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Sensor/Actuator Cabling and Connectors

2017/2018



Sensor/actuator cabling and connectors



Terminal blocks

- Terminal blocks



Interface technology and switching devices

- Electronic switching devices and motor control
- Measurement and control technology
- Monitoring
- Relay modules
- System cabling for controllers



Marking systems, tools and mounting material

- Marking and labeling
- Tools
- Installation and mounting material



Automation

- Lighting and signaling
- Fieldbus components and systems
- Functional safety
- HMIs and industrial PCs
- I/O systems
- Industrial cloud computing
- Industrial communication technology
- Software
- Controllers



Power supplies, surge protection and device circuit breakers

- Surge protection and interference suppression filters
- Power supplies and UPS
- Protective devices



PCB terminal blocks and PCB connectors

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Screw connection

The screw connection is the most universal and globally accepted conductor connection technology. An important characteristic is the maintenance-free conductor contact. It is not necessary to retighten the connection screw.

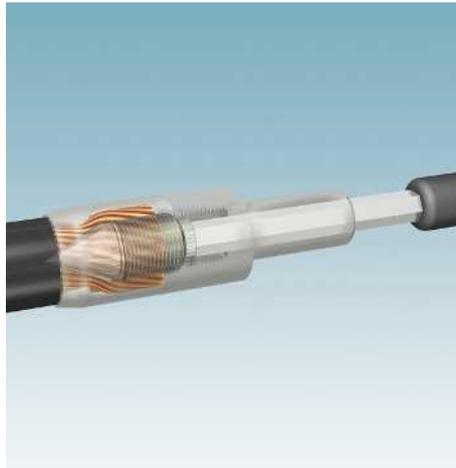
All kinds of copper wires can be clamped without any pretreatment, thereby making gas-tight and permanent contact.

The wire protection, which protects the individual litz wires from damage, is located between the screw and the conductor. The wire protection also performs a screw locking function to prevent release due to vibrations and temperature fluctuations.

Splicing protection can be implemented in the form of ferrules.

With a screw connection, several conductors may also be clamped under one screw.

The conductive parts of the screw connections are made from high-grade copper alloys that are resistant to stress cracking and corrosion.



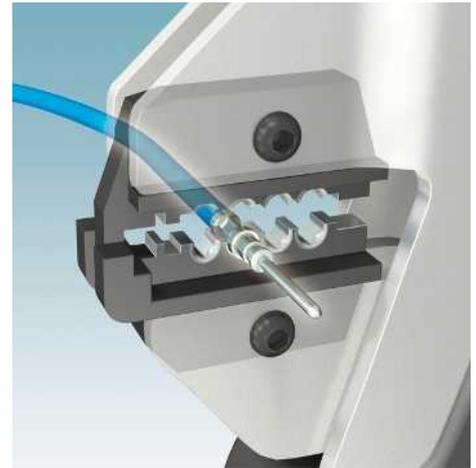
Axial screw connection

With this method, the wire end to be contacted is guided into the connection area of the pin or socket contact.

A tapered mandrel (part of the contact) is then screwed into the stranded wire from the front. Radial pressure is applied to the strands of the wire, pressing them against the contact wall. This results in a gas-tight connection with long-term stability between the wire and contact. It is important that the specified tightening torque is observed.

The mandrel is pressed in using an Allen key which is applied to the front of the contact. This connection technology combines the advantages of screw and crimp connection.

The axial screw connection requires very little space, is easy to use, and only requires a standard Allen key.



Crimp connection

The crimp connection impresses with its small space requirements and its cost-effective creation in series production. For a reliable connection, it is essential that the wire cross section, the crimp contact, and the crimping tool are compatible. Since the crimping tools are subject to a certain degree of wear, the crimping process must be monitored during large-scale production.

Crimp connections can be established with the aid of crimping pliers or crimping machines through specific deformation of the crimping area of the contact.

The requirements for crimp connections are defined in DIN EN 60352-2. Proof of the quality of a crimp connection can be seen in the tensile strength of the connection and crack-free deformation of the crimp contact. Crimping must not result in impermissible elongation of crimp contacts, as this would prevent them from latching correctly in the contact carrier.

The contact is released using an unlocking tool. Assembly tools are also available for very thin conductors.



Push-in connection for contact inserts

Stranded conductors with ferrules or solid conductors can be quickly and easily inserted directly into the connection without tools. The contact spring is formed in such a way that it opens automatically when the conductor is pushed in. It thereby provides the required pressure force against the current bar for a gas-tight, vibration-proof, and shock-proof connection.

To release conductors or connect smaller cross sections, the spring is opened by means of the orange push button – this is done easily and without direct contact with live parts.

The conductive metals are made from high-grade copper alloys. All metal parts of the connection are made from corrosion-resistant materials.



Push-Lock connection for circular connectors

Stranded conductors without ferrules can be easily connected using the lever. The terminal point is completely opened by the color lever and remains in this open position. Even small cross sections are easy to insert. The lever must be closed for the connection.

Wire solid conductors and conductors with ferrules easily and without using tools by means of direct insertion. The contact point does not have to be opened first.

To release a connected conductor, the lever is opened. The conductors can be removed with ease.

All metal parts of the connection are made from corrosion-resistant materials.



IDC displacement connection

The QUICKON connection is equipped with an IDC insulation displacement contact. The term "IDC" stands for Insulation Displacement Connection. With this connection method, an unprepared wire with insulation is positioned in front of the gap of the insulation displacement contact and then pushed into the blade gap through insulation displacement. In so doing, the wire insulation is severed and gas-tight contact is made between the wire and the contact. This reduces connection time by at least 60%.

The connection force is independent of the user and completely reliable provided the permissible conductor cross sections and connection conditions are observed. Solid and stranded conductors can be rewired up to 10 times. However, the wire end should be cut off before connecting again.

QUICKON connections have proven themselves in numerous applications for Phoenix Contact over recent years, such as connectors, for COMBICON, and terminal blocks to CEE plug-in equipment from 0.14 to 6.0 mm².

Sensor/actuator cabling and connectors

Product range overview

Circular connectors



M8 connector, for assembly

Page 14



M12 connector, for assembly

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M5 and M8 device connectors with litz wires

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M23 power connectors

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Sensor/actuator cabling



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4-pos. sensor/actuator cables in sizes M8 and M12
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6-pos. sensor/actuator cables in size M8
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8-pos. sensor/actuator cables in sizes M8 and M12
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Sensor/actuator cabling and connectors

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Data connectors and cables



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M12 device connectors for fieldbuses
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Cables, connectors, and distributors for AS-Interface
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Sensor/actuator cabling and connectors

Product range overview

Heavy-duty connectors



Contact inserts, D7 series
A3, A4 Page 500
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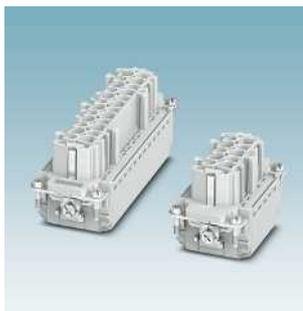
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Installation and mounting material



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Charging technology for E-Mobility



DC charging systems

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AC charging systems

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AC charging controller

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AC set solutions

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Circular connectors

The circular connector range from Phoenix Contact covers the entire scope of industrial applications. From M5 to M58, straight or angled, unshielded or shielded: our extensive portfolio always provides the right connector for your application.

Sensor/actuator connectors

Do you want to wire different cable lengths quickly on site? Our M12 connectors for assembly provide the best connection technology for every application:

- IDC displacement connection
- Push-in connection
- Crimp connection
- Pierce connection
- Screw connection
- Solder connection

In addition, the SPEEDCON fast locking system can save you time when mounting M12 connectors. Just a half-turn is all it takes to create a secure connection.

Shielded connectors for free assembly are available for more stringent requirements.

Sensor/actuator device connectors

In industrial applications, a wide range of requirements are placed on the sensor/actuator cabling. The products from Phoenix Contact are just as varied. You'll find the right device connector – whether in M5, M8 or M12 format and for front or rear mounting. Customer-specific developments enable optimum adaptation to your individual device concept.

Signal, feedback, hybrid, and power connectors

The product portfolio for M17 to M58 connectors covers all common applications in industrial environments for signal, hybrid, and power plug-in connections up to 630 V/150 A. This also includes requirements relating to tightness of seal, vibration resistance, and shielding against EMI. A complete choice of plastic-molded connectors rounds off the circular connector range.

 Your web code: [#0368](#)

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Insulation displacement connection



Connection cross section:
0.08 mm² ... 0.25 mm²,
3-, 4-pos.



Connection cross section:
0.25 mm² ... 0.5 mm²,
3-, 4-pos.



	Technical data							
	3-pos.		4-pos.					
General data								
M8 circular connector according to:	IEC 61076-2-104							
Degree of pollution	3							
Degree of protection	IP65/IP67							
Connection method	Insulation displacement connection							
Cable diameter	2.5 mm ... 5 mm ±0.2 mm							
Electrical data								
Rated voltage	60 V		30 V					
Rated current		4 A						
Insulation resistance		≥ 100 MΩ						
Material data								
Contact/contact surface material	CuSn / Ni/Au							
Contact carrier material	TPU GF							
Flammability rating according to UL 94	HB							
Temperature data								
Plug/socket		-25 ... 80		-25 ... 80				
	Ordering data							
	3-pos.		4-pos.		3-pos.		4-pos.	
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Connector, color-coded and numbered connection area								
Socket, straight	1441040	1	1441053	1	1441066	1	1441079	1
Plug, straight	1441008	1	1441011	1	1441024	1	1441037	1

Screw connection



Unshielded,
3-, 4-pos.



Shielded,
3-, 4-pos.



	Technical data			
	3-pos.	4-pos.		
General data	IEC 61076-2-104			
M8 circular connector according to:	3			
Degree of pollution	IP67			
Degree of protection	Screw connection			
Connection method	3.5 mm ... 5 mm			
Cable diameter	0.14 mm ² ... 0.5 mm ²			
Connection cross section [mm ²]				
Electrical data	60 V	30 V		
Rated voltage	4 A			
Rated current	≥ 100 MΩ			
Insulation resistance				
Material data	CuZn / Au			
Contact/contact surface material	PA			
Contact carrier material	HB			
Flammability rating according to UL 94				
Temperature data	-40 ... 85			
Plug/socket [°C]				
	Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3-pos.		4-pos.	
Connectors				
Socket, straight	1506888	1	1506891	1
Plug, straight	1501252	1	1501265	1
Socket, angled	1407582	1	1407584	1
Plug, angled	1407583	1	1407585	1
	Accessories			
Pressure screw and seal, for cable diameters:				
2.5 mm ... 3.5 mm	SACC-M 8-SET/2,2-3,5	1436945	5	

	Technical data			
	3-pos.	4-pos.		
General data	IEC 61076-2-104			
M8 circular connector according to:	3			
Degree of pollution	IP67			
Degree of protection	Screw connection			
Connection method	3.5 mm ... 5.5 mm			
Cable diameter	0.14 mm ² ... 0.5 mm ²			
Connection cross section [mm ²]				
Electrical data	60 V	30 V		
Rated voltage	4 A			
Rated current	≥ 100 MΩ			
Insulation resistance				
Material data	CuZn / Au			
Contact/contact surface material	PA			
Contact carrier material	HB			
Flammability rating according to UL 94				
Temperature data	-40 ... 85			
Plug/socket [°C]				
	Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3-pos.		4-pos.	
Connectors				
Socket, straight	1542907	1	1542910	1
Plug, straight	1542884	1	1542897	1
Socket, angled				
Plug, angled				
	Accessories			
Pressure screw and seal, for cable diameters:				
2.5 mm ... 3.5 mm				

Circular connectors

M8 sensor/actuator connectors

Solder connection



Unshielded,
3-, 4-pos.



Shielded,
3-, 4-pos.



	Technical data	
	3-pos.	4-pos.
General data		
M8 circular connector according to:	IEC 61076-2-104	
Degree of pollution	3	
Degree of protection	IP67	
Connection method	Solder connection	
Cable diameter	3.5 mm ... 5 mm	
Connection cross section [mm ²]	0.08 mm ² ... 0.25 mm ²	
Electrical data		
Rated voltage	60 V	30 V
Rated current	4 A	
Insulation resistance	≥ 100 MΩ	
Material data		
Contact/contact surface material	CuZn / Au	
Contact carrier material	PA	
Flammability rating according to UL 94	HB	
Temperature data		
Plug/socket	-40 ... 85 [°C]	



	Technical data	
	3-pos.	4-pos.
General data		
M8 circular connector according to:	IEC 61076-2-104	
Degree of pollution	3	
Degree of protection	IP67	
Connection method	Solder connection	
Cable diameter	3.5 mm ... 5 mm	
Connection cross section [mm ²]	0.08 mm ² ... 0.25 mm ²	
Electrical data		
Rated voltage	60 V	30 V
Rated current	4 A	
Insulation resistance	≥ 100 MΩ	
Material data		
Contact/contact surface material	CuZn / Au	
Contact carrier material	PA	
Flammability rating according to UL 94	HB	
Temperature data		
Plug/socket	-40 ... 85	

Description	Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3-pos.		4-pos.	
Connectors				
Socket, angled	1529399	1	1513444	1
Plug, angled	1699902	1	1554209	1
Socket, straight	1681172	1	1681185	1
Plug, straight	1681156	1	1681169	1

Description	Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3-pos.		4-pos.	
Connectors				
Socket, angled	1436479	1	1436482	1
Plug, angled	1436453	1	1436466	1
Socket, straight	1506927	1	1506930	1
Plug, straight	1506901	1	1506914	1

Pressure screw and seal, for cable diameters:	Accessories	
	Order No.	Pcs. / Pkt.
2.5 mm ... 3.5 mm	SACC-M 8-SET/2,2-3,5	1436945 5

Pressure screw and seal, for cable diameters:	Accessories	
	Order No.	Pcs. / Pkt.
2.5 mm ... 3.5 mm		

Insulation displacement connection

Notes:
M12 connectors for assembly for networks and fieldbuses can be found in the data connectors and cables section from page 339



Unshielded,
4-pos.



Unshielded, shielded,
4-, 5-, and 8-pos.



Technical data	
4-pos.	4-pos.
IEC 61076-2-101	
3	
IP65 / IP67	
Insulation displacement connection	
3.5 mm ... 6 mm	4 mm ... 8 mm
0.14 mm ² ... 0.34 mm ²	0.34 mm ² ... 0.75 mm ²
125 V	250 V
4 A	
≥ 100 MΩ	
CuSn / Ni/Au	
TPU	
V0	
-25 ... 80	

Technical data		
4-pos.	5-pos.	8-pos.
IEC 61076-2-101		
3		
IP65 / IP67		
Insulation displacement connection		
5 mm ... 9.7 mm		
0.14 mm ² ... 0.75 mm ²	0.14 mm ² ... 0.5 mm ²	
250 V AC/DC	60 V AC/DC	30 V AC/DC
4 A		2 A
≥ 100 MΩ		
CuSn / Ni/Au		
PA 6.6		
V0		
-40 ... 85		

Ordering data					
Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
4-pos.		4-pos.			

Ordering data					
Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
4-pos.		5-pos.		8-pos.	

Description	Coding	Order No.	Pcs./ Pkt.						
Connector , with plastic knurl, color-coded and numbered connection area									
Socket, straight	A - standard	1641701	1	1641756	1				
Plug, straight	A - standard	1641714	1	1641769	1				
Connector , with metal knurl, SPEEDCON, color-coded and numbered connection area									
Socket, straight	A - standard	1521588	1	1521601	1				
Plug, straight	A - standard	1521575	1	1521591	1				
Connector , with metal knurl, color-coded and numbered connection area									
Socket, straight	A - standard	1641688	1	1641772	1				
Plug, straight	A - standard	1641691	1	1641785	1				
Connector , with stainless steel knurl, color-coded and numbered connection area									
Socket, straight	A - standard	1440766	1	1440782	1				
Plug, straight	A - standard	1440753	1	1440779	1				
Connector , with metal knurl, SPEEDCON, color-coded and numbered connection area, cable diameter: 3.5 mm ... 6 mm									
Socket, straight	A - standard					1414601	1		
Plug, straight	A - standard					1414600	1		
Connector , with metal knurl, SPEEDCON, color-coded and numbered connection area, cable diameter: 5.5 mm ... 9.5 mm									
Socket, straight	A - standard							1424434	1
Plug, straight	A - standard							1424433	1
Connector , shielded, with metal knurl, SPEEDCON, color-coded and numbered connection area									
Socket, straight	A - standard	1413994	1	1413992	1	1414611	1		
Plug, straight	A - standard	1413993	1	1413991	1	1414610	1		
Cable connector , shielded, color-coded and numbered connection area									
		1414418	1	1414417	1	1414612	1		

Push-in connection

Notes:

M12 connectors for assembly for networks and fieldbuses can be found in the data connectors and cables section from page 339

new

new



**Unshielded,
4-, 5-pos.**



**Shielded,
4-, 5-pos.**

	Technical data				Technical data				
	4-pos.		5-pos.		4-pos.		5-pos.		
General data	IEC 61076-2-101				IEC 61076-2-101				
M12 circular connector according to:	3				3				
Degree of pollution	IP65/IP67				IP65/IP67				
Degree of protection	Spring-cage connection				Spring-cage connection				
Connection method	4 mm ... 8 mm				4 mm ... 8 mm				
Cable diameter	0.14 mm ² ... 0.75 mm ²				0.14 mm ² ... 0.75 mm ²				
Connection cross section [mm ²]	250 V				60 V DC				
Electrical data	Rated voltage		Rated current		Rated voltage		Rated current		
	4 A		≥ 100 MΩ		4 A		≥ 100 MΩ		
	Insulation resistance		≥ 100 MΩ		Insulation resistance		≥ 100 MΩ		
Material data	CuSn / Ni/Au				CuSn / Ni/Au				
Contact/contact surface material	PA 6.6				PA 6.6				
Contact carrier material	V0				V0				
Flammability rating according to UL 94	-40 ... 85				-40 ... 85				
Temperature data	-40 ... 85				-40 ... 85				
Plug/socket	[°C]				[°C]				
	-40 ... 85				-40 ... 85				
		Ordering data				Ordering data			
Description	Coding	4-pos.		5-pos.		4-pos.		5-pos.	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Connector, with metal knurl, SPEEDCON, color-coded and numbered connection area									
Socket, angled	A - standard	1424656	1	1424653	1	1424669	1	1424661	1
Plug, angled	A - standard	1424654	1	1424651	1	1424667	1	1424659	1
Socket, straight	A - standard	1424655	1	1424652	1	1424668	1	1424660	1
Plug, straight	A - standard	1424657	1	1424649	1	1424666	1	1424658	1
Connector, with plastic knurl, color-coded and numbered connection area									
Socket, angled	A - standard	1424694	1	1424690	1				
Plug, angled	A - standard	1424692	1	1424688	1				
Socket, straight	A - standard	1424693	1	1424689	1				
Plug, straight	A - standard	1424691	1	1424686	1				
Connector, with metal knurl, SPEEDCON, color-coded and numbered connection area									
Socket, angled	B - standard							1424665	1
Plug, angled	B - standard							1424663	1
Socket, straight	B - standard							1424664	1
Plug, straight	B - standard							1424662	1

Crimp connection

new



Shielded,
4-, 5-, 8-pos.

	Technical data		
	4-pos.	5-pos.	8-pos.
General data			
M12 circular connector according to:	IEC 61076-2-101		IEC 61076-2-109
Degree of pollution		3	
Degree of protection		IP65 / IP67	
Connection method		Crimp connection	
Cable diameter	5 mm ... 7.5 mm		6.5 mm ... 10 mm
Electrical data			
Rated voltage	250 V AC/DC	60 V AC/DC	50 V AC
Rated current		4 A	0.6 A (30 W)
Insulation resistance		≥ 100 Ω	
Material data			
Contact carrier material		PA 6.6	
Flammability rating according to UL 94		V0	
Temperature data			
Plug/socket	[°C]	-40 ... 85	

Description	Coding	Ordering data					
		Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
		4-pos.		5-pos.		8-pos.	
Connector , without contacts, color-coded and numbered contact manager							
Socket, angled	D - data	1422849	1				
Plug, angled	D - data	1422847	1				
Socket, straight	D - data	1422848	1				
Plug, straight	D - data	1422846	1				
Connector , without contacts, color-coded and numbered contact manager							
Socket, angled	A - standard			1422853	1		
Plug, angled	A - standard			1422851	1		
Socket, straight	A - standard			1422852	1		
Plug, straight	A - standard			1422850	1		
Connector , without contacts, color-coded contact manager							
Plug, angled	X - data					1422845	1
Plug, straight	X - data					1422844	1

	Accessories		
	Order No.	Pcs./Pkt.	Order No.
Crimp contacts , turned, gold-plated			
Socket, for A/D-coded, 0.34 mm ² ... 1.0 mm ²	CC1,0-TS-1,00F AU PU100	1423646	100
Pin, for A/D-coded, 0.34 mm ² ... 1.0 mm ²	CC1,0-TS-1,00M AU PU100	1423645	100
Pin, for X-coded, 0.14 mm ² ... 0.34 mm ²	CC0,6-TS-0,34M AU PU100	1423643	100
Crimping pliers , for turned contacts, universal cross section setting, up to a maximum of 2.5 mm ² , digital display with 0.01 mm increments, unlockable pressure lock, lateral entry, including positioning tool			
for turned contacts, four-mandrel crimping	CRIMPFOX-TC MP	1212510	1



Metal knurl,
4, 5, 8-pos.



Metal knurl,
4, 5-pos.,
with SKINTOP® screw connection



Stainless steel knurl,
4, 5-pos.



Technical data		
4-pos.	5-pos.	8-pos.
IEC 61076-2-101		
3		
IP67		
Screw connection		
0.25 mm ² ... 0.75 mm ²	0.25 mm ² ... 0.5 mm ²	
250 V	60 V	30 V
4 A	2 A	
≥ 100 MΩ		
CuZn / CuSnZn		CuZn / Au
PA		
HB		
-40 ... 85		

Technical data		
4-pos.	5-pos.	
IEC 61076-2-101		
3		
IP67		
Screw connection		
0.25 mm ² ... 0.75 mm ²		
250 V	60 V	
4 A		
≥ 100 MΩ		
CuZn / CuSnZn		
PA		
HB		
-20 ... 80		

Technical data		
4-pos.	5-pos.	
IEC 61076-2-101		
3		
IP65/IP67/IP69K		
Screw connection		
0.25 mm ² ... 0.75 mm ²		
250 V	60 V	
4 A		
≥ 100 MΩ		
CuZn / Au		
PA		
V0		
-40 ... 85		

Ordering data					
Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
4-pos.		5-pos.		8-pos.	
1681143	1	1662984	1		
1681101	1	1663129	1		
1681127	1	1662968	1		
1662528	1	1663116	1		
		1681499	1		
		1681473	1		
1696439	1	1681486	1	1513347	1
1523230	1	1681460	1	1513334	1

Ordering data					
Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
4-pos.		5-pos.			
1430381	1	1559000	1		
1556870	1	1456466	1		
		1556812	1		
		1561742	1		
		1556838	1		
		1556825	1		

Ordering data					
Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
4-pos.		5-pos.			
1553284	1	1553297	1		
1553200	1	1553213	1		
1553242	1	1553255	1		
1553161	1	1553187	1		
		1553307	1		
1553226	1	1553239	1		
1553268	1	1553271	1		
1553174	1	1553190	1		

		1410665	1		
		1410666	1		
1408991	1	1408993	1		
1408990	1	1408992	1		
1404416	1	1404418	1		
1404415	1	1404417	1		

Accessories		
SACC-M12-SET/2,5-3,5	1436505	5

Accessories		

Accessories		
SACC-M12-SET/2,5-3,5	1436505	5

Screw connection, shielded

Notes:

M12 connectors for assembly for networks and fieldbuses can be found in the data connectors and cables section from page 339



**Zinc die-cast housing,
4, 5, 8-pos.**



**Stainless steel housing,
5-pos.**



	Technical data						Technical data						
	4-pos.		5-pos.		8-pos.		5-pos.						
General data													
M12 circular connector according to:	IEC 61076-2-101						IEC 61076-2-101						
Degree of pollution	3						3						
Degree of protection	IP67						IP65/IP67/IP69K						
Connection method	Screw connection						Screw connection						
Connection cross section [mm²]	0.25 mm² ... 0.75 mm²				0.25 mm² ... 0.5 mm²		0.25 mm² ... 0.75 mm²						
Electrical data													
Rated voltage	60 V DC				30 V		60 V DC						
Rated current	4 A				2 A		4 A						
Insulation resistance	≥ 100 MΩ						≥ 100 MΩ						
Material data													
Contact/contact surface material	CuZn / Au						CuZn / Au						
Contact carrier material	PA						PA						
Flammability rating according to UL 94	HB						V0						
Temperature data													
Plug/socket			-40 ... 85				-40 ... 85						
	Ordering data						Ordering data						
Description	Coding	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
Connector, cable diameter: 4 mm ... 6 mm		4-pos.		5-pos.		8-pos.		5-pos.					
Plug, angled	A - standard	1694279	1	1693429	1								
Socket, straight	A - standard	1694295	1	1694305	1								
Plug, straight	A - standard	1693830	1	1693416	1								
Connector, cable diameter: 6 mm ... 8 mm													
Socket, angled	A - standard			1430433	1								
Plug, angled	A - standard			1694282	1								
Socket, straight	A - standard	1515170	1	1694318	1	1511860	1						
Plug, straight	A - standard	1501540	1	1694266	1	1511857	1						
Connector, cable diameter: 6 mm ... 8.5 mm													
Socket, straight	A - standard			1508365	1								
Plug, straight	A - standard			1508352	1								
Connector, cable diameter: 3 mm ... 5.5 mm													
Socket, straight	A - standard							1440038	1				
Plug, straight	A - standard							1440012	1				
Connector, cable diameter: 5.5 mm ... 8.6 mm													
Socket, straight	A - standard							1440041	1				
Plug, straight	A - standard							1440025	1				

**DUO connector,
screw connection**

Notes:
SPEEDCON and plastic knurl without wrench flats.



**Metal knurl,
4-, 5-pos.**



**Plastic and stainless steel knurl,
5-pos.**



	Technical data	
	4-pos.	5-pos.
General data	IEC 61076-2-101	
M12 circular connector according to:	3	
Degree of pollution	IP67	
Degree of protection	Screw connection	
Connection method	2x 2.1 mm ... 3 mm (when using the seal for small outer cable diameters)	
Cable diameter	2x 4 mm ... 5.2 mm (when using the seal for large outer cable diameters)	
Cable diameter	0.25 mm ² ... 0.75 mm ²	
Connection cross section [mm ²]		
Electrical data	250 V	
Rated voltage	4 A	
Rated current	60 V	
Insulation resistance	≥ 100 MΩ	
Material data	CuZn / CuSnZn	
Contact/contact surface material	PA	
Contact carrier material	V0	
Flammability rating according to UL 94		
Temperature data	-40 ... 85	
Plug/socket	[°C]	



	Technical data	
	Plastic knurl	Stainless steel knurl
General data	IEC 61076-2-101	
M12 circular connector according to:	3	
Degree of pollution	IP67	
Degree of protection	Screw connection	
Connection method	2x 2.1 mm ... 3 mm (when using the seal for small outer cable diameters)	
Cable diameter	2x 4 mm ... 5.2 mm (when using the seal for large outer cable diameters)	
Cable diameter	0.25 mm ² ... 0.75 mm ²	
Connection cross section [mm ²]		
Electrical data	60 V	
Rated voltage	4 A	
Rated current	≥ 100 MΩ	
Insulation resistance	CuZn / CuSnZn	
Material data	PA	
Contact/contact surface material	V0	
Contact carrier material	CuZn / Au	
Flammability rating according to UL 94		
Temperature data	-40 ... 85	
Plug/socket		

Description	Coding	Ordering data				
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	
		4-pos.		5-pos.		
Connector , with metal knurl, for connecting two cables						
Plug, straight	A - standard	1507052	1	1662748	1	
Connector , with metal knurl, SPEEDCON, for connecting two cables						
Plug, straight	A - standard			1543016	1	
Connector , with plastic knurl, for connecting two cables						
Socket, straight	A - standard			1694596	1	
Plug, straight	A - standard			1662285	1	
Plug, angled	A - standard			1531044	1	
Connector , with stainless steel knurl, for connecting two cables						
Socket, straight	A - standard				1403372	1
Plug, straight	A - standard				1403371	1

Description	Coding	Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		Plastic knurl		Stainless steel knurl	
Connector , with metal knurl, for connecting two cables					
Plug, straight	A - standard				
Connector , with metal knurl, SPEEDCON, for connecting two cables					
Plug, straight	A - standard				
Connector , with plastic knurl, for connecting two cables					
Socket, straight	A - standard				
Plug, straight	A - standard				
Plug, angled	A - standard				
Connector , with stainless steel knurl, for connecting two cables					
Socket, straight	A - standard				
Plug, straight	A - standard				

Circular connectors

M12 sensor/actuator connectors

Solder and Piercecon® connection



Solder connection,
12-pos.



Piercecon® connection,
12-, 17-pos.



	Technical data				
	12-pos.		12-pos.		
General data					
M12 circular connector according to:	IEC 61076-2-101		IEC 61076-2-101		
Degree of pollution	3		3		
Degree of protection	IP67		IP67		
Connection method	Solder connection		Piercecon® fast connection		
Cable diameter	6 mm ... 8 mm		5.4 mm ... 8.2 mm		
Connection cross section [mm²]	0.08 mm² ... 0.25 mm²		0.14 mm²		
Electrical data					
Rated voltage	30 V		30 V		
Rated current	1.5 A (up to 40°C)		1.5 A		
Insulation resistance	> 10 GΩ		≥ 100 MΩ		
Material data					
Contact/contact surface material	CuZn / Au		CuZn / Ni/Au		
Contact carrier material	PA		PA		
Flammability rating according to UL 94	HB		V0		
Temperature data					
Plug/socket [°C]	-40 ... 85		-25 ... 85		
	Ordering data				
	12-pos.		12-pos.		
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Connectors					
Socket, angled	A - standard	1404423	1	1404413	1
Plug, angled	A - standard	1404421	1	1404412	1
Socket, straight	A - standard	1404420	1	1404411	1
Plug, straight	A - standard	1404419	1	1404410	1
Connector, unshielded, color-coded connection area					
Socket, straight	A - standard	1559631	1	1559644	1
Plug, straight	A - standard	1559592	1	1559602	1

Screw connection



Connection cross section: 1.5 mm²,
3-, 4-, 5-pos.



Connection cross section: 2.5 mm²,
5-pos.



	Technical data		
	3-pos.	4-pos.	5-pos.
General data			
Degree of pollution		3	
Degree of protection		IP67	
Connection method		Screw connection	
Connection cross section		0.34 mm ² ... 1.5 mm ²	
Connection cross section AWG		22 ... 16	
Electrical data			
Rated voltage		300 V	
Rated current	12 A		9 A
Insulation resistance		≥ 100 MΩ	
Material data			
Contact/contact surface material		CuZn / Au	
Contact carrier material		PUR / PA66	
Flammability rating according to UL 94		HB	
Temperature data			
Plug/socket		-25 ... 85	



	Technical data		
	5-pos.		
General data			
Degree of pollution		3	
Degree of protection		IP67	
Connection method		Screw connection	
Connection cross section		0.34 mm ² ... 2.5 mm ²	
Connection cross section AWG		22 ... 14	
Electrical data			
Rated voltage		300 V	
Rated current		9 A	
Insulation resistance		≥ 100 MΩ	
Material data			
Contact/contact surface material		CuZn / Au	
Contact carrier material		PUR / PA66	
Flammability rating according to UL 94		HB	
Temperature data			
Plug/socket		-25 ... 85	

Description	Ordering data					
	3-pos.		4-pos.		5-pos.	
	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.

Description	Ordering data					
	5-pos.					
	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.

Connector, cable diameter: 6 mm ... 8 mm

Socket, angled	1521478	1	1521494	1	1521517	1
Plug, angled	1521465	1	1521481	1	1521504	1
Socket, straight	1521300	1	1521342	1	1521384	1
Plug, straight	1521287	1	1521326	1	1521668	1

Connector, cable diameter: 8 mm ... 10 mm

Socket, angled					1456297	1
Plug, angled					1456242	1
Socket, straight					1456271	1
Plug, straight					1456226	1

Connector, cable diameter: 10 mm ... 12 mm

Socket, angled					1456307	1
Plug, angled					1456255	1
Socket, straight	1521313	1	1521355	1	1521397	1
Plug, straight	1521290	1	1521339	1	1521371	1

Connector, cable diameter: 12 mm ... 14 mm

Socket, straight				1559071	1	1456268	1
Plug, straight				1559039	1	1456239	1



Protective circuit:
varistor and rectifier

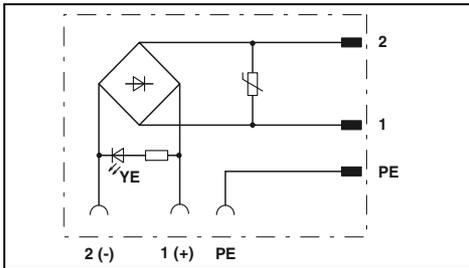


Pressure switch



Protective circuit:
Z diode

ERC



Technical data

EN 175301-803
3
IP65
Screw connection

1.5 A
> 2 GΩ

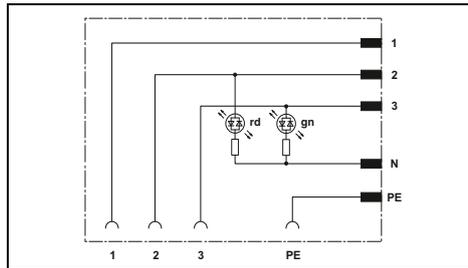
CuZn
CuSn
HB

-25 ... 60

Ordering data

Type	Order No.	Pcs. / Pkt.
SACC-VB-3CON-M16/A-GVL 12/24V	1452178	1
SACC-VB-3CON-M16/A-GVL 110V	1452181	1
SACC-VB-3CON-M16/A-GVL 230V	1452194	1

ERC



Technical data

EN 175301-803
3
IP65
Screw connection

1.5 A
> 2 GΩ

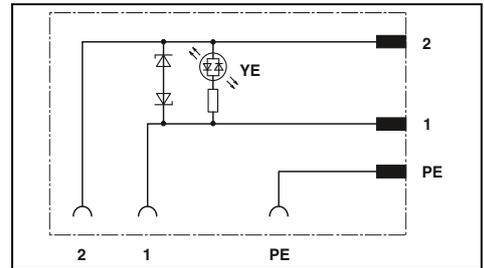
CuZn
CuSn
HB

-25 ... 60

Ordering data

Type	Order No.	Pcs. / Pkt.
SACC-VB-5CON-M16/AD-2L 24V	1457908	1

ERC



Technical data

EN 175301-803
3
IP65
Screw connection

4 A
> 2 GΩ

CuSn
Ag
HB

-25 ... 60

Ordering data

Type	Order No.	Pcs. / Pkt.
SACC-V-3CON-PG9/A-1L-S	1671137	1
SACC-V-3CON-M16/A-1L-S	1544714	1

Circular connectors

Valve connectors

Valve connector, types B and BI, screw connection

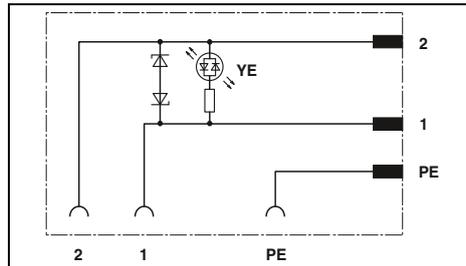


Protective circuit: Z diode

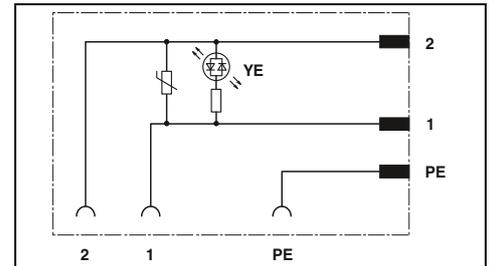


Protective circuit: varistor

ERC



ERC



Technical data

Type B	Type BI
EN 175301-803	-
3	-
IP65	-
Screw connection	-
24 V	-
4 A	-
> 2 GΩ	-
Ag	-
PA	-
HB	-
-25 ... 60	-

Technical data

Type B	Type BI
EN 175301-803	-
3	-
IP65	-
Screw connection	-
24 V	-
1.5 A	-
> 2 GΩ	-
CuSn	-
PA	-
HB	-
-25 ... 60	-

General data	
Valve connector according to:	
Degree of pollution	
Degree of protection	
Connection method	
Electrical data	
Rated voltage	
Rated current	
Insulation resistance	
Material data	
Valve connector contact surface material	
Valve connector material housing	
Flammability rating according to UL 94	
Temperature data	
Valve connectors	[°C]

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Type B		Type BI	
1671153	1	1671140	1

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Type B		Type BI	
1452204	1	1452233	1
1452217	1	1452246	1
1452220	1	1452259	1

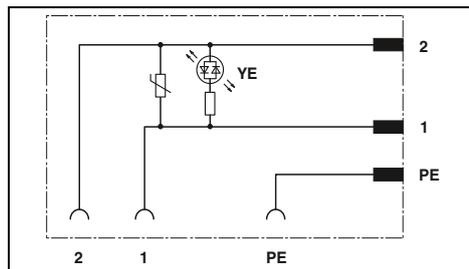
Description	
Valve connector, 3-pos., with protective circuit, Pg9 cable gland	
Valve connector, with protective circuit, yellow LED, rated voltage:	
24 V	
110 V	
230 V	

Valve connectors, type C and CI, screw connection



Protective circuit: varistor

EAC



Technical data

	Type C	Type CI
General data		
Valve connector according to:	EN 175301-803	-
Degree of pollution		3
Degree of protection		IP65
Connection method		Screw connection
Electrical data		
Rated current		1.5 A
Insulation resistance		> 2 GΩ
Material data		
Material contact valve connector		CuZn
Valve connector contact surface material		CuSn
Flammability rating according to UL 94		HB
Temperature data		
Valve connectors [°C]		-25 ... 60

Ordering data

Description	Type C		Type CI	
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Valve connector , with protective circuit, yellow LED, rated voltage:				
24 V	1452262	1	1452291	1
110 V	1452275	1	1452301	1
230 V	1452288	1	1452314	1

Circular connectors

M5 sensor/actuator device connector, front mounting

M5 fastening thread, with 0.5 m long litz wires

Notes:

Flat nut recommended for housing wall thicknesses < 2.5 mm.



**M5,
3-, 4-pos.**

ERC

Technical data

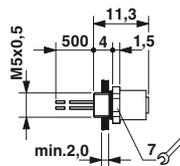
	3-pos.	4-pos.
General data		
M5 circular connector according to:	IEC 61076-2-105	IEC 61076-2-105
Degree of pollution	3	3
Degree of protection	IP67	IP67
Connection method	Individual wires	Individual wires
Electrical data		
Rated voltage	60 V	60 V
Rated current	1 A	1 A
Material data		
Contact/contact surface material	CuSn / Au	CuSn / Au
Contact carrier material	PA 66	PA 66
Flammability rating according to UL 94	HB	HB
Cable type	TPE litz wire	TPE litz wire
Temperature data		
Plug/socket	-25 ... 85	-25 ... 85

Ordering data

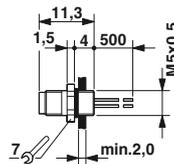
Description	Coding	3-pos.		4-pos.	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Device connectors					
Socket	A - standard	1530605	1	1530618	1
Plug	A - standard	1530582	1	1530595	1

Accessories

Flat nut, with:			
M5 thread	SACC-E-MU-M 5	1535901	100



Dimensions: socket



Dimensions: plug

M8 sensor/actuator device connector, front mounting

M8 fastening thread, with 0.5 m long litz wires



M8, 3-, 4-, 5-pos.



M8, 6-, 8-pos.

ERIE

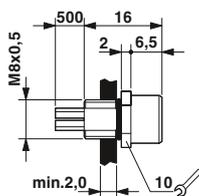
ERIC

	Technical data		
	3-pos.	4-pos.	5-pos.
General data			
M8 circular connector according to:	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104
Degree of pollution	3	3	3
Degree of protection	IP67	IP67	IP67
Connection method	Individual wires	Individual wires	Individual wires
Electrical data			
Rated voltage	50 V AC	50 V AC	30 V AC
Rated current	4 A	4 A	3 A
Material data			
Contact/contact surface material	Cu alloy / Au	Cu alloy / Au	Cu alloy / Au
Contact carrier material	PA 66	PA 66	PA 66
Flammability rating according to UL 94	HB	HB	HB
Cable type	PVC litz wire	PVC litz wire	PVC litz wire
Temperature data			
Plug/socket	-25 ... 85	-25 ... 85	-25 ... 85

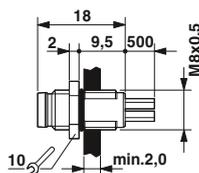
	Technical data	
	6-pos.	8-pos.
General data		
M8 circular connector according to:	IEC 61076-2-104	IEC 61076-2-104
Degree of pollution	3	3
Degree of protection	IP67	IP67
Connection method	Individual wires	Individual wires
Electrical data		
Rated voltage	30 V AC	30 V AC
Rated current	2 A	1.5 A
Material data		
Contact/contact surface material	Cu alloy / Au	Cu alloy / Au
Contact carrier material	PA 66	PA 66
Flammability rating according to UL 94	HB	HB
Cable type	TPE litz wire	PVC litz wire
Temperature data		
Plug/socket	-25 ... 85	-25 ... 85

Description	Coding	Ordering data					
		3-pos.		4-pos.		5-pos.	
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
Device connectors							
Socket	A - standard	1500350	1	1500363	1		
Plug	A - standard	1500334	1	1500347	1		
Socket	B - inverse					1424233	1
Plug	B - inverse					1424234	1
Flat nut, with:							
M8 thread		1504071	100	1504071	100		

Description	Coding	Ordering data			
		6-pos.		8-pos.	
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
Device connectors					
Socket	A - standard	1542677	1	1424231	1
Plug	A - standard	1542664	1	1424232	1
Socket	B - inverse				
Plug	B - inverse				
Flat nut, with:					
M8 thread		1504071	100		



Dimensions: socket, 3-, 4-, 6-pos.



Dimensions: connector, 3-, 4-, 6-pos.

Circular connectors

M8 sensor/actuator device connector, rear mounting

M8, M10, M12 fastening thread, with 0.5 m long litz wires



3-, 4-pos.



6-, 8-pos.

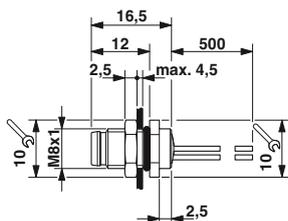


	Technical data			
	3-pos.		4-pos.	
General data	IEC 61076-2-104		IEC 61076-2-104	
M8 circular connector according to:	3		3	
Degree of pollution	IP67		IP67	
Degree of protection	Individual wires		Individual wires	
Connection method	50 V AC		50 V AC	
Electrical data	4 A		4 A	
Rated voltage	Cu alloy / Au		Cu alloy / Au	
Rated current	PUR / PA66		PUR / PA66	
Material data	HB		HB	
Contact/contact surface material	PVC litz wire		PVC litz wire	
Contact carrier material	-25 ... 85		-25 ... 85	
Flammability rating according to UL 94				
Cable type				
Temperature data				
Plug/socket	[°C]		[°C]	

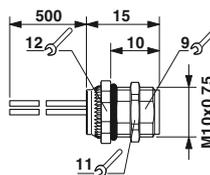
	Technical data			
	6-pos.		8-pos.	
General data	IEC 61076-2-104		IEC 61076-2-104	
M8 circular connector according to:	3		3	
Degree of pollution	IP67		IP67	
Degree of protection	Individual wires		Individual wires	
Connection method	30 V AC		30 V AC	
Electrical data	2 A		1.5 A	
Rated voltage	Cu alloy / Au		Cu alloy / Au	
Rated current	PUR / PA66		PUR / PA66	
Material data	HB		HB	
Contact/contact surface material	TPE litz wire		PVC litz wire	
Contact carrier material	-25 ... 85		-25 ... 85	
Flammability rating according to UL 94				
Cable type				
Temperature data				
Plug/socket	[°C]		[°C]	

	Coding	Ordering data			
		3-pos.		4-pos.	
Description		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Device connector, M8 fastening thread					
Plug	A - standard	1453478	1	1453481	1
Device connector, M10 fastening thread					
Socket	A - standard	1456080	1	1456093	1
Device connector, M12 fastening thread					
Socket	A - standard	1453449	1	1453452	1

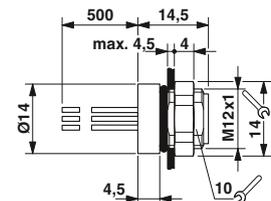
	Coding	Ordering data			
		6-pos.		8-pos.	
Description		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Device connector, M8 fastening thread					
Plug	A - standard	1453494	1	1424230	1
Device connector, M10 fastening thread					
Socket	A - standard	1456103	1	1424229	1
Device connector, M12 fastening thread					
Socket	A - standard	1453465	1		



Dimensions: connector, M8 fastening thread



Dimensions: socket, M10 fastening thread



Dimensions: socket, M12 fastening thread

M12 sensor/actuator device connector, front mounting

Pg9 fastening thread, with 0.5 m long litz wires



4-, 5-, 8-pos.



Can be positioned, 4-, 5-, 8-pos.



	Technical data		
	4-pos.	5-pos.	8-pos.
General data			
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution	3	3	3
Degree of protection	IP67	IP67	IP67
Connection method	Individual wires	Individual wires	Individual wires
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Material data			
Contact/contact surface material	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au
Contact carrier material	PA66	PA66	PA66
Flammability rating according to UL 94	V0	V0	V0
Cable type	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data			
Plug/socket	-25 ... 85	-25 ... 85	-25 ... 85

Description	Coding	Ordering data					
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
		4-pos.		5-pos.		8-pos.	

Socket	A - standard	1693788	1	1671098	1	1513758	1
Plug	A - standard	1693762	1	1671111	1	1513774	1
Socket	B - inverse						
Plug	B - inverse						



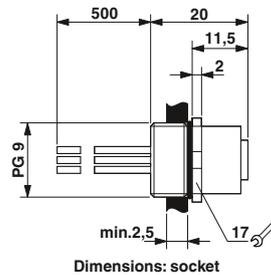
	Technical data		
	4-pos.	5-pos.	8-pos.
General data			
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution	3	3	3
Degree of protection	IP67	IP67	IP67
Connection method	Individual wires	Individual wires	Individual wires
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Material data			
Contact/contact surface material	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au
Contact carrier material	PA66	PA66	PA66
Flammability rating according to UL 94	V0	V0	V0
Cable type	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data			
Plug/socket	-25 ... 85	-25 ... 85	-25 ... 85

Description	Coding	Ordering data					
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
		4-pos.		5-pos.		8-pos.	

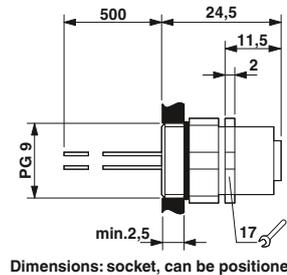
Socket	A - standard	1693791	1	1671108	1	1513761	1
Plug	A - standard	1693775	1	1671124	1	1513787	1
Socket	B - inverse			1515044	1		
Plug	B - inverse			1515057	1		

Accessories		
Flat nut, with:		
Pg9 thread	SACC-E-MU-PG9	1504084 100

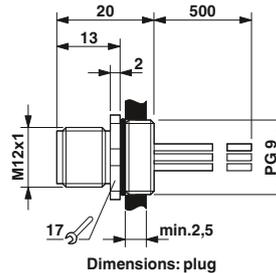
Accessories		
Flat nut, with:		
Pg9 thread		



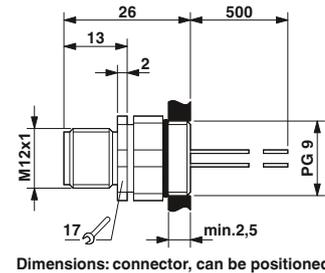
Dimensions: socket



Dimensions: socket, can be positioned



Dimensions: plug



Dimensions: connector, can be positioned

Circular connectors

M12 sensor/actuator device connector, front mounting

M16 fastening thread, with 0.5 m long litz wires



4-, 5-, 8-pos.



12-, 17-pos.



	Technical data		
	4-pos.	5-pos.	8-pos.
General data			
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution	3	3	3
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67
Connection method	Individual wires	Individual wires	Individual wires
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Material data			
Contact/contact surface material	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au
Contact carrier material	PA 66	PA 66	PA 66
Flammability rating according to UL 94	V0	V0	V0
Cable type	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data			
Plug/socket	-25 ... 85	-25 ... 85	-25 ... 85



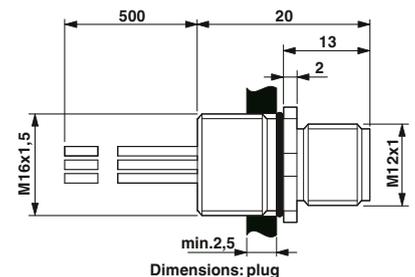
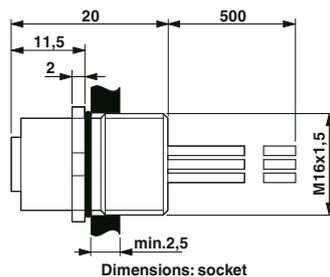
	Technical data	
	12-pos.	17-pos.
General data		
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution	3	3
Degree of protection	IP65/IP67	IP65/IP67
Connection method	Individual wires	Individual wires
Electrical data		
Rated voltage	30 V	30 V
Rated current	1.5 A	1.5 A
Material data		
Contact/contact surface material	CuZn / Ni/Au	CuZn / Ni/Au
Contact carrier material	PA 66	PA 66
Flammability rating according to UL 94	V0	V0
Cable type	TPE litz wire	TPE litz wire
Temperature data		
Plug/socket	-25 ... 85	-25 ... 85

Description	Coding	Ordering data					
		4-pos.		5-pos.		8-pos.	
		Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
Device connectors							
Socket	A - standard	1523434	1	1520039	1	1523476	1
Plug	A - standard	1523450	1	1520055	1	1523492	1
Socket	D - data	1535202	1				
Plug	D - data	1551558	1				
Socket	B - inverse			1520000	1		
Plug	B - inverse			1520013	1		

Description	Coding	Ordering data					
		12-pos.		17-pos.			
		Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
Device connectors							
Socket	A - standard	1556252	1	1556294	1		
Plug	A - standard	1556265	1	1556304	1		

Accessories		
Flat nut, with:		
M16 thread	SACC-E-MU-M16	1504097 100

Accessories		
Flat nut, with:		
M16 thread	SACC-E-MU-M16	1504097 100



M12 sensor/actuator device connector, front mounting

M16 fastening thread, with 0.5 m long litz wires, can be positioned



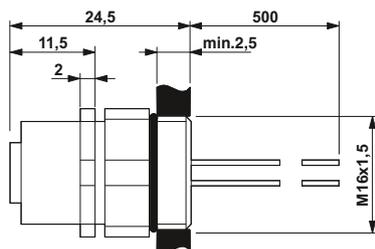
can be positioned, 4-, 5-pos.



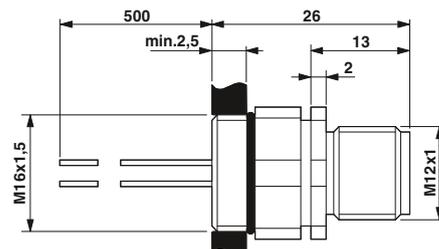
can be positioned, 8-pos.



	Technical data		Technical data						
	4-pos.	5-pos.	8-pos.						
General data									
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101						
Degree of pollution	3	3	3						
Degree of protection	IP67	IP67	IP67						
Connection method	Individual wires	Individual wires	Individual wires						
Electrical data									
Rated voltage	250 V	60 V	30 V						
Rated current	4 A	4 A	2 A						
Material data									
Contact/contact surface material	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au						
Contact carrier material	PA 66	PA 66	PA 66						
Flammability rating according to UL 94	V0	V0	V0						
Cable type	TPE litz wire	TPE litz wire	TPE litz wire						
Temperature data									
Plug/socket	[-25 ... 85		[-25 ... 85						
	Ordering data		Ordering data						
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.			
Device connectors									
Socket	A - standard	1523447	1	1520042	1	1523489	1		
Plug	A - standard	1523463	1	1520068	1	1523502	1		
Socket	D - data	1535215	1						
Plug	D - data	1552256	1						
Socket	B - inverse			1519998	1				
Plug	B - inverse			1520026	1				



Dimensions: socket, can be positioned



Dimensions: connector, can be positioned

Circular connectors

M12 sensor/actuator device connector, front mounting

**XL device connector,
M16 fastening thread,
with 0.5 m long litz wires**

- Tightening limitation
- Wrench size 19



4-, 5-, 8-pos.



12-, 17-pos.



	Technical data		
	4-pos.	5-pos.	8-pos.
General data			
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution	3	3	3
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67
Connection method	Individual wires	Individual wires	Individual wires
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Material data			
Contact/contact surface material	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA 66	PA 66	PA 66
Flammability rating according to UL 94	V0	V0	V0
Cable type	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data			
Plug/socket	-25 ... 85	-25 ... 85	-25 ... 85



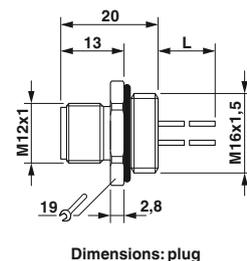
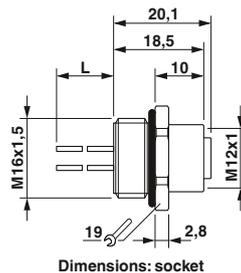
	Technical data	
	12-pos.	17-pos.
General data		
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution	3	3
Degree of protection	IP65/IP67	IP65/IP67
Connection method	Individual wires	Individual wires
Electrical data		
Rated voltage	30 V	30 V
Rated current	1.5 A	1.5 A
Material data		
Contact/contact surface material	CuZn / Au	CuZn / Au
Contact carrier material	PA 66	PA 66
Flammability rating according to UL 94	V0	V0
Cable type	TPE litz wire	TPE litz wire
Temperature data		
Plug/socket	-25 ... 85	-25 ... 85

Description	Coding	Ordering data					
		4-pos.		5-pos.		8-pos.	
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
Socket	A - standard	1411568	1	1411571	1	1411573	1
Plug	A - standard	1411577	1	1411579	1	1411581	1
Socket	D - data	1411569	1				
Plug	D - data	1411578	1				
Socket	B - inverse			1411572	1		
Plug	B - inverse			1411580	1		

Description	Coding	Ordering data			
		12-pos.		17-pos.	
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
Socket	A - standard	1411574	1	1411576	1
Plug	A - standard	1411582	1	1411583	1

Accessories		
Flat nut, with:		
M16 thread	SACC-E-MU-M16	1504097 100

Accessories		
Flat nut, with:		
M16 thread	SACC-E-MU-M16	1504097 100



M12 sensor/actuator device connector, front mounting

M20 fastening thread, with 0.5 m long litz wires

– Housing material: brass, nickel-plated



4-, 5-, 8-pos.

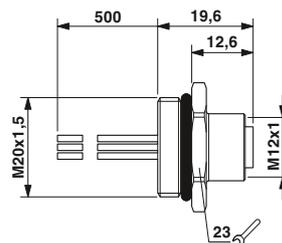


Technical data

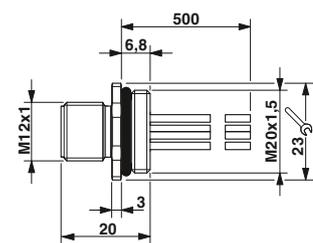
	4-pos.	5-pos.	8-pos.
General data			
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution	3	3	3
Degree of protection	IP67/IP69K	IP67/IP69K	IP67/IP69K
Connection method	Individual wires	Individual wires	Individual wires
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Material data			
Contact/contact surface material	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA 66	PA 66	PA 66
Flammability rating according to UL 94	V0	V0	V0
Cable type	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data			
Plug/socket	-25 ... 85	-25 ... 85	-25 ... 85

Ordering data

Description	Coding	4-pos.		5-pos.		8-pos.	
		Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
Device connectors							
Socket	A - standard	1408436	1	1408454	1	1408453	1
Plug	A - standard	1408451	1	1408446	1	1408442	1



Dimensions: socket



Dimensions: plug

Circular connectors

M12 sensor/actuator device connector, front mounting

One-piece, 20 mm square flange, with 0.5 m long litz wires

- 4x fixing hole, 3.2 mm
- With form seal for M3 screws



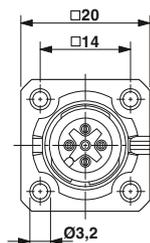
4-, 5-, 8-pos.



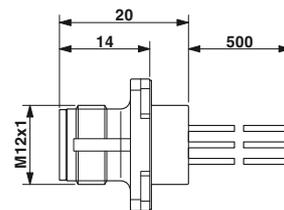
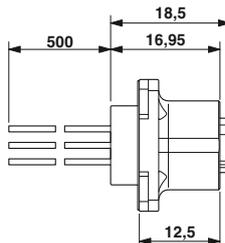
12-, 17-pos.



	Technical data			Technical data			
	4-pos.	5-pos.	8-pos.	12-pos.	17-pos.		
General data							
M12 circular connector according to:	IEC 61076-2-101						
Degree of pollution	3	3	3	3	3		
Degree of protection	IP67	IP67	IP67	IP67	IP67		
Connection method	Individual wires						
Electrical data							
Rated voltage	250 V	60 V	30 V	30 V	30 V		
Rated current	4 A	4 A	2 A	1.5 A	1.5 A		
Material data							
Contact/contact surface material	CuZn / Ni/Au						
Contact carrier material	PA 66						
Flammability rating according to UL 94	V0	V0	V0	V0	V0		
Cable type	TPE litz wire						
Temperature data							
Plug/socket	[-25 ... 85]			[-25 ... 85]			
Ordering data							
Description	Coding	Ordering data			Ordering data		
		Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
		4-pos.			12-pos.		
		5-pos.			17-pos.		
		8-pos.					
Device connectors							
Socket	A - standard	1419797	1	1441655	1	1441697	1
Plug	A - standard	1419784	1	1441642	1	1441710	1
Socket	D - data	1441639	1			1441736	1
Plug	D - data	1441626	1			1441723	1
Socket	B - inverse			1441671	1		
Plug	B - inverse			1441668	1		



Dimensions: socket



Dimensions: plug

M12 sensor/actuator device connector, front mounting

One-piece, 25 mm square flange, with 0.5 m long litz wires

- 4 x fixing hole, 2.7 mm
- With form seal for M2.5 screws



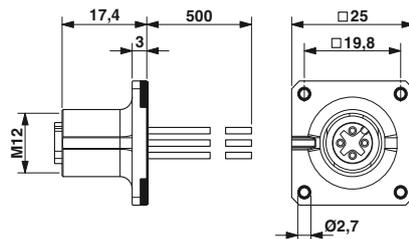
4-, 5-, 8-pos.



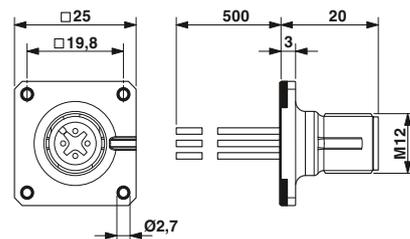
12-, 17-pos.



	Technical data			Technical data							
	4-pos.	5-pos.	8-pos.	12-pos.	17-pos.						
General data											
M12 circular connector according to:	IEC 61076-2-101										
Degree of pollution	3	3	3	3	3						
Degree of protection	IP67	IP67	IP67	IP67	IP67						
Connection method	Individual wires										
Electrical data											
Rated voltage	250 V	60 V	30 V	30 V	30 V						
Rated current	4 A	4 A	2 A	1.5 A	1.5 A						
Material data											
Contact/contact surface material	CuZn / Ni/Au										
Contact carrier material	PA 66										
Flammability rating according to UL 94	V0	V0	V0	V0	V0						
Cable type	TPE litz wire										
Temperature data											
Plug/socket	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85						
	Ordering data			Ordering data							
Description	Coding	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.	
Device connectors											
Socket	A - standard	1420003	1	1440986	1	1441574	1	1441590	1	1441613	1
Plug	A - standard	1419991	1	1440973	1	1441561	1	1441587	1	1441600	1
Socket	D - data	1440960	1								
Plug	D - data	1440957	1								
Socket	B - inverse			1441558	1						
Plug	B - inverse			1440999	1						



Dimensions: socket



Dimensions: plug

Circular connectors

M12 sensor/actuator device connector, front mounting

Modular, 25 mm square flange, pre-assembled



Flange housing, housing bore holes 3.2 mm



with 0.5 m long litz wires, assembled contact carrier and insulating body

ERC

Technical data

General data			
M12 circular connector according to:	IEC 61076-2-101		
Degree of pollution	-		
Degree of protection	-		
Connection method	-		
Electrical data			
Rated voltage	-		
Rated current	-		
Material data			
Contact/contact surface material	- / -		
Contact carrier material	-		
Cable gland material	Zinc die-cast, nickel-plated		
Flammability rating according to UL 94	-		
Cable type	-		
Temperature data			
Plug/socket	[°C]	-25 ... 85	

Ordering data

Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.	5-pos.	8-pos.			
Square flange housing, with O-ring		1419959	10				
Assembled contact carrier and insulating body, with 0.5 m litz wires and crimp contacts							
Plug	A - standard						
Plug	D - data						
Plug	B - inverse						

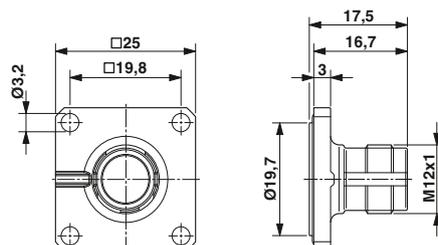
ERC

Technical data

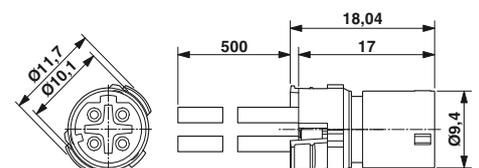
4-pos.	5-pos.	8-pos.
IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
3	3	3
IP67	IP67	IP67
Crimp contacts	Crimp contacts	Crimp contacts
250 V	60 V	30 V
4 A	4 A	2 A
CuZn / Au	CuZn / Au	CuZn / Au
PA 66	PA 66	PA 66
-	-	-
V0	V0	V0
TPE litz wire	TPE litz wire	TPE litz wire
-25 ... 85	-25 ... 85	-25 ... 85

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
4-pos.		5-pos.		8-pos.	
1440805	1	1440818	1	1457827	1
1440821	1	1440759	1		



M12 square flange housing



M12 contact carrier, with litz wires

Modular, 25 mm square flange,
for free assembly



Flange housing,
housing bore holes 3.2 mm



Contact carriers and
insulating bodies for assembly

ERC

Technical data

General data			
M12 circular connector according to:	IEC 61076-2-101		
Degree of pollution	-		
Degree of protection	-		
Connection method	-		
Electrical data			
Rated voltage	-		
Rated current	-		
Material data			
Contact carrier material	-		
Cable gland material	Zinc die-cast, nickel-plated		
Flammability rating according to UL 94	-		
Temperature data			
Plug/socket	[°C]	-25 ... 85	

Ordering data

Description	Coding	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.

Square flange housing, with O-ring

1419959 10

Contact carriers and insulating bodies

Plug A - standard
Plug D - data
Plug B - inverse

Crimp contacts, for 4- and 5-pos. contact carriers, contact material: CuZn, surface: gold-plated, connection cross section: 0.08 mm² ... 0.34 mm²

Contact Ø: 1.0 mm

Crimp contacts, for 8-pos. contact carriers, contact material: CuZn, surface: gold-plated, connection cross section: 0.08 mm² ... 0.34 mm²

Contact Ø: 0.8 mm

Crimping pliers, for turned contacts, universal cross section setting, up to a maximum of 2.5 mm², digital display with 0.01 mm increments, unlockable pressure lock, lateral entry, including positioning tool

for turned contacts, four-mandrel crimping

ERC

ERC

Technical data

4-pos.	5-pos.	8-pos.
IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
3	3	3
IP67	IP67	IP67
Crimp contacts	Crimp contacts	Crimp contacts
250 V	60 V	30 V
4 A	4 A	2 A
PA 66	PA 66	PA 66
-	-	-
V0	V0	V0
-25 ... 85	-25 ... 85	-25 ... 85

Ordering data

Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
4-pos.	5-pos.	8-pos.	Order No.	Pcs./ Pkt.	Order No.

1440931 10 1419988 10 1440928 10
1440944 10 1440915 10

1452356 100 1452356 100

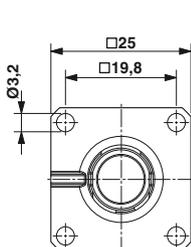
1452372 100

Accessories

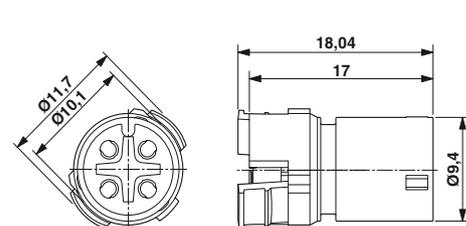
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Accessories

CRIMPFOX-TC MP	1212510	1
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M12 square flange housing



M12 contact carrier

Circular connectors

M12 sensor/actuator device connector, rear mounting

Pg9 fastening thread, with 0.5 m long litz wires



4-, 5-, 8-pos.



12-, 17-pos.

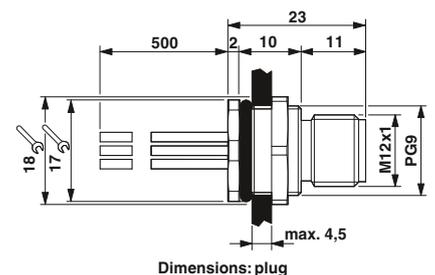
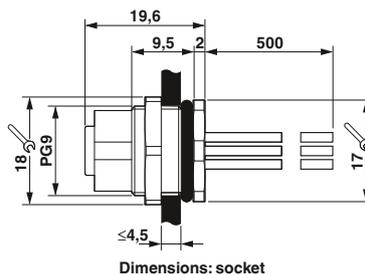


	Technical data					
	4-pos.		5-pos.		8-pos.	
General data	M12 circular connector according to:					
Degree of pollution	3		3		3	
Degree of protection	IP67		IP67		IP67	
Connection method	Individual wires		Individual wires		Individual wires	
Electrical data	250 V		60 V		30 V	
Rated voltage	4 A		4 A		2 A	
Rated current	CuZn / Au		CuZn / Au		CuZn / Au	
Contact/contact surface material	PA 66		PA 66		PA 66	
Contact carrier material	V0		V0		V0	
Flammability rating according to UL 94	TPE litz wire		TPE litz wire		TPE litz wire	
Cable type	-25 ... 85		-25 ... 85		-25 ... 85	
Temperature data	[°C]		[°C]		[°C]	
Plug/socket						

	Technical data					
	12-pos.		17-pos.			
General data	M12 circular connector according to:					
Degree of pollution	3		3		3	
Degree of protection	IP67		IP67		IP67	
Connection method	Individual wires		Individual wires		Individual wires	
Electrical data	30 V		30 V		30 V	
Rated voltage	1.5 A		1.5 A		1.5 A	
Rated current	CuZn / Au		CuZn / Au		CuZn / Au	
Contact/contact surface material	PA 66		PA 66		PA 66	
Contact carrier material	V0		V0		V0	
Flammability rating according to UL 94	TPE litz wire		TPE litz wire		TPE litz wire	
Cable type	-25 ... 85		-25 ... 85		-25 ... 85	
Temperature data	[°C]		[°C]		[°C]	
Plug/socket						

Description	Coding	Ordering data					
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
		4-pos.		5-pos.		8-pos.	
Socket	A - standard	1556621	1	1542729	1	1542732	1
Plug	A - standard	1556618	1	1542703	1	1542716	1
Socket	D - data	1551529	1				
Plug	D - data	1551532	1				
Socket	B - inverse			1543676	1		
Plug	B - inverse			1543663	1		

Order No.	Pcs./ Pkt.	12-pos.		17-pos.	
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
1430446	1	1430462	1		
1430459	1	1430475	1		



M12 sensor/actuator device connector, rear mounting

M12 fastening thread, with 0.5 m long litz wires



4-, 5-, 8-pos.



12-, 17-pos.



Technical data

Technical data

	4-pos.	5-pos.	8-pos.
General data			
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution	3	3	3
Degree of protection	IP67	IP67	IP67
Connection method	Individual wires	Individual wires	Individual wires
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Material data			
Contact/contact surface material	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA 66	PA 66	PA 66
Flammability rating according to UL 94	V0	V0	V0
Cable type	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data			
Plug/socket	-25 ... 85	-25 ... 85	-25 ... 85

	12-pos.	17-pos.
General data		
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution	3	3
Degree of protection	IP67	IP67
Connection method	Individual wires	Individual wires
Electrical data		
Rated voltage	30 V	30 V
Rated current	1.5 A	1.5 A
Material data		
Contact/contact surface material	CuZn / Au	CuZn / Au
Contact carrier material	PA 66	PA 66
Flammability rating according to UL 94	V0	V0
Cable type	TPE litz wire	TPE litz wire
Temperature data		
Plug/socket	-25 ... 85	-25 ... 85

Ordering data

Ordering data

Description	Coding	4-pos.		5-pos.		8-pos.	
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.

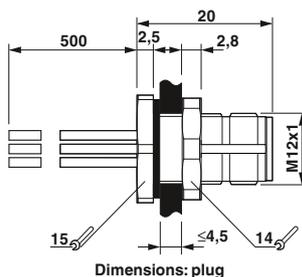
Description	Coding	12-pos.		17-pos.	
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.

Device connectors

Plug	A - standard
Plug	D - data
Plug	B - inverse

Plug	A - standard	1551875	1	1551888	1	1551914	1
Plug	D - data	1551901	1				
Plug	B - inverse			1551891	1		

Plug	A - standard	1437122	1	1437135	1
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Circular connectors

M12 sensor/actuator device connector, rear mounting

M16 fastening thread, with 0.5 m long litz wires



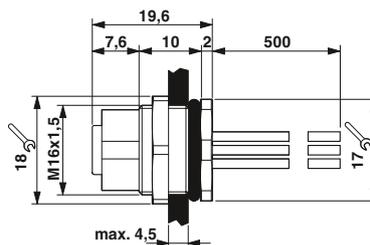
4-, 5-, 8-pos.



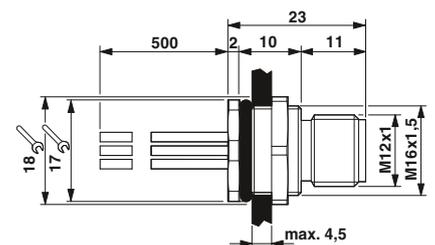
12-, 17-pos.



	Technical data			Technical data							
	4-pos.	5-pos.	8-pos.	12-pos.	17-pos.						
General data											
M12 circular connector according to:	IEC 61076-2-101										
Degree of pollution	3	3	3	3	3						
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67						
Connection method	Individual wires										
Electrical data											
Rated voltage	250 V	60 V	30 V	30 V	30 V						
Rated current	4 A	4 A	2 A	1.5 A	1.5 A						
Material data											
Contact/contact surface material	CuZn / Au										
Contact carrier material	PA 66										
Flammability rating according to UL 94	V0	V0	V0	V0	V0						
Cable type	TPE litz wire										
Temperature data											
Plug/socket	[-25 ... 85			[-25 ... 85							
Ordering data											
Description	Coding	Ordering data			Ordering data						
		Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.				
		4-pos.	5-pos.	8-pos.	12-pos.	17-pos.					
Device connectors											
Socket	A - standard	1419632	1	1419658	1	1419690	1	1419713	1	1419739	1
Plug	A - standard	1419629	1	1419645	1	1419687	1	1419700	1	1419726	1
Socket	D - data	1419616	1								
Plug	D - data	1419603	1								
Socket	B - inverse			1419674	1						
Plug	B - inverse			1419661	1						



Dimensions: socket



Dimensions: plug

M12 sensor/actuator device connector, rear mounting

**XL device connector,
M16 fastening thread,
with 0.5 m long litz wires**

- Tightening limitation
- Wrench size 19



4-, 5-, 8-pos.



12-, 17-pos.



	Technical data		
	4-pos.	5-pos.	8-pos.
General data			
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution	3	3	3
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67
Connection method	Individual wires	Individual wires	Individual wires
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Material data			
Contact/contact surface material	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA 66	PA 66	PA 66
Flammability rating according to UL 94	V0	V0	V0
Cable type	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data			
Plug/socket	-25 ... 85	-25 ... 85	-25 ... 85



	Technical data	
	12-pos.	17-pos.
General data		
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution	3	3
Degree of protection	IP65/IP67	IP65/IP67
Connection method	Individual wires	Individual wires
Electrical data		
Rated voltage	30 V	30 V
Rated current	1.5 A	1.5 A
Material data		
Contact/contact surface material	CuZn / Au	CuZn / Au
Contact carrier material	PA 66	PA 66
Flammability rating according to UL 94	V0	V0
Cable type	TPE litz wire	TPE litz wire
Temperature data		
Plug/socket	-25 ... 85	-25 ... 85

Description	Coding	Ordering data					
		4-pos.		5-pos.		8-pos.	
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.

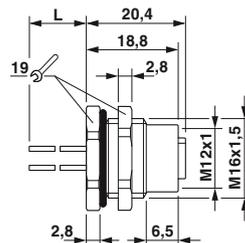
Description	Coding	Ordering data			
		12-pos.		17-pos.	
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.

Device connectors

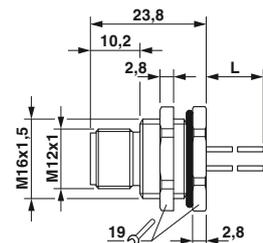
Socket	A - standard		
Plug	A - standard		
Socket	D - data		
Plug	D - data		
Socket	B - inverse		
Plug	B - inverse		

Socket	A - standard	1411584	1	1411586	1	1411588	1
Plug	A - standard	1411591	1	1411593	1	1411595	1
Socket	D - data	1411585	1				
Plug	D - data	1411592	1				
Socket	B - inverse			1411587	1		
Plug	B - inverse			1411594	1		

Socket	A - standard	1411589	1	1411590	1
Plug	A - standard	1411596	1	1411597	1



Dimensions: socket



Dimensions: plug

Circular connectors

M12 sensor/actuator device connector, rear mounting

M16 fastening thread, with assembled cable, shielded



PUR cable,
4-, 5-, 8-pos.,
shielded

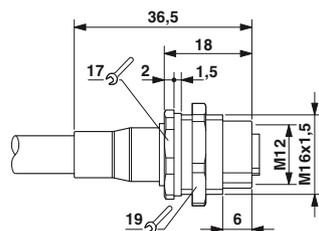


PVC cable,
12-, 17-pos.,
shielded

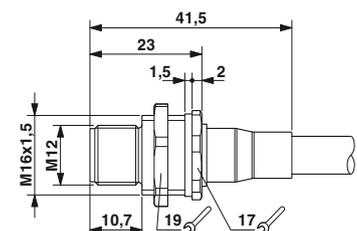
ERC

ERC

	Technical data						
	4-pos.		5-pos.		8-pos.		
General data	M12 circular connector according to:						
Degree of pollution	3		3		3		
Degree of protection	IP67		IP67		IP67		
Connection method	Individual wires		Individual wires		Individual wires		
Electrical data	250 V		60 V		30 V		
Rated voltage	4 A		4 A		2 A		
Rated current	CuZn / Au		CuZn / Au		CuZn / Au		
Contact/contact surface material	PA 66		PA 66		PA 66		
Contact carrier material	V0		V0		V0		
Flammability rating according to UL 94	PUR halogen-free black		PUR halogen-free black		PUR halogen-free black		
Cable type	PVC black		PVC black		PVC black		
Temperature data	-25 ... 85		-25 ... 85		-25 ... 85		
Plug/socket	[°C]		[°C]		[°C]		
		Ordering data					
Description	Cable length	4-pos.		5-pos.		8-pos.	
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
Device connector, A-coded							
Socket	1 m	1419302	1	1419328	1	1419357	1
Plug	1 m	1419399	1	1419409	1	1419425	1
Socket	2 m	1419315	1	1419331	1	1419344	1
Plug	2 m	1419386	1	1419412	1	1419438	1



Dimensions: socket



Dimensions: plug

Pg9 fastening thread, plastic, with 0.5 m long litz wires



5-, 8-pos.

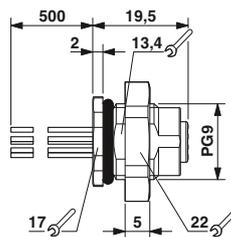
ERC

Technical data

	5-pos.	8-pos.
General data		
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution	3	3
Degree of protection	IP67	IP67
Electrical data		
Rated voltage	60 V	30 V
Rated current	4 A	2 A
Material data		
Contact/contact surface material	CuZn / Au	CuZn / Au
Contact carrier material	PA 66	PA 66
Flammability rating according to UL 94	HB	HB
Temperature data		
Plug/socket	-25 ... 85	-25 ... 85

Ordering data

Description	Coding	5-pos.		8-pos.	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Device connectors					
Socket	A - standard	1436356	1	1436369	1



Dimensions: socket

Circular connectors

M12 sensor/actuator device connector, rear mounting

M16 fastening thread, control cabinet feed-through



4-, 5-, 8-pos.

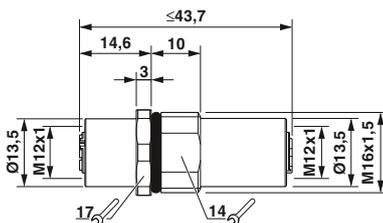
ERC

Technical data

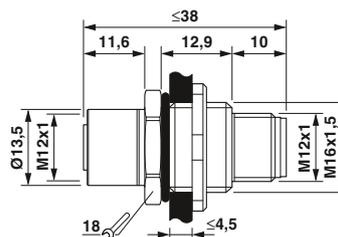
	4-pos.	5-pos.	8-pos.
General data			
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution	3	3	3
Degree of protection	IP67	IP67	IP67
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Material data			
Contact material	CuZn	CuZn	CuZn
Contact surface material	Au	Au	Au
Contact carrier material	PA 66	PA 66	PA 66
Flammability rating according to UL 94	HB	HB	HB
Temperature data			
Plug/socket	-25 ... 85	-25 ... 85	-25 ... 85

Ordering data

Description	Coding	4-pos.		5-pos.		8-pos.	
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
Control cabinet feed-through, M16 fastening thread							
Plug on socket	A - standard			1551671	1	1551697	1
Plug on socket	B - inverse			1551684	1		
Socket to socket	D - data	1424326	1				



Control cabinet feed-through, socket to socket on both sides



Control cabinet feed-through, socket to pin on both sides

Sealing elements

During transport or when in the field, unused plug-in connections must be protected or sealed. Plastic or metal screw plugs, sealing caps, and sealing plugs can be used for this. IP65/IP67 and IP69K protection is achieved.



Description	Ordering data		
	Type	Order No.	Pcs./Pkt.
M5 screw plug ① for unused M5 sockets of sensor/actuator cables, boxes, and device connectors	PROT-M5	1533288	10
M8 screw plug ② for unused M8 sockets of sensor/actuator cables, boxes, and device connectors	PROT-M8	1682540	5
M12 screw plug ③ for unused M12 sockets of sensor/actuator cables, boxes, and device connectors	PROT-M12	1680539	5
M12 screw plug with SPEEDCON fast locking system ④ for unused M12 sockets of sensor/actuator cables, boxes, and device connectors	PROT-MS SCO	1553129	5
M12 sealing cap ⑤ for unused M12 connectors of sensor/actuator cables, device connectors, and I/O devices in the field	PROT-M12 FS	1560251	5
M12 screw plug, metal ⑥ for unused M12 sockets of shielded sensor/actuator cables, boxes, and device connectors	PROT-M12 SH	1503302	5
Metal M12 sealing cap ⑦ for unused M12 connectors of sensor/actuator cables, device connectors, and I/O devices in the field	PROT-M12 FS-M	1430488	10
for unused M12 sockets	PROT-M12 MS-M	1414148	10
Stainless steel M12 screw plug ⑧ for unused M12 sockets of sensor/actuator cables, boxes, and device connectors in the food and outdoor range	PROT-M12 FB	1555538	5
Closing cap ⑨ for Pg9/ Pg11, to close unoccupied connections	Q-PROT 9/11	1670235	10
M16 screw plug ⑩ With flat nut for oval housing cutouts	SACC-M16-SEALING PLUG SET	1453368	10

Sealing elements with holding band or fixing chain

All IP67 interfaces can be closed tightly using the screw plugs and sealing caps in the sizes M8, M12 and 7/8". The holding bands are fastened on the cable or the housing and are thus held in place.

The M12 metal protective cap with fixing chain is suitable for all pin versions. It is used in harsh industrial environments or for EMC applications.



Description	Ordering data		
	Type	Order No.	Pcs./Pkt.
Screw plug made from plastic with retaining strap, for sealing unused sockets ①			
M8 for SAC cables	PROT-M 8 MS-PA-CHAIN	1430860	10
M8 with 3 mm fastening eye	PROT-M 8 MS-PA-CHAIN-EYE-DM3	1441105	10
M8 with 12 mm fastening eye	PROT-M 8 MS-PA-CHAIN-EYE	1441095	10
M12 for SAC cables	PROT-M12 MS-PA-CHAIN	1430899	5
M12 with 15 mm fastening eye	PROT-M12 MS-PA-CHAIN-EYE-DM14	1456200	5
7/8" for SAC cables	PROT-MINMS-PA-CHAIN	1430925	10
Plastic sealing cap with holding band, for closing unoccupied connectors ②			
M8 for SAC cables	PROT-M 8 FS-PA-CHAIN	1430857	10
M8 with 8 mm fastening eye	PROT-M 8 FS-PA-CHAIN-EYE	1441082	10
M12 for SAC cables	PROT-M12 FS-PA-CHAIN	1430873	5
M12 with 12 mm fastening eye	PROT-M12 FS-PA-CHAIN-EYE-DM12	1456187	5
M12 with 15 mm fastening eye	PROT-M12 FS-PA-CHAIN-EYE-DM14	1456190	5
7/8" for SAC cables	PROT-MINFS-PA-CHAIN	1430912	10
Sealing cap made of metal with fixing chain and 16 mm fastening eye, for sealing: ③			
unused M12 connectors	PROT-M12 FS-M-CHAIN	1430491	10
unused M12 sockets	PROT-M12 MS-M-CHAIN	1414147	1

Accessories for device connectors

Special fixing nuts are available for EMC-compliant installation of M12 device connectors for coated or painted housing surfaces. When tightened they cut through the surface coating and establish contact between the housing and the connector.

Alternatively, flat gaskets can be used to provide the seal between the housing panel and device plug. This means that the housing cutouts no longer need to be chamfered for thin panels.



Description	Ordering data		
	Type	Order No.	Pcs./Pkt.
EMC hexagonal nut with fine tooting, For all device connectors with: ①			
M12 fastening thread	SACC-M12-KD-NUT-SH	1440151	10
EMC hexagonal nut with fine tooting, For all device connectors with: ②			
M16 fastening thread	SACC-M16-KD-NUT-SH	1440164	10
Pg9 fastening thread	SACC-PG9-KD-NUT-SH	1440177	10
Flat gasket for all device connectors with: ③			
M16 fastening thread	SACC-M16-SEAL CLM	1430394	10
Pg9 fastening thread	SACC-PG9-SEAL CLM	1556320	10

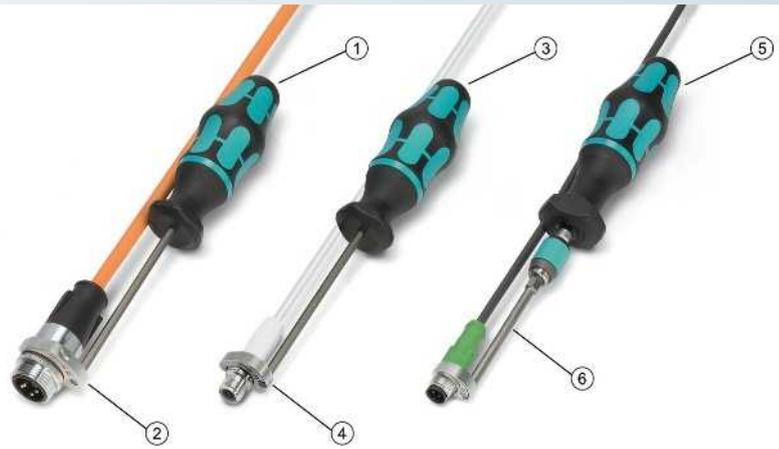
Assembly tools for sensor/actuator cables

To achieve tight plug-in connections, we recommend using assembly tools. M12 and 7/8" circular connectors can be assembled using a torque screwdriver and plug attachment.

The benefits of the plug attachment become particularly clear when connecting the connectors to the distributor boxes. Thanks to the open design, it enables quick adjustment and installation even when space is at a premium.

The version for M12 connectors with hexagonal high-grade steel knurl is also made from high-grade steel. This prevents the connector knurls from being contaminated by corrosive materials.

For greater flexibility, screwdrivers with adjustable torque are available. When used in conjunction with the adapter insert, the available nuts can also be accommodated.

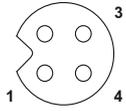


		Ordering data		
Description		Type	Order No.	Pcs./Pkt.
Torque screwdriver	①			
With a preset torque of 0.8 Nm and a 4 mm hexagonal drive		TSD 08 SAC	1212597	1
Nut	②			
For assembling 7/8" connectors, with a knurl diameter of 25 mm, with 4 mm hexagonal drive		SAC BIT MIN-D25	1212512	1
Torque screwdriver	③			
With preset torque of 0.4 Nm and 4 mm hexagonal drive		TSD 04 SAC	1208429	1
Nut	④			
For assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a hexagonal knurl wrench size of 14 mm, with 4 mm hexagonal drive		SAC BIT M12-W14	1212513	1
Torque screwdriver , accuracy according to standard EN ISO 6789	⑤			
Adjustable from 0.3 - 1.2 Nm		TSD-M 1,2NM	1212224	1
Adjustable from 1.2 - 3 Nm		TSD-M 3NM	1212225	1
Adjustable from 3 - 6 Nm		TSD-M 6NM	1212226	1
Adapter insert	⑥			
For torque screwdrivers with adjustable torque, for accommodating plug attachments with 4 mm hexagonal drive		TSD-M SAC-BIT ADAPTER	1212600	1

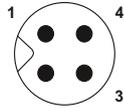
Circular connectors

Pin assignments

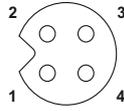
M5 device connectors



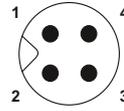
Socket, 3-pos.



Pin, 3-pos.



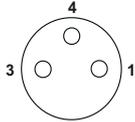
Socket, 4-pos.



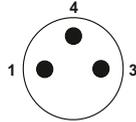
Pin, 4-pos.

Pin	3-pos.		4-pos.	
1	BN		BN	
2	-		WH	
3	BU		BU	
4	BK		BK	

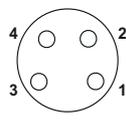
M8 device connectors



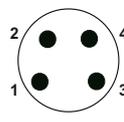
Socket, 3-pos.



Pin, 3-pos.

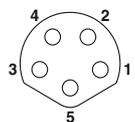


Socket, 4-pos.

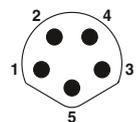


Pin, 4-pos.

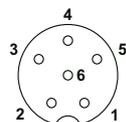
Pin	3-pos., A-coded		4-pos., A-coded	
1	BN		BN	
2	-		WH	
3	BU		BU	
4	BK		BK	



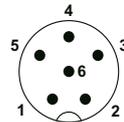
Socket, 5-pos., B-coded



Pin, 5-pos., B-coded

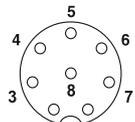


Socket, 6-pos.

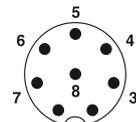


Pin, 6-pos.

Pin	5-pos. B-coded		6-pos., A-coded	
1	GY		BN	
2	RD		WH	
3	WH		BU	
4	BK		BK	
5	BU		GY	
6			PK	



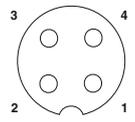
Socket, 8-pos.



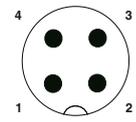
Pin, 8-pos.

Pin	8-pos., A-coded	
1	WH	
2	BN	
3	GN	
4	YE	
5	GY	
6	PK	
7	BU	
8	RD	

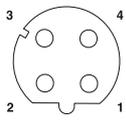
M12 device connectors



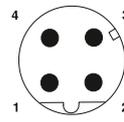
Socket, 4-pos., A-coded



Pin, 4-pos., A-coded

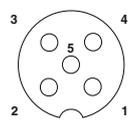


Socket, 4-pos., D-coded

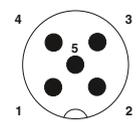


Pin, 4-pos., D-coded

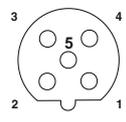
Pin	4-pos., A-coded		4-pos., D-coded	
1	BN		YE	
2	WH		WH	
3	BU		OG	
4	BK		BU	



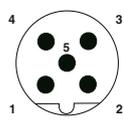
Socket, 5-pos., A-coded



Pin, 5-pos., A-coded

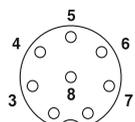


Socket, 5-pos., B-coded

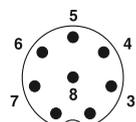


Pin, 5-pos., B-coded

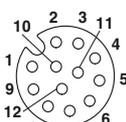
Pin	5-pos., A-coded		5-pos., B-coded	
1	BN		BN	
2	WH		WH	
3	BU		BU	
4	BK		BK	
5	GY		GY	



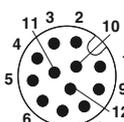
Socket, 8-pos.



Pin, 8-pos.



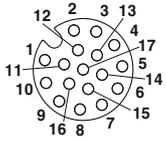
Socket, 12-pos.



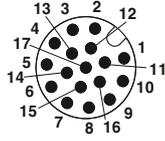
Pin, 12-pos.

Pin	8-pos.		12-pos.	
1	WH		BN	
2	BN		BU	
3	GN		WH	
4	YE		GN	
5	GY		PK	
6	PK		YE	
7	BU		BK	
8	RD		GY	
9	-		RD	
10	-		VT	
11	-		GYPK	
12	-		RDBU	

M12 device connectors



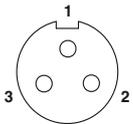
Socket, 17-pos.



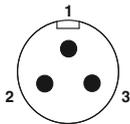
Pin, 17-pos.

Pin	17-pos.	Pin	17-pos.
1	BN	9	RD
2	BU	10	VT
3	WH	11	GYPK
4	GN	12	RDBU
5	PK	13	WHGN
6	YE	14	BNGN
7	BK	15	WHYE
8	GY	16	YEEN
		17	WHGY

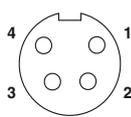
7/8" device connectors



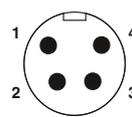
Socket, 3-pos.



Pin, 3-pos.

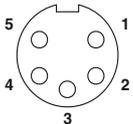


Socket, 4-pos.

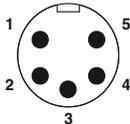


Pin, 4-pos.

Pin	3-pos.	4-pos.
1	BK	BK
2	BN	BU
3	BU	BN
4	-	WH



Socket, 5-pos.



Pin, 5-pos.

Pin	5-pos.
1	BK
2	BU
3	GNYE
4	BN
5	WH

Mechanical and electrical data

Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Connection technology:	Crimp connection
Sealing and O-ring:	Fluororubber (FKM)
Ambient temperature:	-40°C ... 125°C
Cable entry:	Cable and coupler connectors for an outer cable diameter of 3.5 to 11 mm, shielded (M17 Compact) 5 to 12.5 mm, shielded (M17)
Type of locking:	M17 SPEEDCON fast locking system, cable connector With M17 x 1 coarse-pitch thread as an option
Mechanical insertion/withdrawal cycles:	Standard: 100, punched-rolled C-HC crimp contacts: up to 600
Protection class:	IP67 when locked

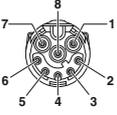
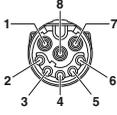
Electrical data			
Number of positions		8	17
Contacts		8	17
Contact Ø	[mm]	1	0.6
Litz wire cross section, crimp contacts Turned	[mm ²]	0.06 ... 1.0	0.06 ... 0.5
Litz wire cross section, C-HC crimp contacts Punched-rolled	[mm ²]	0.06 ... 0.56	–
Nominal current per contact at 25°C ¹⁾		8.0	3.6
Specifications according to DIN EN 61984:2009			
Rated voltage	[V AC/DC]	60	60
Test/surge voltage	[kV AC]	1.5	1.5
Overvoltage category		III	III
Pollution degree ²⁾		3	3
Installation height	[m]	Up to 3000	Up to 3000
Cable clamping area ³⁾	Max. Ø [mm]	12.5	12.5

¹⁾ Determine the effective current carrying capacity according to the application, if necessary, using a derating curve.

²⁾ The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, seal the connector using a protective cap ≥ IP54.

³⁾ The cable clamping areas specified on the following pages may vary depending on the cable material and structure. Selection and testing is the responsibility of the user.

Contact chamber numbering
(view of plug-in side)

Number of positions	Pin	Socket
<p>8-pos. Crimp</p>		
<p>17-pos. Crimp</p>		

Note:

The connectors can be fitted with pin or socket contacts according to the application.

For safety reasons, only use socket contacts in the live part of the connector.

Circular connectors

M17 – signal connectors

Selection guide

M17 signal connectors, 8- and 17-pos., crimp ranges: 0.06 mm² to 1.0 mm²

- Cable connectors
- Coupler connectors
- Device connectors (device flanges)

The connectors are pre-assembled on delivery. The connectors can be extended with the corresponding crimp contacts.

Every housing type can be fitted with pin or socket contacts.

The connectors with knurled nuts can be equipped with the SPEEDCON fast locking system or with M17 x 1 coarse-pitch thread as an option. The connectors with external thread are fully compatible with standard threads and the SPEEDCON fast locking system.

The product chart provides an overview of the available components.

Connector type

Cable connectors

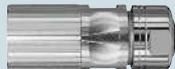
SPEEDCON fast locking system, M17 Compact, see page 60.



M17, see page 64.



M17 x 1 standard interlocking, M17, see page 65.



Square mounting flange for M17 cable and coupler connectors for wall mounting, see page 182.



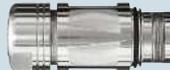
Shielded

Coupler connectors/panel feed-throughs

Coupler connector M17 Compact, see page 61.



M17, see page 66.



Panel feed-through M17 Compact, see page 62.



Shielded

Device connectors

Straight, M17 Compact, see page 63.



Straight, M17, see page 67.



Straight, with central fastening thread, front mounting, M17, see page 69.



Straight, with central fastening thread, rear mounting, M17, see page 69.



Shielded

Angled, rotatable, M17, see page 68.



Crimp contacts

Socket contacts

Turned, see page 71.



Punched-rolled, taped, see page 70.



Pin contacts

Turned, see page 71.



Punched-rolled, taped, see page 70.



All housings can be fitted with pin or socket crimp contacts

Tools/accessories

Crimping tools

Crimping pliers for punched-rolled C-HC crimp contacts, see page 178.



Crimping pliers with digital display for turned crimp contacts, see page 179.



Tools/accessories

Unlocking tool for device connectors with contact carriers for snapping in from the device side, see page 182.



Color rings for individually marking the connectors, see page 184.

**Note:**

For safety reasons, only use socket contacts in the live part of the connector.

Circular connectors

M17 – signal connectors

Cable connector, M17 Compact

- High packing density in a compact product
- Individual marking of connectors with color rings

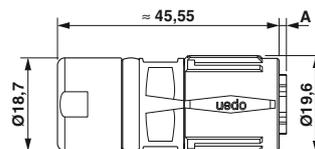


Cable connector, socket assembly



Cable connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		8-pos.		17-pos.		8-pos.		17-pos.	
Cable connector, with contact carrier, without contacts									
	3.5 mm ... 5.5 mm	1613370	1	1613288	1	1618641	1	1618682	1
	5 mm ... 9.2 mm	1613371	1	1613324	1	1618648	1	1618683	1
	9 mm ... 11.2 mm	1613372	1	1613325	1	1618649	1	1618684	1
		Accessories				Accessories			
Crimp contacts		For socket contacts, see page 70 onwards				For pin contacts, see page 70 onwards			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



Coupler connector, M17 Compact

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings

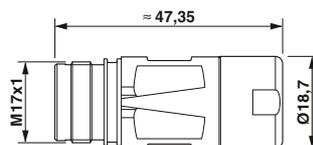


Coupler connector, socket assembly



Coupler connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Coupler connector, with contact carrier, without contacts		8-pos.		17-pos.		8-pos.		17-pos.	
	3.5 mm ... 5.5 mm	1618724	1	1618756	1	1617799	1	1613497	1
	5 mm ... 9.2 mm	1618725	1	1618757	1	1617813	1	1613896	1
	9 mm ... 11.2 mm	1618726	1	1618758	1	1617830	1	1614532	1
		Accessories				Accessories			
Crimp contacts		For socket contacts, see page 70 onwards				For pin contacts, see page 70 onwards			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



Circular connectors

M17 – signal connectors

Panel feed-through, M17 Compact

- Panel feed-throughs suitable for front and rear mounting
- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings
- **Flange dimensions**
25.7 mm x 25.7 mm

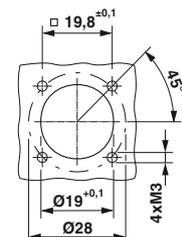
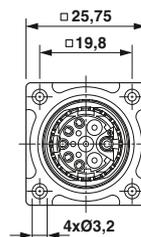
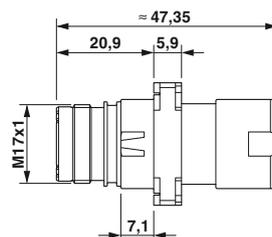


Panel feed-through, socket assembly



Panel feed-through, pin assembly

Description		Ordering data		Ordering data		Ordering data		Ordering data	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Cable clamping area		8-pos.		17-pos.		8-pos.		17-pos.	
Panel feed-through, with contact carrier, without contacts									
	3.5 mm ... 5.5 mm	1618801	1	1618834	1	1617925	1	1617863	1
	5 mm ... 9 mm	1618802	1	1618835	1	1617929	1	1617872	1
	9 mm ... 11 mm	1618805	1	1618836	1	1617932	1	1617873	1
		Accessories				Accessories			
Crimp contacts		For socket contacts, see page 70 onwards				For pin contacts, see page 70 onwards			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



Installation dimensions

**Device connector,
M17 Compact,
front mounting**

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings
- **Flange dimensions:
21.6 mm x 21.6 mm**



Device connector, straight, socket assembly



Device connector, straight, pin assembly

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	8-pos.		17-pos.

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	8-pos.		17-pos.

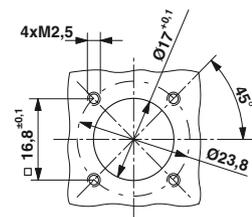
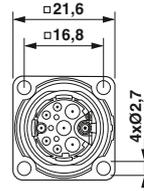
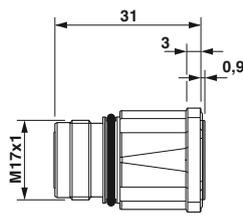
Description			
Device connector, with contact carrier, without contacts, contact insert for support on the device			
Device connector, with contact carrier, without contacts, contact insert can be snapped in			

1619039	1	1607654	1
1619038	1	1607653	1

1613286	1	1607636	1
1619037	1	1607634	1

Accessories	
Crimp contacts	For socket contacts, see page 70 onwards
Color rings, 50 pcs. in set (to be ordered separately)	See page 184
Dust protection caps (to be ordered separately)	See page 186
Unlocking tool for contact carriers	See page 182

Accessories	
Crimp contacts	For pin contacts, see page 70 onwards
Color rings, 50 pcs. in set (to be ordered separately)	See page 184
Dust protection caps (to be ordered separately)	See page 186
Unlocking tool for contact carriers	See page 182



Installation dimensions

Circular connectors

M17 – signal connectors

Cable connector, SPEEDCON fast locking system

– Individual marking of connectors with color rings

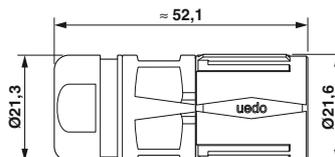


Cable connector, socket assembly



Cable connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		8-pos.		17-pos.		8-pos.		17-pos.	
Cable connector, with contact carrier, without contacts									
	5 mm ... 8 mm	1619007	1	1607642	1	1618999	1	1607625	1
	8 mm ... 10 mm	1619008	1	1607644	1	1619000	1	1607627	1
	10 mm ... 12.5 mm	1619009	1	1624532	1	1619001	1	1624529	1
		Accessories				Accessories			
Crimp contacts		For socket contacts, see page 70 onwards				For pin contacts, see page 70 onwards			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



Cable connector, M17 standard locking

- Standard knurled nut compatible with mating connectors with SPEEDCON and M17 standard external thread
- Individual marking of connectors with color rings

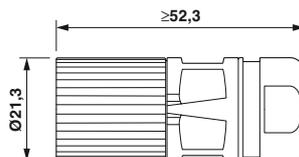


Cable connector, socket assembly



Cable connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Cable connector, with contact carrier, without contacts		8-pos.		17-pos.		8-pos.		17-pos.	
	5 mm ... 8 mm	1619003	1	1607641	1	1618995	1	1607624	1
	8 mm ... 10 mm	1619004	1	1607643	1	1618996	1	1607626	1
	10 mm ... 12.5 mm	1619005	1	1624531	1	1618997	1	1624528	1
		Accessories				Accessories			
Crimp contacts		For socket contacts, see page 70 onwards				For pin contacts, see page 70 onwards			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



Circular connectors

M17 – signal connectors

Coupler connectors

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings

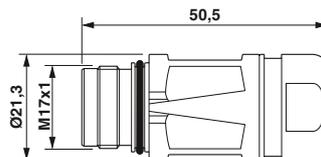


Coupler connector, socket assembly



Coupler connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Coupler connector, with contact carrier, without contacts		8-pos.		17-pos.		8-pos.		17-pos.	
	5 mm ... 8 mm	1619015	1	1607647	1	1619011	1	1607630	1
	8 mm ... 10 mm	1619016	1	1607649	1	1619012	1	1607631	1
	10 mm ... 12.5 mm	1619017	1	1624533	1	1619013	1	1624530	1
		Accessories				Accessories			
Crimp contacts		For socket contacts, see page 70 onwards				For pin contacts, see page 70 onwards			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



Device connector, straight, front mounting

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Contact insert for support on the device or can be snapped in
- Individual marking of connectors with color rings



Device connector, straight, socket assembly



Device connector, straight, pin assembly

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	8-pos.		17-pos.

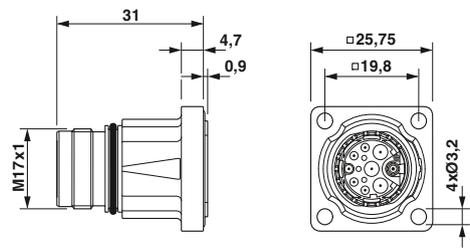
Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	8-pos.		17-pos.

Description			
Device connector, with contact carrier, without contacts, contact insert for support on the device			
Flange dimensions: 25.75 mm x 25.75 mm	1619197	1	1619206
Device connector, with contact carrier, without contacts, contact insert can be snapped in			
Flange dimensions: 25.75 mm x 25.75 mm	1619220	1	1619226

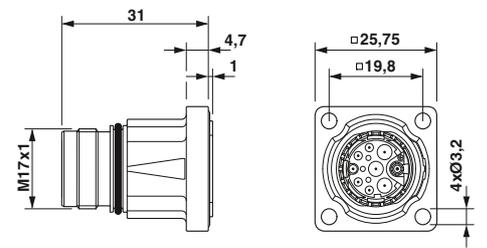
Accessories	
For socket contacts, see page 70 onwards	
See page 184	
See page 186	
See page 182	

Accessories	
For pin contacts, see page 70 onwards	
See page 184	
See page 186	
See page 182	

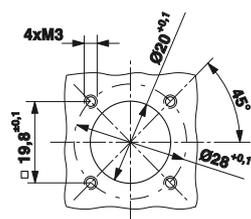
Crimp contacts
Color rings, 50 pcs. in set (to be ordered separately)
Dust protection caps (to be ordered separately)
Unlocking tool for contact carriers



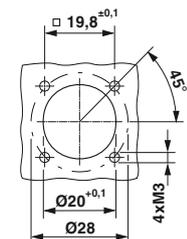
Contact insert for support on the device



Contact insert can be snapped in



Installation dimensions



Installation dimensions

Circular connectors

M17 – signal connectors

Device connector, angled, rotatable, front mounting

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Housing can be freely rotated up to 308°
- Individual marking of connectors with color rings
- Flange versions for M2.5 or M3 fixing

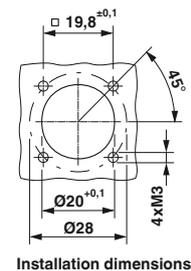
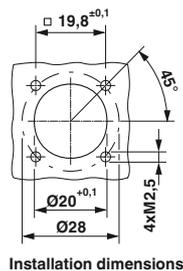
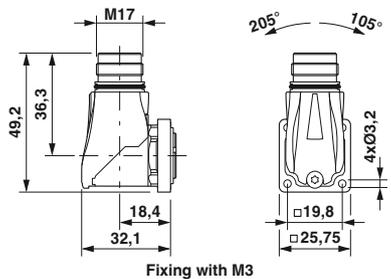
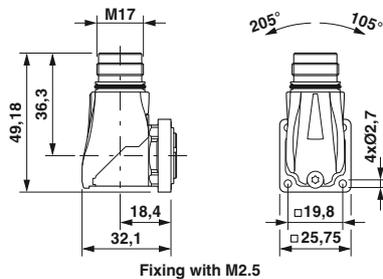


Device connector, angled, rotatable, for socket contacts



Device connector, angled, rotatable, for pin contacts

Description	Ordering data				Ordering data				
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	
	8-pos.		17-pos.		8-pos.		17-pos.		
Device connector, angled, rotatable, with contact carrier, without contacts									
Fixing with M2.5 Device connector, angled, rotatable, with contact carrier, without contacts	1620440	1	1620442	1	1620439	1	1620441	1	
Fixing with M3	1620455	1	1620457	1	1620456	1	1620458	1	
		Accessories				Accessories			
Crimp contacts	For socket contacts, see page 70 onwards				For pin contacts, see page 70 onwards				
Color rings, 50 pcs. in set (to be ordered separately)	See page 184				See page 184				
Dust protection caps (to be ordered separately)	See page 186				See page 186				



Device connector, central fastening thread, front and rear mounting

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Snapping in the contact carriers from the device side
- Individual marking of connectors with color rings



Device connector, central fixing, socket assembly



Device connector, central fixing, pin assembly

Description
Device connector, front mounting, M18 x 0.75 fastening thread, with contact carrier, without contacts
Device connector, rear mounting, M20 x 1.5 fastening thread, with contact carrier, without contacts

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	8-pos.		17-pos.
1619036	1	1613542	1
1619035	1	1613543	1

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	8-pos.		17-pos.
1618584	1	1613540	1
1619034	1	1613541	1

Description
Locking nut, for mounting bore holes and polarization
M18 x 0.75
M20 x 1.5
Crimp contacts
Color rings, 50 pcs. in set (to be ordered separately)
Dust protection caps (to be ordered separately)
Unlocking tool for contact carriers

Accessories		
Type	Order No.	Pcs. / Pkt.
ST-E2015151	1613831	10
RC-13041	1600417	10

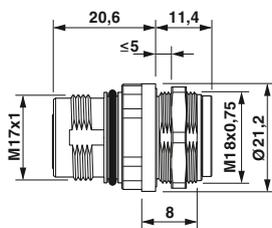
For socket contacts, see page 70 onwards
See page 184

See page 186
See page 182

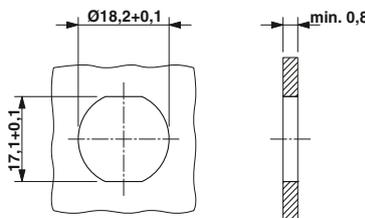
Accessories		
Type	Order No.	Pcs. / Pkt.
ST-E2015151	1613831	10
RC-13041	1600417	10

For pin contacts, see page 70 onwards
See page 184

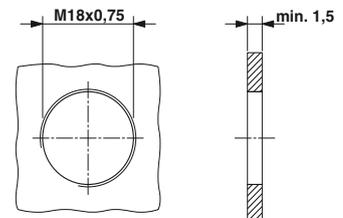
See page 186
See page 182



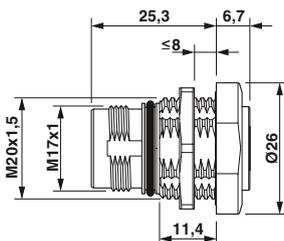
Front mounting, M18 x 0.75, order locking nut separately



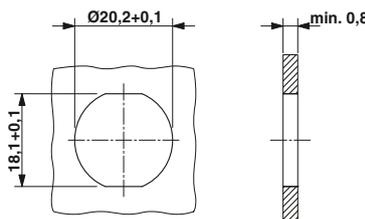
Installation dimensions: mounting with anti-rotation protection and locking nut



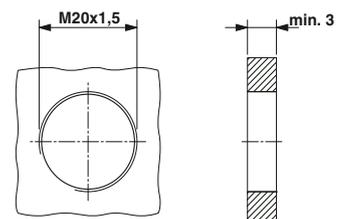
Installation dimensions: mounting with thread



Rear mounting, M20 x 1.5, order locking nut separately



Installation dimensions: mounting with anti-rotation protection and locking nut



Installation dimensions: mounting with thread

Circular connectors

M17 – signal connectors

Crimp contacts, punched-rolled

C-HC® are punched-rolled contacts. They are designed for high insertion/withdrawal cycles.

The contacts are available as taped on rolls for manual or automatic processing.

Note: depending on the litz wire used, the connection cross sections (crimp ranges) may deviate from the listed values. For safety reasons, only use socket contacts in the live part of the plug.



C-HC socket contacts



C-HC pin contacts

Description	Connection cross section [mm²]
Crimp contacts , C-HC punched-rolled, Ø 1.0 mm, 2500 pcs./roll	0.06 ... 0.25
	0.2 ... 0.56
Crimp contact C-HC punched-rolled, Ø 1.0 mm, 10,000 pcs./roll	0.06 ... 0.25
	0.2 ... 0.56

Crimping tools

Ordering data		
Type	Order No.	Pcs. / Pkt.
SF-10KS320	1607031	1
SF-10KS350	1607032	1
SF-10KS330	1607358	1
SF-10KS360	1607361	1

Accessories
Order separately, see page 178

Ordering data		
Type	Order No.	Pcs. / Pkt.
SF-10KP320	1615961	1
SF-10KP350	1615963	1
SF-10KP330	1615962	1
SF-10KP360	1615964	1

Accessories
Order separately, see page 178

Crimp contacts, turned

Depending on the number of positions, assemble the M17 signal connectors with Ø 1.0 mm or Ø 0.6 mm contacts.
 – 8-pos. versions: contacts with Ø 1.0 mm
 – 17-pos. versions: contacts with Ø 0.6 mm

Note:

Depending on the litz wire used, the connection cross sections (crimp ranges) can differ from the values mentioned below.



Crimp contacts, socket



Crimp contacts, pin

		Ordering data			Ordering data		
Description	Connection cross section [mm²]	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Contact socket Ø 0.6 mm	0.06 ... 0.25	ST-06KS010	1607580	100			
	0.14 ... 0.34	ST-06KS020	1607581	100			
	0.34 ... 0.50	ST-06KS030	1607582	100			
Contacts, Ø 1.0 mm, for signal	0.06 ... 0.25	ST-10KS010	1618239	100			
	0.34 ... 0.50	ST-10KS020	1618251	100			
	0.5 ... 1.0	ST-10KS030	1618254	100			
Contact pin Ø 0.6 mm	0.06 ... 0.25				ST-06KP010	1607577	100
	0.14 ... 0.34				ST-06KP020	1607578	100
	0.34 ... 0.50				ST-06KP030	1607579	100
Contacts, Ø 1.0 mm, for signal	0.06 ... 0.25				ST-10KP010	1618255	100
	0.34 ... 0.50				ST-10KP020	1618256	100
	0.5 ... 1.0				ST-10KP030	1618261	100
		Accessories			Accessories		
Crimping tools		Order separately, see page 179			Order separately, see page 179		

Notes:
 Each connector housing type can be assembled with pin or socket contacts.

For safety reasons, only use socket contacts in the live part of the plug.

Mechanical and electrical data

Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Thermoplastic polyester (PBT), polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Connection technology:	Solder cup, crimp connection, solder pin
Sealing and O-ring:	NBR
Flat gasket:	NBR, fiber-reinforced NBR
Temperature range:	-40°C ... +125°C
Cable entry:	Cable and coupler connectors for an outer cable diameter of 3 to 14.5 mm, shielded
Type of locking:	M23 SPEEDCON fast locking system, cable connector with M23 x 1 coarse-pitch thread as an option
Mechanical insertion/withdrawal cycles:	Standard: 100, punched-rolled C-HC crimp contacts: up to 500
Protection class:	IP67 when locked

Electrical data									
Number of positions	6	7	9 (8 + 1)		12	17	19 (16 + 3)		19 (16 + 2 + PE)
Contacts	6	7	8	+ 1	12	17	16	+ 3	16 + 2 + PE
Contact Ø [mm]	2	2	1	2	1	1	1	1.5	1 1.5
Litz wire cross section									
Solder connection: contacts x [mm ²] maximum	6 x 2.5	7 x 2.5	8 x 1.0 + 1 x 2.5		12 x 1.0	17 x 1.0	16 x 1.0 + 3 x 1.0		–
Crimp connection: contacts x [mm ²] maximum	6 x 2.5	7 x 2.5	8 x 0.56 + 1 x 2.5		12 x 0.56	17 x 0.56	–		16 x 1.0 + 3 x 1.0
Nominal current per contact at 25°C ¹⁾	20	20	8	20	8	8	8	10	8 10
Specifications according to DIN EN 61984:2009									
Rated voltage [V AC/DC]	300	300	300		150	150	150		150
Test/surge voltage [kV AC]	2.5	2.5	2.5		1.5	1.5	1.5		1.5
Overvoltage category	II	II	II		II	II	II		II
Pollution degree ²⁾	3	3	3		3	3	3		3
Installation height [m]	Up to 2000	Up to 2000	Up to 2000		Up to 2000	Up to 2000	Up to 2000		Up to 2000
Cable clamping area ³⁾ Max. Ø [mm]	14.5	14.5	14.5		14.5	14.5	14.5		14.5

¹⁾ Determine the effective current carrying capacity according to the application, if necessary, using a derating curve.

²⁾ The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, seal the connector using a protective cap ≥ IP54.

³⁾ The cable clamping areas specified on the following pages may vary depending on the cable material and structure. Selection and testing is the responsibility of the user.

Note:
In contrast to connecting equipment, connectors may only be inserted/withdrawn with the power supply disconnected.

Contact chamber numbering
(view of plug-in side)

Direction of rotation for contact chamber numbering
(view of plug-in side)



Forward running (standard)



Reverse running (standard)

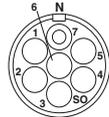
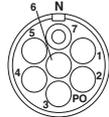
Number of positions

Pin

Socket

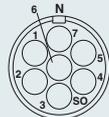
6-pos.

Solder/crimp/solder-in



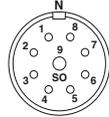
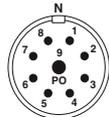
7-pos.

Solder/crimp/solder-in



9-pos. (8 + 1)

Solder/crimp/solder-in



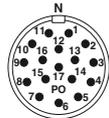
12-pos.

Solder/crimp/solder-in



17-pos.

Solder/crimp/solder-in



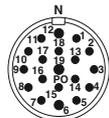
19-pos. (16 + 3)

Solder



19-pos. (16 + 2 + PE)

Crimp



Note:
The connectors can be fitted with pin or socket contacts according to the application.

For safety reasons, only use socket contacts in the live part of the connector.

Selection guide

M23 signal connectors
6- to 19-pos., up to 20 A/300 V,
solder, crimp, and solder-in connection.

- Cable connectors
- Coupler connectors
- Device connectors (device flanges)

In the case of crimp connection, the respective crimp contacts must be added depending on the connection cross section.

Every housing type can be fitted with pin or socket contacts. The product chart provides an overview of the available components.

Connector type

Cable connectors

SPEEDCON fast locking system, see page 76.

M23 x 1 standard interlocking, see page 78.

Shielded



Coupler connectors

See page 80.

Shielded



Device connectors

Front mounting,
Pg13.5 fastening thread,
see page 86.

Front mounting,
M20 fastening thread,
see phoenixcontact.net/products



Front mounting,
flange dimensions: 25 mm x 25 mm,
see page 92.

Front mounting, solder-in connection,
flange dimensions: 25 mm x 25 mm,
see phoenixcontact.net/products



Shielded

Front mounting,
angled, rotatable,
flange dimensions: 26 mm x 26 mm,
see page 96.



Rear mounting,
central fixing nut,
see page 94.



For crimp connection:

Socket contacts

Turned, see page 97.



Rolled, taped,
see page 97.



Pin contacts

Turned, see page 97.



Rolled, taped,
see page 97.



All housings can be fitted with pin or socket crimp contacts

Tools/accessories

Crimping tools

Crimping pliers for rolled
crimp contacts,
see page 177.



Crimping pliers with digital display for turned
crimp contacts,
see page 177.



Tools/accessories

Unlocking tool for device connectors for releasing
the contact carriers from the plug-in side,
see page 182.



Color rings for individually marking the connectors,
see page 184.

**Note:**

For safety reasons, only use socket
contacts in the live part of the
connector.

Circular connectors

M23 – signal connectors

Cable connector, SPEEDCON fast locking system

- 6- to 19-pos. versions, solder or crimp connection
- Individual marking of connectors with color rings

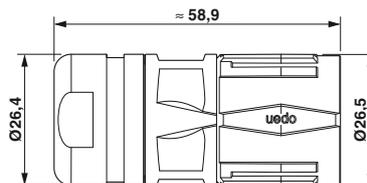


6- and 7-pos.



8+1-pos., 12-pos.

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		6-pos.		7-pos.		8+1-pos.		12-pos.	
Cable connector, with contact carrier, with socket contacts, solder connection									
Universal gasket	3 mm ... 14.5 mm	1619605	1	1619601	1	1619597	1	1619593	1
	4 mm ... 6 mm	1619579	1	1619575	1	1619571	1	1619567	1
	6 mm ... 10 mm	1619534	1	1619530	1	1619526	1	1619522	1
	10 mm ... 14.5 mm	1619508	1	1619504	1	1619500	1	1619496	1
Cable connector, with contact carrier, with pin contacts, solder connection									
Universal gasket	3 mm ... 14.5 mm	1619604	1	1619600	1	1619596	1	1619592	1
	4 mm ... 6 mm	1619578	1	1619574	1	1619570	1	1619548	1
	6 mm ... 10 mm	1619533	1	1619529	1	1619525	1	1619521	1
	10 mm ... 14.5 mm	1619507	1	1619503	1	1619499	1	1619495	1
Cable connector, with contact carrier, without contacts, for socket assembly, crimp connection									
Universal gasket	3 mm ... 14.5 mm	1619603	1	1619599	1	1619595	1	1619591	1
	4 mm ... 6 mm	1619577	1	1619573	1	1619569	1	1619547	1
	6 mm ... 10 mm	1619532	1	1619528	1	1619524	1	1619520	1
	10 mm ... 14.5 mm	1619506	1	1619502	1	1619498	1	1619489	1
Cable connector, with contact carrier, without contacts, for pin assembly, crimp connection									
Universal gasket	3 mm ... 14.5 mm	1619602	1	1619598	1	1619594	1	1619590	1
	4 mm ... 6 mm	1619576	1	1619572	1	1619568	1	1619546	1
	6 mm ... 10 mm	1619531	1	1619527	1	1619523	1	1619519	1
	10 mm ... 14.5 mm	1619505	1	1619501	1	1619497	1	1619488	1
Accessories									
For crimp connection: crimp contacts		Order separately, see page 97 onwards				Order separately, see page 97 onwards			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			





17-pos., 16+3-pos.



16+2+PE-pos.

new

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
17-pos.		16+3-pos.	

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
16+2+PE-pos.			

1619585	1	1619581	1
1619541	1	1619537	1
1619514	1	1619510	1
1619483	1	1619479	1

1619584	1	1619580	1
1619540	1	1619536	1
1619513	1	1619509	1
1619482	1	1619478	1

1619583	1		
1619539	1		
1619512	1		
1619481	1		

1623838	1		
1623836	1		
1623834	1		
1623832	1		

1619582	1		
1619538	1		
1619511	1		
1619480	1		

1623837	1		
1623835	1		
1623833	1		
1623831	1		

Accessories	
Order separately, see page 97 onwards	
See page 184	
See page 186	

Accessories	
Order separately, see page 97 onwards	
See page 184	
See page 186	

Circular connectors

M23 – signal connectors

Cable connector, M23 standard locking

- Standard knurled nut compatible with mating connectors with SPEEDCON and M23 standard external thread
- 6- to 19-pos. versions, solder or crimp connection
- Individual marking of connectors with color rings

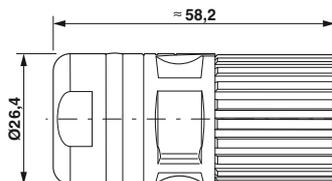


6- and 7-pos.



8+1-pos., 12-pos.

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		6-pos.		7-pos.		8+1-pos.		12-pos.	
Cable connector, with contact carrier, with socket contacts, solder connection									
Universal gasket	3 mm ... 14.5 mm	1619776	1	1619772	1	1619768	1	1619764	1
	4 mm ... 6 mm	1619750	1	1619746	1	1619742	1	1619738	1
	6 mm ... 10 mm	1619724	1	1619720	1	1619716	1	1619710	1
	10 mm ... 14.5 mm	1619659	1	1619655	1	1619651	1	1619647	1
Cable connector, with contact carrier, with pin contacts, solder connection									
Universal gasket	3 mm ... 14.5 mm	1619775	1	1619771	1	1619767	1	1619763	1
	4 mm ... 6 mm	1619749	1	1619745	1	1619741	1	1619737	1
	6 mm ... 10 mm	1619723	1	1619719	1	1619715	1	1619709	1
	10 mm ... 14.5 mm	1619658	1	1619654	1	1619650	1	1619646	1
Cable connector, with contact carrier, without contacts, for socket assembly, crimp connection									
Universal gasket	3 mm ... 14.5 mm	1619774	1	1619770	1	1619766	1	1619762	1
	4 mm ... 6 mm	1619748	1	1619744	1	1619740	1	1619736	1
	6 mm ... 10 mm	1619722	1	1619718	1	1619714	1	1619708	1
	10 mm ... 14.5 mm	1619657	1	1619653	1	1619649	1	1619645	1
Cable connector, with contact carrier, without contacts, for pin assembly, crimp connection									
Universal gasket	3 mm ... 14.5 mm	1619773	1	1619769	1	1619765	1	1619761	1
	4 mm ... 6 mm	1619747	1	1619743	1	1619739	1	1619735	1
	6 mm ... 10 mm	1619721	1	1619717	1	1619711	1	1619707	1
	10 mm ... 14.5 mm	1619656	1	1619652	1	1619648	1	1619644	1
Accessories									
For crimp connection: crimp contacts		Order separately, see page 97 onwards				Order separately, see page 97 onwards			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



new



17-pos., 16+3-pos.



16+2+PE-pos.

Ordering data				Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
17-pos.		16+3-pos.		16+2+PE-pos.			
1619756	1	1619752	1				
1619730	1	1619726	1				
1619702	1	1619661	1				
1619639	1	1619635	1				
1619755	1	1619751	1				
1619729	1	1619725	1				
1619701	1	1619660	1				
1619638	1	1619634	1				
1619754	1			1623846	1		
1619728	1			1623844	1		
1619700	1			1623842	1		
1619637	1			1623840	1		
1619753	1			1623845	1		
1619727	1			1623843	1		
1619699	1			1623841	1		
1619636	1			1623839	1		
Accessories				Accessories			
Order separately, see page 97 onwards				Order separately, see page 97 onwards			
See page 184				See page 184			
See page 186				See page 186			

Circular connectors

M23 – signal connectors

Coupler connectors

- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
- 6- to 19-pos. versions, solder or crimp connection
- Individual marking of connectors with color rings

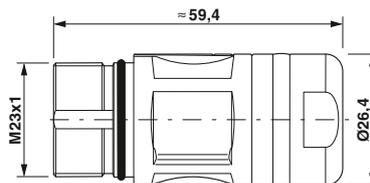


6- and 7-pos.



8+1-pos., 12-pos.

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		6-pos.		7-pos.		8+1-pos.		12-pos.	
Coupler connector, with contact carrier, with socket contacts, solder connection									
Universal gasket	3 mm ... 14.5 mm	1620172	1	1620168	1	1620164	1	1620160	1
	4 mm ... 6 mm	1620145	1	1620141	1	1620137	1	1620133	1
	6 mm ... 10 mm	1620119	1	1620115	1	1620079	1	1620075	1
	10 mm ... 14.5 mm	1620046	1	1620042	1	1620036	1	1620032	1
Coupler connector, with contact carrier, with pin contacts, solder connection									
Universal gasket	3 mm ... 14.5 mm	1620171	1	1620167	1	1620163	1	1620159	1
	4 mm ... 6 mm	1620144	1	1620140	1	1620136	1	1620132	1
	6 mm ... 10 mm	1620118	1	1620114	1	1620078	1	1620074	1
	10 mm ... 14.5 mm	1620045	1	1620041	1	1620035	1	1620031	1
Coupler connector, with contact carrier, without contacts, for socket assembly, crimp connection									
Universal gasket	3 mm ... 14.5 mm	1620170	1	1620166	1	1620162	1	1620158	1
	4 mm ... 6 mm	1620143	1	1620139	1	1620135	1	1620131	1
	6 mm ... 10 mm	1620117	1	1620081	1	1620077	1	1620073	1
	10 mm ... 14.5 mm	1620044	1	1620038	1	1620034	1	1620030	1
Coupler connector, with contact carrier, without contacts, for pin assembly, crimp connection									
Universal gasket	3 mm ... 14.5 mm	1620169	1	1620165	1	1620161	1	1620157	1
	4 mm ... 6 mm	1620142	1	1620138	1	1620134	1	1620130	1
	6 mm ... 10 mm	1620116	1	1620080	1	1620076	1	1620072	1
	10 mm ... 14.5 mm	1620043	1	1620037	1	1620033	1	1620029	1
Accessories									
For crimp connection: crimp contacts		Order separately, see page 97 onwards				Order separately, see page 97 onwards			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



new



17-pos., 16+3-pos.



16+2+PE-pos.

Ordering data				Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
17-pos.		16+3-pos.		16+2+PE-pos.			
1620151	1	1620147	1				
1620125	1	1620121	1				
1620052	1	1620048	1				
1620024	1	1620020	1				
1620150	1	1620146	1				
1620124	1	1620120	1				
1620051	1	1620047	1				
1620023	1	1620019	1				
1620149	1	1624006	1				
1620123	1	1624009	1				
1620050	1	1624008	1				
1620022	1	1624007	1				
1620148	1	1624010	1				
1620122	1	1624013	1				
1620049	1	1624012	1				
1620021	1	1624011	1				
Accessories				Accessories			
Order separately, see page 97 onwards				Order separately, see page 97 onwards			
See page 184				See page 184			
See page 186				See page 186			

Circular connectors

M23 – signal connectors

Cable connector, angled, SPEEDCON fast locking system

- 6- to 19-pos. versions, solder or crimp connection
- Individual marking of connectors with color rings
- 8 different cable outlet directions can be set

new

new



6- and 7-pos.



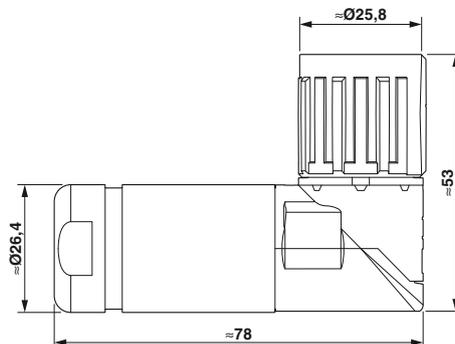
8+1-pos., 12-pos.

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		6-pos.		7-pos.		8+1-pos.		12-pos.	
Cable connector, angled, with contact carrier, with socket contacts, solder connection									
Universal gasket	3 mm ... 14.5 mm	1619450	1	1619446	1	1619442	1	1619438	1
	4 mm ... 6 mm	1619424	1	1619420	1	1619416	1	1619412	1
	6 mm ... 10 mm	1619398	1	1619394	1	1619390	1	1619386	1
	10 mm ... 14.5 mm	1619372	1	1619366	1	1619362	1	1619358	1
Cable connector, angled, with contact carrier, with pin contacts, solder connection									
Universal gasket	3 mm ... 14.5 mm	1619449	1	1619445	1	1619441	1	1619437	1
	4 mm ... 6 mm	1619423	1	1619419	1	1619415	1	1619411	1
	6 mm ... 10 mm	1619397	1	1619393	1	1619389	1	1619385	1
	10 mm ... 14.5 mm	1619371	1	1619365	1	1619361	1	1619357	1
Cable connector, angled, with contact carrier, without contacts, for socket assembly, crimp connection									
Universal gasket	3 mm ... 14.5 mm	1619448	1	1619444	1	1619440	1	1619436	1
	4 mm ... 6 mm	1619422	1	1619418	1	1619414	1	1619410	1
	6 mm ... 10 mm	1619396	1	1619392	1	1619388	1	1619384	1
	10 mm ... 14.5 mm	1619368	1	1619364	1	1619360	1	1619356	1
Cable connector, angled, with contact carrier, without contacts, for pin assembly, crimp connection									
Universal gasket	3 mm ... 14.5 mm	1619447	1	1619443	1	1619439	1	1619435	1
	4 mm ... 6 mm	1619421	1	1619417	1	1619413	1	1619409	1
	6 mm ... 10 mm	1619395	1	1619391	1	1619387	1	1619383	1
	10 mm ... 14.5 mm	1619367	1	1619363	1	1619359	1	1619354	1

Accessories
For crimp connection: crimp contacts
Color rings, 50 pcs. in set (to be ordered separately)
Dust protection caps (to be ordered separately)

Accessories
Order separately, see page 97 onwards
See page 184
See page 186

Accessories
Order separately, see page 97 onwards
See page 184
See page 186



new

new



17-pos., 16+3-pos.



16+2+PE-pos.

Ordering data

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
17-pos.		16+3-pos.	

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.

1619430	1	1619426	1
1619404	1	1619400	1
1619378	1	1619374	1
1619349	1	1619345	1

1619429	1	1619425	1
1619403	1	1619399	1
1619377	1	1619373	1
1619348	1	1619344	1

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1619428	1		
1619402	1		
1619376	1		
1619347	1		

1624080	1		
1624081	1		
1624082	1		
1624083	1		

1619427	1		
1619401	1		
1619375	1		
1619346	1		

1624084	1		
1624085	1		
1624086	1		
1624087	1		

Accessories

Accessories

Order separately, see page 97 onwards
See page 184
See page 186

Order separately, see page 97 onwards
See page 184
See page 186

Circular connectors

M23 – signal connectors

Cable connector, angled, M23 standard locking

- Standard knurled nut compatible with mating connectors with SPEEDCON and M23 standard external thread
- 6- to 19-pos. versions, solder or crimp connection
- Individual marking of connectors with color rings
- 8 different cable outlet directions can be set

new

new

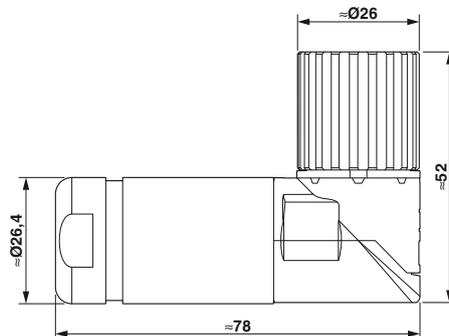


6- and 7-pos.



8+1-pos., 12-pos.

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		6-pos.		7-pos.		8+1-pos.		12-pos.	
Cable connector, with contact carrier, with socket contacts, solder connection									
Universal gasket	3 mm ... 14.5 mm	1619343	1	1619339	1	1619335	1	1619331	1
	4 mm ... 6 mm	1620291	1	1620287	1	1620283	1	1620279	1
	6 mm ... 10 mm	1620262	1	1620258	1	1620254	1	1620250	1
	10 mm ... 14.5 mm	1620212	1	1620208	1	1620190	1	1620186	1
Cable connector, angled, with contact carrier, with pin contacts, solder connection									
Universal gasket	3 mm ... 14.5 mm	1619342	1	1619338	1	1619334	1	1619330	1
	4 mm ... 6 mm	1620290	1	1620286	1	1620282	1	1620278	1
	6 mm ... 10 mm	1620261	1	1620257	1	1620253	1	1620249	1
	10 mm ... 14.5 mm	1620211	1	1620207	1	1620189	1	1620185	1
Cable connector, angled, with contact carrier, without contacts, for socket assembly, crimp connection									
Universal gasket	3 mm ... 14.5 mm	1619341	1	1619337	1	1619333	1	1620303	1
	4 mm ... 6 mm	1620289	1	1620285	1	1620281	1	1620277	1
	6 mm ... 10 mm	1620260	1	1620256	1	1620252	1	1620248	1
	10 mm ... 14.5 mm	1620210	1	1620192	1	1620188	1	1620184	1
Cable connector, angled, with contact carrier, without contacts, for pin assembly, crimp connection									
Universal gasket	3 mm ... 14.5 mm	1619340	1	1619336	1	1619332	1	1620302	1
	4 mm ... 6 mm	1620288	1	1620284	1	1620280	1	1620276	1
	6 mm ... 10 mm	1620259	1	1620255	1	1620251	1	1620247	1
	10 mm ... 14.5 mm	1620209	1	1620191	1	1620187	1	1620183	1
Accessories									
For crimp connection: crimp contacts	Order separately, see page 97 onwards								
Color rings, 50 pcs. in set (to be ordered separately)	See page 184								
Dust protection caps (to be ordered separately)	See page 186								
Accessories									
Order separately, see page 97 onwards									
See page 184									
See page 186									



new

new



17-pos., 16+3-pos.



16+2+PE-pos.

Ordering data				Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
17-pos.		16+3-pos.					
1620297	1	1620293	1				
1620268	1	1620264	1				
1620218	1	1620214	1				
1620178	1	1620174	1				
1620296	1	1620292	1				
1620267	1	1620263	1				
1620217	1	1620213	1				
1620177	1	1620173	1				
1620295	1	1624071	1				
1620266	1	1624072	1				
1620216	1	1624073	1				
1620176	1	1624074	1				
1620294	1	1624075	1				
1620265	1	1624076	1				
1620215	1	1624077	1				
1620175	1	1624078	1				
Accessories				Accessories			
Order separately, see page 97 onwards				Order separately, see page 97 onwards			
See page 184				See page 184			
See page 186				See page 186			

Circular connectors

M23 – signal connectors

Device connector, front mounting

– Pg13.5 fastening thread

- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
- 6- to 19-pos. versions, solder or crimp connection
- Individual marking of connectors with color rings

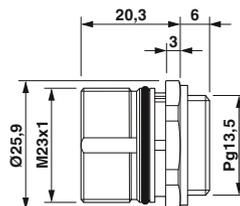
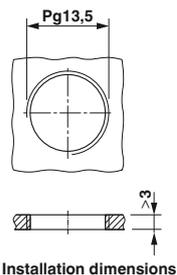


6- and 7-pos.



8+1-pos., 12-pos.

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Device connector, with contact carrier, with socket contacts, solder connection, Pg13.5 central fastening thread, axial seal								
		6-pos.		7-pos.		8+1-pos.		12-pos.
Device connector, with contact carrier, with pin contacts, solder connection, Pg13.5 central fastening thread, axial seal	1619903	1	1619899	1	1619895	1	1619891	1
Device connector, with contact carrier, without contacts, for socket assembly, crimp connection, Pg13.5 central fastening thread, axial seal	1619902	1	1619898	1	1619894	1	1619890	1
Device connector, with contact carrier, without contacts, for pin assembly, crimp connection, Pg13.5 central fastening thread, axial seal	1619901	1	1619897	1	1619893	1	1619889	1
	1619900	1	1619896	1	1619892	1	1619888	1
Accessories				Accessories				
For crimp connection: crimp contacts				Order separately, see page 97 onwards				
Color rings, 50 pcs. in set (to be ordered separately)				See page 184				
Dust protection caps (to be ordered separately)				See page 186				



new



17-pos., 16+3-pos.



16+2+PE-pos.

Ordering data				Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
17-pos.		16+3-pos.		16+2+PE-pos.			
1619883	1	1619879	1				
1619882	1	1619878	1				
1619881	1			1624019	1		
1619880	1			1624018	1		
Accessories				Accessories			
Order separately, see page 97 onwards				Order separately, see page 97 onwards			
See page 184				See page 184			
See page 186				See page 186			

Circular connectors

M23 – signal connectors

Device connector, front mounting

– M20 fastening thread

- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
- 6- to 19-pos. versions, solder or crimp connection
- Individual marking of connectors with color rings

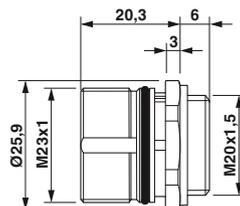
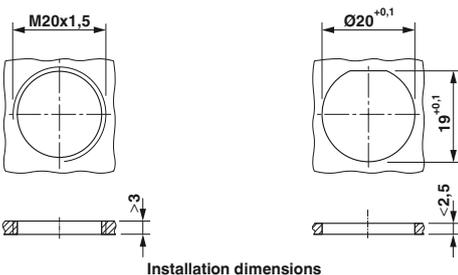


6- and 7-pos.



8+1-pos., 12-pos.

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Device connector, with contact carrier, with socket contacts, solder connection, M20 central fastening thread, axial seal								
		6-pos.		7-pos.		8+1-pos.		12-pos.
Device connector, with contact carrier, with pin contacts, solder connection, M20 central fastening thread, axial seal	1619877	1	1619873	1	1619869	1	1619865	1
Device connector, with contact carrier, without contacts, for socket assembly, crimp connection, M20 central fastening thread, axial seal	1619876	1	1619872	1	1619868	1	1619864	1
Device connector, with contact carrier, without contacts, for pin assembly, crimp connection, M20 central fastening thread, axial seal	1619875	1	1619871	1	1619867	1	1619863	1
	1619874	1	1619870	1	1619866	1	1619862	1
Description	Accessories				Accessories			
	Type	Order No.	Pcs. / Pkt.		Type	Order No.	Pcs. / Pkt.	
Locking nut, for mounting bore holes and polarization								
M20 x 1.5	RC-13041	1600417	10		RC-13041	1600417	10	
For crimp connection: crimp contacts	Order separately, see page 97 onwards				Order separately, see page 97 onwards			
Color rings, 50 pcs. in set (to be ordered separately)	See page 184				See page 184			
Dust protection caps (to be ordered separately)	See page 186				See page 186			



new



17-pos., 16+3-pos.



16+2+PE-pos.

Ordering data				Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
17-pos.		16+3-pos.		16+2+PE-pos.			
1619857	1	1619853	1				
1619856	1	1619852	1				
1619855	1			1624017	1		
1619854	1			1624016	1		
Accessories				Accessories			
Type	Order No.	Pcs. / Pkt.		Type	Order No.	Pcs. / Pkt.	
RC-13041	1600417	10		RC-13041	1600417	10	
Order separately, see page 97 onwards See page 184				Order separately, see page 97 onwards See page 184			
See page 186				See page 186			

Circular connectors

M23 – signal connectors

Device connector, front mounting, can be positioned

– **M20 fastening thread**

- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
- 6- to 19-pos. versions, solder or crimp connection
- Individual marking of connectors with color rings

new

new

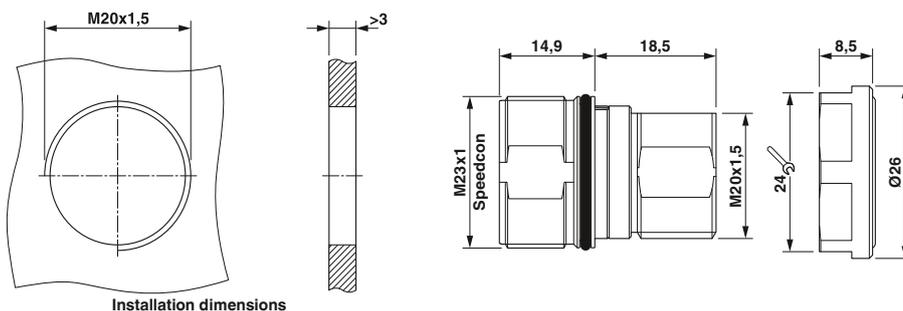


6- and 7-pos.



8+1-pos., 12-pos.

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Device connector, with contact carrier, with socket contacts, solder connection, M20 central fastening thread, axial seal	6-pos.		7-pos.		8+1-pos.		12-pos.	
Device connector, with contact carrier, with pin contacts, solder connection, M20 central fastening thread, axial seal	1624045	1	1624047	1	1624049	1	1624051	1
Device connector, with contact carrier, without contacts, for socket assembly, crimp connection, M20 central fastening thread, axial seal	1624044	1	1624046	1	1624048	1	1624050	1
Device connector, with contact carrier, without contacts, for pin assembly, crimp connection, M20 central fastening thread, axial seal	1624030	1	1624031	1	1624032	1	1624033	1
	1624022	1	1624023	1	1624024	1	1624026	1
Description	Accessories				Accessories			
	Type	Order No.	Pcs. / Pkt.		Type	Order No.	Pcs. / Pkt.	
Locking nut, for mounting bore holes and polarization	RC-13041	1600417	10		RC-13041	1600417	10	
M20 x 1.5	Order separately, see page 97 onwards				Order separately, see page 97 onwards			
For crimp connection: crimp contacts	See page 184				See page 184			
Color rings, 50 pcs. in set (to be ordered separately)	See page 186				See page 186			
Dust protection caps (to be ordered separately)								



new

new



17-pos., 16+3-pos.



16+2+PE-pos.

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
17-pos.		16+3-pos.	

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
16+2+PE-pos.			

1624056 1 1624058 1

1624055 1 1624057 1

1624035 1

1624029 1

1623629 1

1623630 1

Accessories

Type	Order No.	Pcs. / Pkt.
RC-13041	1600417	10

Accessories

Type	Order No.	Pcs. / Pkt.
RC-13041	1600417	10

Order separately, see page 97 onwards
See page 184
See page 186

Order separately, see page 97 onwards
See page 184
See page 186

Circular connectors

M23 – signal connectors

Device connector, front mounting

– Flange dimensions:
25 mm x 25 mm

- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
- 6- to 19-pos. versions, solder or crimp connection
- Individual marking of connectors with color rings

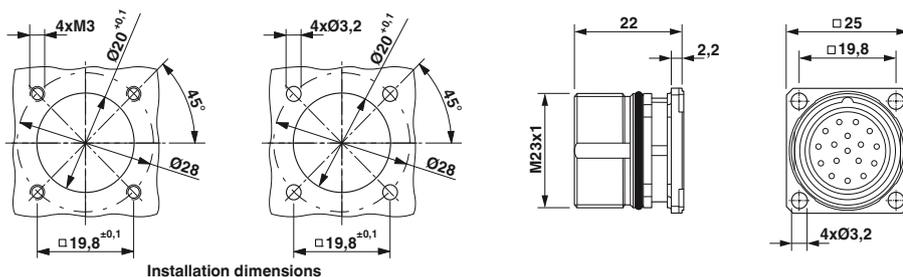


6- and 7-pos.



8+1-pos., 12-pos.

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Device connector, with contact carrier, with socket contacts, solder connection, flat gasket	6-pos.		7-pos.		8+1-pos.		12-pos.	
Device connector, with contact carrier, with pin contacts, solder connection, flat gasket	1619993	1	1619989	1	1619973	1	1619969	1
Device connector, with contact carrier, without contacts, for socket assembly, crimp connection, flat gasket	1619992	1	1619988	1	1619972	1	1619968	1
Device connector, with contact carrier, without contacts, for pin assembly, crimp connection, flat gasket	1619991	1	1619987	1	1619971	1	1619967	1
	1619990	1	1619986	1	1619970	1	1619966	1
Accessories				Accessories				
For crimp connection: crimp contacts	Order separately, see page 97 onwards				Order separately, see page 97 onwards			
Color rings, 50 pcs. in set (to be ordered separately)	See page 184				See page 184			
Dust protection caps (to be ordered separately)	See page 186				See page 186			



new



17-pos., 16+3-pos.



16+2+PE-pos.

Ordering data				Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
17-pos.		16+3-pos.		16+2+PE-pos.			
1619961	1	1619957	1				
1619960	1	1619956	1				
1619959	1			1624015	1		
1619958	1			1624014	1		
Accessories				Accessories			
Order separately, see page 97 onwards				Order separately, see page 97 onwards			
See page 184				See page 184			
See page 186				See page 186			

Circular connectors

M23 – signal connectors

Device connector, rear mounting

- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
- 6- to 19-pos. versions, solder or crimp connection
- Individual marking of connectors with color rings

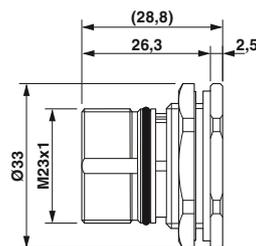
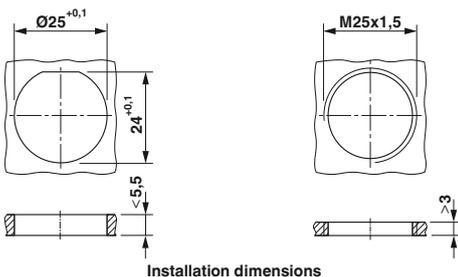


6- and 7-pos.



8+1-pos., 12-pos.

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Device connector, with contact carrier, with socket contacts, solder connection, central fixing nut, axial seal	6-pos.		7-pos.		8+1-pos.		12-pos.	
Device connector, with contact carrier, with pin contacts, solder connection, central fixing nut, axial seal	1619851	1	1619847	1	1619843	1	1619790	1
Device connector, with contact carrier, without contacts, for socket assembly, crimp connection, central fixing nut, axial seal	1619850	1	1619846	1	1619842	1	1619789	1
Device connector, with contact carrier, without contacts, for pin assembly, crimp connection, central fixing nut, axial seal	1619849	1	1619845	1	1619841	1	1619788	1
	1619848	1	1619844	1	1619791	1	1619787	1
Accessories				Accessories				
For crimp connection: crimp contacts				Order separately, see page 97 onwards				
Color rings, 50 pcs. in set (to be ordered separately)				See page 184				
Dust protection caps (to be ordered separately)				See page 186				



new



17-pos., 16+3-pos.



16+3-pos., 16+2+PE-pos.

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.

1619782	1	1619778	1
1619781	1	1619777	1

1619780	1		
1619779	1		

1624021	1		
1624020	1		

Accessories	
Order separately, see page 97 onwards	
See page 184	
See page 186	

Accessories	
Order separately, see page 97 onwards	
See page 184	
See page 186	

Circular connectors

M23 – signal connectors

Device connector, angled, rotatable, front mounting

- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
- Flange dimensions: 26 mm x 26 mm



8+1, 12, 17-pos.

Ordering data

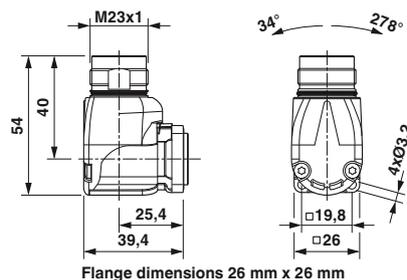
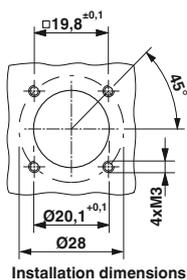
Description
Device connector, with contact carrier, with pin contacts, solder connection, angled, rotatable, axial seal
Device connector, with contact carrier, without contacts, for pin assembly, crimp connection, angled, rotatable, axial seal

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
1621746	1	1621741	1	1621745	1
1621735	1	1621738	1	1621744	1

Accessories

For crimp connection: crimp contacts
Color rings, 50 pcs. in set (to be ordered separately)

Order separately, see page 97 onwards
See page 184



Crimp contacts

Pin and socket crimp contacts with various connection cross sections can be ordered for each crimp contact carrier.



Rolled crimp contacts



Turned crimp contacts

		Ordering data			Ordering data		
Description	Contacts / connection cross section [mm ²]	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Crimp contacts for contact carriers, 6-pos., 6 x Ø2.0 mm	Pin Ø 2.0 mm / 1.0 ... 1.5				RC-5CP2000	1603513	50
	Socket Ø 2.0 mm / 1.0 ... 1.5				RC-5CS2000	1603517	50
	Pin Ø 2.0 mm / 1.5 ... 2.5				RC-5AP2000	1603505	50
	Socket Ø 2.0 mm / 1.5 ... 2.5				RC-5AS2000	1603509	50
Crimp contacts for contact carriers, 7-pos., 7 x Ø2.0 mm	Pin Ø 2.0 mm / 1.0 ... 1.5				RC-5CP2000	1603513	50
	Socket Ø 2.0 mm / 1.0 ... 1.5				RC-5CS2000	1603517	50
	Pin Ø 2.0 mm / 1.5 ... 2.5				RC-5AP2000	1603505	50
	Socket Ø 2.0 mm / 1.5 ... 2.5				RC-5AS2000	1603509	50
Crimp contacts for contact carriers, 9-pos. (8+1), 8 x Ø1.0 mm, 1 x Ø2.0 mm	Pin Ø1.0 mm / 0.14 ... 0.56				RC-12P2000	1597862	100
	Socket Ø1.0 mm / 0.14 ... 0.56				RC-12S2000	1599600	100
	Pin Ø 2.0 mm / 1.5 ... 2.5				RC-5AP2000	1603505	50
	Socket Ø 2.0 mm / 1.5 ... 2.5				RC-5AS2000	1603509	50
	Pin Ø 2.0 mm / 1.0 ... 1.5				RC-5CP2000	1603513	50
	Socket Ø 2.0 mm / 1.0 ... 1.5				RC-5CS2000	1603517	50
Crimp contacts for contact carriers, 12-pos., 12 x Ø1.0 mm	Pin Ø1.0 mm / 0.22 ... 0.56	RC-22P2000	1603321	100			
	Socket Ø1.0 mm / 0.22 ... 0.56	RC-22S2000	1603327	100			
	Pin Ø1.0 mm / 0.14 ... 0.56	RC-12P2000	1597862	100			
	Socket Ø1.0 mm / 0.14 ... 0.56	RC-12S2000	1599600	100			
Crimp contacts for contact carriers, 16-pos., 16 x Ø1.0 mm	Pin Ø1.0 mm / 0.22 ... 0.56	RC-22P2000	1603321	100			
	Socket Ø1.0 mm / 0.22 ... 0.56	RC-22S2000	1603327	100			
	Pin Ø1.0 mm / 0.14 ... 0.56	RC-12P2000	1597862	100			
	Socket Ø1.0 mm / 0.14 ... 0.56	RC-12S2000	1599600	100			
Crimp contacts for contact carriers, 19-pos. (16+2+PE), 16 x Ø1.0 mm, 2 x Ø1.5 mm, 1 x Ø1.5 mm (PE)	Pin Ø 1.0 mm / 0.08 ... 0.22				RC-15P2010	1623776	100
	Pin Ø 1.0 mm / 0.14 ... 0.56				RC-15P2020	1623777	100
	Pin Ø 1.0 mm / 0.5 ... 1.0				RC-15P2030	1623778	100
Crimp contacts for contact carrier, 19-pos. (16+2+PE), 2 x Ø 1.5 mm	Pin Ø 1.5 mm / 0.75 ... 1.0	RC-15P2000	1623779	100			
	Socket Ø 1.5 mm / 0.75 ... 1.0	RC-15S2000	1623775	100			
Crimp contacts for contact carrier, 19-pos. (16+2+PE), 1 x Ø 1.5 mm	Pin, leading Ø 1.5 mm / 0.75 ... 1.0				RC-15P2100	1623780	100
		Accessories			Accessories		
Crimping tools		See page 177			See page 177		

Mechanical and electrical data

Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Connection technology:	Crimp connection
Sealing and O-ring:	Fluororubber (FKM)
Ambient temperature:	-40°C ... 125°C
Cable entry:	Cable and coupler connectors for an outer cable diameter of 3 to 14.5 mm, shielded
Type of locking:	M23 SPEEDCON screw locking, cable connector with M23 x 1 coarse-pitch thread as an option
Mechanical insertion/withdrawal cycles:	Standard: 100, punched-rolled C-HC crimp contacts: up to 500
Protection class:	IP67 when locked

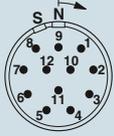
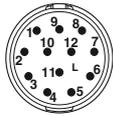
Electrical data			
Number of positions		12	17
Contacts		12	17
Contact Ø	[mm]	1	1
Litz wire cross section, crimp contacts turned	[mm ²]	0.08 ... 1.0	0.08 ... 1.0
Litz wire cross section, C-HC crimp contacts punched-rolled	[mm ²]	0.06 ... 0.56	0.06 ... 0.56
Cable clamping area	Max. Ø [mm]	14.5	14.5
Nominal current per contact at 25°C ¹⁾	[A]	8	8
Specifications according to DIN EN 61984:2009			
Rated voltage	[V AC/DC]	150	100
Test/surge voltage	[kV]	2.5	1.5
Overvoltage category		III	III
Pollution degree ²⁾		3	3
Installation height	[m]	Up to 3000	Up to 3000
Cable clamping area ³⁾	Max. Ø [mm]	14.5	14.5

¹⁾ Determine the effective current carrying capacity according to the application, if necessary, using a derating curve.

²⁾ The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, seal the connector using a protective cap ≥ IP54.

³⁾ The cable clamping areas specified on the following pages may vary depending on the cable material and structure. Selection and testing is the responsibility of the user.

Note:
In contrast to connecting equipment, connectors may only be inserted/withdrawn with the power supply disconnected.

Contact chamber numbering (view of plug-in side)				
Direction of rotation for contact chamber numbering (view of plug-in side)				
Number of positions	Pin	Socket	Pin	Socket
12-pos. N-coding Crimp				
17-pos. N-coding Crimp				

Note:
Standard coding is "N". Other codings and numbers of positions available on request.

The connectors can be fitted with pin or socket contacts according to the application.

For safety reasons, only use socket contacts in the live part of the connector.

Circular connectors

M23 – feedback connectors

Selection guide

M23 signal connectors

12- and 17-pos., N-coding, up to 8 A/150 V, crimp ranges up to 1 mm²

- Cable connectors
- Coupler connectors
- Device connectors (device flanges)

Crimp contacts must be ordered separately depending on the connection cross section.

Every housing type can be fitted with pin or socket contacts.

The connectors are available with forward or reverse running contact chamber numbering.

N (0°) and S (20°, on request) coding positions are possible.

The product chart provides an overview of the available components.

Connector type

Cable connectors

SPEEDCON fast locking system, see page 102.

M23 x 1 standard interlocking, see page 103.

Shielded



Square mounting flange for cable and coupler connectors for wall mounting, see page 182.

Coupler connectors

See page 104.

Shielded



Square mounting flange for cable and coupler connectors for wall mounting, see page 182.

Device connectors

Straight, 4-hole mounting Ø 3.2, see page 106.



Contact carrier for snapping in from the device side, straight, 4-hole mounting Ø 3.2, see page 106.



Shielded

Angled, rotatable, flange dimensions: 26 mm x 26 mm, see page 107.



Angled, rotatable, flange dimensions: 28 mm x 28 mm, see page 107.



Crimp contacts

Socket contacts

Turned, see page 109.



Punched-rolled, taped,
see page 108.



Pin contacts

Turned, see page 109.



Punched-rolled, taped,
see page 108.



All housings can be fitted with pin or socket crimp contacts

Tools/accessories

Crimping tools

Crimping pliers for punched-rolled
C-HC crimp contacts,
see page 178.



Crimping pliers with digital display for turned
crimp contacts,
see page 179.



Tools/accessories

Unlocking tool for device connectors with
contact carriers for snapping in from the device side,
see page 182.



Color rings for individually marking the connectors,
see page 184.

**Note:**

For safety reasons, only use socket
contacts in the live part of the
connector.

Circular connectors

M23 – feedback connectors

Cable connector, SPEEDCON fast locking system

- 12- and 17-pos. versions
- Individual marking of connectors with color rings

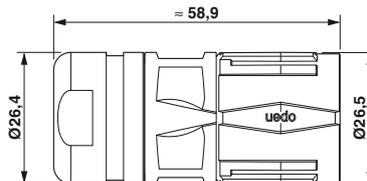


Cable connector, socket assembly



Cable connector, pin assembly

Description		Ordering data		Ordering data		Ordering data		Ordering data	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Cable clamping area								
Cable connector, with contact carrier, without contacts, standard direction of rotation									
	Universal gasket								
	3 mm ... 14.5 mm	1619472	1	1619470	1	1619471	1	1619469	1
	4 mm ... 6 mm	1619466	1	1619464	1	1619465	1	1619463	1
	6 mm ... 10 mm	1619460	1	1619458	1	1619459	1	1619457	1
	10 mm ... 14.5 mm	1619454	1	1619452	1	1619453	1	1619451	1
Cable connector, with contact carrier, without contacts, reverse direction of rotation									
	Universal gasket								
	3 mm ... 14.5 mm	1619474	1			1619473	1		
	4 mm ... 6 mm	1619468	1			1619467	1		
	6 mm ... 10 mm	1619462	1			1619461	1		
	10 mm ... 14.5 mm	1619456	1			1619455	1		
		Accessories				Accessories			
Crimp contacts		For socket contacts, see page 108 onwards				For pin contacts, see page 108 onwards			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



**Cable connector,
M23 standard locking**

- M23 standard knurled nut
- 12- and 17-pos. versions
- Individual marking of connectors with color rings

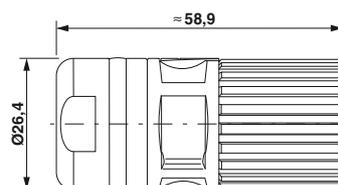


**Cable connector,
socket assembly**



**Cable connector,
pin assembly**

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Cable connector housing, with contact carrier, without contacts, standard direction of rotation		12-pos.		17-pos.		12-pos.		17-pos.	
Universal gasket	3 mm ... 14.5 mm	1619631	1	1619629	1	1619630	1	1619628	1
	4 mm ... 6 mm	1619625	1	1619623	1	1619624	1	1619619	1
	6 mm ... 10 mm	1619616	1	1619614	1	1619615	1	1619613	1
	10 mm ... 14.5 mm	1619610	1	1619608	1	1619609	1	1619607	1
Cable connector housing, with contact carrier, without contacts, reverse direction of rotation									
Universal gasket	3 mm ... 14.5 mm	1619633	1			1619632	1		
	4 mm ... 6 mm	1619627	1			1619626	1		
	6 mm ... 10 mm	1619618	1			1619617	1		
	10 mm ... 14.5 mm	1619612	1			1619611	1		
Crimp contacts		Accessories				Accessories			
Color rings, 50 pcs. in set (to be ordered separately)		For socket contacts, see page 108 onwards				For pin contacts, see page 108 onwards			
Dust protection caps (to be ordered separately)		See page 184				See page 184			
		See page 186				See page 186			



Circular connectors

M23 – feedback connectors

Coupler connectors

- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
- 12- and 17-pos. versions
- Individual marking of connectors with color rings

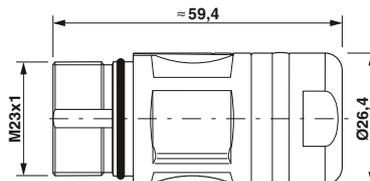


Coupler connector, socket assembly



Coupler connector, pin assembly

Description		Ordering data		Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.		
Cable clamping area		12-pos.		17-pos.		12-pos.		17-pos.	
Coupler connector housing , with contact carrier, without contacts, standard direction of rotation									
Universal gasket	3 mm ... 14.5 mm	1620016	1	1620014	1	1620015	1	1620013	1
	4 mm ... 6 mm	1620009	1	1620007	1	1620008	1	1620006	1
	6 mm ... 10 mm	1620003	1	1620001	1	1620002	1	1620000	1
	10 mm ... 14.5 mm	1619997	1	1619995	1	1619996	1	1619994	1
Coupler connector housing , with contact carrier, without contacts, reverse direction of rotation									
Universal gasket	3 mm ... 14.5 mm	1620018	1			1620017	1		
	4 mm ... 6 mm	1620011	1			1620010	1		
	6 mm ... 10 mm	1620005	1			1620004	1		
	10 mm ... 14.5 mm	1619999	1			1619998	1		
		Accessories				Accessories			
Crimp contacts		For socket contacts, see page 108 onwards				For pin contacts, see page 108 onwards			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



Circular connectors

M23 – feedback connectors

Device connector, straight, front mounting

- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
- Contact insert for support on the device or can be snapped in

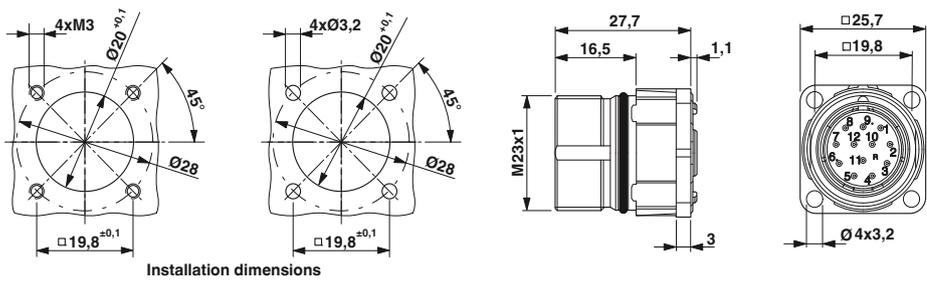


Device connector, straight, socket assembly



Device connector, straight, pin assembly

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Device connector, straight, with contact carrier, without contacts, 4-hole fastening with Ø 3.2 mm								
Standard direction of rotation	1607283	1	1607892	1	1607236	1	1607860	1
Reverse direction of rotation	1607307	1			1607260	1		
Device connector, straight, with contact carrier, without contacts, 4-hole fastening with Ø 3.2 mm, contact insert can be snapped in								
Standard direction of rotation	1607830	1	1607893	1	1607804	1	1607863	1
Reverse direction of rotation	1607844	1			1607817	1		
Accessories				Accessories				
Crimp contacts	For socket contacts, see page 108 onwards				For pin contacts, see page 108 onwards			
Color rings, 50 pcs. in set (to be ordered separately)	See page 184				See page 184			
Dust protection caps (to be ordered separately)	See page 186				See page 186			



Device connector, angled, rotatable, front mounting

- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
- Flange dimensions: 26 mm x 26 mm or 28 mm x 28 mm



Device connector, angled, rotatable, for socket contacts



Device connector, angled, rotatable, for pin contacts

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	12-pos.		17-pos.

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	12-pos.		17-pos.

Description	
Device connector, angled, rotatable, with contact carrier, without contacts, flange dimensions: 26 mm x 26 mm	
Standard direction of rotation	1607280
Reverse direction of rotation	1607304
Device connector, angled, rotatable, with contact carrier, without contacts, flange dimensions: 28 mm x 28 mm	
Standard direction of rotation	1607827
Reverse direction of rotation	1607842

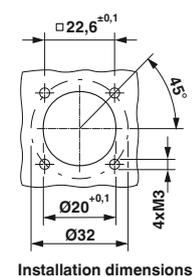
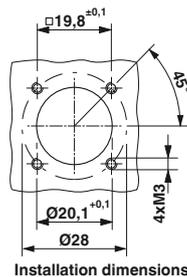
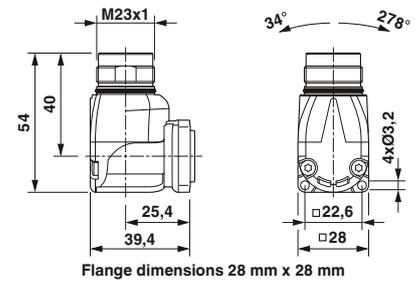
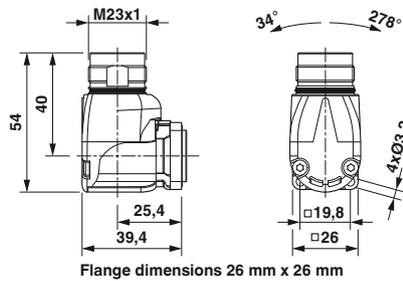
1607280	1	1607345	1
1607304	1		
1607827	1	1607887	1
1607842	1		

1607233	16	1607328	1
1607257	1		
1607802	1	1607852	1
1607814	1		

Accessories	
For socket contacts, see page 108 onwards	
See page 184	
See page 186	

Accessories	
For pin contacts, see page 108 onwards	
See page 184	
See page 186	

Crimp contacts
Color rings, 50 pcs. in set (to be ordered separately)
Dust protection caps (to be ordered separately)



Circular connectors

M23 – feedback connectors

Crimp contacts, punched-rolled

C-HC® are punched-rolled contacts. They are designed for high insertion/withdrawal cycles.

The contacts are available taped on rolls for manual or automatic processing.

Note: depending on the litz wire used, the connection cross sections (crimp ranges) may deviate from the listed values. For safety reasons, only use socket contacts in the live part of the plug.



C-HC socket contacts



C-HC pin contacts

Description	Connection cross section [mm²]
Crimp contacts , C-HC punched-rolled, Ø 1.0 mm, 2500 pcs./roll	0.06 ... 0.25
	0.2 ... 0.56
Crimp contact C-HC punched-rolled, Ø 1.0 mm, 10,000 pcs./roll	0.06 ... 0.25
	0.2 ... 0.56

Crimping tools

Ordering data		
Type	Order No.	Pcs. / Pkt.
SF-10KS320	1607031	1
SF-10KS350	1607032	1
SF-10KS330	1607358	1
SF-10KS360	1607361	1

Accessories
Order separately, see page 178 onwards

Ordering data		
Type	Order No.	Pcs. / Pkt.
SF-10KP320	1615961	1
SF-10KP350	1615963	1
SF-10KP330	1615962	1
SF-10KP360	1615964	1

Accessories
Order separately, see page 178 onwards

Crimp contacts, turned

Depending on the number of positions, assemble the M23 feedback connectors with 12 or 17 Ø 1 mm signal contacts from the SF series.

These contacts are also used as signal contacts with the M23 power connectors. This simplifies handling and storage considerably.

Note: Depending on the litz wire used, the connection cross sections (crimp ranges) can differ from the values mentioned below.



Crimp contacts socket



Crimp contacts pin

		Ordering data			Ordering data		
Description	Connection cross section [mm ²]	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Contact socket Ø 1.0 mm	0.06 ... 0.2	SF-6CS2000	1605562	100			
	0.14 ... 0.5	SF-10KS004	1607356	100			
	0.5 ... 1.0	SF-6AS2000	1605557	100			
Contact pin Ø 1.0 mm	0.06 ... 0.2				SF-6CP2000	1605559	100
	0.14 ... 0.5				SF-10KP004	1607355	100
	0.5 ... 1.0				SF-6AP2000	1605554	100
		Accessories			Accessories		
Crimping tools		Order separately, see page 179			Order separately, see page 179		

Notes:

Each connector housing type can be assembled with pin or socket contacts.

For safety reasons, only use socket contacts in the live part of the plug.

Mechanical and electrical data

Mechanical data

Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Connection technology:	Crimp connection
Sealing and O-ring:	Fluororubber (FKM)
Ambient temperature:	-40°C ... 130°C
Cable entry:	Cable and coupler connectors for an outer cable diameter of 7.5 to 18 mm, shielded
Type of locking:	M23 SPEEDCON screw locking
Mechanical insertion/withdrawal cycles:	Standard: 100
Protection class:	IP67 when locked

Electrical data

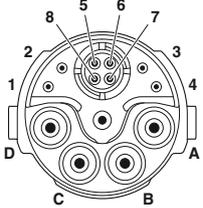
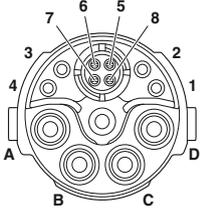
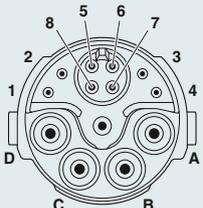
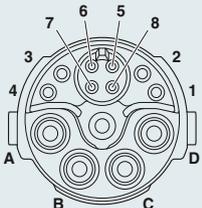
Number of positions	13 (4 + 4 + 4 + PE), CAT5 (100 Mbps)				13 (8 + 4 + PE)							
Contacts	4	+	4	+	4	+	PE	8	+	4	+	PE
Contact Ø	[mm]	0.8	1.0	2.0	2.0	1.0	2.0	2.0				
Litz wire cross sections												
Cable and coupler connectors:												
	Cable Ø max. 18 mm	[mm ²]	0.08 ... 0.5	0.06 ... 1.0	0.25 ... 4.0	0.25 ... 4.0	0.06 ... 1.0	0.25 ... 4.0	0.25 ... 4.0			
Device connectors:												
	[mm ²]	0.08 ... 0.5	0.06 ... 1.0	0.25 ... 4.0	0.25 ... 4.0	0.06 ... 1.0	0.25 ... 4.0	0.25 ... 4.0				
Nominal current per contact at 25°C ¹⁾												
		3.6	8	30	-	8	30	-				
Specifications according to DIN EN 61984:2009												
Rated voltage												
	[V AC/DC]	50	50	630/850	-	50	630/850	-				
Test/surge voltage												
	[kV AC]	1.5	1.5	6	-	1.5	6	-				
Overvoltage category												
		III				III						
Pollution degree ²⁾												
		3				3						
Installation height												
	[m]	Up to 3000				Up to 3000						
Cable clamping area ³⁾												
	Max. Ø [mm]	18				18						

¹⁾ Determine the effective current carrying capacity according to the application, if necessary, using a derating curve.

²⁾ The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, seal the connector using a protective cap ≥ IP54.

³⁾ The cable clamping areas specified on the following pages may vary depending on the cable material and structure. Selection and testing is the responsibility of the user.

Contact chamber numbering
(view of plug-in side)

Number of positions	Pin		Socket	
<p>13-pos., CAT5 (100 Mbps) (4 + 4 + 4 + PE) Crimp</p>				
<p>13-pos. (8 + 4 + PE) Crimp</p>				

Circular connectors

M23 – hybrid connectors

Selection guide

M23 hybrid connectors up to 30 A/630 V AC/850 V DC, crimp ranges up to 4 mm²

- Cable connectors
- Coupler connectors
- Device connectors (device flanges)

The connectors are pre-assembled on delivery. The connectors can be extended with the corresponding crimp contacts.

The product chart provides an overview of the available components.

Connector type

Cable connectors

SPEEDCON fast locking system, see page 114.

M23 x 1 standard interlocking, see page 115.



Shielded

Coupler connectors

See page 116.



Shielded

Device connectors

Straight, front mounting see page 117.



Straight, rear mounting see page 118.



Angled, rotatable, flange dimensions: 26 mm x 26 mm, see page 119.



Angled, rotatable, flange dimensions: 28 mm x 28 mm see page 119.



Shielded

Crimp contacts

Socket contacts

Turned, see page 120.



Tools/accessories

Crimping pliers with digital display for turned crimp contacts, see page 179.



All housings can be fitted with pin or socket crimp contacts

Pin contacts

Turned, see page 120.



Accessories

Color rings for individually marking the connectors, see page 184.

**Note:**

For safety reasons, only use socket contacts in the live part of the connector.

Circular connectors

M23 – hybrid connectors

Cable connector, hybrid, SPEEDCON fast locking system

- 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
- 4x power+PE, 8x signal

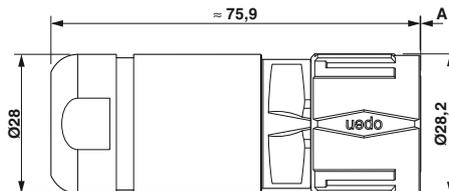


Cable connector, socket assembly



Cable connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4 x signal + CAT5		8 x signal		4 x signal + CAT5		8 x signal	
Cable connector, with contact carrier, without contacts, crimp connection									
Universal gasket	7.5 mm ... 18 mm	1621517	1	1621524	1	1621529	1	1621534	1
	7.5 mm ... 9 mm	1621520	1	1621525	1	1621530	1	1621535	1
	9 mm ... 12 mm	1621521	1	1621526	1	1621531	1	1621536	1
	12 mm ... 15 mm	1621522	1	1621527	1	1621532	1	1621537	1
	15 mm ... 18 mm	1621523	1	1621528	1	1621533	1	1621538	1
		Accessories				Accessories			
M23 hybrid cable, (5 x 2.5 + 2 x (2 x 0.5) + (4 x 22 AWG)C)C									
Length of cable: 1 m		KC-88014311/1,00		1623127	1	KC-88014311/1,00		1623127	1
Length of cable: 20 m		KC-88014311/20,00		1622080	1	KC-88014311/20,00		1622080	1
Cable length: 100 m		KC-88014311/100,00		1623039	1	KC-88014311/100,00		1623039	1
Crimp contacts		See page 120				See page 120			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



Pin version: dimension A = 0.2 mm,
socket version: dimension A = 0 mm

Cable connector, hybrid, standard locking

- 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
- 4x power+PE, 8x signal

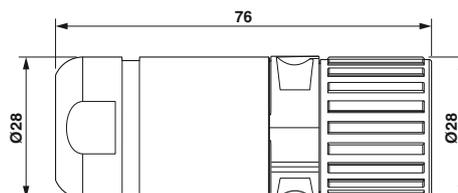


Cable connector, socket assembly



Cable connector, pin assembly

		Ordering data				Ordering data							
Description	Cable clamping area	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.				
		4 x signal + CAT5		8 x signal		4 x signal + CAT5		8 x signal					
Cable connector, with contact carrier, without contacts, crimp connection													
Universal gasket	7.5 mm ... 18 mm	1621997	1	1622002	1	1622007	1	1622012	1				
	7.5 mm ... 9 mm	1621998	1	1622003	1	1622008	1	1622013	1				
	9 mm ... 12 mm	1621999	1	1622004	1	1622009	1	1622014	1				
	12 mm ... 15 mm	1622000	1	1622005	1	1622010	1	1622015	1				
	15 mm ... 18 mm	1622001	1	1622006	1	1622011	1	1622016	1				
M23 hybrid cable, (5 x 2.5 + 2 x (2 x 0.5) + (4 x 22 AWG)C)C													
Length of cable: 1 m		KC-88014311/1,00		1623127		1		KC-88014311/1,00		1623127		1	
Length of cable: 20 m		KC-88014311/20,00		1622080		1		KC-88014311/20,00		1622080		1	
Cable length: 100 m		KC-88014311/100,00		1623039		1		KC-88014311/100,00		1623039		1	
Crimp contacts		See page 120											
Color rings, 50 pcs. in set (to be ordered separately)		See page 184											
Dust protection caps (to be ordered separately)		See page 186											



Circular connectors

M23 – hybrid connectors

Coupler connector, hybrid

- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
- 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
- 4x power+PE, 8x signal

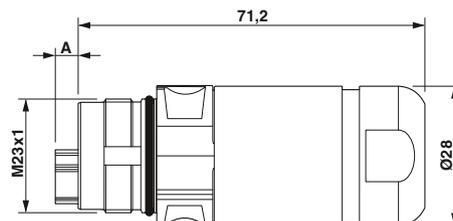


Coupler connector, socket assembly



Coupler connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4 x signal + CAT5		8 x signal		4 x signal + CAT5		8 x signal	
Coupler connector, with contact carrier, without contacts, crimp connection									
Universal gasket	7.5 mm ... 18 mm	1621539	1	1621544	1	1621549	1	1621554	1
	7.5 mm ... 9 mm	1621540	1	1621545	1	1621550	1	1621555	1
	9 mm ... 12 mm	1621541	1	1621546	1	1621551	1	1621556	1
	12 mm ... 15 mm	1621542	1	1621547	1	1621552	1	1621557	1
	15 mm ... 18 mm	1621543	1	1621548	1	1621553	1	1621558	1
		Accessories				Accessories			
M23 hybrid cable, (5 x 2.5 + 2 x (2 x 0.5) + (4 x 22 AWG)C)C		KC-88014311/1,00		1623127	1	KC-88014311/1,00		1623127	1
Length of cable: 1 m		KC-88014311/20,00		1622080	1	KC-88014311/20,00		1622080	1
Length of cable: 20 m		KC-88014311/100,00		1623039	1	KC-88014311/100,00		1623039	1
Cable length: 100 m									
Crimp contacts		See page 120				See page 120			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



Pin version: dimension A = 4.7 mm,
socket version: dimension A = 0 mm

Device connector, hybrid, straight, front mounting

- The external thread is designed for the standard and SPEEDCON fast locking system
- 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
- 4x power+PE, 8x signal



Device connector, straight, socket assembly



Device connector, straight, pin assembly

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.

1621567	1	1621568	1
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Accessories	
See page 120	
See page 184	
See page 186	

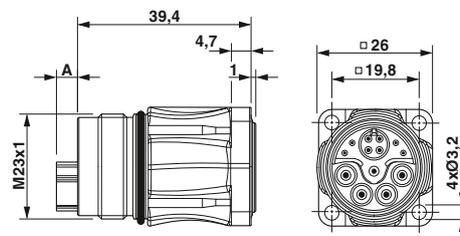
Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.

1621569	1	1621570	1
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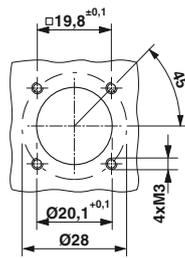
Accessories	
See page 120	
See page 184	
See page 186	

Description
Device connector , with contact carrier, without contacts
Flange dimensions: 26 mm x 26 mm

Crimp contacts
Color rings, 50 pcs. in set (to be ordered separately)
Dust protection caps (to be ordered separately)



Pin version: dimension A = 4.75 mm, socket version: dimension A = 0 mm



Installation dimensions

Circular connectors

M23 – hybrid connectors

Device connector, hybrid, straight, rear mounting

- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
- 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
- 4x power+PE, 8x signal



Device connector, straight, socket assembly



Device connector, straight, pin assembly

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.						
Device connector, with contact carrier, without contacts	4 x signal + CAT5		8 x signal		4 x signal + CAT5		8 x signal	
	1624344	1	1627204	1	1627205	1	1627206	1
		Accessories				Accessories		
Crimp contacts	See page 120							
Color rings, 50 pcs. in set (to be ordered separately)	See page 184							
Dust protection caps (to be ordered separately)	See page 186							

**Device connector, hybrid,
angled, rotatable,
front mounting**

- The external thread is designed for the standard and SPEEDCON fast locking system
- 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
- 4x power+PE, 8x signal
- Housing can be freely rotated by 310°



Device connector, angled, rotatable,
socket assembly



Device connector, angled, rotatable,
pin assembly

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.

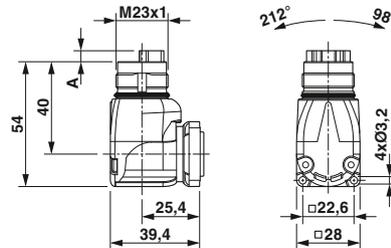
Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.

Description	
Device connector, with contact carrier, without contacts	
Flange dimensions: 26 mm x 26 mm	
Device connector, with contact carrier, without contacts	
Flange dimensions: 28 mm x 28 mm	

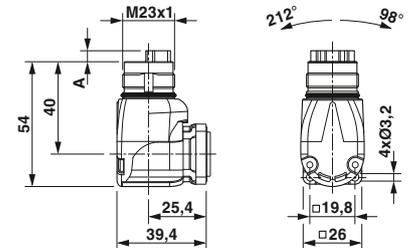
Accessories			
See page 120			
See page 184			
See page 186			

Accessories			
See page 120			
See page 184			
See page 186			

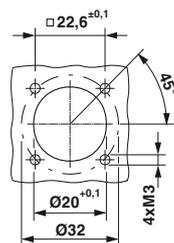
Crimp contacts
Color rings, 50 pcs. in set (to be ordered separately)
Dust protection caps (to be ordered separately)



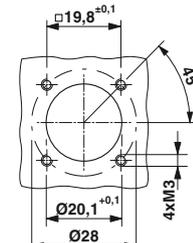
Pin version: dimension A = 4.7 mm,
socket version: dimension A = 0 mm



Pin version: dimension A = 4.7 mm,
socket version: dimension A = 0 mm



Installation dimensions



Installation dimensions

Circular connectors

M23 – hybrid connectors

Crimp contacts, turned



Crimp contacts, socket



Crimp contacts, pin

Description	Connection cross section [mm ²]	Ordering data			Ordering data		
		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Contacts, Ø 0.8 mm	0.08 ... 0.25	SF-08KS010	1621571	100	SF-08KP010	1621574	100
	0.34 ... 0.50	SF-08KS020	1621573	100	SF-08KP020	1621575	100
Contacts, Ø 1.0 mm, for signal	0.06 ... 0.25	ST-10KS010	1618239	100	ST-10KP010	1618255	100
	0.34 ... 0.50	ST-10KS020	1618251	100	ST-10KP020	1618256	100
	0.5 ... 1.0	ST-10KS030	1618254	100	ST-10KP030	1618261	100
Contacts, Ø 2.0 mm	0.25 ... 1.0	SF-20KS021	1621576	50	SF-20KP021	1621579	50
	1.0 ... 2.5	SF-20KS022	1621577	50	SF-20KP022	1621580	50
	2.5 ... 4.0	SF-20KS023	1621578	50	SF-20KP023	1621581	50

Circular connectors

M40 – hybrid connectors

Mechanical and electrical data

Mechanical data

Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Connection technology:	Crimp connection
Sealing and O-ring:	Fluororubber (FKM)
Ambient temperature:	-40°C ... 130°C
Cable entry:	Cable and coupler connectors for an outer cable diameter of 9 to 26.5 mm, shielded
Type of locking:	M40 SPEEDCON screw locking
Mechanical insertion/withdrawal cycles:	Standard: 100
Protection class:	IP68/IP69K when locked

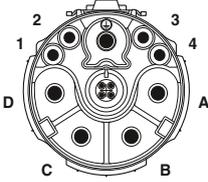
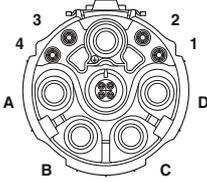
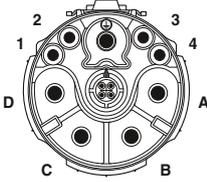
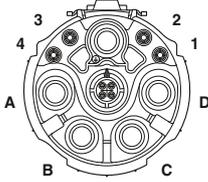
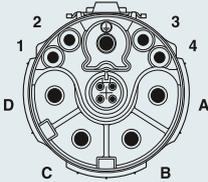
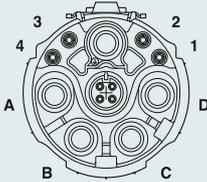
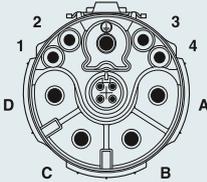
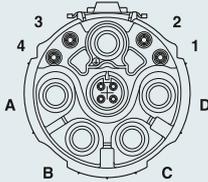
Electrical data

Number of positions	13 (4 + 4 + 4 + PE), CAT5 (100 Mbps)				13 (4 + 4 + 4 + PE), signal							
Contacts	4	+	4	+	4	+	PE	8	+	4	+	PE
Contact Ø [mm]	0.8		1.0		3.6		3.6	1.0		3.6		3.6
Litz wire cross sections												
Cable and coupler connectors:												
	Cable Ø max. 26.5 mm	[mm ²]	0.08 ... 0.5	0.06 ... 1.5	1.0 ... 16.0	0.25 ... 4.0	0.06 ... 1.5	1.0 ... 16.0	1.0 ... 16.0			
Device connectors:												
		[mm ²]	0.08 ... 0.5	0.06 ... 1.5	1.0 ... 10.0	0.25 ... 4.0	0.06 ... 1.5	1.0 ... 10.0	1.0 ... 10.0			
Nominal current per contact at 25°C ¹⁾												
			3.6	8	70	-	8	70	-			
Specifications according to DIN EN 61984:2009												
Rated voltage [V AC/DC]												
			50	500	630/850	-	500	630/850	-			
Test/surge voltage [kV AC]												
			1.5	4	6	-	4	6	-			
Overvoltage category												
			III				III					
Pollution degree ²⁾												
			3				3					
Installation height [m]												
			Up to 3000				Up to 3000					
Cable clamping area ³⁾ Max. Ø [mm]												
			26.5				26.5					

¹⁾ Determine the effective current carrying capacity according to the application, if necessary, using a derating curve.

²⁾ The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, seal the connector using a protective cap ≥ IP54.

³⁾ The cable clamping areas specified on the following pages may vary depending on the cable material and structure. Selection and testing is the responsibility of the user.

Contact chamber numbering (view of plug-in side)				
Number of positions	Pin AC-coded	Socket AC-coded	Pin DC-coded	Socket DC-coded
13-pos., CAT5 (100 Mbps) (4 + 4 + 4 + PE) Crimp				
13-pos., signal (4 + 4 + 4 + PE) Crimp				

Circular connectors

M40 – hybrid connectors

Selection guide

M40 hybrid connectors up to
70 A/630 V AC/850 V DC,
crimp ranges up to 16 mm²

- Cable connectors
- Coupler connectors
- Device connectors (device flanges)

The connectors are pre-assembled on
delivery. The connectors can be extended
with the corresponding crimp contacts.

The product chart provides an overview
of the available components.

Connector type

Cable connectors

SPEEDCON fast locking system,
see page 126.



Shielded

Coupler connectors

See page 127.



Shielded

Device connectors

Straight,
see page 128.



Angled, rotatable,
see page 129.



Shielded

Crimp contacts

Socket contacts

Turned, see page 130.



All housings can be fitted with pin or socket crimp contacts

Pin contacts

Turned, see page 130.



Tools/accessories

Crimping pliers with digital display for turned crimp contacts, see page 179.



Accessories

Color rings for individually marking the connectors, see page 184.

**Note:**

For safety reasons, only use socket contacts in the live part of the connector.

Circular connectors

M40 – hybrid connectors

Cable connector, hybrid, SPEEDCON fast locking system

- 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
- 4x power+PE, 8x signal



Cable connector, socket assembly



Cable connector, pin assembly

Description	Cable clamping area
Cable connector, AC-coded, with contact carrier, without contacts, crimp connection	
Universal gasket	9 mm ... 14 mm 14 mm ... 20.5 mm 20.5 mm ... 26.5 mm
Cable connector, DC-coded, with contact carrier, without contacts, crimp connection	
Universal gasket	9 mm ... 14 mm 14 mm ... 20.5 mm 20.5 mm ... 26.5 mm

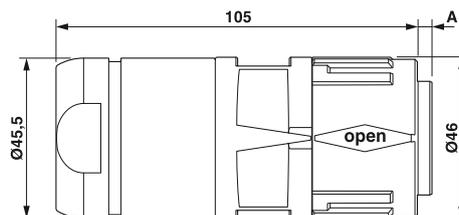
Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
4+4+4+PE-pos. (CAT5)		4+4+4+PE-pos. (signal)	
1623324	1	1623329	1
1623327	1	1623330	1
1623328	1	1623331	1
4+4+4+PE-pos. (CAT5)		4+4+4+PE-pos. (signal)	
1623683	1	1623686	1
1623684	1	1623687	1
1623685	1	1623688	1

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
4+4+4+PE-pos. (CAT5)		4+4+4+PE-pos. (signal)	
1623332	1	1623335	1
1623333	1	1623336	1
1623334	1	1623337	1
4+4+4+PE-pos. (CAT5)		4+4+4+PE-pos. (signal)	
1623692	1	1623695	1
1623693	1	1623696	1
1623694	1	1623697	1

M40 hybrid cable, (5 x 10 + 2 x (2 x 0.5) + (4 x 22 AWG)C)C	
Length of cable: 1 m	
Length of cable: 20 m	
Crimp contacts	See page 130
Color rings, 50 pcs. in set (to be ordered separately)	See page 184
Dust protection caps (to be ordered separately)	See page 186

Accessories			
KC-88014448/1,00	1627298	1	
KC-88014448/20,00	1627299	1	
See page 130			
See page 184			
See page 186			

Accessories			
KC-88014448/1,00	1627298	1	
KC-88014448/20,00	1627299	1	
See page 130			
See page 184			
See page 186			



Pin version: dimension A = 4.05 mm, socket version: dimension A = 0.4 mm

Coupler connector, hybrid, M40 standard locking

- Compatible with mating connectors with SPEEDCON and M40 standard knurled nut
- 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
- 4x power+PE, 8x signal

new



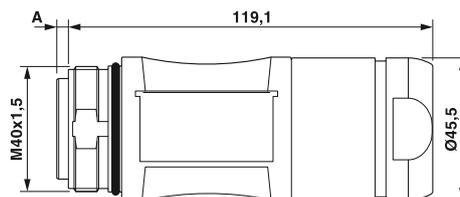
Coupler connector, socket assembly

new



Coupler connector, pin assembly

Description		Ordering data		Ordering data		Ordering data		Ordering data	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Cable clamping area		4+4+4+PE-pos. (CAT5)		4+4+4+PE-pos. (signal)		4+4+4+PE-pos. (CAT5)		4+4+4+PE-pos. (signal)	
Coupler connector, AC-coded, with contact carrier, without contacts, crimp connection									
Universal gasket	9 mm ... 14 mm	1623339	1	1623344	1	1623356	1	1623359	1
	14 mm ... 20.5 mm	1623341	1	1623345	1	1623357	1	1623360	1
	20.5 mm ... 26.5 mm	1623342	1	1623346	1	1623358	1	1623361	1
Coupler connector, DC-coded, with contact carrier, without contacts, crimp connection									
Universal gasket	9 mm ... 14 mm	1623701	1	1623704	1	1623710	1	1623713	1
	14 mm ... 20.5 mm	1623702	1	1623705	1	1623711	1	1623714	1
	20.5 mm ... 26.5 mm	1623703	1	1623706	1	1623712	1	1623715	1
M40 hybrid cable, (5 x 10 + 2 x (2 x 0.5) + (4 x 22 AWG)C)C									
Length of cable: 1 m		KC-88014448/1,00		1627298	1	KC-88014448/1,00		1627298	1
Length of cable: 20 m		KC-88014448/20,00		1627299	1	KC-88014448/20,00		1627299	1
Crimp contacts		See page 130				See page 130			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



Pin version: dimension A = 3.8 mm,
socket version: dimension A = 0.15 mm

Circular connectors

M40 – hybrid connectors

Device connector, hybrid, straight, front mounting

- The external thread is designed for the standard and SPEEDCON fast locking system
- 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
- 4x power+PE, 8x signal

new

new

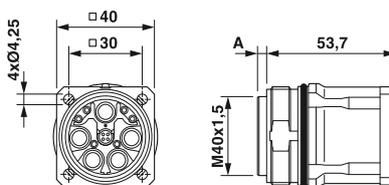


Device connector, straight, socket assembly



Device connector, straight, pin assembly

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Device connector, AC-coded, with contact carrier, without contacts, crimp connection	4+4+4+PE-pos. (CAT5)		4+4+4+PE-pos. (signal)		4+4+4+PE-pos. (CAT5)		4+4+4+PE-pos. (signal)	
Flange dimensions: 40 mm x 40 mm	1623371	1	1623372	1	1623374	1	1623375	1
Device connector, DC-coded, with contact carrier, without contacts, crimp connection								
Flange dimensions: 40 mm x 40 mm	1623725	1	1623726	1	1623728	1	1623729	1
Accessories				Accessories				
Crimp contacts	See page 130			See page 130				
Color rings, 50 pcs. in set (to be ordered separately)	See page 184			See page 184				
Dust protection caps (to be ordered separately)	See page 186			See page 186				



Pin version: dimension A = 3.8 mm, socket version: dimension A = 0.15 mm

Device connector, hybrid, angled, rotatable, front mounting

- The external thread is designed for the standard and SPEEDCON fast locking system
- 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
- 4x power+PE, 8x signal

new



Device connector, angled, rotatable, socket assembly

new



Device connector, angled, rotatable, pin assembly

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
4+4+4+PE-pos. (CAT5)		4+4+4+PE-pos. (signal)	

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
4+4+4+PE-pos. (CAT5)		4+4+4+PE-pos. (signal)	

Description	
Device connector, AC-coded, angled, rotatable, with contact carrier, without contacts, crimp connection	
Flange dimensions: 40 mm x 40 mm	
Device connector, DC-coded, angled, rotatable, with contact carrier, without contacts, crimp connection	
Flange dimensions: 40 mm x 40 mm	

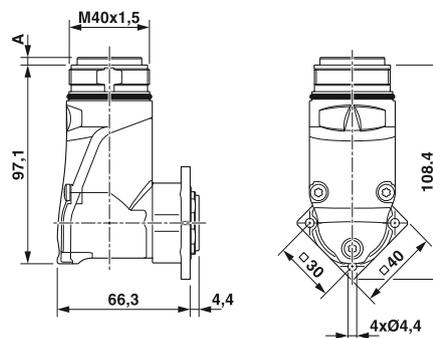
1623365	1	1623366	1
1623719	1	1623720	1

1623368	1	1623369	1
1623722	1	1623723	1

Accessories	
See page 130	
See page 184	
See page 186	

Accessories	
See page 130	
See page 184	
See page 186	

Crimp contacts
Color rings, 50 pcs. in set (to be ordered separately)
Dust protection caps (to be ordered separately)



Pin version: dimension A = 3.7 mm,
socket version: dimension A = 0.05 mm

Circular connectors

M40 – hybrid connectors

Crimp contacts, turned

Notes:
 1) Not for device connector, angled, rotatable



Description	Connection cross section [mm²]	Ordering data			Ordering data		
		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Contacts, Ø 0.8 mm	0.08 ... 0.25	SF-08KS010	1621571	100	SF-08KP010	1621574	100
	0.34 ... 0.50	SF-08KS020	1621573	100	SF-08KP020	1621575	100
Contacts, Ø 1.0 mm, for CAT5 and signal	0.06 ... 0.25	SB-10KS001	1623603	100	SB-10KP001	1623607	100
	0.34 ... 0.50	SB-10KS002	1623604	100	SB-10KP002	1623611	100
	0.5 ... 1.0	SB-10KS003	1623605	100	SB-10KP003	1623612	100
	1.0 ... 1.5	SB-10KS004	1623606	100	SB-10KP004	1623613	100
Contacts, Ø 1.0 mm, for signal	0.06 ... 0.25	ST-10KS010	1618239	100	ST-10KP010	1618255	100
	0.34 ... 0.50	ST-10KS020	1618251	100	ST-10KP020	1618256	100
	0.5 ... 1.0	ST-10KS030	1618254	100	ST-10KP030	1618261	100
Contacts, Ø 3.6 mm	2.5 ... 4.0	SB-36KS002	1623378	20	SB-36KP002	1623383	20
	4.0 ... 6.0	SB-36KS003	1623379	20	SB-36KP003	1623384	20
	10.0	SB-36KS004	1623380	20	SB-36KP004	1623385	20
	16.0 ¹⁾	SB-36KS005	1623381	20	SB-36KP005	1623386	20

Mechanical and electrical data

Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Connection technology:	Crimp connection
Sealing and O-ring:	Fluororubber (FKM)
Ambient temperature:	-40°C ... 125°C
Cable entry:	Cable and coupler connectors for an outer cable diameter of 3.5 to 11 mm, shielded (M17 Compact) 5 to 12.5 mm, shielded (M17)
Type of locking:	M17 SPEEDCON fast locking system, cable connector With M17 x 1 coarse-pitch thread as an option
Mechanical insertion/withdrawal cycles:	Standard: 100, punched-rolled C-HC crimp contacts: up to 500
Protection class:	IP67 when locked

Electrical data										
Number of positions		4 (3 + PE)	6 (5 + PE)	7 (6 + PE)	8 (7 + PE)	9 (5 + 3 + PE)				
Contacts		3 + PE	5 + PE	6 + PE	7 + PE	5	+	3	+	PE
Contact Ø	[mm]	2	1	1	1	0.6		1		1
Litz wire cross section, crimp contacts Turned	[mm ²]	0.25 ... 2.5	0.06 ... 1.0	0.06 ... 1.0	0.06 ... 1.0	0.06 ... 0.5		0.06 ... 1.0		0.06 ... 1.0
Litz wire cross section, C-HC crimp contacts Punched-rolled	[mm ²]	–	0.08 ... 0.56	0.06 ... 0.56	0.06 ... 0.56	–		–		–
Nominal current per contact at 25°C ¹⁾		20 (25) ²⁾	14	14	14	3.6		14		–
Specifications according to DIN EN 61984:2009										
Rated voltage	[V AC/DC]	630	630	630	630	60		630		–
Test/surge voltage	[kV AC]	6	6	6	6	1.5		6		–
Overvoltage category		III	III	III	III			III		
Pollution degree ³⁾		3	3	3	3			3		
Installation height	[m]	Up to 3000	Up to 3000	Up to 3000	Up to 3000			Up to 3000		
Cable clamping area ⁴⁾	Max. Ø [mm]	12.5	12.5	12.5	12.5			12.5		

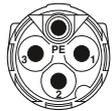
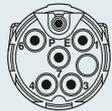
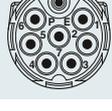
¹⁾ Determine the effective current carrying capacity according to the application, if necessary, using a derating curve.

²⁾ 25 A in the case of assignment with 3 x 2.5 mm²

³⁾ The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, seal the connector using a protective cap ≥ IP54.

⁴⁾ The cable clamping areas specified on the following pages may vary depending on the cable material and structure. Selection and testing is the responsibility of the user.

Contact chamber numbering
(view of plug-in side)

Number of positions	Pin	Socket
4-pos. (3 + PE) Crimp		
6-pos. (5 + PE) (contact chambers 2 + 5 closed) Crimp		
7-pos. (6 + PE) Crimp		
8-pos. (7 + PE) Crimp		
9-pos. (5 + 3 + PE) Crimp		

* with grounding spring
PE leading

* with grounding spring
PE leading

Note:

The connectors can be fitted with pin or socket contacts according to the application.

For safety reasons, only use socket contacts in the live part of the connector.

Circular connectors

M17 – power connectors

Selection guide

M17 power connectors, 4-, 6-, 7-, 8-, and 9-pos., up to 20 A/630 V, crimp ranges: 0.06 mm² to 2.5 mm²

- Cable connectors
- Coupler connectors
- Device connectors (device flanges)

The connectors are pre-assembled on delivery. The connectors can be extended with the corresponding crimp contacts.

Every housing type can be fitted with pin or socket contacts.

The cable connectors can be optionally equipped with the SPEEDCON fast locking system or with M17 x 1 coarse-pitch thread. The connectors with external thread are fully compatible with standard threads and the SPEEDCON fast locking system.

The product chart provides an overview of the available components.

Connector type

Cable connectors

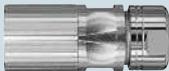
SPEEDCON fast locking system, M17 Compact, see page 136.



M17, see page 140.



M17 x 1 standard interlocking, M17, see page 141.



Square mounting flange for cable and coupler connectors for wall mounting, see page 182.



Shielded

Coupler connectors/panel feed-throughs

Coupler connector M17 Compact, see page 137.



M17, see page 142.



Panel feed-through M17 Compact, see page 138.



Shielded

Device connectors

Straight, M17 Compact, see page 139.



Straight, M17, see page 143.



Straight, with central fastening thread, front mounting, M17, see page 145.



Straight, with central fastening thread, rear mounting, M17, see page 145.



Shielded

Angled, rotatable, M17, see page 144.



Crimp contacts

Socket contacts

Turned, see page 147.



Punched-rolled, taped,
see page 146.



Pin contacts

Turned, see page 147.



Punched-rolled, taped,
see page 146.



All housings can be fitted with pin or socket crimp contacts

Tools/accessories

Crimping tools

Crimping pliers for punched-rolled
C-HC crimp contacts,
see page 178.



Crimping pliers with digital display for turned
crimp contacts,
see page 179.



Tools/accessories

Unlocking tool for device connectors with contact
carriers for snapping in from the device side,
see page 182.



Color rings for individually marking the connectors,
see page 184.

**Note:**

For safety reasons, only use socket
contacts in the live part of the
connector.

Circular connectors

M17 – power connectors

Cable connector, M17 Compact

- High packing density in a compact product
- Individual marking of connectors with color rings

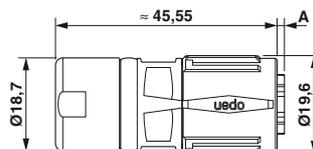


3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Description		Cable clamping area		Ordering data							
		3+PE-pos.	5+PE-pos.	6+PE-pos.	7+PE-pos.	5+3+PE-pos.	Order No.	Pcs./Pkt.			
Cable connector, with contact carrier, without contacts, for socket assembly	3.5 mm ... 5.5 mm	1618312	1	1618621	1	1618632	1	1618633	1	1618674	1
	5 mm ... 9.2 mm	1618408	1	1618620	1	1618631	1	1618634	1	1618675	1
	9 mm ... 11.2 mm	1618603	1	1618619	1	1618630	1	1618635	1	1618676	1
Cable connector, with contact carrier, without contacts, for pin assembly	3.5 mm ... 5.5 mm	1618602	1	1618614	1	1618622	1	1618640	1	1618681	1
	5 mm ... 9.2 mm	1618574	1	1618615	1	1618623	1	1618639	1	1618680	1
	9 mm ... 11.2 mm	1618575	1	1618616	1	1618624	1	1618638	1	1618679	1
				Accessories							
Crimp contacts				Order separately, see page 146 onwards							
Color rings, 50 pcs. in set (to be ordered separately)				See page 184							
Dust protection caps (to be ordered separately)				See page 186							



**Coupler connector,
M17 Compact**

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings

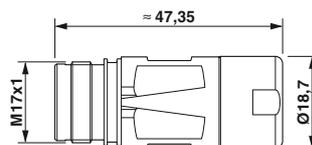


3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Description		Cable clamping area		Ordering data							
		3+PE-pos.	5+PE-pos.	6+PE-pos.	7+PE-pos.	5+3+PE-pos.	Order No.	Pcs./Pkt.			
Coupler connector, with contact carrier, without contacts, for socket assembly	3.5 mm ... 5.5 mm	1618695	1	1618696	1	1618708	1	1618716	1	1618748	1
	5 mm ... 9.2 mm	1618694	1	1618697	1	1618709	1	1618717	1	1618749	1
	9 mm ... 11.2 mm	1618693	1	1618698	1	1618710	1	1618718	1	1618750	1
Coupler connector, with contact carrier, without contacts, for pin assembly	3.5 mm ... 5.5 mm	1620614	1	1618703	1	1618704	1	1618712	1	1618740	1
	5 mm ... 9.2 mm	1618406	1	1618702	1	1618705	1	1618713	1	1618741	1
	9 mm ... 11.2 mm	1618690	1	1618701	1	1618706	1	1618714	1	1618742	1
				Accessories							
Crimp contacts				Order separately, see page 146 onwards							
Color rings, 50 pcs. in set (to be ordered separately)				See page 184							
Dust protection caps (to be ordered separately)				See page 186							



Circular connectors

M17 – power connectors

Panel feed-through, M17 Compact

- Panel feed-throughs suitable for front and rear mounting
- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings
- **Flange dimensions:**
25.7 mm x 25.7 mm



3+PE, 5+PE, 6+PE-pos.

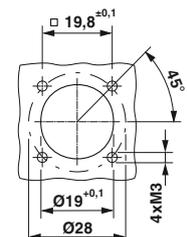
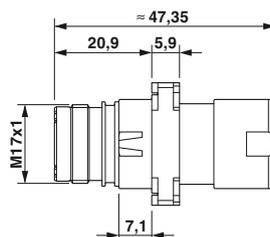


7+PE, 5+3+PE-pos.

Description	Cable clamping area	Ordering data					
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
Panel feed-through, with contact carrier, without contacts, for socket assembly	3.5 mm ... 5.5 mm	1618762	1	1618772	1	1618780	1
	5 mm ... 9 mm	1618763	1	1618773	1	1618781	1
	9 mm ... 11 mm	1618764	1	1618774	1	1618782	1
Panel feed-through, with contact carrier, without contacts, for pin assembly	3.5 mm ... 5.5 mm	1618402	1	1618767	1	1618776	1
	5 mm ... 9 mm	1618407	1	1618768	1	1618777	1
	9 mm ... 11 mm	1618760	1	1618769	1	1618778	1

Description	Cable clamping area	Ordering data					
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
Panel feed-through, with contact carrier, without contacts, for socket assembly	3.5 mm ... 5.5 mm	1618787	1	1618825	1		
	5 mm ... 9 mm	1618786	1	1618824	1		
	9 mm ... 11 mm	1618785	1	1618823	1		
Panel feed-through, with contact carrier, without contacts, for pin assembly	3.5 mm ... 5.5 mm	1618788	1	1618818	1		
	5 mm ... 9 mm	1618790	1	1618819	1		
	9 mm ... 11 mm	1618791	1	1618820	1		

Accessories		Accessories	
Crimp contacts	Order separately, see page 146 onwards	Crimp contacts	Order separately, see page 146 onwards
Color rings, 50 pcs. in set (to be ordered separately)	See page 184	Color rings, 50 pcs. in set (to be ordered separately)	See page 184
Dust protection caps (to be ordered separately)	See page 186	Dust protection caps (to be ordered separately)	See page 186



Installation dimensions

**Device connector,
M17 Compact,
front mounting**

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings
- **Flange dimensions: 21.6 mm x 21.6 mm**



3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Ordering data					
Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
3+PE-pos.		5+PE-pos.		6+PE-pos.	

Ordering data					
Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
7+PE-pos.		5+3+PE-pos.			

Description
Device connector, with contact carrier, without contacts, for socket assembly
Contact insert for support on the device
Device connector, with contact carrier, without contacts, for pin assembly
Contact insert for support on the device
Device connector, with contact carrier, without contacts, for socket assembly
Contact insert can be snapped in
Device connector, with contact carrier, without contacts, for pin assembly
Contact insert can be snapped in

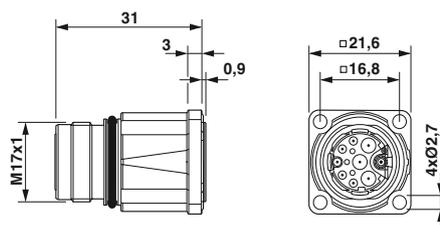
1607694	1	1607728	1	1613589	1
1607675	1	1607711	1	1613570	1
1607692	1	1607727	1	1613588	1
1607674	1	1607710	1	1613569	1

1607769	1	1613631	1
1607747	1	1613612	1
1607768	1	1613630	1
1607746	1	1613611	1

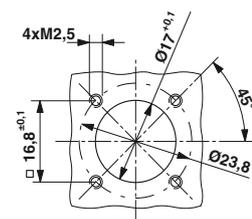
Accessories
Order separately, see page 146 onwards
See page 184
See page 186
See page 182

Accessories
Order separately, see page 146 onwards
See page 184
See page 186
See page 182

Crimp contacts
Color rings, 50 pcs. in set (to be ordered separately)
Dust protection caps (to be ordered separately)
Unlocking tool for contact carriers



Flange dimensions 21.6 mm x 21.6 mm



Installation dimensions

Circular connectors

M17 – power connectors

Cable connector, SPEEDCON fast locking system

- SPEEDCON fast locking system or M17 standard interlocking
- Standard knurled nut compatible with mating connectors with SPEEDCON and M17 standard external thread
- Individual marking of connectors with color rings

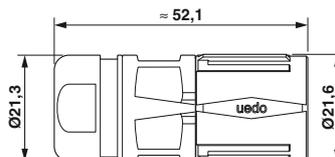


3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Description	Cable clamping area	Ordering data											
		Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.						
Cable connector, with contact carrier, without contacts, for socket assembly		3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
	5 mm ... 8 mm	1607683	1	1607718	1	1613578	1	1607756	1	1613620	1		
	8 mm ... 10 mm	1607685	1	1607720	1	1613580	1	1607759	1	1613622	1		
	10 mm ... 12.5 mm	1624538	1	1624544	1	1624550	1	1624556	1	1624639	1		
Cable connector, with contact carrier, without contacts, for pin assembly		3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
	5 mm ... 8 mm	1607665	1	1607700	1	1613559	1	1607736	1	1613601	1		
	8 mm ... 10 mm	1607667	1	1607702	1	1613561	1	1607738	1	1613603	1		
	10 mm ... 12.5 mm	1624535	1	1624541	1	1624547	1	1624553	1	1624637	1		
		Accessories						Accessories					
Crimp contacts		Order separately, see page 146 onwards						Order separately, see page 146 onwards					
Color rings, 50 pcs. in set (to be ordered separately)		See page 184						See page 184					
Dust protection caps (to be ordered separately)		See page 186						See page 186					



**Cable connector,
M17 standard locking**

- Standard knurled nut compatible with mating connectors with SPEEDCON and M17 standard external thread
- Individual marking of connectors with color rings

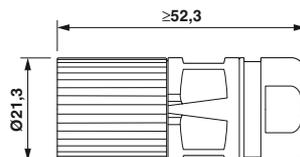


3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Description	Cable clamping area	Ordering data					
		Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
		3+PE-pos.		5+PE-pos.		6+PE-pos.	
Cable connector, with contact carrier, without contacts, for socket assembly							
	5 mm ... 8 mm	1607682	1	1607717	1	1613577	1
	8 mm ... 10 mm	1607684	1	1607719	1	1613579	1
	10 mm ... 12.5 mm	1624537	1	1624534	1	1624549	1
Cable connector, with contact carrier, without contacts, for pin assembly							
	5 mm ... 8 mm	1607663	1	1607699	1	1613558	1
	8 mm ... 10 mm	1607666	1	1607701	1	1613560	1
	10 mm ... 12.5 mm	1624534	1	1624540	1	1624546	1
		Accessories					
Crimp contacts		Order separately, see page 146 onwards					
Color rings, 50 pcs. in set (to be ordered separately)		See page 184					
Dust protection caps (to be ordered separately)		See page 186					



Circular connectors

M17 – power connectors

Coupler connectors

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings

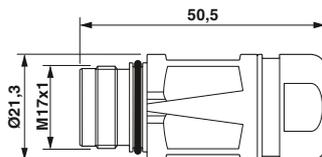


3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Description	Cable clamping area	Ordering data						Ordering data					
		Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
		3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Coupler connector, with contact carrier, without contacts, for socket assembly													
	5 mm ... 8 mm	1607688	1	1607723	1	1613583	1	1607764	1	1613625	1		
	8 mm ... 10 mm	1607689	1	1607724	1	1613584	1	1607765	1	1613626	1		
	10 mm ... 12.5 mm	1624539	1	1624545	1	1624551	1	1624557	1	1624654	1		
Coupler connector, with contact carrier, without contacts, for pin assembly													
	5 mm ... 8 mm	1607670	1	1607706	1	1613564	1	1607741	1	1613606	1		
	8 mm ... 10 mm	1607671	1	1607707	1	1613565	1	1607742	1	1613607	1		
	10 mm ... 12.5 mm	1624536	1	1624542	1	1624548	1	1624554	1	1624653	1		
		Accessories						Accessories					
Crimp contacts		Order separately, see page 146 onwards						Order separately, see page 146 onwards					
Color rings, 50 pcs. in set (to be ordered separately)		See page 184						See page 184					
Dust protection caps (to be ordered separately)		See page 186						See page 186					



**Device connector,
straight, front mounting**

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Contact insert for support on the device or can be snapped in
- Individual marking of connectors with color rings
- **Flange dimensions:
25.7 mm x 25.7 mm**



3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Ordering data					
Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
3+PE-pos.		5+PE-pos.		6+PE-pos.	

Ordering data					
Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
7+PE-pos.		5+3+PE-pos.			

Description
Device connector, with contact carrier, without contacts, for socket assembly
Contact insert for support on the device
Device connector, with contact carrier, without contacts, for pin assembly
Contact insert for support on the device
Device connector, with contact carrier, without contacts, for socket assembly
Contact insert can be snapped in
Device connector, with contact carrier, without contacts, for pin assembly
Contact insert can be snapped in

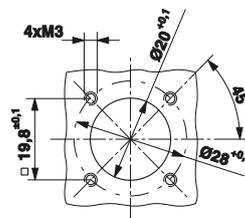
1619189	1	1619191	1	1619193	1
1619186	1	1619190	1	1619192	1
1619212	1	1619214	1	1619216	1
1619209	1	1619213	1	1619215	1

1619195	1	1620459	1
1619194	1	1620460	1
1619218	1	1620461	1
1619217	1	1620462	1

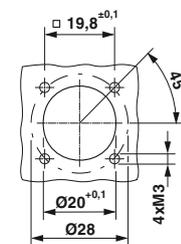
Accessories
Order separately, see page 146 onwards
See page 184
See page 186
See page 182

Accessories
Order separately, see page 146 onwards
See page 184
See page 186
See page 182

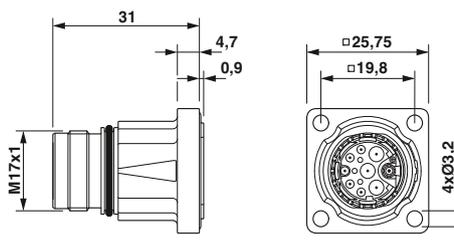
Crimp contacts
Color rings, 50 pcs. in set (to be ordered separately)
Dust protection caps (to be ordered separately)
Unlocking tool for contact carriers



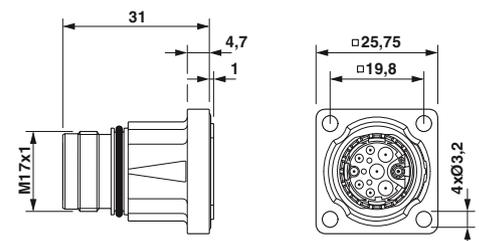
Installation dimensions



Installation dimensions



Contact insert for support on the device



Contact insert can be snapped in

Circular connectors

M17 – power connectors

Device connector, angled, rotatable, front mounting

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Housing can be freely rotated up to 308°
- Individual marking of connectors with color rings
- Flange versions for M2.5 or M3 fixing
- **Flange dimensions: 25.7 mm x 25.7 mm**

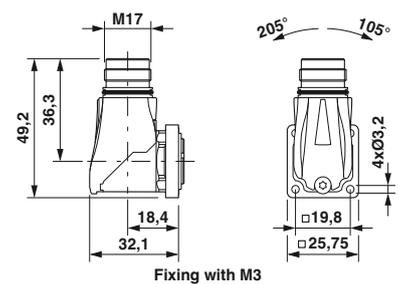
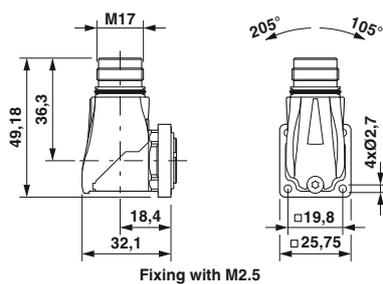
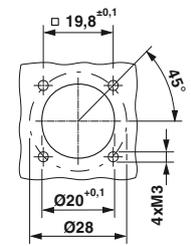
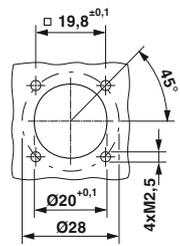


3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Description	Ordering data						Ordering data								
	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.			
Device connector, angled, rotatable, with contact carrier, without contacts, for socket contacts	3+PE-pos.			5+PE-pos.			6+PE-pos.			7+PE-pos.			5+3+PE-pos.		
Fixing with M2.5 Device connector, angled, rotatable, with contact carrier, without contacts, for pin contacts	1620428	1	1620432	1	1620434	1	1620436	1	1620438	1					
Fixing with M2.5 Device connector, angled, rotatable, with contact carrier, without contacts, for socket contacts	1620427	1	1620431	1	1620433	1	1620435	1	1620437	1					
Fixing with M3 Device connector, angled, rotatable, with contact carrier, without contacts, for pin contacts	1620443	1	1620447	1	1620449	1	1620451	1	1620453	1					
Fixing with M3	1620444	1	1620448	1	1620450	1	1620452	1	1620454	1					
Accessories															
Crimp contacts	Order separately, see page 146 onwards														
Color rings, 50 pcs. in set (to be ordered separately)	See page 184														
Dust protection caps (to be ordered separately)	See page 186														



Device connector, central fastening thread, front and rear mounting

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Snapping in the contact carriers from the device side
- Individual marking of connectors with color rings



3+PE, 5+PE-pos.



7+PE, 5+3+PE-pos.

Ordering data					
Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
3+PE-pos.		5+PE-pos.		6+PE-pos.	

Ordering data					
Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
7+PE-pos.		5+3+PE-pos.			

Description
Device connector, front mounting, M18 x 0.75 fastening thread, with contact carrier, without contacts, for socket contacts
Device connector, front mounting, M18 x 0.75 fastening thread, with contact carrier, without contacts, for pin contacts
Device connector, rear mounting, M20 x 1.5 fastening thread, with contact carrier, without contacts, for socket contacts
Device connector, rear mounting, M20 x 1.5 fastening thread, with contact carrier, without contacts, for pin contacts

1613546	1	1613550	1	1613572	1
1613544	1	1613548	1	1613553	1
1613547	1	1613551	1	1613587	1
1613545	1	1613549	1	1613568	1

1613592	1	1613614	1
1613590	1	1613595	1
1613593	1	1613629	1
1613591	1	1613610	1

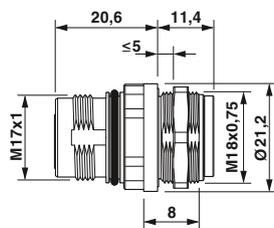
Accessories			
Type	Order No.	Pcs./Pkt.	
ST-E2015151	1613831	10	
RC-13041	1600417	10	

Accessories			
Type	Order No.	Pcs./Pkt.	
ST-E2015151	1613831	10	
RC-13041	1600417	10	

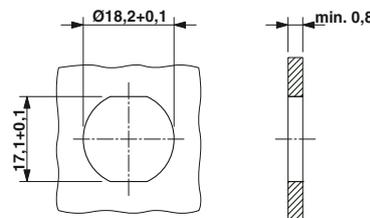
Crimp contacts
Color rings, 50 pcs. in set (to be ordered separately)
Dust protection caps (to be ordered separately)
Unlocking tool for contact carriers

Order separately, see page 146 onwards
See page 184
See page 186
See page 182

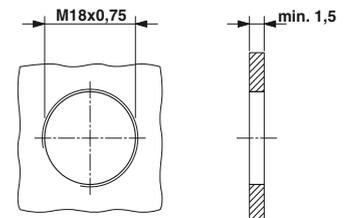
Order separately, see page 146 onwards
See page 184
See page 186
See page 182



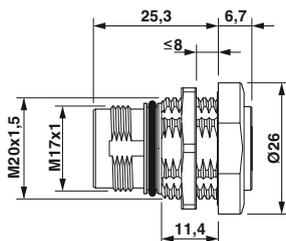
Front mounting, M18 x 0.75, order locking nut separately



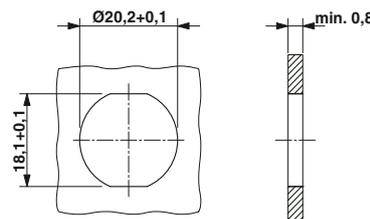
Installation dimensions: mounting with anti-rotation protection and locking nut



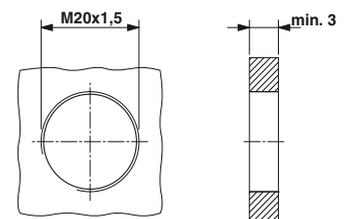
Installation dimensions: mounting with thread



Rear mounting, M20 x 1.5, order locking nut separately



Installation dimensions: mounting with anti-rotation protection and locking nut



Installation dimensions: mounting with thread

Circular connectors

M17 – power connectors

Crimp contacts, punched-rolled

C-HC® are punched-rolled contacts. They are designed for high insertion/withdrawal cycles.

The contacts are available taped on rolls for manual or automatic processing.

Note: depending on the litz wire used, the connection cross sections (crimp ranges) may deviate from the listed values. For safety reasons, only use socket contacts in the live part of the plug.



C-HC socket contacts



C-HC pin contacts

Description	Connection cross section [mm²]
Crimp contacts , C-HC punched-rolled, Ø 1.0 mm, 2500 pcs./roll	0.06 ... 0.25
	0.2 ... 0.56
Crimp contact C-HC punched-rolled, Ø 1.0 mm, 10,000 pcs./roll	0.06 ... 0.25
	0.2 ... 0.56

Crimping tools

Ordering data		
Type	Order No.	Pcs. / Pkt.
SF-10KS320	1607031	1
SF-10KS350	1607032	1
SF-10KS330	1607358	1
SF-10KS360	1607361	1

Accessories
Order separately, see page 178 onwards

Ordering data		
Type	Order No.	Pcs. / Pkt.
SF-10KP320	1615961	1
SF-10KP350	1615963	1
SF-10KP330	1615962	1
SF-10KP360	1615964	1

Accessories
Order separately, see page 178 onwards

Contact diameter

Number of positions	Number of contacts	Contact Ø [mm]
4(3+PE)	4	2
6(5+PE)	6	1
7(6+PE)	7	1
8(7+PE)	8	1
9(5+3+PE)	5+3+PE	0.6+1+1
17	17	0.6

Crimp contacts, turned

Depending on the number of positions, assemble the M17 power connectors with \varnothing 2 mm, \varnothing 1 mm or \varnothing 0.6 mm contacts (see table below).

Note: depending on the litz wire used, the connection cross sections (crimp ranges) may deviate from the listed values. For safety reasons, only use socket contacts in the live part of the plug.



Crimp contacts socket



Crimp contacts pin

		Ordering data			Ordering data		
Description	Connection cross section [mm ²]	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Contact socket \varnothing 2.0 mm	0.25 ... 1.0	ST-20KS010	1607657	50			
	1.0 ... 2.5	ST-20KS020	1607658	50			
Contacts, \varnothing 1.0 mm, for signal	0.06 ... 0.25	ST-10KS010	1618239	100			
	0.34 ... 0.50	ST-10KS020	1618251	100			
	0.5 ... 1.0	ST-10KS030	1618254	100			
Contact socket \varnothing 0.6 mm	0.06 ... 0.25	ST-06KS010	1607580	100			
	0.14 ... 0.34	ST-06KS020	1607581	100			
	0.34 ... 0.50	ST-06KS030	1607582	100			
Contact pin \varnothing 2.0 mm	0.25 ... 1.0				ST-20KP010	1607655	50
	1.0 ... 2.5				ST-20KP020	1607656	50
Contacts, \varnothing 1.0 mm, for signal	0.06 ... 0.25				ST-10KP010	1618255	100
	0.34 ... 0.50				ST-10KP020	1618256	100
	0.5 ... 1.0				ST-10KP030	1618261	100
Contact pin \varnothing 0.6 mm	0.06 ... 0.25				ST-06KP010	1607577	100
	0.14 ... 0.34				ST-06KP020	1607578	100
	0.34 ... 0.50				ST-06KP030	1607579	100
		Accessories			Accessories		
Crimping tools		Order separately, see page 179			Order separately, see page 179		

Contact diameter

Number of positions	Number of contacts	Contact \varnothing [mm]
4(3+PE)	4	2
6(5+PE)	6	1
7(6+PE)	7	1
8(7+PE)	8	1
9(5+3+PE)	5+3+PE	0.6+1+1
17	17	0.6

Mechanical and electrical data

Mechanical data

Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Connection technology:	Crimp connection
Sealing and O-ring:	Fluororubber (FKM)
Ambient temperature:	-40°C ... 125°C
Cable entry:	Cable and coupler connectors for an outer cable diameter of 7.5 to 18 mm, shielded
Type of locking:	M23 SPEEDCON screw locking, cable connector M23 x 1 coarse-pitch thread as an option
Mechanical insertion/withdrawal cycles:	Standard: 100
Protection class:	IP67 when locked

Electrical data

Number of positions	6 (5 + PE)		8 (4 + 3 + PE)				
	Contacts	5 + PE	4	+	3	+	PE
Contact Ø [mm]	2	1	2	2	2		
Litz wire cross sections							
Short version, cable Ø max. 14 mm [mm ²]	0.25 ... 2.5	0.06 ... 1.0	0.25 ... 2.5		0.25 ... 2.5		0.25 ... 2.5
Long version, cable Ø max. 18 mm [mm ²]	0.25 ... 4.0	0.06 ... 1.0	0.25 ... 4.0		0.25 ... 4.0		0.25 ... 4.0
Device connectors [mm ²]	0.25 ... 4.0	0.06 ... 1.0	0.25 ... 4.0		0.25 ... 4.0		0.25 ... 4.0
Nominal current per contact at 25°C ¹⁾	30	9	30				–
Specifications according to DIN EN 61984:2009							
Rated voltage [V AC/DC]	630 ²⁾	250	630 ²⁾				–
Test/surge voltage [kV AC]	6	4	6				–
Overvoltage category	III		III				
Pollution degree ³⁾	3		3				
Installation height [m]	Up to 3000		Up to 3000				
Cable clamping area ⁴⁾ Max. Ø [mm]	18		18				

¹⁾ Determine the effective current carrying capacity according to the application, if necessary, using a derating curve.

²⁾ 400 V when fitted with punched-rolled C-HC contacts

³⁾ The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, seal the connector using a protective cap ≥ IP54.

⁴⁾ The cable clamping areas specified on the following pages may vary depending on the cable material and structure. Selection and testing is the responsibility of the user.

Contact chamber numbering (view of plug-in side)				
Number of positions	Pin		Socket	
<p>6-pos. (5 + PE) Crimp</p>		<p>* with grounding spring, pos. 3 leading</p>		<p>* with grounding spring, pos. 3</p>
<p>8-pos. (4 + 3 + PE) Crimp</p>		<p>* with grounding spring, pos. 2</p>		<p>* with grounding spring, pos. 2 leading</p>

Circular connectors

M23 – power connectors

Selection guide

M23 power connectors up to
30 A/630 V, crimp ranges up to 4 mm²

- Cable connectors
- Coupler connectors
- Device connectors (device flanges)
- Feed-throughs/panel feed-throughs

The connectors are pre-assembled on delivery. The connectors can be extended with the corresponding crimp contacts.

The product chart provides an overview of the available components.

Connector type

Cable connectors

Short,
SPEEDCON fast locking system,
see page 152.

M23 x 1 standard interlocking,
see page 152.



Long,
SPEEDCON fast locking system,
see page 152.

M23 x 1 standard interlocking,
see page 152.



Shielded

Device connectors with knurled nut

Straight,
see page 155.



Angled,
see page 155.



Coupler connectors

Short,
see page 153.



Long,
see page 153.



Shielded

With mounting flange
Short, see page 156.



With mounting flange
Long, see page 156.



Device connectors

Straight,
see page 154.



Angled, rotatable,
flange dimensions: 26 mm x 26 mm,
see page 154.



Angled, rotatable,
flange dimensions: 28 mm x 28 mm
see page 154.



Shielded

Panel feed-through

External socket - internal pin,
see page 157.



Panel feed-throughs are supplied fully wired.

Crimp contacts

Tools/accessories

Socket contacts

Socket contacts

Turned, see page 158.



Crimping pliers with digital display for turned crimp contacts, see page 179.



Pin contacts

Pin contacts

Turned, see page 158.



Accessories

Color rings for individually marking the connectors, see page 184.



Pin contacts

Note:

For safety reasons, only use socket contacts in the live part of the connector.

Circular connectors

M23 – power connectors

Cable connector, long and short design

- SPEEDCON fast locking system or M23 standard interlocking
- Standard knurled nut compatible with mating connectors with SPEEDCON and M23 standard external thread
- Individual marking of connectors with color rings



Cable connector, SPEEDCON

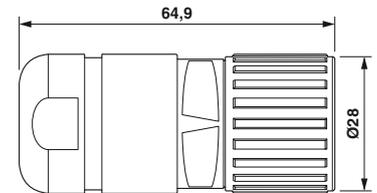


Cable connector, M23 standard interlocking

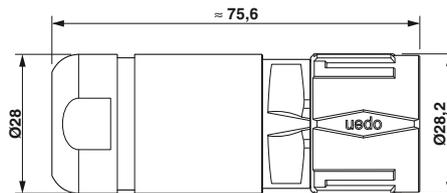
Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		5+PE-pos.		4+3+PE-pos.		5+PE-pos.		4+3+PE-pos.	
Cable connector, short, with contact carrier, without contacts, for cable Ø 7.5 mm to 14 mm, connection cross section up to 2.5 mm²									
Universal gasket	7.5 mm ... 14 mm	1618197	1	1618207	1	1605532	1	1605602	1
	7.5 mm ... 9 mm	1618194	1	1618204	1	1605524	1	1605595	1
	9 mm ... 11 mm	1618195	1	1618205	1	1605526	1	1605596	1
	11 mm ... 14 mm	1618196	1	1618206	1	1605529	1	1605597	1
Cable connector, long, with contact carrier, without contacts, for cable Ø 7.5 mm to 18 mm, connection cross section up to 4 mm²									
Universal gasket	7.5 mm ... 18 mm	1618202	1	1618212	1	1605549	1	1605617	1
	7.5 mm ... 9 mm	1618201	1	1618211	1	1605548	1	1605614	1
	9 mm ... 12 mm	1618200	1	1618210	1	1605546	1	1605610	1
	12 mm ... 15 mm	1618199	1	1618209	1	1605545	1	1605607	1
	15 mm ... 18 mm	1618198	1	1618208	1	1605543	1	1605605	1
Accessories									
Crimp contacts		For socket contacts, see page 158				For socket contacts, see page 158			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



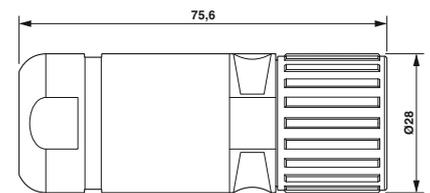
Short design



Short design



Long design



Long design

Coupler connector, long and short design

- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
- Individual marking of connectors with color rings

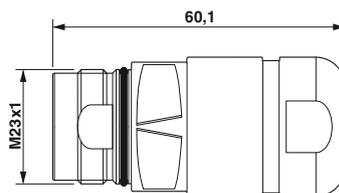


Coupler connector, short

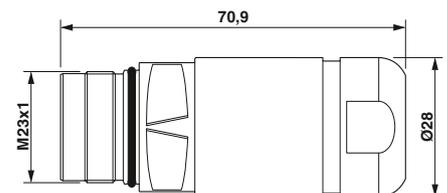


Coupler connector, long

		Ordering data				Ordering data			
Description	Cable clamping area	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
				5+PE-pos.		4+3+PE-pos.		5+PE-pos.	
Coupler connector, short, with contact carrier, without contacts, for cable Ø 7.5 mm to 14 mm, connection cross section up to 2.5 mm²									
Universal gasket	7.5 mm ... 14 mm	1605499	1	1605575	1				
	7.5 mm ... 9 mm	1605494	1	1605568	1				
	9 mm ... 11 mm	1605496	1	1605570	1				
	11 mm ... 14 mm	1605498	1	1605571	1				
Coupler connector, long, with contact carrier, without contacts, for cable Ø 7.5 mm to 18 mm, connection cross section up to 4 mm²									
Universal gasket	7.5 mm ... 18 mm					1605510	1	1605583	1
	7.5 mm ... 9 mm					1605509	1	1605582	1
	9 mm ... 12 mm					1605508	1	1605581	1
	12 mm ... 15 mm					1605507	1	1605580	1
	15 mm ... 18 mm					1605505	1	1605578	1
Accessories									
Crimp contacts		For pin contacts, see page 158				For pin contacts, see page 158			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



Short design



Long design

Circular connectors

M23 – power connectors

Device connector, straight and angled, rotatable

- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut



Device connector, straight



Device connector, angled rotatable

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Device connector with contact carrier without contacts	1605520	1	1605589	1
Flange dimensions: 26 mm x 26 mm				
Device connector, with reinforced contact carrier (black) for angled mating connectors, without contacts	1620619	1	1620620	1
Flange dimensions: 26 mm x 26 mm				
Device connector with contact carrier without contacts				
Flange dimensions: 28 mm x 28 mm				

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Device connector with contact carrier without contacts	1620657	1	1620660	1
Flange dimensions: 26 mm x 26 mm				
Device connector, with reinforced contact carrier (black) for angled mating connectors, without contacts				
Flange dimensions: 28 mm x 28 mm				

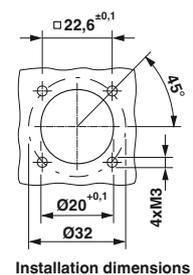
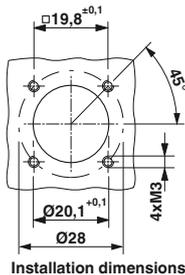
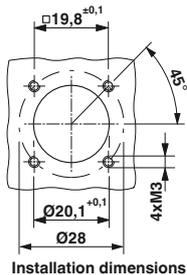
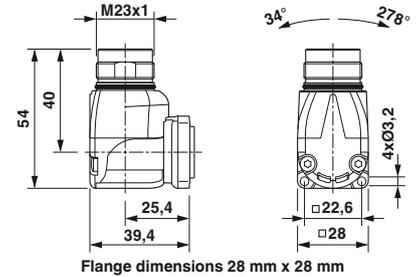
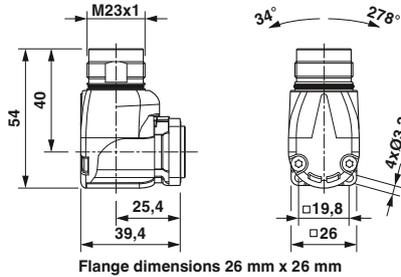
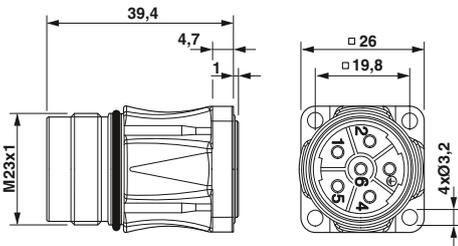
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Device connector with contact carrier without contacts	1620661	1	1620662	1
Flange dimensions: 26 mm x 26 mm				
Device connector, with reinforced contact carrier (black) for angled mating connectors, without contacts				
Flange dimensions: 28 mm x 28 mm				

Accessories

Crimp contacts	For pin contacts, see page 158
Color rings, 50 pcs. in set (to be ordered separately)	See page 184
Dust protection caps (to be ordered separately)	See page 186

For pin contacts, see page 158	For pin contacts, see page 158
See page 184	See page 184
See page 186	See page 186

For pin contacts, see page 158	For pin contacts, see page 158
See page 184	See page 184
See page 186	See page 186



**Device connector,
with knurled nut**

Only assemble device connectors with knurled nut with socket contacts.

- Standard knurled nut compatible with mating connectors with SPEEDCON and M23 standard external thread

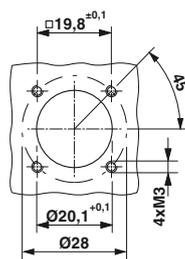
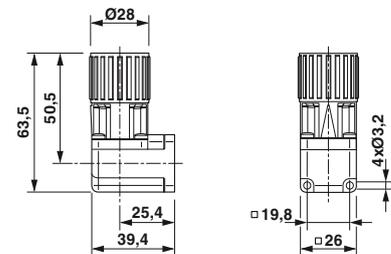
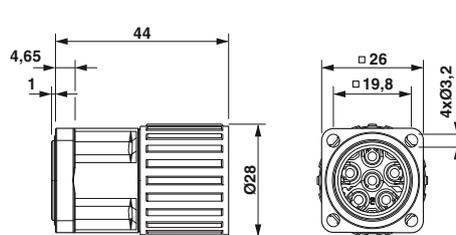


**Device connector
with knurled nut, straight**

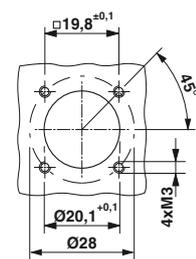


**Device connector
with knurled nut, angled fixed**

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Device connector with knurled nut, straight, with contact carrier, without contacts	1607082	1	1605622	1	1607405	1	1607429	1
Device connector with knurled nut, angled, fixed, with contact carrier, without contacts								
	Accessories				Accessories			
Crimp contacts	For socket contacts, see page 158				For socket contacts, see page 158			
Dust protection caps (to be ordered separately)	See page 186				See page 186			



Installation dimensions



Installation dimensions

Circular connectors

M23 – power connectors

Panel feed-through, long and short design

- Rear mounting
- Compatible with mating connectors with M23 standard knurled nuts

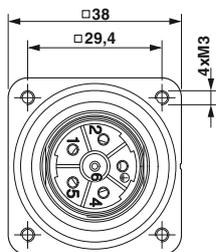


Panel feed-through, short

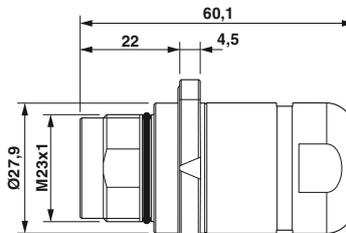


Panel feed-through, long

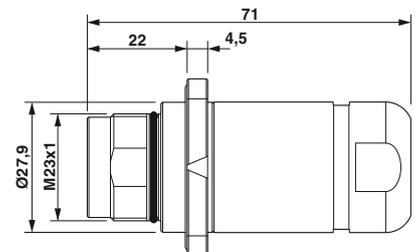
Description		Ordering data		Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.		
Cable clamping area		5+PE-pos.		4+3+PE-pos.		5+PE-pos.		4+3+PE-pos.	
Panel feed-through, short with contact carrier, without contacts, for cable Ø 7.5 to 14 mm, connection cross section up to 2.5 mm ²									
Universal gasket	7.5 mm ... 14 mm	1605517	1	1607051	1				
	7.5 mm ... 9 mm	1605516	1	1607048	1				
	9 mm ... 11 mm	1607037	1	1607049	1				
	11 mm ... 14 mm	1607038	1	1607050	1				
Panel feed-through, long with contact carrier, without contacts, for cable Ø 7.5 to 18 mm, connection cross section up to 4 mm ²									
Universal gasket	7.5 mm ... 18 mm					1605518	1	1607056	1
	7.5 mm ... 9 mm					1607042	1	1607055	1
	9 mm ... 12 mm					1607041	1	1607054	1
	12 mm ... 15 mm					1607040	1	1607053	1
	15 mm ... 18 mm					1607039	1	1607052	1
Crimp contacts		For pin contacts, see page 158				For pin contacts, see page 158			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			
		Accessories				Accessories			



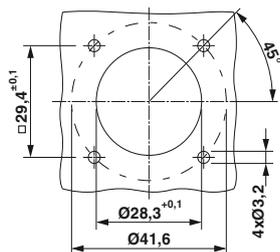
Flange dimensions for short and long design



Short design



Long design



Installation dimensions for short and long design

Panel feed-through, fully wired

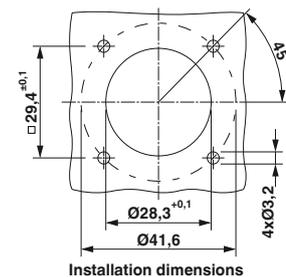
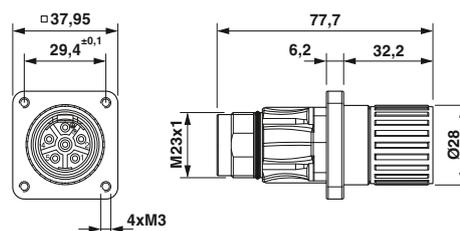
- Front mounting
- Internally fully wired and fitted with contacts
- Compatible with mating connectors with M23 standard knurled nuts



Panel feed-through, pin/socket

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Panel feed-through, pin inside - socket outside, fully wired, with contacts			
	5+PE-pos.		4+3+PE-pos.	
	1605492	1	1605567	1
Accessories				
Dust protection caps (to be ordered separately)	See page 186			



Circular connectors

M23 – power connectors

Crimp contacts, turned

Assemble the 6-pos. (5+PE) versions with two Ø 2 mm contacts. Assemble the 8-pos. (4+3+PE) versions with four Ø 1 mm signal contacts and four Ø 2 mm contacts.

Note: observe the crimp ranges for cable and coupler connectors.

- Short version: connection cross sections up to 2.5 mm², max. cable Ø of 14 mm
- Long version: connection cross sections up to 4 mm², max. cable Ø of 18 mm



Crimp contacts, socket



Crimp contacts, pin

ERC

Description	Connection cross section [mm ²]	Ordering data			Ordering data		
		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Contacts, socket Ø 2.0 mm for cable and device connectors with knurled nuts, power and PE contacts							
	0.25 ... 1.0	SF-7PS2000	1605636	50			
	0.75 ... 1.5	SF-7NS2000	1605631	50			
	1.0 ... 2.5	SF-7QS2000	1605643	50			
	4.0	SF-7MS2000	1605628	50			
Contacts, socket Ø 1.0 mm for cable and device connectors with knurled nuts, signal contacts							
	0.06 ... 0.2	SF-6CS2000	1605562	100			
	0.14 ... 0.5	SF-10KS004	1607356	100			
	0.5 ... 1.0	SF-6AS2000	1605557	100			
Contacts, pin Ø 2.0 mm for coupler connectors, power and PE contacts							
	0.14 ... 0.25				SF-7RP2000	1605646	50
	0.25 ... 1.0				SF-7PP2000	1605634	50
	0.75 ... 1.5				SF-20KP004	1607376	50
	1.0 ... 2.5				SF-7QP2000	1605639	50
	4.0				SF-7MP2000	1605626	50
Contacts, pin Ø 1.0 mm for coupler connectors, signal contacts							
	0.06 ... 0.2				SF-6CP2000	1605559	100
	0.14 ... 0.5				SF-10KP004	1607355	100
	0.5 ... 1.0				SF-6AP2000	1605554	100
Contacts, pin Ø 2.0 mm for device connectors, power and PE contacts							
	0.14 ... 0.25				SF-7RP2000	1605646	50
	0.25 ... 1.0				SF-7PP2000	1605634	50
	0.75 ... 1.5				SF-20KP004	1607376	50
	1.0 ... 2.5				SF-7QP2000	1605639	50
	4.0				SF-7MP2000	1605626	50
Contacts, pin Ø 1.0 mm for device connectors, signal contacts							
	0.06 ... 0.2				SF-6CP2000	1605559	100
	0.14 ... 0.5				SF-10KP004	1607355	100
	0.5 ... 1.0				SF-6AP2000	1605554	100
Accessories				Accessories			
Crimping tools		Order separately, see page 179 onwards			Order separately, see page 179 onwards		

Contact diameter

Number of positions	Number of contacts	Contact Ø [mm]
6(5+PE)	5+PE	2+2
8(4+3+PE)	4+3+PE	1+2+2

Mechanical and electrical data

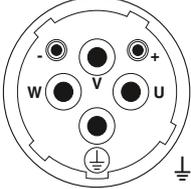
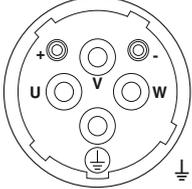
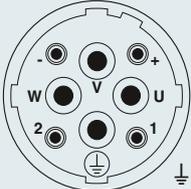
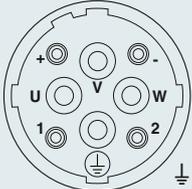
Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Connection technology:	Crimp connection
Sealing and O-ring:	Fluororubber (FKM)
Ambient temperature:	-40°C ... 125°C
Cable entry:	Outer cable diameter 9.0 to 26.5 mm, shielded
Type of locking:	M40 SPEEDCON fast locking system, cable connector with M40 x 1.5 coarse-pitch thread as an option
Mechanical insertion/withdrawal cycles:	Standard: 50
Protection class	IP67 when locked

Electrical data											
Number of positions		6 (2 + 3 + PE)					8 (4 + 3 + PE)				
Contacts		2	+	3	+	PE	4	+	3	+	PE
Contact Ø	[mm]	2.0		3.6		3.6	2.0		3.6		3.6
Litz wire cross sections											
Cable and coupler connectors	[mm²]	0.14 ... 4.0		0.75 ... 10		0.75 ... 10	0.14 ... 4.0		0.75 ... 10		0.75 ... 10
Device connectors	[mm²]	0.14 ... 4.0		0.75 ... 10		0.75 ... 10	0.14 ... 4.0		0.75 ... 10		0.75 ... 10
Nominal current per contact at 25°C ¹⁾	[A]	30		70		–	30		70		–
Specifications according to DIN EN 61984:2009											
Rated voltage	[V AC/DC]	250		630		–	250		630		–
Test/surge voltage	[kV]	4		6		–	4		6		–
Overvoltage category		III					III				
Pollution degree		3					3				
Installation height	[m]	Up to 3000					Up to 3000				
Cable clamping area ²⁾	Max. Ø [mm]	26.5					26.5				

¹⁾ Determine the effective current carrying capacity according to the application, if necessary, using a derating curve.

²⁾ The cable clamping areas specified on the following pages may vary depending on the cable material and structure. Selection and testing is the responsibility of the user.

Contact chamber numbering
(view of plug-in side)

Number of positions	Pin	Socket
<p>6-pos. (2 + 3 + PE) Crimp</p>		
<p>8-pos. (4 + 3 + PE) Crimp</p>		

* with grounding spring

Circular connectors

M40 – power connectors

Selection guide

M40 power connectors up to 70 A/630 V, crimp ranges up to 16 mm²

- Cable connectors
- Coupler connectors
- Device connectors (device flanges)
- Feed-throughs/panel feed-throughs

The connectors are pre-assembled on delivery. The connectors can be extended with the corresponding crimp contacts.

M40 connectors with knurled nuts can be supplied with SPEEDCON fast locking system or with M40 x 1.5 coarse-pitch thread as an option.

The product chart provides an overview of the available components.

Connector type

Cable connectors

SPEEDCON fast locking system, see page 164.

Shielded



Mounting flange for wall mounting, see page 182.



M40 x 1.5 standard interlocking, see page 164.



Device connectors with knurled nut

Straight, see page 166.

Shielded



Angled, see page 167.



Coupler connectors

See page 164.

Shielded



Device connectors

Angled, rotatable, see page 168.

Straight, see page 165.



Crimp contacts

Tools/accessories

Socket contacts

Turned, see page 169.



Socket contacts

Crimping tools

Crimping pliers, see page 179.



Crimping pliers with digital display for turned crimp contacts, see page 179.



Pin contacts

Turned, see page 169.



Pin contacts

Accessories

Color rings for individually marking the connectors, see page 184.

**Note:**

For safety reasons, only use socket contacts in the live part of the connector.

Circular connectors

M40 – power connectors

Cable connectors

- SPEEDCON fast locking system or M40 standard interlocking
- Standard knurled nut compatible with mating connectors with SPEEDCON or M40 standard external thread
- Individual marking of connectors with color rings



Cable connector, SPEEDCON



Cable connector

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		2+3+PE-pos.		4+3+PE-pos.		2+3+PE-pos.		4+3+PE-pos.	
Cable connector housing, with contact carrier, without contacts, connection cross section up to 16 mm²									
	9 mm ... 14 mm	1613428	1	1613434	1	1613518	1	1613528	1
	14 mm ... 20.5 mm	1613429	1	1613435	1	1613519	1	1613529	1
	20.5 mm ... 26.5 mm	1613430	1	1613436	1	1613520	1	1613530	1
		Accessories				Accessories			
Crimp contacts		For socket contacts, see page 169				For socket contacts, see page 169			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



Coupler and device connectors

- Compatible with mating connectors with SPEEDCON and M40 standard knurled nut
- Individual marking of connectors with color rings

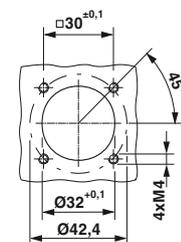
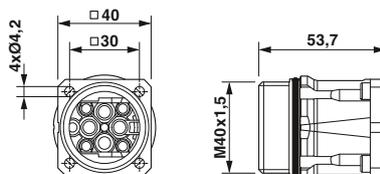
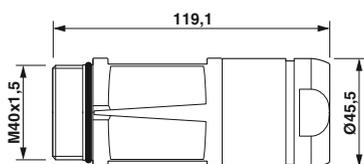


Coupling connector



Device connector, straight

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Coupler connector, with contact carrier, without contacts, connection cross section up to 16 mm²		2+3+PE-pos.		4+3+PE-pos.		2+3+PE-pos.		4+3+PE-pos.	
	9 mm ... 14 mm	1613425	1	1613431	1				
	14 mm ... 20.5 mm	1613426	1	1613432	1				
	20.5 mm ... 26.5 mm	1613427	1	1613433	1				
Device connector, straight, with contact carrier, without contacts									
Connection cross section up to 10 mm ²						1613517	1	1613527	1
		Accessories				Accessories			
Crimp contacts		For pin contacts, see page 169				For pin contacts, see page 169			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



Installation dimensions

Circular connectors

M40 – power connectors

Device connector, with knurled nut

- SPEEDCON fast locking system or M40 standard interlocking
- Standard knurled nut compatible with mating connectors with SPEEDCON or M40 standard external thread
- Only assemble device connectors with knurled nut with socket contacts

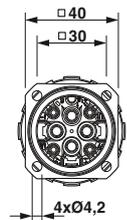
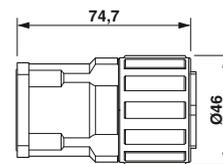
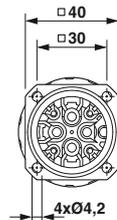
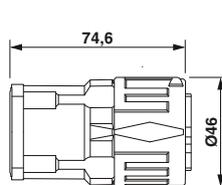
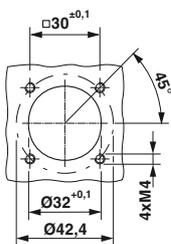


Device connector with knurled nut, straight, SPEEDCON



Device connector with knurled nut, straight

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Device connector with SPEEDCON knurled nut, straight, with contact carrier, without contacts	2+3+PE-pos.		4+3+PE-pos.		2+3+PE-pos.		4+3+PE-pos.	
Connection cross section up to 16 mm ²	1613524	1	1613534	1	1605823	1	1605865	1
Device connector with standard knurled nut, straight, with contact carrier, without contacts								
Connection cross section up to 16 mm ²								
Accessories				Accessories				
Crimp contacts	For socket contacts, see page 169				For socket contacts, see page 169			
Color rings, 50 pcs. in set (to be ordered separately)	See page 184				See page 184			
Dust protection caps (to be ordered separately)	See page 186				See page 186			



Installation dimensions

**Device connector,
with knurled nut**

Only assemble device connectors with knurled nut with socket contacts



**Device connector
with knurled nut, angled, SPEEDCON**



**Device connector
with knurled nut, angled**

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.

Description
Device connector with SPEEDCON knurled nut, angled, with contact carrier, without contacts
Connection cross section up to 16 mm ²
Device connector with knurled nut, angled, with contact carrier, without contacts
Connection cross section up to 16 mm ²

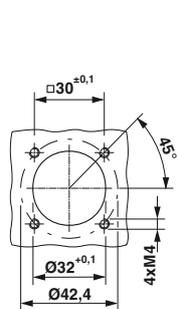
1613525	1	1613535	1
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1607532	1	1607543	1
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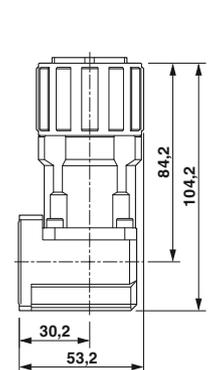
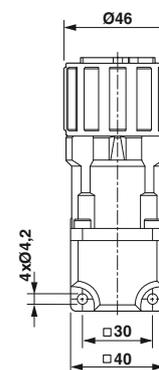
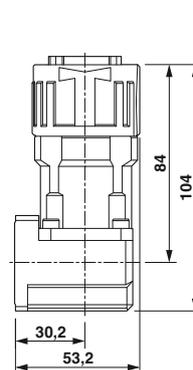
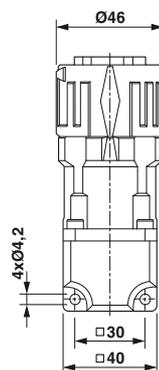
Accessories	
For socket contacts, see page 169	See page 184
See page 184	See page 186

Accessories	
For socket contacts, see page 169	See page 184
See page 184	See page 186

Crimp contacts
Color rings, 50 pcs. in set (to be ordered separately)
Dust protection caps (to be ordered separately)



Installation dimensions



Circular connectors

M40 – power connectors

Device connector, angled, rotatable

- Compatible with mating connectors with SPEEDCON and M40 standard knurled nut
- The rotatable angled housing can be rotated freely through 310°.
- Individual marking of connectors with color rings



Device connector, angled rotatable

Ordering data

Description

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.

Device connector, angled, rotatable, with contact carrier, without contacts

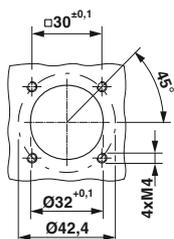
1620663 1 1620664 1

Connection cross section up to 10 mm²

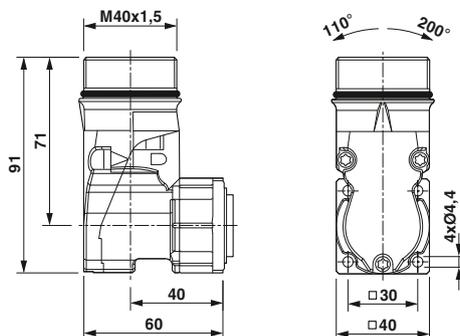
Accessories

Crimp contacts
Color rings, 50 pcs. in set (to be ordered separately)
Dust protection caps (to be ordered separately)

For pin contacts, see page 169
See page 184
See page 186



Installation dimensions



Crimp contacts, turned

Assemble the 6-pos. (2+3+PE) versions with two Ø 2 mm signal contacts and four Ø 3.6 mm contacts (three power contacts and one PE contact).

Assemble the 8-pos. (4+3+PE) versions with four Ø 2 mm signal contacts and four Ø 3.6 mm contacts (three power contacts and one PE contact).

Note: Depending on the litz wire used, the connection cross sections (crimp ranges) can differ from the values mentioned below.



Crimp contacts, socket



Crimp contacts, pin

		Ordering data			Ordering data		
Description	Connection cross section [mm ²]	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Contacts, socket Ø 3.6 mm, for cable and device connectors with knurled nuts, power and PE contacts							
	1.0 ... 2.5	SM-36KS001	1605756	20			
	2.5 ... 4.0	SM-36KS002	1605758	20			
	4.0 ... 6.0	SM-36KS003	1605760	20			
	6.0 ... 10.0	SM-36KS004	1605762	20			
	16	SM-36KS016	1623972	20			
Contacts, socket Ø 2.0 mm, for cable and device connectors with knurled nuts, signal contacts							
	0.25 ... 1.0	SF-7PS2000	1605636	50			
	0.75 ... 1.5	SF-7NS2000	1605631	50			
	1.0 ... 2.5	SF-7QS2000	1605643	50			
	4.0	SF-7MS2000	1605628	50			
Contacts, pin Ø 3.6 mm, for coupler connectors, power and PE contacts							
	1.0 ... 2.5				SM-36KP005	1605749	20
	2.5 ... 4.0				SM-36KP006	1605750	20
	4.0 ... 6.0				SM-36KP008	1605754	20
	6.0 ... 10.0				SM-36KP007	1605752	20
	16				SM-36KP016	1623970	20
Contacts, pin Ø 2.0 mm, for coupler connectors, signal contacts							
	0.25 ... 1.0				SM-20KP006	1605738	50
	0.75 ... 1.5				SM-20KP005	1605736	50
	1.0 ... 2.5				SM-20KP007	1605739	50
	4.0				SM-20KP008	1605741	50
Contacts, pin Ø 3.6 mm, for device connectors, power and PE contacts							
	0.75 ... 1.5				SM-36KP001	1605743	20
	1.0 ... 2.5				SM-36KP009	1607057	20
	1.0 ... 4.0				SM-36KP002	1605744	20
	4.0 ... 6.0				SM-36KP003	1605745	20
	6.0 ... 10.0				SM-36KP004	1605747	20
Contacts, pin Ø 2.0 mm, for device connectors, signal contacts							
	0.14 ... 0.25				SF-7RP2000	1605646	50
	0.25 ... 1.0				SF-7PP2000	1605634	50
	0.75 ... 1.5				SF-20KP004	1607376	50
	1.0 ... 2.5				SF-7QP2000	1605639	50
	4.0				SF-7MP2000	1605626	50

Accessories

Crimping tools

Order separately, see page 179

Accessories

Order separately, see page 179

Number of positions	Number of contacts	Contact Ø [mm]
6(2+3+PE)	2+3+PE	2+3.6+3.6
8(4+3+PE)	4+3+PE	2+3.6+3.6

Mechanical and electrical data

Mechanical data

Housing material:	Aluminum
Housing surface:	Aluminum, anodized
Insulating body:	Polyamide (PA 66)
Contact surface:	Power and PE contacts: silver-plated (Ag), signal contacts: gold-plated (Au)
Connection technology:	Crimp connection
Sealing and O-ring:	Fluororubber (FPM)
Ambient temperature:	-40°C ... 120°C
Cable entry:	Cable and coupler connectors for an outer cable diameter of 17 to 3 mm, shielded
Type of locking:	M58 x 2 screw locking
Mechanical insertion/withdrawal cycles:	Standard: 100
Protection class:	IP67 when locked

Electrical data

Number of positions	6 (2 + 3 + PE)			8 (4 + 3 + PE)		
	2	3	PE	4	3	PE
Contacts	2	3	PE	4	3	PE
Contact Ø [mm]	1.6	10	10	1.6	10	10
Litz wire cross section						
Crimp contacts, turned [mm ²]	0.75 ... 1.5	10 ... 50	10 ... 50	0.75 ... 1.5	10 ... 50	10 ... 50
Nominal current per contact at 25°C ¹⁾ [A]	12	150	–	12	150	–
Specifications according to DIN EN 61984:2009						
Rated voltage [V AC/DC]	250	630	–	250	630	–
Test/surge voltage [kV AC]	4	6	–	4	6	–
Overvoltage category		III			III	
Pollution degree		3			3	
Installation height [m]		Up to 2000			Up to 2000	
Cable clamping area ²⁾ Max. Ø [mm]		36			36	

¹⁾ Determine the effective current carrying capacity according to the application, if necessary, using a derating curve.

²⁾ The cable clamping areas specified on the following pages may vary depending on the cable material and structure. Selection and testing is the responsibility of the user.

Note:

In contrast to connecting equipment, connectors may only be inserted/withdrawn with the power supply disconnected.

Contact chamber numbering
(view of plug-in side)

Number of positions	Pin	Socket
<p>6-pos. (2 + 3 + PE) Crimp</p>		
<p>8-pos. (4 + 3 + PE) Crimp</p>		

* with grounding spring,
PE leading

Circular connectors

M58 – power connectors

Selection guide

M58 power connectors up to 150 A/630 V, crimp ranges up to 50 mm²

- Cable connectors
- Coupler connectors
- Device connectors, straight

The connectors are pre-assembled on delivery. The connectors can be extended with the corresponding crimp contacts.

The product chart provides an overview of the available components.

Connector type

Cable connectors

Shielded



See page 174.

Coupler connectors

Shielded



See page 174.

Device connectors

Shielded



See page 175.

Crimp contacts

Socket contacts

Turned, see page 176.



Socket contacts

Pin contacts

Pin contacts

Pin contacts

Turned, see page 176.



Tools/accessories

Crimping tools

Crimping device for power and PE contacts
Ø 10 mm,
see page 180.



Crimping pliers for signal contacts Ø 1.6 mm,
see page 180.

**Note:**

For safety reasons, only use socket contacts in the live part of the connector.

Circular connectors

M58 – power connectors

Cable and coupler connectors

- High transmission capacities of up to 630 V and 150 A
- Connection cross sections up to 50 mm²
- Cable clamping area from 17 mm to 36 mm

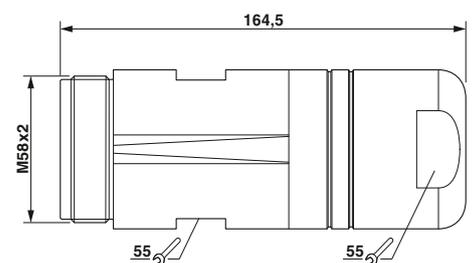
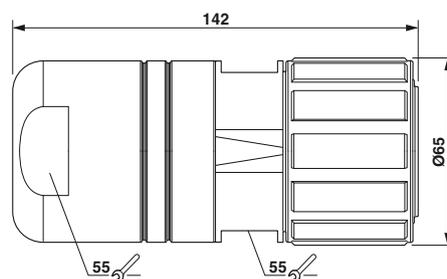


Cable connector



Coupling connector

Description		Ordering data		Ordering data		Ordering data		Ordering data	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Connector housing, with contact carrier, without contacts, for cable diameter:	Cable clamping area	2+3+PE-pos.		4+3+PE-pos.		2+3+PE-pos.		4+3+PE-pos.	
	17 mm ... 25 mm	1607503	1	1607508	1	1607500	1	1607506	1
	25 mm ... 36 mm	1607501	1	1607507	1	1607499	1	1607505	1
Crimp contacts		Accessories				Accessories			
		For socket contacts, see page 176 See page 186				For pin contacts, see page 176 See page 186			
Dust protection caps (to be ordered separately)									



Device connector for front mounting

Assemble the coupler and device connectors with pin contacts and the cable connectors with socket contacts.



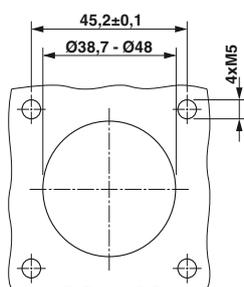
Device connector, straight

Ordering data

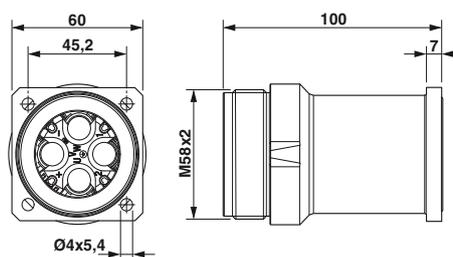
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Device connector, straight, with contact carrier, without contacts	1615686	1	1615687

Accessories

Crimp contacts	For pin contacts, see page 176
Dust protection caps (to be ordered separately)	See page 186



Installation dimensions



Circular connectors

M58 – power connectors

Crimp contacts, turned

Assemble the 6-pos. (2+3+PE) versions with two Ø 1.6 mm signal contacts and four Ø 10 mm contacts (three power contacts and one PE contact).

Assemble the 8-pos. (4+3+PE) versions with four Ø 1.6 mm signal contacts and four Ø 10 mm contacts (three power contacts and one PE contact).

Note: Depending on the litz wire used, the connection cross sections (crimp ranges) can differ from the values mentioned below.



Crimp contacts, socket



Crimp contacts, pin

Description	Connection cross section [mm²]	Ordering data			Ordering data		
		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Contacts, socket Ø 10.0 mm for cable connectors, power and PE contacts	10.0	SL-1CKS010	1607916	4			
	16.0	SL-1CKS020	1607917	4			
	25.0	SL-1CKS030	1607918	4			
	35.0	SL-1CKS040	1607919	4			
	50.0	SL-1CKS050	1607920	4			
Contacts, socket Ø 1.6 mm for cable connectors, signal contacts	0.75 ... 1.5	SL-16KS010	1607956	4			
Contacts, pin Ø 10.0 mm for coupler and device connectors, power and PE contacts	10.0				SL-1CKP010	1607911	4
	16.0				SL-1CKP020	1607912	4
	25.0				SL-1CKP030	1607913	4
	35.0				SL-1CKP040	1607914	4
	50.0				SL-1CKP050	1607915	4
Contacts, pin Ø 1.6 mm for coupler and device connectors, signal contacts	0.75 ... 1.5				SL-16KP010	1607909	4
Crimping tools		Accessories			Accessories		
		Order separately, see page 180 onwards			Order separately, see page 180 onwards		

Number of positions	Number of contacts	Contact Ø [mm]
6(2+3+PE)	2+3+PE	1.6+10+10
8(4+3+PE)	4+3+PE	1.6+10+10

**Tools and accessories
for M23 signal connectors**

The RC-Z2130 and RC-Z2514 crimping pliers are used for rolled or turned RC crimp contacts.

The RC-Z2514 crimping pliers with 4-mandrel crimping are suitable for turned RC contacts. Detailed operating instructions are included in the packaging.



**Crimping tools
for rolled or turned RC contacts**



**Contact insertion and unlocking tool
for RC contacts**

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Crimping pliers for rolled RC crimp contacts Ø 1 mm Litz wire cross section 0.08 ... 0.56 mm ²	RC-Z2130	1604267	1			
Crimping pliers for turned RC crimp contacts Ø 1 mm / Ø 1.5 mm / Ø 2 mm Litz wire cross section of 0.08 ... 2.5 mm ²	RC-Z2514	1614590	1			
Insertion and contact removal tool for RC crimp contacts Female / male Ø 1 mm Female / male Ø 1.5 mm Female / male Ø 2 mm				RC-Z2494	1614123	1
				RC-Z2274	1604409	1
				RC-Z2490	1611803	1

Tools and accessories

Crimping tools for punched-rolled C-HC crimp contacts

The manual crimping pliers are suitable for single processing. For processing taped products, a bench-mounted electric crimping device with integrated feed mechanism is available.

- The SF-Z0041 adapter enables tools for the manual crimping pliers for single processing to be used with the electric crimping device.



Hand crimping tools for punched-rolled C-HC crimp contacts



Electrical crimping device for punched-rolled C-HC crimp contacts

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Hand crimping pliers , basic tool for individual processing						
for C-HC crimp contacts	SF-Z0029	1607458	1			
Tool head for crimping pliers SF-Z0029 , for C-HC crimp contacts						
Contacts Ø 1 mm	SF-Z0031	1607461	1			
Electric crimping device , for processing taped products						
for C-HC crimp contacts				SF-Z0032	1607462	1
Tool head for electrical crimp device SF-Z0032 , for C-HC crimp contacts, processing for taped articles						
Contacts Ø 1.0 mm / connection 0.08 ... 0.2 mm ²				SF-Z0039	1607470	1
Contacts Ø 1.0 mm / connection 0.2 ... 0.56 mm ²				SF-Z0040	1607471	1
Media hub for elec. crimping device SF-Z0032 for accommodating rolls up to Ø 60 cm				SF-Z0052	1615413	1
Adapter for electrical crimp device SF-Z0032 , for accommodating tool heads for single processing				SF-Z0041	1607472	1

Crimping tools for turned contacts

The crimping pliers are suitable for turned contacts with \varnothing 0.6 mm, \varnothing 1 mm, \varnothing 2 mm, and \varnothing 3.6 mm (excluding M23 signal connectors). A pneumatic crimping tool is available for large litz wire cross sections.

Notes:

For crimping tools for M23 signal connectors, see page 177



Manual crimping pliers

		Ordering data		
Description	Litz wire cross section [mm ²]	Type	Order No.	Pcs. / Pkt.
Manual crimping pliers with digital display for turned crimp contacts with \varnothing 1 mm, \varnothing 2 mm, \varnothing 3.6 mm	0.06 ... 6	SF-Z0025	1607452	1
Positioners for crimping the SF-6FS2000 / SF-6DP2000 contacts with a connection cross section of 1.5 mm ²		SF-Z0042	1613666	1
Manual crimping pliers with digital display for turned crimp contacts with \varnothing 0.6 mm, \varnothing 1 mm, \varnothing 2 mm	0.06 ... 2.5	SF-Z0054	1615585	1
Manual crimping pliers with digital display for turned crimp contacts with \varnothing 2 mm, \varnothing 3.6 mm	1.5 ... 10	SF-Z0026	1607454	1
Locator for SF-Z0026 crimping pliers, for crimping turned M40 hybrid contacts, \varnothing 3.6 mm	2.5 ... 6	SB-Z0026	1624618	1
Manual crimping pliers, for turned crimp contacts, \varnothing 3.6 mm	10 ... 16	SB-Z0016	1624515	1

Circular connectors

Tools and accessories

Crimping tools for turned contacts for M58 power connectors

The SF-Z0025 manual crimping pliers are used for turned crimp contacts with \varnothing 1.6 mm for M58 power connectors. The \varnothing 10 mm contacts can be crimped conveniently using the SL-Z0007 electric crimping tool.

The crimping stamps for the \varnothing 10 mm contacts are used in pairs. The stamps are tailored to the connection cross sections and marked.



Electro-hydraulic crimping device



Manual crimping pliers

		Ordering data			Ordering data		
Description	Connection cross section [mm ²]	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Electro-hydraulic crimping device incl. charger and rechargeable battery, for Litz wire cross section 10 ... 50 mm² (power and PE contacts \varnothing 10 mm)		SL-Z0007	1613484	1			
Crimping stamp for crimping device SL-Z0007	10	SL-Z0011	1613488	1			
Crimping stamp for crimping device SL-Z0007	16	SL-Z0012	1613489	1			
Crimping stamp for crimping device SL-Z0007	25	SL-Z0013	1613490	1			
Crimping stamp for crimping device SL-Z0007	35	SL-Z0014	1613491	1			
Crimping stamp for crimping device SL-Z0007	50	SL-Z0015	1613492	1			
Crimping tool with digital display	0.06 ... 6				SF-Z0025	1607452	1
Accessories for electro-hydraulic crimping device SL-Z0007							
	Replacement battery	SL-Z0008	1613485	1			
	Table holder incl. foot actuation switch	SL-Z0010	1613487	1			

Notes:

The SF-Z0025 manual crimping pliers with digital display are also suitable for crimping ST / SF / SM turned crimp contacts.

Special wrench

The torque screw driver is specially adapted to the M23 circular connectors and simplifies the process of tightening and loosening the knurled nut safely, even in places where space is limited.

The tool consists of a hook spanner as well as a torque screw driver with a set torque of 2.5 Nm.



**Torque screw driver
for M23 connectors with knurled nuts**



**Special screw key
for screwing in the adapter**

		Ordering data			Ordering data		
Description	Wrench size [mm]	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Torque screw driver incl. hook wrench							
	For M23 connectors with knurled nuts	SF-Z0028	1607456	1			
Replacement hook spanner for torque screw driver							
		SF-Z0027	1607455	1			
Special wrench for cable or coupler connectors for screwing in the adapter. Connection dimensions for torque spanner: 8.9 mm x 11.9 mm							
	for M17 connectors, WAF 19				ST-Z0012	1613667	1
	for M23 connectors, WAF 24				RF-Z0007	1614347	1
	for M40 connectors, WAF 41				SM-Z0012	1614349	1
	for M58 connectors, WAF 55				SL-Z0016	1614348	1

Circular connectors

Tools and accessories

Contact removal tools, square mounting flange

The removal tool is used for those contact carriers which are snapped into the housing without rear support. They are removed from the plug-in side using the removal tool.

The square mounting flange is used for cable and coupler connectors. In this way, the product range is easily expanded with connectors as panel feed-throughs.



Contact removal tool for snap-in contact carriers



Square mounting flange for cable or coupler connectors for wall mounting

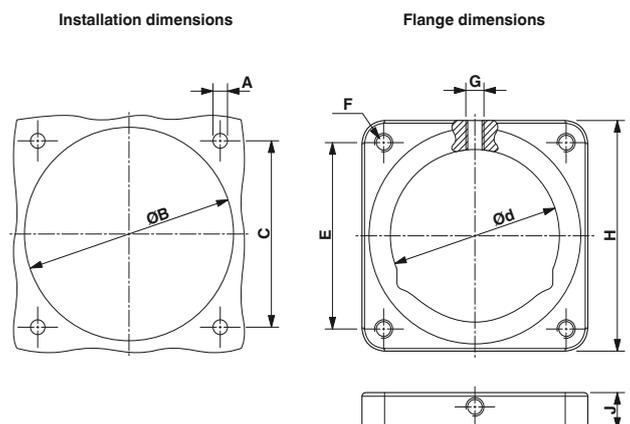
			Ordering data			Ordering data		
Description	Wall mounting	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.	
Contact removal tool for contact carriers, device connectors								
	For M17 signal or power connectors	ST-Z0001	1607770	1				
	For M23 feedback connectors	RF-Z0001	1607904	1				
	For M23 signal connectors	CA-Z0001	1620699	1				
Square mounting flange, metal, with O-ring gasket, for M17 (excluding M17 Compact) cable and coupler connectors for wall mounting								
	4 x Ø 2.7 mm				ST-Z0002	1607771	1	
	4 x M3				ST-Z0003	1607772	1	
Square mounting flange, metal, without O-ring gasket, for M17 (excluding M17 Compact) cable and coupler connectors for wall mounting								
	4 x Ø 2.7 mm				ST-Z0004	1607773	1	
	4 x M3				ST-Z0005	1607775	1	
Square mounting flange, metal, with O-ring gasket, for M23 feedback cable and coupler connectors for wall mounting								
	4 x M3				RF-Z0003	1607905	1	
Square mounting flange, metal, with O-ring gasket, for M40 cable and coupler connectors for wall mounting								
	4 x Ø 4.3 mm				SM-Z0003	1607935	1	
Square mounting flange, metal, without O-ring gasket, for M40 cable and coupler connectors for wall mounting								
	4 x Ø 4.3 mm				SM-Z0004	1607937	1	

Installation dimensions for square mounting flanges

Type	Installation dimensions			Flange dimensions					
	A	B	C	d	E	F	G	H	J
ST-Z0002 ST-Z0003 ST-Z0004 ST-Z0005	4 x M2.5/ Ø 3.2	Ø 22.9 +0.2	□ 22.6 ±0.1	Ø 21.6	□ 22.6 ±0.1	4 x M3/ Ø 2.7	M2.5	□ 28.0 ±0.1	5
RF-Z0003	4 x Ø 3.2	Ø 27.9 ±0.1	□ 28.3 ±0.1	Ø 26.2	□ 28.3 ±0.1	4 x M3	M3	□ 35.0	6
SM-Z0003 SM-Z0004	4 x M4/ Ø 4.2	Ø 46.1 ±0.1	□ 42.4 ±0.1	Ø 45.0	□ 42.4 ±0.1	4 x Ø 4.3	M3	□ 55.0 ±0.1	5.5

Note:

For insulating wall mounting, plastic mounting flanges are available on request.



Circular connectors

Tools and accessories

Color rings

The color rings are used for individually marking the connectors



Color rings
for marking connectors
with cable entry



Color rings
for marking device connectors

		Ordering data			Ordering data		
Description	Color	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Color rings for M17 connectors, 50 pcs. in set	Green	ST-Z0016	1617993	50	ST-Z0019	1620621	50
	Orange	ST-Z0017	1618049	50	ST-Z0020	1620622	50
	Black	ST-Z0018	1618050	50	ST-Z0021	1620623	50
Color rings for M23 signal connectors, 50 pcs. in set	Green	RF-Z0014	1620588	50			
	Orange	RF-Z0015	1620592	50			
	Black	RF-Z0016	1620593	50			
Color rings for M23 signal device connectors, front mounting, Pg13.5 and M20 fastening thread/rear mounting, central fastening thread, 50 pcs. in set	Green				CA-Z0110	1620700	50
	Orange				CA-Z0111	1620701	50
	Black				CA-Z0112	1620702	50
Color rings for M23 signal device connectors, front mounting, flange dimensions: 25 mm x 25 mm, 50 pcs. in set	Green				CA-Z0120	1620704	50
	Orange				CA-Z0121	1620705	50
	Black				CA-Z0122	1620706	50
Color rings for M23 feedback connectors and M23 signal device connectors, angled, rotatable, 50 pcs. in the set	Green	RF-Z0014	1620588	50	RF-Z0017	1620624	50
	Orange	RF-Z0015	1620592	50	RF-Z0018	1620625	50
	Black	RF-Z0016	1620593	50	RF-Z0019	1620626	50
Color rings for M23 hybrid and power connectors, 50 pcs. in set	Green	SF-Z0064	1620585	50	RF-Z0017	1620624	50
	Orange	SF-Z0065	1620586	50	RF-Z0018	1620625	50
	Black	SF-Z0066	1620587	50	RF-Z0019	1620626	50
Color rings for M40 hybrid and power connectors, 50 pcs. in the set	Green	SM-Z0025	1620558	50	SM-Z0028	1620627	50
	Orange	SM-Z0026	1620559	50	SM-Z0029	1620628	50
	Black	SM-Z0027	1620560	50	SM-Z0030	1620629	50

Dust protection caps, plastic

A range of protective caps is available for signal connectors and power connectors to protect the contact elements in the case of a separate plug connection.

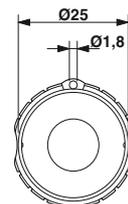
These prevent penetration of dust and humidity.

Plastic protective caps enable IP40 degree of protection when locked.



Plastic dust protection caps

		Ordering data		
Description	Degree of protection when locked	Type	Order No.	Pcs. / Pkt.
Plastic dust protection cap for signal or power connectors, with M17 external thread	IP40	ST-Z0006	1607776	25
Plastic dust protection cap for signal or power connectors, with M17 knurled nut (SPEEDCON and standard)	IP40	ST-Z0007	1607777	25
Plastic dust protection cap for signal or power connectors, with M17 external thread (M17 COMPACT)	IP40	ST-Z0023	1621049	25
Plastic dust protection cap for signal or power connectors, with M17 knurled nut (M17 COMPACT)	IP40	ST-Z0024	1621904	25
Plastic dust protection cap with lug for signal or power connectors with M23 external thread	IP40	SF-Z0019	1607449	25
Plastic dust protection cap for signal or power connectors, with M23 knurled nut	IP40	RC-Z2058	1604223	25
Plastic dust protection cap for signal or power connectors, with M23 external thread	IP40	RC-Z2059	1604225	25
Plastic dust protection cap, anti-static, black, for signal or power connectors, with M23 knurled nut	IP40	RC-Z2468	1611796	25
Plastic dust protection cap for hybrid connectors, with M23 external thread	IP40	SH-Z2304	1622137	25
Plastic dust protection cap, anti-static, black, for signal or power connectors with M23 external thread	IP40	RC-Z2469	1611797	25
Plastic dust protection cap for power connectors with M40 external thread	IP40	SM-Z0001	1605866	25
Plastic dust protection cap for signal or power connectors with M40 external thread	IP40	SM-Z0031	1624199	25
Plastic dust protection cap for power connectors with M58 external thread	IP40	SL-Z0005	1607926	25



SF-Z0019, eye for fixing rope

Dust protection caps, metal

Metal protective caps are available for higher demands as regards the degree of protection. These enable IP67 protection when locked.

The steel wire is fastened to the housing panel. The metal dust protection cap is therefore captive.



Metal dust protection caps

		Ordering data		
Description	Degree of protection when locked	Type	Order No.	Pcs. / Pkt.
Metal dust protection cap , signal or power connectors, with M17 external thread	IP67	ST-Z0014	1616069	10
Metal dust protection cap with steel wire and lug , device fastening, for signal or power connectors, with M17 external thread	IP67	ST-Z0013	1616068	10
Metal dust protection cap with steel wire and loop , cable fastening, signal or power connectors, with M17 knurled nut	IP67	ST-Z0077	1627217	10
Metal dust protection cap , for signal connector, with M23 outer thread	IP67	RC-Z2104	1604260	10
Metal dust protection cap with steel wire and lug , device fastening, for signal connectors, with M23 external thread	IP67	RC-Z2068	1604236	10
Metal dust protection cap with steel wire and lug , device fastening, for signal connectors, with M23 knurled nut	IP67	RC-Z2062	1604228	10
Metal dust protection cap with steel wire and loop , cable fastening, for signal connectors, with M23 knurled nut	IP67	CA-Z0077	1627224	1
Metal dust protection cap , for power connectors with M23 external thread	IP67	SC-Z2319	1605456	10
Metal dust protection cap with steel wire and lug , device fastening, for power connectors, with M23 external thread	IP67	SC-Z2320	1605457	10
Metal dust protection cap with steel wire and lug , device fastening, for hybrid and power connectors, with M23 knurled nut	IP67	SH-Z2300	1622141	10
Metal dust protection cap with steel wire and loop , cable fastening, for hybrid and power connectors, with M23 knurled nut	IP67	SH-Z0077	1627226	1
Metal dust protection cap , for hybrid connectors, with M23 external thread	IP67	SH-Z2303	1622138	10
Metal dust protection cap with steel wire and lug , device fastening, for hybrid connectors, with M23 external thread	IP67	SH-Z2302	1622139	10
Metal dust protection cap , for hybrid and power connectors with M40 external thread	IP67	SB-Z0001	1623827	1
Metal dust protection cap with steel wire and lug , device fastening, for hybrid and power connectors, with M40 external thread	IP67	SB-Z0002	1623828	1



Sensor/actuator cabling

A one-stop shop for the entire range of solutions for field installation

In distributed connection technology, passive distributor systems connect the I/O devices to the PLC. Phoenix Contact offers the most comprehensive range of sensor/actuator cabling on the market. Passive M5, M8, M12, and 7/8" components consisting of distributor boxes, cables, and connectors for assembly are available from stock. A comprehensive choice of valve connectors completes the entire range.

The 1/2" and 7/8" range for the North American market can be found on our website.

Customer and industry-specific solutions

In order to respond flexibly to your requirements, cables and distributor boxes can be individually configured with various cable lengths and types (e.g., other materials or colors).

Phoenix Contact offers a range of suitable product series for increased requirements, such as the railway or food industry, the long-term use of products outdoors and cables for flexible use in drag chains or robot applications.

Faster assembly with SPEEDCON

The SPEEDCON fast locking system is based on the Plug and Turn principle. With just half a turn, you can create a secure plug-in connection without tools and reduce assembly time by 90%. The SPEEDCON fast locking system from Phoenix Contact is 100% compatible with all M12 connectors.

 Your web code: [#0564](#)

Assembled cables

3-pos. cables with connectors	190
4-pos. cables with connectors	200
5-pos. cables with connectors	206
6-pos. cables with connectors	211
8-pos. cables with connectors	213
12- and 17-pos. cables with connectors	218
Assembled M17 to M40 cables	222
Cables with valve connectors	234

Distributors and adapters	254
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Distributor boxes	266
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Cabling for the railway industry	276
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Cabling for the food industry	278
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Cabling for outdoor applications	280
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Cabling for robots and drag chains	282
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M12 cabling for power applications	284
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By the meter – cable rings, cable drums	304
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Accessories	308
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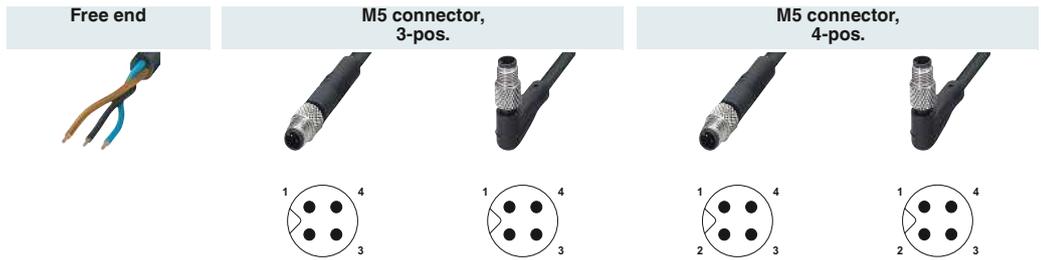
Cable range	320
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Sensor/actuator cabling

Assembled cables

M5 SAC cable, 3- and 4-pos., cable type: PUR/PVC

Notes:
For information about the cable qualities, see page 320



Free end	Ordering data		Ordering data		Ordering data		Ordering data	
	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	
	1.5 m	1530265	1.5 m	1530346	1.5 m	1530304	1.5 m	1530388
	3 m	1530278	3 m	1530359	3 m	1530317	3 m	1530391
	5 m	1530281	5 m	1530362	5 m	1530320	5 m	1530401
	10 m	1530294	10 m	1530375	10 m	1530333	10 m	1530414
Socket M5, 3-pos., straight 	1.5 m	1530427						
	3 m	1530430						
	5 m	1530443						
	10 m	1530456						
Socket M5, 3-pos., angled 	1.5 m	1530508						
	3 m	1530511						
	5 m	1530524						
	10 m	1530537						
Socket M5, 4-pos., straight 	1.5 m	1530469						
	3 m	1530472						
	5 m	1530485						
	10 m	1530498						
Socket M5, 4-pos., angled 	1.5 m	1530540						
	3 m	1530553						
	5 m	1530566						
	10 m	1530579						

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PUR M5** cable type and are available from stock.

Cable description	Cable type	Color coding	Pin assignment 3-pos.
PUR/PVC - black	PUR M5	BN	1
		BK	4
		BU	3

Color coding	Pin assignment 4-pos.
BN	1
WH	2
BK	4
BU	3

		Technical data	Technical data
		M5 3-pos.	M5 4-pos.
Rated voltage	[V]	125	125
Rated current	[A]	1	1
Contact material		CuZn	CuZn
Contact surface material		Au	Au
Grip body material		PUR	PUR
M5 circular connector according to:		IEC 61076-2-105	IEC 61076-2-105
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Plug/socket	[°C]	-25 ... 80	-25 ... 80

Sensor/actuator cabling

Assembled cables

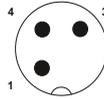
M8 SAC cable, snap-in, 3- and 4-pos., cable type: PUR

Notes:
For information about the cable qualities, see page 320

Free end



M12 connector, 3-pos.



Ordering data

Ordering data

Ordering data

M8 socket, snap-in, 3-pos., straight

Order No.

Order No.

Order No.



5 m [1519875](#)
Variable [1697593](#)

Variable [1696853](#)

M8 socket, snap-in, 3-pos., angled



5 m [1519891](#)
Variable [1697629](#)

Variable [1696882](#)

M8 socket, snap-in, 3-pos., with LEDs, angled



Variable [1513402](#)

Variable [1515675](#)

M8 socket, snap-in, 4-pos., straight



Variable [1513389](#)

M8 socket, snap-in, 4-pos., angled



Variable [1513392](#)

M8 socket, snap-in, 4-pos., with LEDs, angled



Variable [1511954](#)

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, with a straight 3-pos. M12 connector and a straight M8 snap-in socket, the ordering data is as follows:

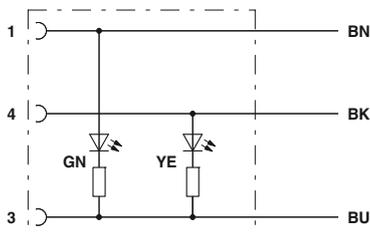
Order No.	Cable type	Length [m] 40 m, maximum
1696853	PUR	4.5
Minimum order amount: 25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type	Suitable for:	Color coding	Pin assignment 3-pos.
PUR, halogen-free - black E221474	PUR	3-/4-pos.	BN BK	1 4
PUR, halogen-free - gray E221474	280	3-pos.	BU	3
TPE-U highly flexible - gray E221474	800	3-/4-pos.		

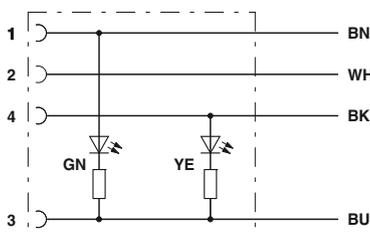
Color coding	Pin assignment 4-pos.
BN	1
WH	2
BK	4
BU	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

	Technical data	Technical data	Technical data	Technical data
	M8 3-pos.	M8 3-pos., with LEDs	M8 4-pos.	M8 4-pos., with LED
Rated voltage [V]	60	24	30	24
Rated current [A]	4	4	4	4
Contact material	CuSn	CuSn	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au	Ni/Au	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing			
M8 circular connector according to:	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104
Degree of protection	IP65 / IP67 / IP68			
Temperature data				
Plug/socket [°C]	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90



Contact assignment of the M8 socket with LED, 3-pos.



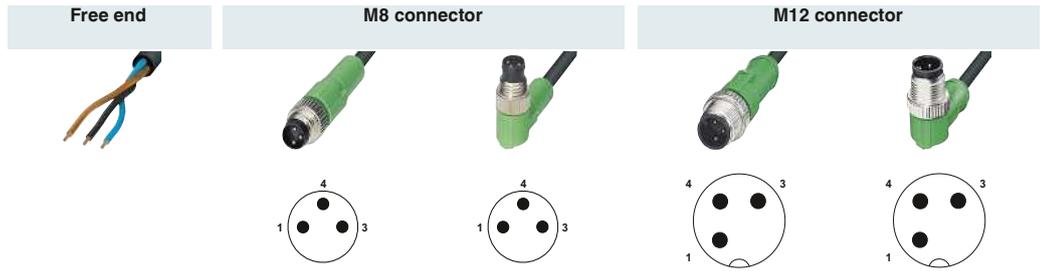
Contact assignment of the M8 socket with LED, 4-pos.

Sensor/actuator cabling

Assembled cables

M8 and M12 SAC cable, 3-pos., cable type: PUR

Notes:
For information about the cable qualities, see page 320



Free end	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.		Order No.		Order No.	
			1.5 m	1681664	1.5 m	1681693	1.5 m	1668014	1.5 m	1668137
			3 m	1681677	3 m	1681703	3 m	1668027	3 m	1668140
			5 m	1681680	5 m	1681716	5 m	1668030	5 m	1668153
			10 m	1693584	10 m	1694114	10 m	1682566	10 m	1694444
			Variable	1697548	Variable	1697551	Variable	1696662	Variable	1696675
M8 socket, straight			1.5 m	1669712	0.3 m	1681907	0.3 m	1682029	0.3 m	1668797
			3 m	1669725	0.6 m	1681910	0.6 m	1682032	0.6 m	1668807
			5 m	1669628	1.5 m	1681923	1.5 m	1682045	1.5 m	1668810
			10 m	1694101	3 m	1681936	3 m	1682058	3 m	1668823
			Variable	1697580	Variable	1697632	Variable	1697661	Variable	1696840
M8 socket, angled			1.5 m	1669738	0.3 m	1681949	0.3 m	1682061	0.3 m	1668836
			3 m	1669741	0.6 m	1681952	0.6 m	1682074	0.6 m	1668849
			5 m	1669631	1.5 m	1681965	1.5 m	1682087	1.5 m	1668852
			10 m	1694169	3 m	1681978	3 m	1682090	3 m	1668865
			Variable	1697603	Variable	1697645	Variable	1697674	Variable	1696866
M8 socket, angled, with 2 LEDs			1.5 m	1671069	0.3 m	1681981	0.3 m	1682100	0.3 m	1694884
			3 m	1671072	0.6 m	1681994	0.6 m	1682113	0.6 m	1694897
			5 m	1671085	1.5 m	1682003	1.5 m	1682126	1.5 m	1694907
			10 m	1683594	3 m	1682016	3 m	1682139	3 m	1694910
			Variable	1697616	Variable	1697658	Variable	1697687	Variable	1696879
M12 socket, straight			1.5 m	1694486	0.3 m	1682304	0.3 m	1682388	0.3 m	1681509
			3 m	1694499	0.6 m	1682317	0.6 m	1682391	0.6 m	1681512
			5 m	1683510	1.5 m	1682320	1.5 m	1682401	1.5 m	1681525
			10 m	1693034	3 m	1682333	3 m	1682414	3 m	1681538
			Variable	1696688	Variable	1697690	Variable	1697726	Variable	1696756
M12 socket, straight, pin 2 - 4 bridged			1.5 m	1668072					0.3 m	1668315
			3 m	1668085					0.6 m	1668328
			5 m	1668098					1.5 m	1668331
			10 m	1694208					3 m	1668344
			Variable	1696691					Variable	1696769
									Variable	1668551
									Variable	1668564
									Variable	1668577
									Variable	1668580
									Variable	1668611
M12 socket, straight, with LED			1.5 m	1694185						
			3 m	1694198						
			5 m	1694787						
			10 m	1694790						
			Variable	1696701	Variable	1514197			Variable	1511802
									Variable	1524763
M12 socket, angled			1.5 m	1694509	0.3 m	1682346	0.3 m	1682427	0.3 m	1681541
			3 m	1694512	0.6 m	1682359	0.6 m	1682430	0.6 m	1681554
			5 m	1694525	1.5 m	1682362	1.5 m	1682443	1.5 m	1681567
			10 m	1694538	3 m	1682375	3 m	1682456	3 m	1681570
			Variable	1696714	Variable	1697700	Variable	1697739	Variable	1696772
M12 socket, angled, pin 2 - 4 bridged			1.5 m	1668195					0.3 m	1668399
			3 m	1668205					0.6 m	1668409
			5 m	1668218					1.5 m	1668412
			10 m	1681017					3 m	1668425
			Variable	1696727					Variable	1696785
									Variable	1668632
									Variable	1668645
									Variable	1668658
									Variable	1668661
									Variable	1696824
M12 socket, angled with LED			1.5 m	1694392	0.3 m	1693351	0.3 m	1682469	0.3 m	1694554
			3 m	1694402	0.6 m	1693364	0.6 m	1682472	0.6 m	1694567
			5 m	1694415	1.5 m	1693380	1.5 m	1682485	1.5 m	1694570
			10 m	1694428	3 m	1693403	3 m	1682498	3 m	1694583
			Variable	1696730	Variable	1697713	Variable	1697742	Variable	1696798
M12 socket, angled, with LED, pin 2 - 4 bridged			1.5 m	1668250					0.3 m	1668438
			3 m	1668263					0.6 m	1668441
			5 m	1668276					1.5 m	1668454
			10 m	1681059					3 m	1668467
			Variable	1696743					Variable	1696808
									Variable	1696837

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, with a straight 3-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

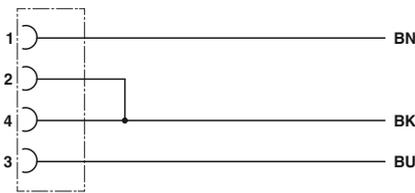
Order No.	Cable type	Length [m]
1696756	PUR	4.5
Minimum order amount:		25 pcs.
Increments:		0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type	Suitable for:
PUR, halogen-free - black E221474	PUR	M8/M12
PUR, halogen-free - gray E221474	280	M8/M12
TPE-U highly flexible - gray E221474	800	M8/M12
PUR irradiated - orange E221474	150	M12
PVC - black E221474	PVC	M8/M12
PVC - gray E221474	500	M8/M12
PVC - yellow E221474	540	M12
PVC 105° - yellow E221474	542	M12

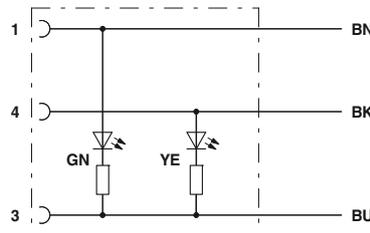
Color coding	Pin assignment
BN	1
BK	4
BU	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

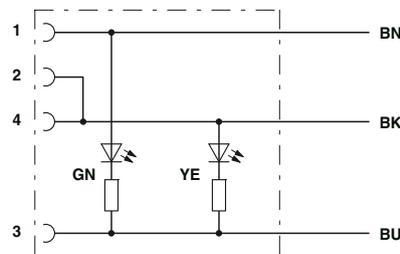
Technical data	Technical data	Technical data	Technical data
M8 3-pos.	M8 3-pos., with LEDs	M12 3-pos.	M12 3-pos., with LEDs
Rated voltage [V]	60	250	24
Rated current [A]	4	4	4
Contact material	CuSn	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing IEC 61076-2-104	TPU, hardly inflammable, self-extinguishing IEC 61076-2-104	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:	IEC 61076-2-104	IEC 61076-2-101	IEC 61076-2-101
M12 circular connector according to:	-	IEC 61076-2-101	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data	-25 ... 90	-25 ... 90	-25 ... 90
Plug/socket	-25 ... 90	-25 ... 90	-25 ... 90



Contact assignment of M12 sockets bridged



Contact assignment of M8/M12 socket with two LEDs



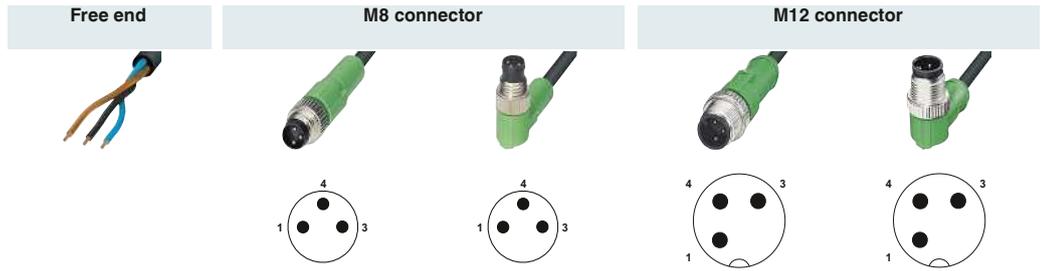
Contact assignment of M12 sockets with 2 LEDs, bridged

Sensor/actuator cabling

Assembled cables

M8 and M12 SAC cable, 3-pos., cable type: PVC

Notes:
For information about the cable qualities, see page 320



Free end	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.		Order No.		Order No.	
			1.5 m	1415861	1.5 m	1415865	1.5 m	1414434	1.5 m	1414447
			3 m	1415862	3 m	1415866	3 m	1414435	3 m	1414448
			5 m	1415863	5 m	1415867	5 m	1693173	5 m	1414449
			10 m	1447280	10 m	1415869	10 m	1414437	10 m	1414450
			Variable	1697548	Variable	1697551	Variable	1696662	Variable	1696675
M8 socket, straight			1.5 m	1415870	0.3 m	1415877	0.3 m	1415881	0.3 m	1415525
			3 m	1415871	0.6 m	1415878	0.6 m	1415882	0.6 m	1415527
			5 m	1510748	1.5 m	1415879	1.5 m	1415883	1.5 m	1415528
			10 m	1506532	3 m	1415880	3 m	1415884	3 m	1415529
			Variable	1697580	Variable	1697632	Variable	1697661	Variable	1696840
M8 socket, angled			1.5 m	1415872	0.3 m	1415886	0.3 m	1415891	0.3 m	1415530
			3 m	1446320	0.6 m	1415888	0.6 m	1415892	0.6 m	1415531
			5 m	1403253	1.5 m	1415889	1.5 m	1415893	1.5 m	1415532
			10 m	1403773	3 m	1415890	3 m	1415894	3 m	1415533
			Variable	1697603	Variable	1697645	Variable	1697674	Variable	1696866
M8 socket, angled, with 2 LEDs			1.5 m	1415874	0.3 m	1415896	0.3 m	1415901		
			3 m	1415875	0.6 m	1415897	0.6 m	1415902		
			5 m	1508174	1.5 m	1415898	1.5 m	1415903		
			10 m	1415876	3 m	1415899	3 m	1415904		
			Variable	1697616	Variable	1697658	Variable	1697687	Variable	1696879
M12 socket, straight			1.5 m	1414451				0.3 m	1414576	
			3 m	1414452				0.6 m	1414577	
			5 m	1400505				1.5 m	1414578	
			10 m	1403486				3 m	1414579	
			Variable	1696688	Variable	1697690	Variable	1697726	Variable	1696756
M12 socket, straight, pin 2 - 4 bridged										
			Variable	1696691				Variable	1696769	Variable
M12 socket, straight, with 2 LEDs			1.5 m	1414556						
			3 m	1414561						
			5 m	1508459						
			10 m	1414565						
			Variable	1696701	Variable	1514197		Variable	1511802	Variable
M12 socket, angled			1.5 m	1414552				0.3 m	1414580	
			3 m	1414553				0.6 m	1414581	
			5 m	1579051				1.5 m	1415519	
			10 m	1453821				3 m	1415520	
			Variable	1696714	Variable	1697700	Variable	1697739	Variable	1696772
M12 socket, angled, pin 2 - 4 bridged										
			Variable	1696727				Variable	1696785	Variable
M12 socket, angled, with 2 LEDs			1.5 m	1414571				0.3 m	1415521	
			3 m	1414573				0.6 m	1415522	
			5 m	1505326				1.5 m	1415523	
			10 m	1414575				3 m	1415524	
			Variable	1696730	Variable	1697713	Variable	1697742	Variable	1696798
M12 socket, angled, with LED, pin 2 - 4 bridged										
			Variable	1696743				Variable	1696808	Variable

Information for products with fixed cable length:

Products with fixed cable length are produced with the PVC cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, with a straight 3-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

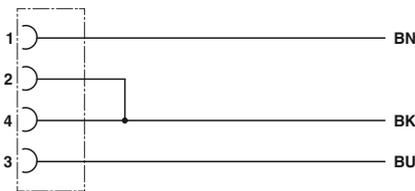
Order No.	Cable type	Length [m]
1696756	PVC	4.5
Minimum order amount:		25 pcs.
Increments:		0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type	Suitable for:
PVC - black E221474	PVC	M8/M12
PVC - gray E221474	500	M8/M12
PVC - yellow E221474	540	M12
PVC 105° - yellow E221474	542	M12
PUR, halogen-free - black E221474	PUR	M8/M12
PUR irradiated - orange E221474	150	M12
PUR, halogen-free - gray E221474	280	M8/M12
TPE-U highly flexible - gray E221474	800	M8/M12

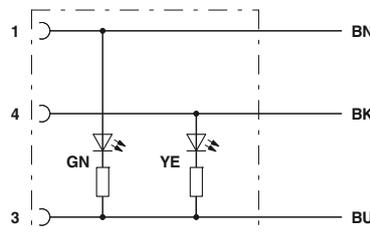
Color coding	Pin assignment
BN	1
BK	4
BU	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

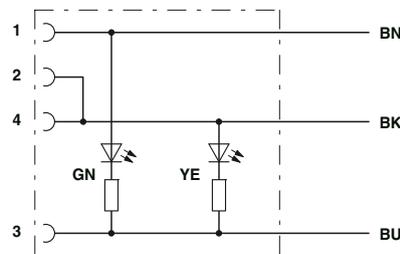
Technical data	Technical data	Technical data	Technical data
M8 3-pos.	M8 3-pos., with LEDs	M12 3-pos.	M12 3-pos., with LEDs
Rated voltage [V]	60	250	24
Rated current [A]	4	4	4
Contact material	CuSn	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:	IEC 61076-2-104	IEC 61076-2-101	IEC 61076-2-101
M12 circular connector according to:	-	IEC 61076-2-101	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data	-25 ... 90	-25 ... 90	-25 ... 90
Plug/socket	-25 ... 90	-25 ... 90	-25 ... 90



Contact assignment of M12 sockets bridged



Contact assignment of M8/M12 socket with two LEDs



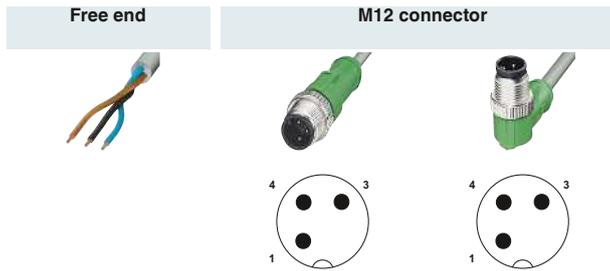
Contact assignment of M12 sockets with 2 LEDs, bridged

Sensor/actuator cabling

Assembled cables

M12 SAC cable, 3-pos., cable type: 800

Notes:
For information about the cable qualities, see page 326



Free end	Ordering data		Ordering data		Ordering data	
	Order No.	Length	Order No.	Length	Order No.	Length
		1.5 m	1456734	1.5 m	1456899	1.5 m
		3 m	1456747	3 m	1456909	3 m
		5 m	1456750	5 m	1456912	5 m
		10 m	1456763	10 m	1456925	10 m
		Variable	1696662	Variable	1696675	Variable
M12 socket, straight 		1.5 m	1456679	0.3 m	1456776	
		3 m	1456682	0.6 m	1456789	
		5 m	1456695	1.5 m	1456792	
		10 m	1456705	3 m	1456802	
		Variable	1696688	Variable	1696756	
M12 socket, angled 		1.5 m	1454260	0.3 m	1456815	
		3 m	1456718	0.6 m	1456828	
		5 m	1454273	1.5 m	1456831	
		10 m	1454299	3 m	1456844	
		Variable	1696714	Variable	1696772	
M12 socket, angled, with 2 LEDs 		1.5 m	1454312	0.3 m	1456857	
		3 m	1456721	0.6 m	1456860	
		5 m	1454325	1.5 m	1456873	
		10 m	1454341	3 m	1456886	
		Variable	1696730	Variable	1696798	

Information for products with fixed cable length:

Products with fixed cable length are produced with the highly flexible 800 cable type and are available from stock.

Cable description	Cable type	Color coding	Pin assignment
TPE-U highly flexible - gray Robots and drag chains	800	BN BK BU	1 4 3

Ordering data for products with variable cable:

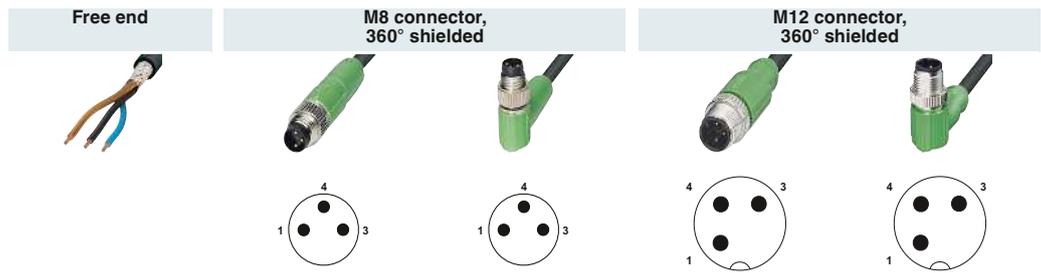
For a 4.5 m long sensor/actuator cable, TPE-U 800, with a straight 3-pos. M12 connector and free cable end, the ordering data is as follows:

Order No.	Cable type	Length [m]
1696662	800	4.5
Minimum order amount:		Increments:
25 pcs.		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

	Technical data	Technical data
	M12 3-pos.	M12 3-pos., with LEDs
Rated voltage [V]	250	24
Rated current [A]	4	4
Contact material	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
Knurl material	Zinc die-cast, nickel-plated	Zinc die-cast, nickel-plated
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data		
Plug/socket	-25 ... 90	-25 ... 90

M8 and M12 SAC cable, 3-pos., shielded, cable type: PUR

Notes:
For information about the cable qualities, see page 320



	Ordering data		Ordering data		Ordering data		Ordering data	
Free end	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	
	1.5 m	1521614	1.5 m	1521669	1.5 m	1682650	1.5 m	1682689
	3 m	1521527	3 m	1521672	3 m	1682663	3 m	1682692
	5 m	1521630	5 m	1521685	5 m	1682676	5 m	1682702
	10 m	1521643	10 m	1521698	10 m	1500664	10 m	1500677
	Variable	1521656	Variable	1521708	Variable	1697425	Variable	1697438
M8 socket, straight, 360° shielded								
	1.5 m	1521711	0.3 m	1456310				
	3 m	1521724	0.6 m	1456323				
	5 m	1521737	1.5 m	1455285				
	10 m	1521740	3 m	1455298				
	Variable	1521753	Variable	1552052	Variable	1552078		
M8 socket, angled, 360° shielded								
	1.5 m	1521766						
	3 m	1521779						
	5 m	1521782						
	10 m	1521795						
	Variable	1521805	Variable	1552065	Variable	1552081		
M12 socket, straight, 360° shielded								
	1.5 m	1682786			0.3 m	1500800		
	3 m	1682799			0.6 m	1500813		
	5 m	1682809			1.5 m	1500826		
	10 m	1500680			3 m	1500839		
	Variable	1697441			Variable	1536049	Variable	1536065
M12 socket, angled, 360° shielded								
	1.5 m	1682812			0.3 m	1500923		
	3 m	1682825			0.6 m	1500936		
	5 m	1682838			1.5 m	1500949		
	10 m	1500693			3 m	1500952		
	Variable	1697454			Variable	1536052	Variable	1536078

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Cable description	Cable type	Suitable for:
PUR, halogen-free - black E221474	PUR	M8/M12
PVC - black E221474	PVC	M12
PVC - gray E221474	500	M12

Color coding	Pin assignment
BN	1
BK	4
BU	3

Ordering data for products with variable cable:

For a 4.5 m long shielded sensor/actuator cable, PUR, halogen-free, black, with a straight 3-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m]
1536049	PUR	4.5
Minimum order amount:		25 pcs.
Increments:		0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

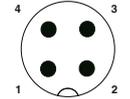
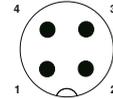
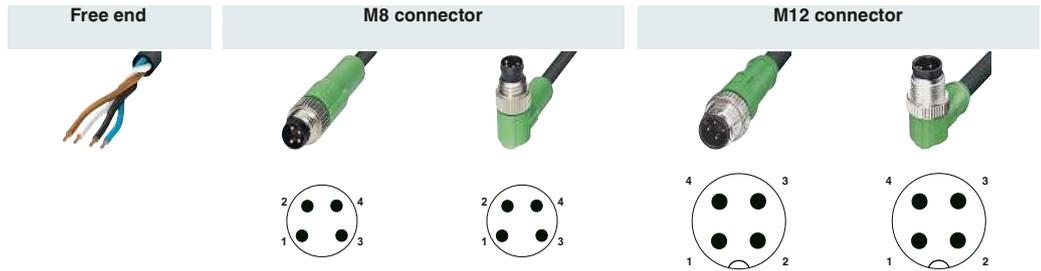
	Technical data	Technical data
	M8 3-pos., shielded	M12 3-pos., shielded
Rated voltage [V]	60	250
Rated current [A]	4	4
Contact material	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:	IEC 61076-2-104	-
M12 circular connector according to:	-	IEC 61076-2-101
Degree of protection	IP65 / IP67	IP65 / IP67
Temperature data		
Plug/socket [°C]	-25 ... 90	-25 ... 90

Sensor/actuator cabling

Assembled cables

M8 and M12 SAC cable, 4-pos., cable type: PUR

Notes:
For information about the cable qualities, see page 320



		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Free end		Order No.		Order No.		Order No.		Order No.		Order No.	
				1.5 m	1681787	1.5 m	1681813	1.5 m	1668043	1.5 m	1668166
				3 m	1681790	3 m	1681826	3 m	1668056	3 m	1668179
				5 m	1681800	5 m	1681839	5 m	1668069	5 m	1668182
				10 m	1694143	10 m	1694156	10 m	1682993	10 m	1694457
				Variable	1697755	Variable	1697768	Variable	1696947	Variable	1696950
M8 socket, straight				1.5 m	1681842	0.3 m	1682142	0.3 m	1682223	0.3 m	1694923
				3 m	1681855	0.6 m	1682155	0.6 m	1682236	0.6 m	1693076
				5 m	1681868	1.5 m	1682168	1.5 m	1682249	1.5 m	1693089
				10 m	1683484	3 m	1682171	3 m	1682252	3 m	1694936
				Variable	1697771	Variable	1697797	Variable	1697810	Variable	1697072
										Variable	1507874
M8 socket, angled				1.5 m	1681871	0.3 m	1682184	0.3 m	1682265		1671551
				3 m	1681884	0.6 m	1682197	0.6 m	1682278		1671564
				5 m	1681897	1.5 m	1682207	1.5 m	1682281		1671577
				10 m	1694172	3 m	1682210	3 m	1682294		1671580
				Variable	1697784	Variable	1697807	Variable	1697823	Variable	1697085
M8 socket, angled, with 2 LEDs											
				Variable	1517673					Variable	1515031
M12 socket, straight				1.5 m	1668108			0.3 m	1668357	0.3 m	1668593
				3 m	1668111			0.6 m	1668360	0.6 m	1668603
				5 m	1668124			1.5 m	1668373	1.5 m	1668616
				10 m	1683002			3 m	1668386	3 m	1668629
				Variable	1696963	Variable	1506697	Variable	1697001	Variable	1697030
M12 socket, straight, with 2 LEDs				1.5 m	1694800						
				3 m	1694813						
				5 m	1694826						
				10 m	1694839						
				Variable	1696976						
M12 socket, angled				1.5 m	1668221			0.3 m	1668470	0.3 m	1668713
				3 m	1668234			0.6 m	1668483	0.6 m	1668726
				5 m	1668247			1.5 m	1668496	1.5 m	1668739
				10 m	1681389			3 m	1668506	3 m	1668742
				Variable	1696989	Variable	1511718	Variable	1697836	Variable	1697014
										Variable	1697043
M12 socket, angled, with 3 LEDs				1.5 m	1668289			0.3 m	1668519	0.3 m	1668755
				3 m	1668292			0.6 m	1668522	0.6 m	1668768
				5 m	1668302			1.5 m	1668535	1.5 m	1668771
				10 m	1681020			3 m	1668548	3 m	1668784
				Variable	1696992			Variable	1697027	Variable	1697056

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Ordering data for products with variable cable:

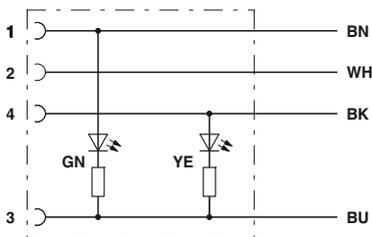
For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, with a straight 4-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1697001	PUR	4.5
Minimum order amount: 25 pcs.		
Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m		

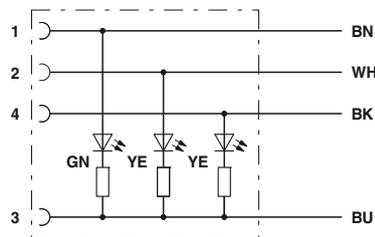
Cable description	Cable type	Suitable for:	Color coding	Pin assignment
PUR, halogen-free - black E221474	PUR	M8/M12	BN	1
PUR, halogen-free - yellow E221474	240	M12	WH	2
PUR, halogen-free - gray E221474	280	M8/M12	BK	4
TPE-U highly flexible - gray E221474	800	M8/M12	BU	3
PUR irradiated - orange E221474	150	M12		
PUR irradiated - yellow E221474	160	M12		
PVC - black E221474	PVC	M8/M12		
PVC - gray E221474	500	M8/M12		
PVC - yellow E221474	540	M12		
PVC 105° - yellow E221474	542	M12		

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

	Technical data	Technical data	Technical data	Technical data
	M8 4-pos.	M8 4-pos., with LED	M12 4-pos.	M12 4-pos., with LED
Rated voltage [V]	30	24	250	24
Rated current [A]	4	4	4	4
Contact material	CuSn	CuSn	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au	Ni/Au	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing			
M8 circular connector according to:	IEC 61076-2-104	IEC 61076-2-104	-	-
M12 circular connector according to:	-	-	IEC 61076-2-101	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68			
Temperature data				
Plug/socket [°C]	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90



Contact assignment of M8/M12 socket with LED



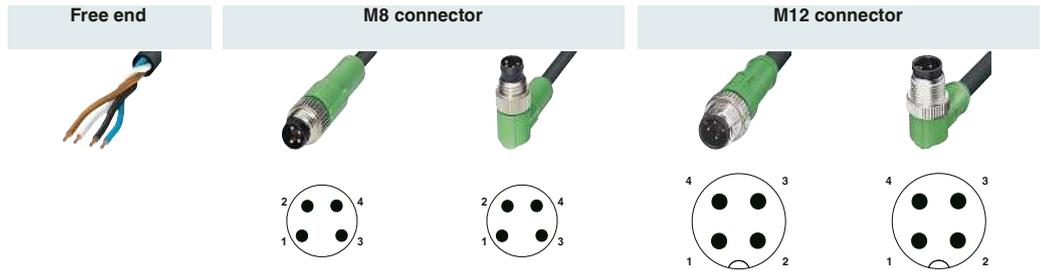
Contact assignment of M12 sockets with LED

Sensor/actuator cabling

Assembled cables

M8 and M12 SAC cable, 4-pos., cable type: PVC

Notes:
For information about the cable qualities, see page 320



Free end	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data			
	Order No.		Order No.		Order No.		Order No.		Order No.			
			1.5 m	1415542	1.5 m	1415546	1.5 m	1415585	1.5 m	1415591		
			3 m	1415543	3 m	1415547	3 m	1415588	3 m	1415592		
			5 m	1415544	5 m	1415548	5 m	1415589	5 m	1415593		
			10 m	1415545	10 m	1415549	10 m	1415590	10 m	1415594		
			Variable	1697755	Variable	1697768	Variable	1696947	Variable	1696950		
M8 socket, straight			1.5 m	1415550	0.3 m	1415556	0.3 m	1415576	0.3 m	1415671		
			3 m	1415551	0.6 m	1415557	0.6 m	1415577	0.6 m	1415672		
			5 m	1403252	1.5 m	1415558	1.5 m	1415578	1.5 m	1415673		
			10 m	1401062	3 m	1415560	3 m	1415579	3 m	1415674		
			Variable	1697771	Variable	1697797	Variable	1697810	Variable	1697072		
									Variable	1507874		
M8 socket, angled			1.5 m	1415552	0.3 m	1415562	0.3 m	1415580	0.3 m	1415667		
			3 m	1415554	0.6 m	1415572	0.6 m	1415581	0.6 m	1415668		
			5 m	1403254	1.5 m	1415573	1.5 m	1415582	1.5 m	1415669		
			10 m	1401064	3 m	1415574	3 m	1415583	3 m	1415670		
			Variable	1697784	Variable	1697807	Variable	1697823	Variable	1697085		
M8 socket, angled, with 2 LEDs			Variable	1517673					Variable	1515031		
M12 socket, straight			1.5 m	1544976				0.3 m	1415611	0.3 m	1415627	
			3 m	1404407				0.6 m	1415612	0.6 m	1415628	
			5 m	1404408				1.5 m	1415613	1.5 m	1415635	
			10 m	1446333				3 m	1415614	3 m	1415636	
			Variable	1696963	Variable	1506697		Variable	1697001	Variable	1697030	
M12 socket, straight, with 2 LEDs			1.5 m	1415596								
			3 m	1415597								
			5 m	1415602								
			10 m	1415605								
			Variable	1696976								
M12 socket, angled			1.5 m	1415606				0.3 m	1415617	0.3 m	1415642	
			3 m	1693526				0.6 m	1454817	0.6 m	1415643	
			5 m	1693539				1.5 m	1415618	1.5 m	1415644	
			10 m	1415608				3 m	1415619	3 m	1415645	
			Variable	1696989	Variable	1511718	Variable	1697836	Variable	1697014	Variable	1697043
M12 socket, angled, with 3 LEDs			1.5 m	1415609				0.3 m	1415620	0.3 m	1415646	
			3 m	1415610				0.6 m	1415623	0.6 m	1415647	
			5 m	1404961				1.5 m	1415624	1.5 m	1415648	
			10 m	1401063				3 m	1415625	3 m	1415650	
			Variable	1696992				Variable	1697027	Variable	1697056	

Information for products with fixed cable length:

Products with fixed cable length are produced with the PVC cable type and are available from stock.

Ordering data for products with variable cable:

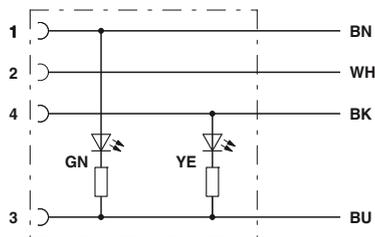
For a 4.5 m long sensor/actuator cable, PVC - black, with a straight 4-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m]
1697001	PVC	4.5
Minimum order amount:		25 pcs.
Increments:		0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

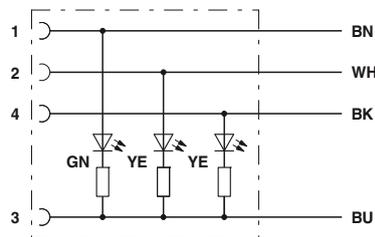
Cable description	Cable type	Suitable for:	Color coding	Pin assignment
PVC - black E221474	PVC	M8/M12	BN	1
PVC - gray E221474	500	M8/M12	WH	2
PVC - yellow E221474	540	M12	BK	4
PVC 105° - yellow E221474	542	M12	BU	3
PUR, halogen-free - black E221474	PUR	M8/M12		
PUR, halogen-free - yellow E221474	240	M12		
PUR, halogen-free - gray E221474	280	M8/M12		
PUR irradiated - orange E221474	150	M12		
PUR irradiated - yellow E221474	160	M12		
TPE-U highly flexible - gray E221474	800	M8/M12		

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

	Technical data	Technical data	Technical data	Technical data
	M8 4-pos.	M8 4-pos., with LED	M12 4-pos.	M12 4-pos., with LED
Rated voltage [V]	30	24	250	24
Rated current [A]	4	4	4	4
Contact material	CuSn	CuSn	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au	Ni/Au	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing			
M8 circular connector according to:	IEC 61076-2-104	IEC 61076-2-104	-	-
M12 circular connector according to:	-	-	IEC 61076-2-101	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68			
Temperature data				
Plug/socket [°C]	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90



Contact assignment of M8/M12 socket with LED



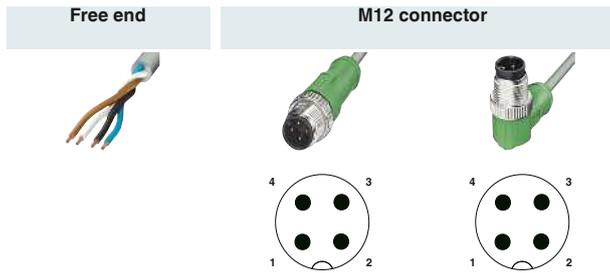
Contact assignment of M12 sockets with LED

Sensor/actuator cabling

Assembled cables

M12 SAC cable, 4-pos., cable type: 800

Notes:
For information about the cable qualities, see page 326



Free end	Ordering data		Ordering data		Ordering data	
	Order No.	Length	Order No.	Length	Order No.	Length
		1.5 m	1457018	1.5 m	1457128	1.5 m
		3 m	1457021	3 m	1457131	3 m
		5 m	1457034	5 m	1457144	5 m
		10 m	1457047	10 m	1457157	10 m
		Variable	1696947	Variable	1696950	Variable
M12 socket, straight 		1.5 m	1456938	0.3 m	1457050	0.3 m
		3 m	1456941	0.6 m	1457063	0.6 m
		5 m	1567322	1.5 m	1567270	1.5 m
		10 m	1567335	3 m	1457076	3 m
		Variable	1696963	Variable	1697001	Variable
M12 socket, angled 		1.5 m	1456954	0.3 m	1457089	0.3 m
		3 m	1456967	0.6 m	1567225	0.6 m
		5 m	1456970	1.5 m	1567238	1.5 m
		10 m	1456983	3 m	1457092	3 m
		Variable	1696989	Variable	1697014	Variable
M12 socket, angled, with 3 LEDs 		1.5 m	1456996	0.3 m	1457102	0.3 m
		3 m	1457005	0.6 m	1567173	0.6 m
		5 m	1567351	1.5 m	1567199	1.5 m
		10 m	1567364	3 m	1457115	3 m
		Variable	1696992	Variable	1697027	Variable

Information for products with fixed cable length:

Products with fixed cable length are produced with the highly flexible 800 cable type and are available from stock.

Cable description	Cable type	Color coding	Pin assignment
TPE-U highly flexible - gray Robots and drag chains	800	BN WH BK BU	1 2 4 3

Ordering data for products with variable cable:

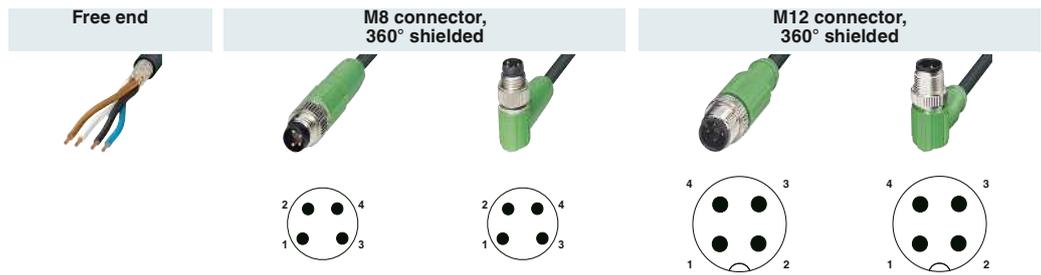
For a 4.5 m long sensor/actuator cable, TPE-U 800, with a straight 4-pos. M12 connector and free cable end, the ordering data is as follows:

Order No.	Cable type	Length [m]
1696947	800	4.5
Minimum order amount:		Increments:
25 pcs.		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

	Technical data	
	M12 4-pos.	M12 4-pos., with LED
Rated voltage [V]	250	24
Rated current [A]	4	4
Contact material	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
Knurl material	Zinc die-cast, nickel-plated	Zinc die-cast, nickel-plated
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data		
Plug/socket [°C]	-25 ... 90	-25 ... 90

M8 and M12 SAC cable, 4-pos., shielded, cable type: PUR

Notes:
For information about the cable qualities, see page 320



	Ordering data		Ordering data		Ordering data		Ordering data	
Free end	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	
	1.5 m	1521818	1.5 m	1521863	1.5 m	1682715	1.5 m	1682870
	3 m	1521821	3 m	1521876	3 m	1682618	3 m	1682883
	5 m	1521834	5 m	1521889	5 m	1682647	5 m	1682896
	10 m	1521847	10 m	1521892	10 m	1694389	10 m	1500703
	Variable	1521850	Variable	1521902	Variable	1697467	Variable	1697470
M8 socket, straight, 360° shielded	1.5 m	1521915	0.3 m	1574580				
	3 m	1521928	0.6 m	1455722				
	5 m	1521931	1.5 m	1455735				
	10 m	1521944	3 m	1574603				
	Variable	1521957	Variable	1552094	Variable	1552104		
M8 socket, angled, 360° shielded	1.5 m	1521960						
	3 m	1521973						
	5 m	1521986						
	10 m	1521999						
	Variable	1522008	Variable	1552065	Variable	1552120		
M12 socket, straight, 360° shielded	1.5 m	1682841			0.3 m	1500842		
	3 m	1682854			0.6 m	1500855		
	5 m	1682867			1.5 m	1500868		
	10 m	1500716			3 m	1500871		
	Variable	1697483			Variable	1536081	Variable	1536104
M12 socket, angled, 360° shielded	1.5 m	1682906			0.3 m	1500965		
	3 m	1682919			0.6 m	1500978		
	5 m	1682922			1.5 m	1500981		
	10 m	1500729			3 m	1500994		
	Variable	1697496			Variable	1536094	Variable	1536117

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Cable description	Cable type	Suitable for:	Color coding	Pin assignment
PUR, halogen-free - black E221474	PUR	M8/M12	BN	1
			WH	2
PVC - black E221474	PVC	M12	BK	4
			BU	3
PVC - gray E221474	500	M12		

Ordering data for products with variable cable:

For a 4.5 m long shielded sensor/actuator cable, PUR, halogen-free, black, with a straight 4-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m]
1536081	PUR	4.5
Minimum order amount:		25 pcs.
Increments:		0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

	Technical data	Technical data
	M8 4-pos., shielded	M12 4-pos., shielded
Rated voltage [V]	30	250
Rated current [A]	4	4
Contact material	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:	IEC 61076-2-104	-
M12 circular connector according to:	-	IEC 61076-2-101
Degree of protection	IP65 / IP67	IP65 / IP67
Temperature data		
Plug/socket [°C]	-25 ... 90	-25 ... 90

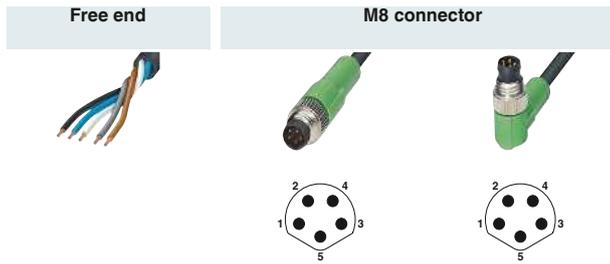
Sensor/actuator cabling

Assembled cables

M8 SAC cable, 5-pos., B-coded, cable type: PUR

Notes:

For information about the cable qualities, see page 320



Free end	Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.	
		1.5 m	1404461	1.5 m	1404465	
		3 m	1404462	3 m	1404466	
		5 m	1404463	5 m	1404467	
		10 m	1404464	10 m	1404468	
M8 socket, straight 		1.5 m	1404470	0.3 m	1404479	
		3 m	1404471	0.6 m	1404480	
		5 m	1404473	1.5 m	1404481	
		10 m	1404474	3 m	1404482	
M8 socket, angled 		1.5 m	1404475			
		3 m	1404476			
		5 m	1404477			
		10 m	1404478			

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free 115 cable type and are available from stock.

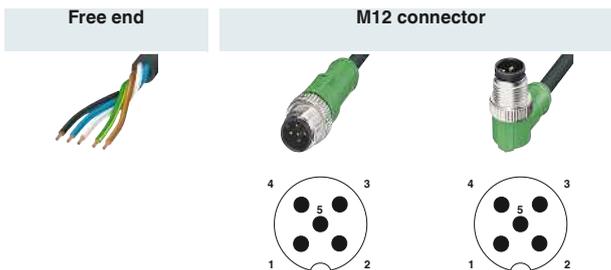
Cable description	Cable type	Color coding	Pin assignment															
PUR, halogen-free - black	115	<table border="1"> <tr><td>BN</td><td></td><td>1</td></tr> <tr><td>WH</td><td></td><td>2</td></tr> <tr><td>BK</td><td></td><td>4</td></tr> <tr><td>BU</td><td></td><td>3</td></tr> <tr><td>GY</td><td></td><td>5</td></tr> </table>	BN		1	WH		2	BK		4	BU		3	GY		5	
BN		1																
WH		2																
BK		4																
BU		3																
GY		5																

Technical data

		M85-pos.
Rated voltage	[V]	30
Rated current	[A]	3
Contact material		CuSn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
Knurl material		Zinc die-cast, nickel-plated
M8 circular connector according to:		IEC 61076-2-104
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-25 ... 90

M12 SAC cable, 5-pos., cable type: PUR

Notes:
For information about the cable qualities, see page 320



Ordering data

Free end	Order No.	Order No.	Order No.
		1.5 m 1669767	1.5 m 1669796
		3 m 1669770	3 m 1669806
		5 m 1669783	5 m 1669819
		10 m 1683361	10 m 1694460
		Variable 1697098	Variable 1697108
M12 socket, straight 	1.5 m 1669822	0.3 m 1681583	
	3 m 1669835	0.6 m 1681596	
	5 m 1669848	1.5 m 1681606	
	10 m 1683374	3 m 1681619	
	Variable 1697111	Variable 1697140	Variable 1508734
M12 socket, angled 	1.5 m 1669851	0.3 m 1681622	
	3 m 1669864	0.6 m 1681635	
	5 m 1669877	1.5 m 1681648	
	10 m 1694541	3 m 1681651	
	Variable 1697124	Variable 1697153	Variable 1529506
M12 socket, angled, with 3 LEDs 	1.5 m 1669880	0.3 m 1694635	
	3 m 1669893	0.6 m 1694648	
	5 m 1669903	1.5 m 1694651	
	10 m 1694431		
	Variable 1697137	Variable 1697166	Variable 1552159

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, with a straight 5-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m]
1697140	PUR	4.5
Minimum order amount:		25 pcs.
Increments:		0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - black E221474	PUR	BN	1
PUR, halogen-free - black, 5th wire gray E221474	115	WH	2
TPE-U highly flexible - gray, 5th wire gray E221474	800	BK	4
PUR irradiated - orange E221474	150	BU	3
PVC - black E221474	PVC	GNYE	5
PVC - black, 5th wire gray E221474	515		
PVC - gray E221474	500		
PVC 105° - yellow E221474	540		
PVC 105° - yellow, 5th wire gray E221474	542		

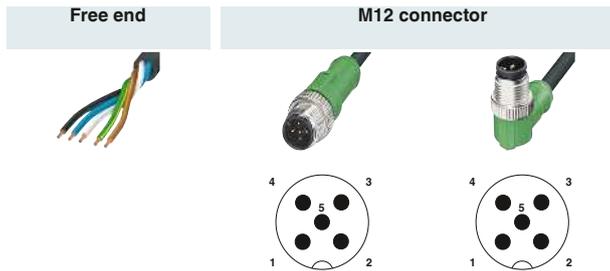
Technical data	Technical data
M12 5-pos.	M12 5-pos., with LED
Rated voltage [V]	60
Rated current [A]	4
Contact material	CuSn
Contact surface material	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68
Temperature data	-25 ... 90
Plug/socket [°C]	-25 ... 90

Sensor/actuator cabling

Assembled cables

M12 SAC cable, 5-pos., cable type: PVC

Notes:
For information about the cable qualities, see page 320



Free end	Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.	
		1.5 m	1415675	1.5 m	1415679	
		3 m	1415676	3 m	1415680	
		5 m	1415677	5 m	1415681	
		10 m	1415678	10 m	1415682	
		Variable	1697098	Variable	1697108	
M12 socket, straight 		1.5 m	1415683	0.3 m	1415695	
		3 m	1415684	0.6 m	1415696	
		5 m	1453889	1.5 m	1415697	
		10 m	1415685	3 m	1415698	
		Variable	1697111	Variable	1697140	Variable
M12 socket, angled 		1.5 m	1415686	0.3 m	1415699	
		3 m	1415687	0.6 m	1415700	
		5 m	1415688	1.5 m	1415701	
		10 m	1415689	3 m	1415702	
		Variable	1697124	Variable	1697153	Variable
M12 socket, angled, with 3 LEDs 		1.5 m	1415690	0.3 m	1415703	
		3 m	1415691	0.6 m	1415704	
		5 m	1415693	1.5 m	1415705	
		10 m	1415694	3 m	1415706	
		Variable	1697137	Variable	1697166	Variable

Information for products with fixed cable length:

Products with fixed cable length are produced with the PVC cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, with a straight 5-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1697140	PVC	4.5

Minimum order amount:
25 pcs.

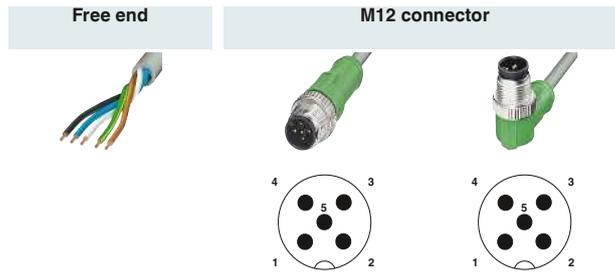
Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type	Color coding	Pin assignment
PVC - black E221474	PVC	BN	1
PVC - black, 5th wire gray E221474	515	WH	2
PVC - gray E221474	500	BK	4
PVC 105° - yellow E221474	540	BU	3
PVC 105° - yellow, 5th wire gray E221474	542	GNYE	5
PUR, halogen-free - black E221474	PUR		
PUR, halogen-free - black, 5th wire gray E221474	115		
PUR irradiated - orange E221474	150		
TPE-U highly flexible - gray, 5th wire gray E221474	800		

	Technical data	Technical data
	M12 5-pos.	M12 5-pos., with LED
Rated voltage [V]	60	24
Rated current [A]	4	4
Contact material	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:	-	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data		
Plug/socket [°C]	-25 ... 90	-25 ... 90

**M12 SAC cable,
5-pos.,
cable type: 802**

Notes:
For information about the cable qualities, see page 326



Free end	Ordering data		Ordering data		Ordering data	
	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.
	1.5 m	1457225	1.5 m	1457322		
	3 m	1457238	3 m	1457335		
	5 m	1457241	5 m	1457348		
	10 m	1457254	10 m	1457351		
	Variable	1697098	Variable	1697108		
M12 socket, straight 	1.5 m	1454419	0.3 m	1457267		
	3 m	1457160	0.6 m	1454561		
	5 m	1454422	1.5 m	1454587		
	10 m	1454448	3 m	1457270		
	Variable	1697111	Variable	1697140		
M12 socket, angled 	1.5 m	1457173	0.3 m	1457283		
	3 m	1457186	0.6 m	1454516		
	5 m	1457199	1.5 m	1454532		
	10 m	1457209	3 m	1457296		
	Variable	1697124	Variable	1697153		
M12 socket, angled, with 3 LEDs 	1.5 m	1454367	0.3 m	1457306		
	3 m	1457212	0.6 m	1454464		
	5 m	1454370	1.5 m	1454480		
	10 m	1454396	3 m	1457319		
	Variable	1697137	Variable	1697166		

Information for products with fixed cable length:

Products with fixed cable length are produced with the 802 cable type and are available from stock.

Cable description	Cable type	Color coding	Pin assignment
TPE-U highly flexible - gray Robots and drag chains	802	BN WH BK BU GNYE	1 2 4 3 5

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, TPE-U 802, with a straight 5-pos. M12 connector and free cable end, the ordering data is as follows:

Order No.	Cable type	Length [m]
1697098	802	4.5
Minimum order amount:		40 m, maximum
25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

	Technical data	
	M12 5-pos.	M12 5-pos., with LED
Rated voltage [V]	60	24
Rated current [A]	4	4
Contact material	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
Knurl material	Zinc die-cast, nickel-plated	Zinc die-cast, nickel-plated
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data		
Plug/socket [°C]	-25 ... 90	-25 ... 90

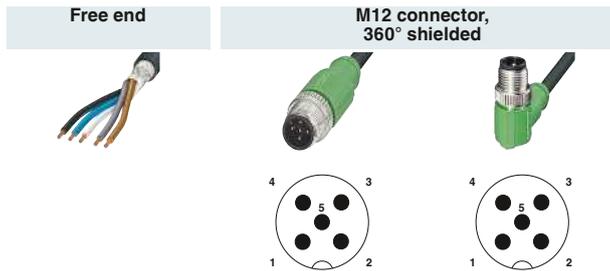
Sensor/actuator cabling

Assembled cables

M12 SAC cable, 5-pos., shielded, cable type: PUR

Notes:

For information about the cable qualities, see page 320



	Ordering data	Ordering data	Ordering data
Free end	Order No.	Order No.	Order No.
	1.5 m	1682728	1.5 m 1682757
	3 m	1682744	3 m 1682760
	5 m	1682731	5 m 1682773
	10 m	1500732	10 m 1500745
	Variable	1697506	Variable 1697519
M12 socket, straight, 360° shielded 	1.5 m	1682935	0.3 m 1500884
	3 m	1682948	0.6 m 1500897
	5 m	1682951	1.5 m 1500907
	10 m	1500758	3 m 1500910
	Variable	1697522	Variable 1536120
M12 socket, angled, 360° shielded 	1.5 m	1682964	0.3 m 1501003
	3 m	1682977	0.6 m 1501029
	5 m	1682980	1.5 m 1501045
	10 m	1500761	3 m 1501058
	Variable	1697535	Variable 1536133

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - black E221474	PUR	BN	1
PVC - black E221474	PVC	WH	2
PVC - gray E221474	500	BK	4
		BU	3
		GY	5

Ordering data for products with variable cable:

For a 4.5 m long shielded sensor/actuator cable, PUR, halogen-free, black, with a straight 5-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

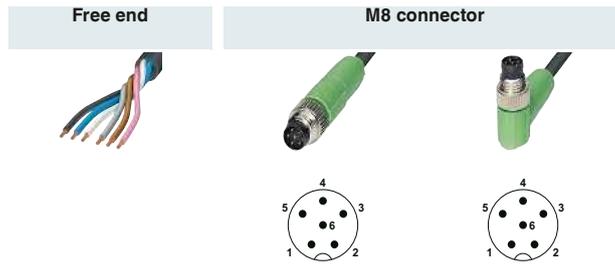
Order No.	Cable type	Length [m] 40 m, maximum
1536120	PUR	4.5
Minimum order amount:		Increments:
25 pcs.		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

Technical data

M12 5-pos., shielded	
Rated voltage [V]	60
Rated current [A]	4
Contact material	CuSn
Contact surface material	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:	IEC 61076-2-101
Degree of protection	IP65 / IP67
Temperature data	
Plug/socket [°C]	-25 ... 90

**M8 SAC cable,
6-pos.,
cable type: PUR**

Notes:
For information about the cable qualities, see page 320



	Ordering data	Ordering data	Ordering data
Free end	Order No.	Order No.	Order No.
	1.5 m	1.5 m	1.5 m
	3 m	3 m	3 m
	5 m	5 m	5 m
	10 m	10 m	10 m
	Variable	Variable	Variable
M8 socket, straight	Order No.	Order No.	Order No.
	1.5 m	1.5 m	1.5 m
	3 m	3 m	3 m
	5 m	5 m	5 m
	10 m	10 m	10 m
	Variable	Variable	Variable
M8 socket, angled	Order No.	Order No.	Order No.
	1.5 m	1.5 m	1.5 m
	3 m	3 m	3 m
	5 m	5 m	5 m
	10 m	10 m	10 m
	Variable	Variable	Variable

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - black E221474	PUR	BN WH BU BK GY PK	1 2 3 4 5 6

Ordering data for products with variable cable:

For a 4.5 m long shielded sensor/actuator cable, PUR, halogen-free, black, with a straight 6-pos. M8 connector and open cable end, the ordering data is as follows:

Order No.	Cable type	Length [m]
1522134	PUR	4.5
Minimum order amount:		
25 pcs.		
Increments:		
0.2 ... 3 m = 0.1 m		
> 3 m = 0.5 m		

Technical data	
M8 6-pos.	
Rated voltage	[V] 30
Rated current	[A] 1.5
Contact material	CuZn
Contact surface material	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:	IEC 61076-2-104
Degree of protection	IP65 / IP67 / IP68
Temperature data	
Plug/socket	[°C] -25 ... 90

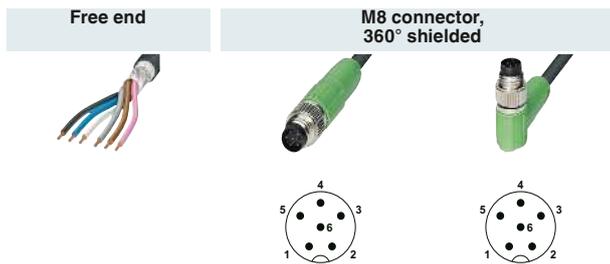
Sensor/actuator cabling

Assembled cables

M8 SAC cable, 6-pos., shielded, cable type: PUR

Notes:

For information about the cable qualities, see page 320



	Ordering data	Ordering data	Ordering data
Free end	Order No.	Order No.	Order No.
	1.5 m	1522299	1.5 m 1522341
	3 m	1522309	3 m 1522354
	5 m	1522312	5 m 1522367
	10 m	1522325	5 m 1522370
	Variable	1522338	Variable 1522383
M8 socket, straight, 360° shielded 	1.5 m	1522396	
	3 m	1522406	
	5 m	1522419	
	10 m	1522422	
	Variable	1522435	Variable 1552010 Variable 1552036
M8 socket, angled, 360° shielded 	1.5 m	1522448	
	3 m	1522451	
	5 m	1522464	
	10 m	1522477	
	Variable	1522480	Variable 1552023 Variable 1552049

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Cable description	Cable type	Color coding	Pin assignment																		
PUR, halogen-free - black E221474	PUR	<table border="1"> <tr><td>BN</td><td></td><td>1</td></tr> <tr><td>WH</td><td></td><td>2</td></tr> <tr><td>BU</td><td></td><td>3</td></tr> <tr><td>BK</td><td></td><td>4</td></tr> <tr><td>GY</td><td></td><td>5</td></tr> <tr><td>PK</td><td></td><td>6</td></tr> </table>	BN		1	WH		2	BU		3	BK		4	GY		5	PK		6	
BN		1																			
WH		2																			
BU		3																			
BK		4																			
GY		5																			
PK		6																			

Ordering data for products with variable cable:

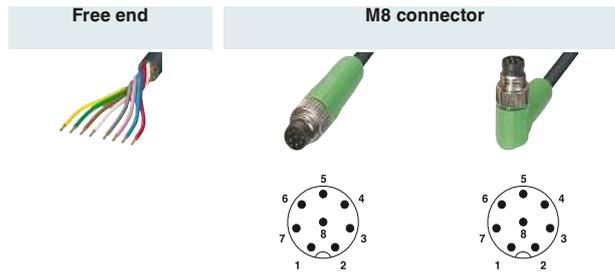
For a 4.5 m long shielded sensor/actuator cable, PUR, halogen-free, black, with a straight 6-pos. M8 connector and a straight M8 socket, the ordering data is as follows:

Order No.	Cable type	Length [m]
1552010	PUR	4.5
Minimum order amount:		Increments:
25 pcs.		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

Technical data	
M8 6-pos., shielded	
Rated voltage [V]	30
Rated current [A]	1.5
Contact material	CuZn
Contact surface material	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:	IEC 61076-2-104
Degree of protection	IP65 / IP67
Temperature data	
Plug/socket [°C]	-25 ... 90

**M8 SAC cable,
8-pos.,
cable type: PUR**

Notes:
For information about the cable qualities, see page 320



Free end	Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.	
		1.5 m	1404178	1.5 m	1404182	
		3 m	1404180	3 m	1404186	
		5 m	1404181	5 m	1404185	
		10 m	1404179	10 m	1404183	
M8 socket, straight 		1.5 m	1404187	0.3 m	1404196	
		3 m	1404188	0.6 m	1404198	
		5 m	1404189	1.5 m	1404199	
		10 m	1404190	3 m	1404200	
M8 socket, angled 		1.5 m	1404191	0.3 m	1404201	
		3 m	1404192	0.6 m	1404202	
		5 m	1404193	1.5 m	1404203	
		10 m	1404194	3 m	1404204	

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Cable description	Cable type	Color coding	Pin assignment																								
PUR, halogen-free - black	PUR	<table border="1"> <tr><td>WH</td><td></td><td>1</td></tr> <tr><td>BN</td><td></td><td>2</td></tr> <tr><td>GN</td><td></td><td>3</td></tr> <tr><td>YE</td><td></td><td>4</td></tr> <tr><td>GY</td><td></td><td>5</td></tr> <tr><td>PK</td><td></td><td>6</td></tr> <tr><td>BU</td><td></td><td>7</td></tr> <tr><td>RD</td><td></td><td>8</td></tr> </table>	WH		1	BN		2	GN		3	YE		4	GY		5	PK		6	BU		7	RD		8	
WH		1																									
BN		2																									
GN		3																									
YE		4																									
GY		5																									
PK		6																									
BU		7																									
RD		8																									

Technical data

		M8 8-pos.
Rated voltage	[V]	30
Rated current	[A]	1.5
Contact material		CuSn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
Knurl material		Zinc die-cast, nickel-plated
M8 circular connector according to:		IEC 61076-2-104
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-25 ... 85

Sensor/actuator cabling

Assembled cables

M12 SAC cable, 8-pos., cable type: PUR

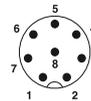
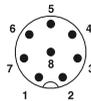
Notes:

For information about the cable qualities, see page 320

Free end



M12 connector



Ordering data

Ordering data

Ordering data

Free end	Order No.	Order No.	Order No.
	1.5 m	1522493	1.5 m 1522545
	3 m	1522503	3 m 1522558
	5 m	1522516	5 m 1522561
	10 m	1522529	10 m 1522574
	Variable	1522532	Variable 1522587
M12 socket, straight 	1.5 m	1522590	0.3 m 1522671
	3 m	1522600	0.6 m 1522684
	5 m	1520369	1.5 m 1522697
	10 m	1520372	3 m 1522707
	Variable	1522613	Variable 1522710
M12 socket, angled 	1.5 m	1522626	0.3 m 1522723
	3 m	1522639	0.6 m 1522736
	5 m	1522642	1.5 m 1522749
	10 m	1522655	3 m 1522752
	Variable	1522668	Variable 1522765

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, with a straight 8-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - black E221474	PUR	WH	1
TPE-U highly flexible - gray E221474	800	BN	2
PVC - black E221474	PVC	GN	3
PVC - gray E221474	500	YE	4
		GY	5
		PK	6
		BU	7
		RD	8

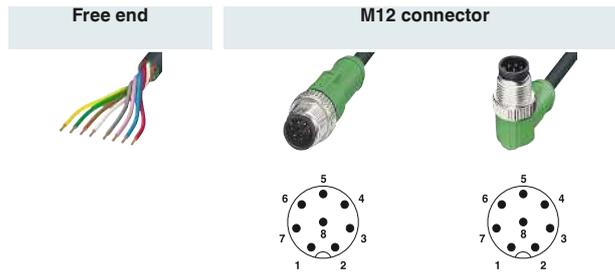
Order No.	Cable type	Length [m]
1522710	PUR	4.5
Minimum order amount:		Increments:
25 pcs.		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

Technical data

		M12 8-pos.
Rated voltage	[V]	30
Rated current	[A]	2
Contact material		CuZn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-25 ... 90

M12 SAC cable, 8-pos., cable type: PVC

Notes:
For information about the cable qualities, see page 320



	Ordering data	Ordering data	Ordering data
Free end	Order No.	Order No.	Order No.
	1.5 m	1.5 m	1.5 m
	3 m	3 m	3 m
	5 m	5 m	5 m
	10 m	10 m	10 m
	Variable	Variable	Variable
M12 socket, straight	Order No.	Order No.	Order No.
	1.5 m	0.3 m	0.3 m
	3 m	0.6 m	0.6 m
	5 m	1.5 m	1.5 m
	10 m	3 m	3 m
	Variable	Variable	Variable
M12 socket, angled	Order No.	Order No.	Order No.
	1.5 m	0.3 m	0.3 m
	3 m	0.6 m	0.6 m
	5 m	1.5 m	1.5 m
	10 m	3 m	3 m
	Variable	Variable	Variable

Information for products with fixed cable length:

Products with fixed cable length are produced with the PVC cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, with a straight 8-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m]
1522710	PVC	4.5
Minimum order amount:		
25 pcs.		
Increments:		
0.2 ... 3 m = 0.1 m		
> 3 m = 0.5 m		

Cable description	Cable type	Color coding	Pin assignment
PVC - black E221474	PVC	WH	1
		BN	2
PVC - gray E221474	500	GN	3
		YE	4
PUR, halogen-free - black E221474	PUR	GY	5
		PK	6
TPE-U highly flexible - gray E221474	800	BU	7
		RD	8

Technical data
M12 8-pos.
Rated voltage [V]
Rated current [A]
Contact material
Contact surface material
Grip body material
M12 circular connector according to:
Degree of protection
Temperature data
Plug/socket [°C]

Rated voltage [V]	30
Rated current [A]	2
Contact material	CuZn
Contact surface material	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68
Temperature data	
Plug/socket [°C]	-25 ... 90

Sensor/actuator cabling

Assembled cables

M8 SAC cable, 8-pos., shielded, cable type: PUR

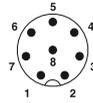
Notes:

For information about the cable qualities, see page 320

Free end



M8 connector, 360° shielded



	Ordering data		Ordering data		Ordering data	
Free end	Order No.		Order No.		Order No.	
		1.5 m		1404137		
		3 m		1404140		
		5 m		1404141		
		10 m		1404138		
M8 socket, straight, 360° shielded 		1.5 m	1404147	0.3 m	1404133	
		3 m	1404148	0.6 m	1404134	
		5 m	1404149	1.5 m	1404135	
		10 m	1404150	3 m	1404136	

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

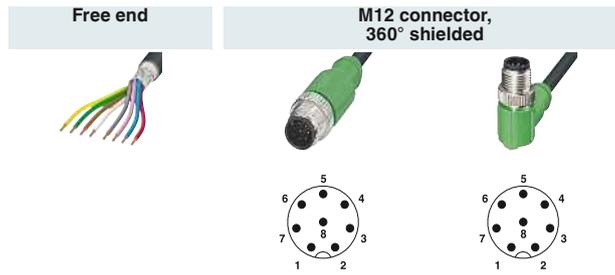
Cable description	Cable type	Color coding	Pin assignment																								
PUR, halogen-free - black	PUR	<table border="1"> <tr><td>WH</td><td></td><td>1</td></tr> <tr><td>BN</td><td></td><td>2</td></tr> <tr><td>GN</td><td></td><td>3</td></tr> <tr><td>YE</td><td></td><td>4</td></tr> <tr><td>GY</td><td></td><td>5</td></tr> <tr><td>PK</td><td></td><td>6</td></tr> <tr><td>BU</td><td></td><td>7</td></tr> <tr><td>RD</td><td></td><td>8</td></tr> </table>	WH		1	BN		2	GN		3	YE		4	GY		5	PK		6	BU		7	RD		8	
WH		1																									
BN		2																									
GN		3																									
YE		4																									
GY		5																									
PK		6																									
BU		7																									
RD		8																									

Technical data

		M8 8-pos.
Rated voltage	[V]	30
Rated current	[A]	1.5
Contact material		CuSn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
Knurl material		Zinc die-cast, nickel-plated
M8 circular connector according to:		IEC 61076-2-104
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 85

M12 SAC cable, 8-pos., shielded, cable type: PUR

Notes:
For information about the cable qualities, see page 320



Free end	Ordering data		Ordering data		Ordering data	
	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.
	1.5 m	1522778	1.5 m	1522817	1.5 m	1522817
	3 m	1522781	3 m	1522820	3 m	1522820
	5 m	1526981	5 m	1522833	5 m	1522833
	10 m	1522794	10 m	1522846	10 m	1522846
	Variable	1522804	Variable	1522859	Variable	1522859
M12 socket, straight, 360° shielded 	1.5 m	1522862	0.3 m	1522969		
	3 m	1522875	0.6 m	1522972		
	5 m	1522888	1.5 m	1522985		
	10 m	1522891	3 m	1522998		
	Variable	1522901	Variable	1523007	Variable	1551998
M12 socket, angled, 360° shielded 	1.5 m	1522914	0.3 m	1523010		
	3 m	1522927	0.6 m	1523023		
	5 m	1522930	1.5 m	1523036		
	10 m	1522943	3 m	1523049		
	Variable	1522956	Variable	1523052	Variable	1552007

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long shielded sensor/actuator cable, PUR, halogen-free, black, with a straight 8-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m]
1523007	PUR	4.5
Minimum order amount:		25 pcs.
Increments:		0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - black E221474	PUR	WH	1
		BN	2
PUR, halogen-free - gray E221474	280	GN	3
		YE	4
PVC - black E221474	PVC	GY	5
		PK	6
		BU	7
		RD	8

Technical data	
M12 8-pos., shielded	
Rated voltage	[V] 30
Rated current	[A] 2
Contact material	CuZn
Contact surface material	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:	IEC 61076-2-101
Degree of protection	IP65 / IP67
Temperature data	
Plug/socket	[°C] -25 ... 90

Sensor/actuator cabling

Assembled cables

M12-SPEEDCON, SAC cable, 12 and 17-pos., cable type: PUR

Notes:
For information about the cable qualities, see page 320



Free end	Ordering data					
	Order No.					
	1.5 m	1430530	1.5 m	1430572	1.5 m	1430695
	3 m	1430543	3 m	1430585	3 m	1430705
	5 m	1430556	5 m	1430598	5 m	1430718
	10 m	1430569	10 m	1430608	10 m	1430721
	1.5 m	1430611			1.5 m	1430734
	3 m	1430624			3 m	1430747
	5 m	1430637			5 m	1430750
	10 m	1430640			10 m	1430763
	1.5 m	1430653				
	3 m	1430666				
	5 m	1430679				
	10 m	1430682				
	1.5 m	1430776				
	3 m	1430789				
	5 m	1430792				
	10 m	1430802				
	1.5 m	1430815				
	3 m	1430828				
	5 m	1430831				
	10 m	1430844				

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Cable description	Cable type	Color coding	Pin assignment, 17-pos.
PUR, halogen-free - black	PUR	BN	1
		BU	2
		WH	3
		GN	4
		PK	5
		YE	6
		BK	7
		GY	8
		RD	9
		VT	10
		GYPK	11
		RDBU	12
		WHGN	13
		BNGN	14
		WHYE	15
		YEEN	16
		WHGY	17

	Technical data	Technical data
	M12 12-pos.	M12 17-pos.
Rated voltage [V]	30	30
Rated current [A]	1.5	1.5
Contact material	CuZn	CuZn
Contact surface material	Ni/Au	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data		
Plug/socket [°C]	-25 ... 85	-25 ... 90

M12-SPEEDCON, SAC cable, 12 and 17-pos., cable type: PVC

Notes:
For information about the cable qualities, see page 320



Free end	Ordering data				
	Order No.				
	1.5 m	1554775	1.5 m	1554814	1.5 m
	3 m	1554788	3 m	1554827	3 m
	5 m	1554791	5 m	1554830	5 m
	10 m	1554801	10 m	1554843	10 m
M12 socket, SPEEDCON, 12-pos., straight 	1.5 m	1554856			
	3 m	1554869			
	5 m	1554872			
	10 m	1554885			
M12 socket, SPEEDCON, 12-pos., angled 	1.5 m	1554898			
	3 m	1554908			
	5 m	1554924			
	10 m	1554937			
M12 socket, SPEEDCON, 17-pos., straight 	1.5 m	1555347			
	3 m	1555350			
	5 m	1555363			
	10 m	1555376			
M12 socket, SPEEDCON, 17-pos., angled 	1.5 m	1555389			
	3 m	1555392			
	5 m	1555402			
	10 m	1555415			

Information for products with fixed cable length:

Products with fixed cable length are produced with the PVC cable type and are available from stock.

Cable description	Cable type	Color coding	Pin assignment, 17-pos.
PVC - black	PVC	BN	1
		BU	2
		WH	3
		GN	4
		PK	5
		YE	6
		BK	7
		GY	8
		RD	9
		VT	10
		GYPK	11
		RDBU	12
		WHGN	13
		BNGN	14
		WHYE	15
		YEBN	16
		WHGY	17

	Technical data	
	M12 12-pos.	M12 17-pos.
Rated voltage [V]	30	30
Rated current [A]	1.5	1.5
Contact material	CuZn	CuZn
Contact surface material	Ni/Au	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data		
Plug/socket [°C]	-25 ... 90	-25 ... 90

Sensor/actuator cabling

Assembled cables

M12-SPEEDCON, SAC cable, 12-pos., shielded

Notes:
For information about the cable qualities, see page 320

Free end



M12 SPEEDCON connector, 360° shielded



Ordering data

Ordering data

Ordering data

Free end	Order No.	Order No.	Order No.
	1.5 m	1430048	1.5 m 1430080
	3 m	1430051	3 m 1430093
	5 m	1430064	5 m 1430103
	10 m	1430077	10 m 1430116

M12 socket, SPEEDCON, straight, 360° shielded



0.5 m	1437083	
1 m	1434730	
1.5 m	1430129	
3 m	1430132	3 m 1402551
5 m	1430145	
10 m	1430158	

M12 socket, SPEEDCON, angled, 360° shielded



1.5 m	1430161
3 m	1430174
5 m	1430187
10 m	1430190

M23 socket, straight, 360° shielded



0.5 m	1437326
1 m	1437339
2 m	1437342
5 m	1437355

Information for products with fixed cable length:

Products with fixed cable length are produced with the 35T cable type and are available from stock.

Cable description	Cable type	Color coding	Pin assignment M12																																				
PUR/PVC - black, twisted pair	35T	<table border="1"> <tbody> <tr><td>BN</td><td></td><td>1</td></tr> <tr><td>BU</td><td></td><td>2</td></tr> <tr><td>WH</td><td></td><td>3</td></tr> <tr><td>GN</td><td></td><td>4</td></tr> <tr><td>PK</td><td></td><td>5</td></tr> <tr><td>YE</td><td></td><td>6</td></tr> <tr><td>BK</td><td></td><td>7</td></tr> <tr><td>GY</td><td></td><td>8</td></tr> <tr><td>RD</td><td></td><td>9</td></tr> <tr><td>VT</td><td></td><td>10</td></tr> <tr><td>GYPK</td><td></td><td>11</td></tr> <tr><td>RDBU</td><td></td><td>12</td></tr> </tbody> </table>	BN		1	BU		2	WH		3	GN		4	PK		5	YE		6	BK		7	GY		8	RD		9	VT		10	GYPK		11	RDBU		12	
BN		1																																					
BU		2																																					
WH		3																																					
GN		4																																					
PK		5																																					
YE		6																																					
BK		7																																					
GY		8																																					
RD		9																																					
VT		10																																					
GYPK		11																																					
RDBU		12																																					

Technical data

		M12 12-pos.
Rated voltage	[V]	30
Rated current	[A]	1.5
Contact material		CuZn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		IEC 61076-2-101
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 85

M12-SPEEDCON, SAC cable, 17-pos., shielded

Notes:
For information about the cable qualities, see page 320



Ordering data

Free end	Order No.	Order No.	Order No.
	1.5 m	1430200	1.5 m 1430242
	3 m	1430213	3 m 1430255
	5 m	1430226	5 m 1430268
	10 m	1430239	10 m 1430271

M12socket, SPEEDCON, straight, 360° shielded

	1.5 m	1430284	
	3 m	1430297	
	5 m	1430307	5 m 1402421
	10 m	1430310	10 m 1402422

M12 socket, SPEEDCON, angled, 360° shielded

	1.5 m	1430323	
	3 m	1430336	
	5 m	1430349	
	10 m	1430352	

M23 socket, straight, 360° shielded

	0.5 m	1437407
	1 m	1437410
	2 m	1437423
	5 m	1437436

Information for products with fixed cable length:

Products with fixed cable length are produced with the **35T** cable type and are available from stock.

Cable description	Cable type	Color coding	Pin assignment M12
PUR/PVC - black, twisted pair	35T	BN	1
		BU	2
		WH	3
		GN	4
		PK	5
		YE	6
		BK	7
		GY	8
		RD	9
		VT	10
		GYPK	11
		RDBU	12
		WHGN	13
		BNGN	14
		WHYE	15
		YEBN	16
		WHGY	17

Technical data

		M12 17-pos.
Rated voltage	[V]	30
Rated current	[A]	1.5
Contact material		CuZn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		IEC 61076-2-101
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90

Sensor/actuator cabling

Assembled cables

Plastic-molded M17 and M23 signal connectors

- Feedback connectors
- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- CuZn or Gd-Zn knurl, nickel-plated
- IP67 degree of protection
- Plug head temperature range -40°C to +105°C
- Standard and counter direction contact numbering
- M17 and M23 standard thread, SPEEDCON fast locking system on request
- Angled versions rotatable

	M17, 17-position, socket, standard, 60 V, 3.6 A	M23, 12-position, socket, counter direction, 150 V, 9 A	M23, 12-position, socket, counter direction, 150 V, 9 A
			
	E01	E00	E00
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
Free end 	2 m 1624780 5 m 1624781 10 m 1624782	2 m 1619247 5 m 1619248 10 m 1619249	2 m 1619280 5 m 1619281 10 m 1619282
M17, 17-pos., pin 	2 m 1624778 5 m 1624783 10 m 1624784		
M23, 12-pos., pin 		2 m 1619289 5 m 1619290 10 m 1619291	
M23, 12-pos., pin 			
M23, 17-pos., pin 			

Cable information:

Type/application	Color	Structure	Sheath/core material	Assignment	Temperature range
E00 Feedback	Orange	Shielded, 4 x 2x 0.25 + 2x 0.5	TPU/PP	1 - Pink 2 - Red 3 - Black 4 - Blue 5 - Brown 6 - Green 7 - Violet 8 - Gray 9 - Outer shield 10 - White 11 - N.c. 12 - Brown	Mobile: -20°C ... 60°C Fixed: -40°C ... 80°C
E01 Feedback	Green	Shielded, 3x 2x 0.14 + 2x 0.5 + 4x 0.14 + 4x 0.22	TPU/TPM	1 - Yellow 2 - Green 3 - Red 4 - n.c. 5 - Blue 6 - N.c. 7 - Brown-blue (encoder) 8 - Green-black (+temp.) 9 - Green-red (-temp.) 10 - Brown-red (P encoder) 11 - Black 12 - Brown 13 - Orange 14 - White-black 15 - Brown-gray (OV sense) 16 - Brown-yellow (sense) 17 - N.c. Inner shield on housing	Mobile: -30°C ... 60°C Fixed: -30°C ... 80°C

M23, 12-position, socket, standard, 150 V, 9 A		M23, 12-position, socket, standard, 150 V, 9 A		M23, 17-position, socket, standard, 100 V, 9 A		M23, 17-position, socket, standard, 100 V, 9 A	
							
E00		E00		E01		E01	
Ordering data		Ordering data		Ordering data		Ordering data	
Order No.		Order No.		Order No.		Order No.	
2 m	1619250	2 m	1619285	2 m	1619277	2 m	1619286
5 m	1619273	5 m	1619283	5 m	1619278	5 m	1619287
10 m	1619274	10 m	1619284	10 m	1619279	10 m	1619288
2 m	1619292						
5 m	1619293						
10 m	1619294						
				2 m	1619295		
				5 m	1619296		
				10 m	1619297		

Sensor/actuator cabling

Assembled cables

Plastic-molded M17 power connectors

- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- CuZn or Gd-Zn knurl, nickel-plated
- IP67 degree of protection
- Plug head temperature range -40°C to +105°C
- Standard contact numbering
- M17 standard thread - SPEEDCON rapid interlock system on request

M17, 3+PE-position,
socket, standard,
630 V, 18 A

M17, 3+PE-position,
socket, standard,
630 V, 26 A

M17, 5+PE-position,
socket, standard,
630 V, 12 A



B00

B01

C00

Ordering data

Ordering data

Ordering data

Order No.

Order No.

Order No.

Free end



Length	Order No.	Order No.	Order No.
2 m	1619298	1619301	1619307
5 m	1619299	1619302	1619308
10 m	1619300	1619303	1619309

M17, 3+PE-pos., pin



Length	Order No.	Order No.
2 m	1619304	1619326
5 m	1619305	1619327
10 m	1619306	1619328

M17, 5+PE-pos., pin



Length	Order No.
2 m	1619316
5 m	1619317
10 m	1619318

M17, 7+PE-pos., pin



Cable information:

Type	Color	Structure	Sheath/core material	Assignment	Temperature range	
B00 Servo	Orange	Shielded, 4 x 1.50	PUR/TPM	1 - Black U 2 - Black V 3 - Black W	Mobile: -20°C ... 60°C Fixed: -40°C ... 80°C	
B01 Servo	Orange	Shielded, 4 x 2.50	TPU/TPM	PE - Green-yellow	Mobile: -20°C ... 70°C Fixed: -50°C ... 80°C	
C00 Servo	Orange	Shielded, 4 x 0.75 + 2 x 0.5	PUR/TPM	1 - Black U 6 - Black V 7 - Black W PE - Green-yellow	3 - Black, 5 (brake) 4 - Black, 6 (brake)	Mobile: -30°C ... 70°C Fixed: -40°C ... 80°C
C01 Servo	Orange	Shielded, 4G1 + 2 x 0.5	PUR/TPE	1 - Black U 6 - Black V 7 - Black W PE - Green-yellow	3 - Black (brake) 4 - White (brake)	Mobile: -5°C ... 70°C Fixed: -30°C ... 70°C
D00 Servo	Orange	Shielded, 4 x 0.75 + 2 x 2 x 0.34	PUR/TPM	1 - Black U 2 - Black V 3 - Black W	4 - Black 5 (brake) 5 - Black 6 (brake) 6 - Black 7 (temp. +)	Mobile: -30°C ... 90°C Fixed: -40°C ... 90°C
D01 Servo	Orange	Shielded, 4 x 1.0 + 2 x 2 x 0.75	PUR/TPM	PE - Green-yellow	7 - Black 8 (temp. -)	Mobile: -40°C ... 60°C Fixed: -40°C ... 80°C

M17, 5+PE-position,
socket, standard,
630 V, 15 A



M17, 7+PE-position,
socket, standard,
630 V, 12 A



M17, 7+PE-position,
socket, standard,
630 V, 15 A



D00

D01

Ordering data		Ordering data		Ordering data	
Order No.		Order No.		Order No.	
2 m	1619310	2 m	1624785	2 m	1619313
5 m	1619311	5 m	1624786	5 m	1619314
10 m	1619312	10 m	1624792	10 m	1619315



2 m [1619319](#)
5 m [1619321](#)
10 m [1619322](#)

	2 m 1624787	2 m 1619323
	5 m 1624788	5 m 1619324
	10 m 1624789	10 m 1619325

Sensor/actuator cabling

Assembled cables

Plastic-molded M23 power connectors

- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- CuZn or Gd-Zn knurl, nickel-plated
- IP67 degree of protection
- Plug head temperature range -40°C to +105°C
- Standard contact numbering
- M23 standard thread, SPEEDCON fast locking system on request
- Angled version rotatable (only with reinforced device connector [1620619](#))

M23, 3+PE-position, socket, standard, 630 V, 34 A

M23, 4+PE-position, socket, standard, 630 V, 34 A

M23, 5+PE-position, socket, standard, 630 V, 18 A



A00

A01

C02

Ordering data

Ordering data

Ordering data

Order No.

Order No.

Order No.

Free end



	A00	A01	C02
2 m	1624771	1625776	1618957
5 m	1619622	1625777	1618958
10 m	1624772	1625775	1618959

M23, 3+PE-pos., pin



2 m	1624773
5 m	1619606
10 m	1624774

M23, 4+PE-pos., pin



2 m	1625779
5 m	1625781
10 m	1625780

M23, 5+PE-pos., pin



2 m	1618964
5 m	1618965
10 m	1618966

Cable information:

Type	Color	Structure	Sheath/core material	Assignment	Temperature range
A00 Energy	Gray	Shielded, 4x 4.0	PVC/PVC	1 - N.c. 2 - Black 3 PE - Green-yellow	4 - Black 1 5 - Black 2 6 - N./c. Fixed: -40°C ... 90°C
A01 Energy	Gray	5x 4.0	PVC/PVC	1 - Black 4 2 - Black 3 PE - Green-yellow	4 - Black 1 5 - Black 2 6 - N.c. Fixed: -40°C ... 90°C
C02 Servo	Orange	Shielded, 4x 1.50 + 2x 1.5	PUR/TPM	1 - Black U 2 - Black V 6 - Black W PE - Green-yellow	4 - Black, (BR1 brake) 5 - White, (BR2 brake) Mobile: -20°C ... 60°C Fixed: -40°C ... 80°C
C03 Servo	Orange	Shielded, 4x 2.50 + 2x 1.5	TPU/TPM		Mobile: -20°C ... 70°C Fixed: -50°C ... 80°C

M23, 5+PE-position,
socket, standard,
630 V, 18 A

M23, 5+PE-position,
socket, standard,
630 V, 26 A

M23, 5+PE-position,
socket, standard,
630 V, 26 A



C02

C03

C03

Ordering data

Ordering data

Ordering data

Order No.

Order No.

Order No.

2 m [1620415](#)
5 m [1620416](#)
10 m [1620417](#)

2 m [1620396](#)
5 m [1620397](#)
10 m [1620398](#)

2 m [1620418](#)
5 m [1620419](#)
10 m [1620420](#)

2 m [1620406](#)
5 m [1620407](#)
10 m [1620408](#)

Sensor/actuator cabling

Assembled cables

Plastic-molded M23 power connectors

- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- CuZn or Gd-Zn knurl, nickel-plated
- IP67 degree of protection
- Plug head temperature range -40°C to +105°C
- Standard contact numbering
- M23 standard thread, SPEEDCON fast locking system on request
- Angled version rotatable (only with reinforced device connector [1620620](#))

M23, 4+3+PE-position,
socket, standard,
250 V/630 V, 18 A

M23, 4+3+PE-position,
socket, standard,
250 V/630 V, 18 A

M23, 4+3+PE-position,
socket, standard,
250 V/630 V, 26 A



D02

D02

D03

Ordering data

Ordering data

Ordering data

Order No.

Order No.

Order No.

Free end



2 m [1620399](#)
5 m [1620400](#)
10 m [1620401](#)

2 m [1620421](#)
5 m [1620422](#)
10 m [1620423](#)

2 m [1620402](#)
5 m [1620404](#)
10 m [1620405](#)

M23, 4+3+PE-pos., pin



2 m [1620409](#)
5 m [1620410](#)
10 m [1620411](#)

2 m [1620412](#)
5 m [1620413](#)
10 m [1620414](#)

Cable information:

Type	Color	Structure	Sheath/core material	Assignment		Temperature range
D02 Servo	Orange	Shielded, 4x 1.5 + 2x 2x 0.75	PUR/TPM	1 - Black U 3 - Black V 4 - Black W	A - Black 5 (brake) B - Black 6 (brake) C - Black 7 (motor temp. +) D - Black 8 (motor temp. -)	Mobile: -20°C ... 60°C Fixed: -40°C ... 80°C
D03 Servo	Orange	Shielded, 4x 2.5 + 2x 2x 0.75	PUR/TPM	PE - Green-yellow		Mobile: -20°C ... 60°C Fixed: -40°C ... 80°C

M23, 4+3+PE-position,
socket, standard,
250 V/630 V, 26 A



D03

Ordering data

Order No.

2 m	1620424
5 m	1620425
10 m	1620426

Sensor/actuator cabling

Assembled cables

Plastic-molded M40 power connectors

- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- CuZn or Gd-Zn knurl, nickel-plated
- IP67 degree of protection
- Plug head temperature range -40°C to +105°C
- Standard contact numbering
- M40 standard thread, SPEEDCON fast locking system on request

M40, 2+3+PE-position,
socket, standard,
250 V/630 V, 26 A

M40, 2+3+PE-position,
socket, standard,
250 V/630 V, 34 A

M40, 2+3+PE-position,
socket, standard,
250 V/630 V, 44 A



C03

C04

C05

Ordering data

Ordering data

Ordering data

Order No.

Order No.

Order No.

Free end



2 m

1619329

2 m

1620311

2 m

1620316

5 m

1620309

5 m

1620313

5 m

1620317

10 m

1620310

10 m

1620314

10 m

1620318

M40, 2+3+PE-pos., pin



2 m

1620345

2 m

1620348

2 m

1620376

5 m

1620346

5 m

1620349

5 m

1620377

10 m

1620347

10 m

1620375

10 m

1620378

M40, 4+3+PE-pos., pin



Cable information:

Type	Color	Structure	Sheath/core material	Assignment	Temperature range	
C03 Servo	Orange	Shielded, 4 x 2.50 + 2 x 1.5	TPU/TPM	U - Black U V - Black V W - Black W PE - Green-yellow	+ - Black, (BR1) -- White, (BR2)	Mobile: -20°C ... 70°C Fixed: -50°C ... 80°C
C04 Servo	Orange	Shielded, 4 x 4.00 + 2 x 1.5	TPU/TPM			Mobile: -20°C ... 70°C Fixed: -50°C ... 80°C
C05 Servo	Orange	Shielded, 4 x 6.00 + 2 x 1.5	PUR/TPE			Mobile: -40°C ... 80°C Fixed: -50°C ... 90°C
C06 Servo	Orange	Shielded, 4 x 10.0 + 2 x 1.5	TPU/TPM			Mobile: -20°C ... 70°C Fixed: -50°C ... 80°C
D03 Servo	Orange	Shielded, 4 x 2.5 + 2 x 2 x 0.75	PUR/TPM	U - Black 1 V - Black 2 W - Black 3 PE - Green-yellow	+ - Black 7 (motor temp. +) -- Black 8 (motor temp. -) 1 - Black 5 (brake) 2 - Black 6 (brake)	Mobile: -20°C ... 60°C Fixed: -40°C ... 80°C
D04 Servo	Orange	Shielded, 4 x 4.0 + 2 x 1.5 + 2 x 1.0	PUR/TPM			Mobile: -30°C ... 80°C Fixed: -45°C ... 80°C
D05 Servo	Orange	Shielded, 4 x 6.0 + 2 x 1.5 + 2 x 1.0	PUR/TPM			Mobile: -30°C ... 60°C Fixed: -30°C ... 80°C
D06 Servo	Orange	Shielded, 4 x 10 + 2 x 1.5 + 2 x 1.0	PUR/TPM			Mobile: -20°C ... 60°C Fixed: -40°C ... 80°C

M40, 2+3+PE-position,
socket, standard,
250 V/630 V, 61 A



C06

Ordering data

Order No.

2 m [1620319](#)
5 m [1620320](#)
10 m [1620321](#)

M40, 4+3+PE-position,
socket, standard,
250 V/630 V, 26 A



D03

Ordering data

Order No.

2 m [1620322](#)
5 m [1620323](#)
10 m [1620324](#)

M40, 4+3+PE-position,
socket, standard,
250 V/630 V, 34 A



D04

Ordering data

Order No.

2 m [1620325](#)
5 m [1620337](#)
10 m [1620338](#)

M40, 4+3+PE-position,
socket, standard,
250 V/630 V, 44 A



D05

Ordering data

Order No.

2 m [1620339](#)
5 m [1620340](#)
10 m [1620341](#)

M40, 4+3+PE-position,
socket, standard,
250 V/630 V, 61 A



D06

Ordering data

Order No.

2 m [1620342](#)
5 m [1620343](#)
10 m [1620344](#)

2 m [1620379](#)
5 m [1620380](#)
10 m [1620381](#)

2 m [1620382](#)
5 m [1620383](#)
10 m [1620384](#)

2 m [1620385](#)
5 m [1620386](#)
10 m [1620387](#)

2 m [1620390](#)
5 m [1620391](#)
10 m [1620392](#)

2 m [1620393](#)
5 m [1620394](#)
10 m [1620395](#)

Sensor/actuator cabling

Assembled cables

Plastic-molded M23 hybrid connectors

- Transmission of signals, data (CAT5, 100 Mbps), and power
- Rated voltage: 630 V AC/850 V DC
- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- CuZn or Gd-Zn knurl, nickel-plated
- IP67 degree of protection
- Plug head temperature range -40°C to +105°C
- SPEEDCON fast locking system, M23 standard thread on request
- Angled version can be rotated

	M23, 4+4+4+PE-position, socket, standard, 50 V/630 V, 26 A	M23, 4+4+4+PE-position, male connector, standard, 50 V/630 V, 26 A	M23, 4+4+4+PE-position, socket, standard, 50 V/630 V, 26 A
			
	H00	H00	H00
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
Free end	2 m 1622224 5 m 1622225 10 m 1622226	2 m 1622227 5 m 1622228 10 m 1622229	2 m 1622230 5 m 1622231 10 m 1622232
			
M23, 4+4+4+PE-pos., pin	2 m 1622244 5 m 1622245 10 m 1622246		
			
M23, 4+4+4+PE-pos., pin	2 m 1622247 5 m 1622248 10 m 1622249		
			
M23, 4+4+4+PE-pos., pin			2 m 1622250 5 m 1622251 10 m 1622252
			

Cable information:

Type	Color	Structure	Sheath/core material	Assignment		Temperature range
H00 Hybrid	Orange	Shielded, (5 x 2.5 + 2 x (2 x 0.5) + (4 x AWG 22) C) C	PUR/TPE, polyolefin	A - Black BK1 (2.5 mm ²) B - Black BK2 (2.5 mm ²) C - Black BK3 (2.5 mm ²) D - Black BK4 (2.5 mm ²) PE - Green-yellow (2.5 mm ²)	1 - Brown BN (0.5 mm ²) 2 - Violet VT (0.5 mm ²) 3 - Black BK (0.5 mm ²) 4 - Green GN (0.5 mm ²) 5 - Blue BU (0.34 mm ²) 6 - Yellow YE (0.34 mm ²) 7 - White WH (0.34 mm ²) 8 - Orange OG (0.34 mm ²)	Mobile: -30°C ... 60°C Fixed: -40°C ... 80°C

M23, 4+4+4+PE-position,
male connector, standard,
50 V/630 V, 26 A



H00

Ordering data

Order No.

2 m	1622233
5 m	1622234
10 m	1622243

Sensor/actuator cabling

Assembled cables

Valve connector with Zener diode, cable type: PUR

Notes:
For information about the cable qualities, see page 320



		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Type	Diagram	Length	Order No.								
Type A		1.5 m	1434989	0.3 m	1434882	0.3 m	1434934	Variable	1405650		
		3 m	1434992	0.6 m	1434895	0.6 m	1434947				
		5 m	1435001	1.5 m	1434905	1.5 m	1434950				
		10 m	1435014	3 m	1434918	3 m	1434963				
		Variable	1435027	Variable	1434921	Variable	1434976				
Type B		1.5 m	1435386	0.3 m	1435289	0.3 m	1435331	Variable	1405651		
		3 m	1435399	0.6 m	1435292	0.6 m	1435344				
		5 m	1435409	1.5 m	1435302	1.5 m	1435357				
		10 m	1435412	3 m	1435315	3 m	1435360				
		Variable	1435425	Variable	1435328	Variable	1435373				
Type BI		1.5 m	1435234	0.3 m	1435137	0.3 m	1435182	Variable	1405652		
		3 m	1435247	0.6 m	1435140	0.6 m	1435195				
		5 m	1435250	1.5 m	1435153	1.5 m	1435205				
		10 m	1435263	3 m	1435166	3 m	1435218				
		Variable	1435276	Variable	1435179	Variable	1435221				
Type C		1.5 m	1435535	0.3 m	1435438	0.3 m	1435483	Variable	1405653		
		3 m	1435548	0.6 m	1435441	0.6 m	1435496				
		5 m	1435551	1.5 m	1435454	1.5 m	1435506				
		10 m	1435564	3 m	1435467	3 m	1435519				
		Variable	1435726	Variable	1435629	Variable	1435674				
Type CI		1.5 m	1435687	0.3 m	1435580	0.3 m	1435632	Variable	1405654		
		3 m	1435690	0.6 m	1435593	0.6 m	1435645				
		5 m	1435700	1.5 m	1435603	1.5 m	1435658				
		10 m	1435713	3 m	1435616	3 m	1435661				
		Variable	1435577	Variable	1435470	Variable	1435522				

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, type A valve connector with Zener diode, and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m]
1434921	PUR	4.5
Minimum order amount:		25 pcs.
Increments:		0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

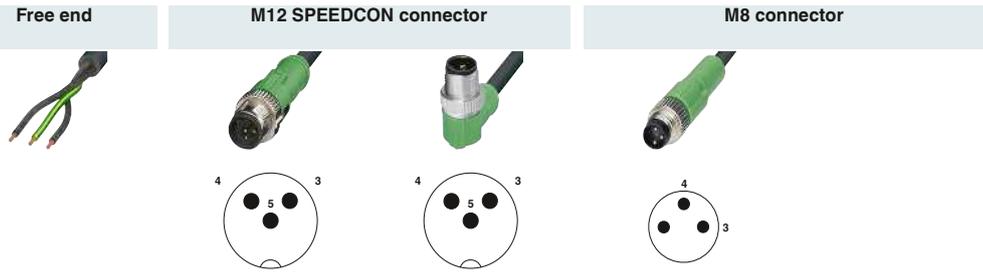
Cable description	Cable type	M12					Color coding	Pin assignment
		M8	M12	A	B(I)	C(I)		
PUR, halogen-free - black, 0.5 mm ²	PUR	x	x	x	x	x	BK1: 1, BK2: 2, GNYE: 3, 4, 5	Pin assignment M12: 3, 4, 5
PUR, halogen-free - black, 1.0 mm ²	121		x	x				
PUR, halogen-free - yellow, 0.5 mm ²	240		x	x	x	x		
PUR, halogen-free - gray, 0.5 mm ²	280		x	x	x	x		
PUR irradiated - orange, 0.5 mm ²	150		x	x	x	x		
PUR highly flexible - gray, 0.5 mm ²	800		x	x	x	x		
PVC - black, 0.5 mm ²	PVC	x	x	x	x	x	Color coding M8: BU, BN	Pin assignment M8: 3, 4
PVC - black, 0.75 mm ²	534		x	x	x	x		
PVC - gray, 0.5 mm ²	500		x	x	x	x		

Technical data

Connector	
Rated voltage	[V] 24
Rated current	[A] 4
Contact material	CuSn
M12 contact surface material	Ni/Au
Valve connector contact surface material	Sn
Grip body material	TPU
Knurl material	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Plug/socket	[°C] -25 ... 90
Valve connectors	[°C] -20 ... 85

Valve connector with Zener diode, cable type: PVC

Notes:
For information about the cable qualities, see page 320



		Ordering data		Ordering data		Ordering data		Ordering data	
Type A		Order No.	Order No.						
		1.5 m	1438684						
		3 m	1415905						
		5 m	1439502						
		10 m	1439492						
		Variable	1435027	Variable	1434921	Variable	1434976	Variable	1405650
		1.5 m	1415922						
		3 m	1415923						
		5 m	1415924						
		10 m	1400610						
		Variable	1435425	Variable	1435328	Variable	1435373	Variable	1405651
		1.5 m	1415929						
		3 m	1400609						
		5 m	1415930						
		10 m	1400607						
		Variable	1435276	Variable	1435179	Variable	1435221	Variable	1405652
		1.5 m	1439162						
		3 m	1439515						
		5 m	1439528						
		10 m	1439531						
		Variable	1435726	Variable	1435629	Variable	1435674	Variable	1405653
		1.5 m	1439175						
		3 m	1415939						
		5 m	1415940						
		10 m	1400605						
		Variable	1435577	Variable	1435470	Variable	1435522	Variable	1405654

Information for products with fixed cable length:

Products with fixed cable length are produced with the PVC cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, type A valve connector with Zener diode, and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m]
1434921	PVC	4.5
Minimum order amount:		Increments:
25 pcs.		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

Cable description	Cable type	M8	M12	A	B(I)	C(I)
PVC - black, 0.5 mm ²	PVC	x	x	x	x	x
PVC - black, 0.75 mm ²	534		x	x	x	x
PVC - gray, 0.5 mm ²	500		x	x	x	x
PUR, halogen-free - black, 0.5 mm ²	PUR	x	x	x	x	x
PUR, halogen-free - black, 1.0 mm ²	121		x	x		
PUR, halogen-free - yellow, 0.5 mm ²	240		x	x	x	x
PUR, halogen-free - gray, 0.5 mm ²	280		x	x	x	x
PUR irradiated - orange, 0.5 mm ²	150		x	x	x	x
PUR highly flexible - gray, 0.5 mm ²	800		x	x	x	x

Color coding		Pin assignment M12
BK1	1	3
BK2	2	4
GNYE		5

Color coding M8		Pin assignment M8
BU		3
BN		4

Technical data	
Connector	
Rated voltage	[V] 24
Rated current	[A] 4
Contact material	CuSn
M12 contact surface material	Ni/Au
Valve connector contact surface material	Sn
Grip body material	TPU
Knurl material	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Plug/socket	[°C] -25 ... 90
Valve connectors	[°C] -20 ... 85

Sensor/actuator cabling

Assembled cables

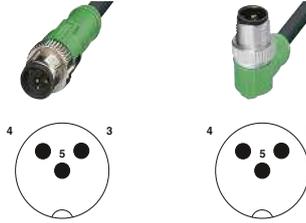
Valve connector with 24 V varistor, cable type: PUR

Notes:
For information about the cable qualities, see page 320

Free end



M12 SPEEDCON connector



		Ordering data		Ordering data		Ordering data	
Type	Diagram	Length	Order No.	Length	Order No.	Length	Order No.
Type A		1.5 m	1443103				
		3 m	1443116				
		5 m	1443129				
		10 m	1443132				
		Variable	1400876	Variable	1400874	Variable	1400875
Type B		1.5 m	1443145				
		3 m	1443158				
		5 m	1443161				
		10 m	1443174				
		Variable	1400882	Variable	1400880	Variable	1400881
Type BI		1.5 m	1443187				
		3 m	1443190				
		5 m	1443200				
		10 m	1443213				
		Variable	1400879	Variable	1400877	Variable	1400878
Type C		1.5 m	1443226				
		3 m	1443239				
		5 m	1443242				
		10 m	1443255				
		Variable	1400894	Variable	1400892	Variable	1400893
Type CI		1.5 m	1443268				
		3 m	1443271				
		5 m	1443284				
		10 m	1443297				
		Variable	1400891	Variable	1400889	Variable	1400890

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, type B valve connector with 24 V varistor, and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m]
1400880	PUR	4.5
Minimum order amount:		Increments:
25 pcs.		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - black, 0.5 mm ²	PUR	BK1 1 BK2 2 GNYE	3 4 5
PUR, halogen-free - black, 1.0 mm ² Type A valve connector only	121		
PUR, halogen-free - yellow, 0.5 mm ²	240		
PUR, halogen-free - gray, 0.5 mm ²	280		
PUR irradiated - orange, 0.5 mm ²	150		
PUR highly flexible - gray, 0.5 mm ²	800		
PVC - black, 0.5 mm ²	PVC		
PVC - black, 0.75 mm ²	534		
PVC - gray, 0.5 mm ²	500		

Technical data

Connector	
Rated voltage	[V] 24
Rated current	[A] 4
Contact material	CuSn
M12 contact surface material	Ni/Au
Valve connector contact surface material	Sn
Grip body material	TPU
Knurl material	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Plug/socket	[°C] -25 ... 90
Valve connectors	[°C] -20 ... 85

Valve connector with 24 V varistor, cable type: PVC

Notes:
For information about the cable qualities, see page 320



		Ordering data		Ordering data		Ordering data	
Type	Diagram	Length	Order No.	Order No.	Order No.	Order No.	Order No.
Type A		1.5 m	1415908				
		3 m	1415909				
		5 m	1415910				
		10 m	1415911				
		Variable	1400876	Variable	1400874	Variable	1400875
Type B		1.5 m	1415925				
		3 m	1415926				
		5 m	1415927				
		10 m	1415928				
		Variable	1400882	Variable	1400880	Variable	1400881
Type BI		1.5 m	1415931				
		3 m	1415932				
		5 m	1415933				
		10 m	1415934				
		Variable	1400879	Variable	1400877	Variable	1400878
Type C		1.5 m	1415935				
		3 m	1415936				
		5 m	1415937				
		10 m	1415938				
		Variable	1400894	Variable	1400892	Variable	1400893
Type CI		1.5 m	1415941				
		3 m	1415942				
		5 m	1415943				
		10 m	1415944				
		Variable	1400891	Variable	1400889	Variable	1400890

Information for products with fixed cable length:

Products with fixed cable length are produced with the PVC cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, type B valve connector with 24 V varistor, and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m]
1400880	PVC	4.5
Minimum order amount:		40 m, maximum
25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type	Color coding	Pin assignment
PVC - black, 0.5 mm ²	PVC	BK1 1, BK2 2	3, 4
PVC - black, 0.75 mm ²	534	GNYE	5
PVC - gray, 0.5 mm ²	500		
PUR, halogen-free - black, 0.5 mm ²	PUR		
PUR, halogen-free - black, 1.0 mm ² Type A valve connector only	121		
PUR, halogen-free - yellow, 0.5 mm ²	240		
PUR, halogen-free - gray, 0.5 mm ²	280		
PUR irradiated - orange, 0.5 mm ²	150		
PUR highly flexible - gray, 0.5 mm ²	800		

Technical data	
Connector	
Rated voltage	[V] 24
Rated current	[A] 4
Contact material	CuSn
M12 contact surface material	Ni/Au
Valve connector contact surface material	Sn
Grip body material	TPU
Knurl material	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Plug/socket	[°C] -25 ... 90
Valve connectors	[°C] -20 ... 85

Assembled cables

Valve connector with 230 V varistor, cable type: PUR

Notes:

For information about the cable qualities, see page 320

Free end



Ordering data

Type A



	Order No.
1.5 m	1402985
3 m	1400694
5 m	1400648
10 m	1402986

Technical data

		Connector
Rated voltage	[V]	230
Rated current	[A]	4
Valve connector contact surface material		Sn
Degree of protection		IP65 / IP67
Temperature data		
Valve connectors	[°C]	-20 ... 85

Valve connector with 230 V varistor, cable type: PVC

Notes:

For information about the cable qualities, see page 320

Free end

Ordering data
Type A


	Order No.
1.5 m	1415912
3 m	1415913
5 m	1415914
10 m	1415915

Technical data
Connector

Rated voltage	[V]	230
Rated current	[A]	4
Valve connector contact surface material		Sn
Degree of protection		IP65 / IP67
Temperature data		
Valve connectors	[°C]	-20 ... 85

Sensor/actuator cabling

Assembled cables

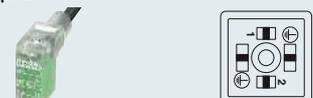
Valve connectors with energy-reducing function, 1 A

Notes:
For information about the cable qualities, see page 320

Free end
1 A



Ordering data

Type	Order No.
Type A 	1.5 m 1413115
	3 m 1413114
	5 m 1413116
	10 m 1413118
Type B 	1.5 m 1401294
	3 m 1401295
	5 m 1401338
	10 m 1401339
Type BI 	1.5 m 1401340
	3 m 1401350
	5 m 1401358
	10 m 1401359
Type C 	1.5 m 1401434
	3 m 1401435
	5 m 1401448
	10 m 1401465
Type CI 	1.5 m 1401466
	3 m 1401542
	5 m 1401544
	10 m 1401617

Technical data

		Connector
Rated voltage	[V]	24
Rated current	[A]	1
Valve connector contact surface material		Ag
Degree of protection		IP67
Temperature data		
Valve connectors	[°C]	-25 ... 80

Valve connectors with energy-reducing function, 4 A



Notes:

For information about the cable qualities, see page 320

Ordering data

Type A	Order No.
	1.5 m 1400827
	3 m 1401131
	5 m 1401136
	10 m 1401168

Technical data

		Connector
Rated voltage	[V]	24
Rated current	[A]	4
Valve connector contact surface material		Ag
Degree of protection		IP67
Temperature data		
Valve connectors	[°C]	-25 ... 80

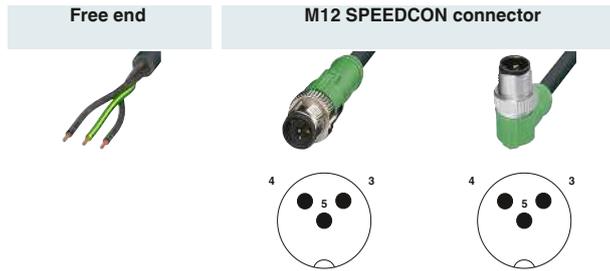
Sensor/actuator cabling

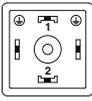
Assembled cables

Valve connector with freewheeling diode, cable type: PUR

Notes:

For information about the cable qualities, see page 320



Type A	Ordering data	Ordering data		Ordering data	
		Order No.	Order No.	Order No.	Order No.
 	1.5 m	1400589			
	3 m	1400588			
	5 m	1400798			
	10 m	1400799			
	Variable	1417832	Variable	1417833	Variable

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Ordering data for type A valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, type A valve connector with freewheeling diode, and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1417833	PUR	4.5
Minimum order amount:		Increments:
25 pcs.		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - black, 0.5 mm ²	PUR	BK1 1	3
PUR, halogen-free - black, 1.0 mm ² Type A valve connector only	121	BK2 2	4
PUR, halogen-free - yellow, 0.5 mm ²	240	GNYE	5
PUR, halogen-free - gray, 0.5 mm ²	280		
PUR irradiated - orange, 0.5 mm ²	150		
PUR highly flexible - gray, 0.5 mm ²	800		
PVC - black, 0.5 mm ²	PVC		
PVC - black, 0.75 mm ²	534		
PVC - gray, 0.5 mm ²	500		

Technical data	
Connector	
Rated voltage	[V] 24
Rated current	[A] 2
Contact material	CuSn
M12 contact surface material	Ni/Au
Valve connector contact surface material	Sn
Grip body material	TPU
Knurl material	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Plug/socket	[°C] -25 ... 90
Valve connectors	[°C] -20 ... 85

Valve connector with freewheeling diode, cable type: PVC

Notes:
For information about the cable qualities, see page 320



		Ordering data		Ordering data		Ordering data	
Type A		Order No.	Order No.	Order No.	Order No.	Order No.	Order No.
	1.5 m	1415916					
	3 m	1415917					
	5 m	1415918					
	10 m	1415919					
	Variable	1417832	Variable	1417833	Variable	1417834	

Information for products with fixed cable length:

Products with fixed cable length are produced with the PVC cable type and are available from stock.

Ordering data for type A valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, type A valve connector with freewheeling diode, and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m]
1417833	PVC	4.5
Minimum order amount:		25 pcs.
Increments:		0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type	Color coding	Pin assignment
PVC - black, 0.5 mm ²	PVC	BK1 1, BK2 2, GNYE	3, 4, 5
PVC - black, 0.75 mm ²	534		
PVC - gray, 0.5 mm ²	500		
PUR, halogen-free - black, 0.5 mm ²	PUR		
PUR, halogen-free - black, 1.0 mm ² Type A valve connector only	121		
PUR, halogen-free - yellow, 0.5 mm ²	240		
PUR, halogen-free - gray, 0.5 mm ²	280		
PUR irradiated - orange, 0.5 mm ²	150		
PUR highly flexible - gray, 0.5 mm ²	800		

Technical data

Connector

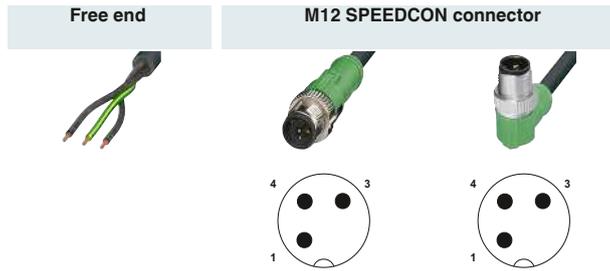
Rated voltage	[V]	24
Rated current	[A]	2
Contact material		CuSn
M12 contact surface material		Ni/Au
Valve connector contact surface material		Sn
Grip body material		TPU
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

Sensor/actuator cabling

Assembled cables

Valve connector without wiring, cable type: PUR

Notes:
For information about the cable qualities, see page 320



		Ordering data		Ordering data		Ordering data	
Type	Diagram	Length	Order No.	Length	Order No.	Length	Order No.
Type A		1.5 m	1402983	Variable	1400895	Variable	1400896
		3 m	1439544				
		5 m	1402984				
		10 m	1400732				
Type B		Variable	1400909	Variable	1400903	Variable	1400905
Type BI		5 m	1439065	Variable	1400900	Variable	1400901
		10 m	1438862				
		Variable	1400902				
Type C		5 m	1400814	Variable	1400919	Variable	1400920
		10 m	1400641				
		Variable	1400921				
Type CI		Variable	1400918	Variable	1400916	Variable	1400917

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, unwired type C valve connector, and a 3-pos. straight M12 connector, the ordering data is as follows:

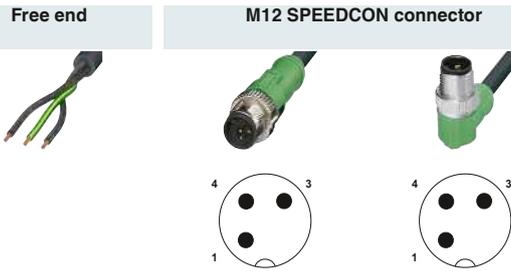
Order No.	Cable type	Length [m]
1400919	PUR	4.5
Minimum order amount:		40 m, maximum
25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - black, 0.5 mm ²	PUR	BK1 1, BK2 2, GNYE	3, 4, 5
PUR, halogen-free - black, 1.0 mm ² Type A valve connector only	121		
PUR, halogen-free - yellow, 0.5 mm ²	240		
PUR, halogen-free - gray, 0.5 mm ²	280		
PUR irradiated - orange, 0.5 mm ²	150		
PUR highly flexible - gray, 0.5 mm ²	800		
PVC - black, 0.5 mm ²	PVC		
PVC - black, 0.75 mm ²	534		
PVC - gray, 0.5 mm ²	500		

Technical data	
Connector	
Rated voltage	[V] 60
Rated current	[A] 4
Contact material	CuSn
M12 contact surface material	Ni/Au
Valve connector contact surface material	Sn
Grip body material	TPU
Knurl material	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Plug/socket	[°C] -25 ... 90
Valve connectors	[°C] -20 ... 85

Valve connector without wiring, cable type: PVC

Notes:
For information about the cable qualities, see page 320



Ordering data

Type	Order No.	Order No.	Order No.
Type A 	1.5 m	1415920	
	3 m	1415921	
	5 m	1402977	
	10 m	1402978	
	Variable	1400897	Variable 1400895
Type B 	Variable	1400909	Variable 1400903
			Variable 1400905
Type BI 	5 m		
	10 m		
	Variable	1400902	Variable 1400900
Type C 	5 m		
	10 m		
Type CI 	Variable	1400921	Variable 1400919
			Variable 1400920
	Variable	1400918	Variable 1400916
			Variable 1400917

Information for products with fixed cable length:

Products with fixed cable length are produced with the PVC cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, unwired type C valve connector, and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m]
1400919	PVC	4.5
Minimum order amount:		Increments:
25 pcs.		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

Cable description	Cable type	Color coding	Pin assignment
PVC - black, 0.5 mm ²	PVC	BK1 1	3
PVC - black, 0.75 mm ²	534	BK2 2	4
PVC - gray, 0.5 mm ²	500	GNYE	5
PUR, halogen-free - black, 0.5 mm ²	PUR		
PUR, halogen-free - black, 1.0 mm ² Type A valve connector only	121		
PUR, halogen-free - yellow, 0.5 mm ²	240		
PUR, halogen-free - gray, 0.5 mm ²	280		
PUR irradiated - orange, 0.5 mm ²	150		
PUR highly flexible - gray, 0.5 mm ²	800		

Technical data	
Connector	
Rated voltage	[V] 60
Rated current	[A] 4
Contact material	CuSn
M12 contact surface material	Ni/Au
Valve connector contact surface material	Sn
Grip body material	TPU
Knurl material	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Plug/socket	[°C] -25 ... 90
Valve connectors	[°C] -20 ... 85

Sensor/actuator cabling

Assembled cables

Valve connector, pressure switch with 2 LEDs, cable type: PUR

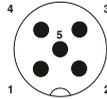
Notes:

For information about the cable qualities, see page 320

Free end



M12 SPEEDCON connector



Type AD	Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.
 	1.5 m	1435085	0.3 m	1435030		
	3 m	1435098	0.6 m	1435043		
	5 m	1435108	1.5 m	1435056		
	10 m	1435111	3 m	1435069		
	Variable	1435124	Variable	1435072		

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Ordering data for type AD valve connector cables with 2 LEDs and variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, type AD valve connector with 2 LEDs, and a 5-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m]
1435072	PUR	4.5
Minimum order amount:		Increments:
25 pcs.		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - black, 0.5 mm ²	PUR	BK1 1	1
PUR, halogen-free - yellow, 0.5 mm ²	240	BK2 2	2
PUR, halogen-free - gray, 0.5 mm ²	280	BK3 3	4
		BK2 4	3
		GNYE	5
PUR irradiated - orange, 0.5 mm ²	150		
PUR highly flexible - gray, 0.5 mm ²	800		
PVC - black, 0.5 mm ²	PVC		
PVC - black, 0.75 mm ²	534		
PVC - gray, 0.5 mm ²	500		

Technical data

Connector	
Rated voltage	[V] 24
Rated current	[A] 4
Contact material	CuSn
M12 contact surface material	Ni/Au
Valve connector contact surface material	Sn
Grip body material	TPU
Knurl material	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Plug/socket	[°C] -25 ... 90
Valve connectors	[°C] -20 ... 85

Valve connector, pressure switch with 2 LEDs, cable type: PVC

Notes:
For information about the cable qualities, see page 320



Type AD	Ordering data		Ordering data	
	Order No.	Order No.	Order No.	Order No.
 	1.5 m	1415945		
	3 m	1415946		
	5 m	1438639		
	10 m	1438671		
	Variable	1435124	Variable	1435072

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PVC** cable type and are available from stock.

Ordering data for type AD valve connector cables with 2 LEDs and variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, type AD valve connector with 2 LEDs, and a 5-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m]
1435072	PVC	4.5
Minimum order amount:		Increments:
25 pcs.		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

Cable description	Cable type	Color coding	Pin assignment
PVC - black, 0.5 mm ²	PVC	BK1 1	1
PVC - black, 0.75 mm ²	534	BK2 2	2
PVC - gray, 0.5 mm ²	500	BK3 3	4
		BK2 4	3
		GNYE 5	5
PUR, halogen-free - black, 0.5 mm ²	PUR		
PUR, halogen-free - yellow, 0.5 mm ²	240		
PUR, halogen-free - gray, 0.5 mm ²	280		
PUR irradiated - orange, 0.5 mm ²	150		
PUR highly flexible - gray, 0.5 mm ²	800		

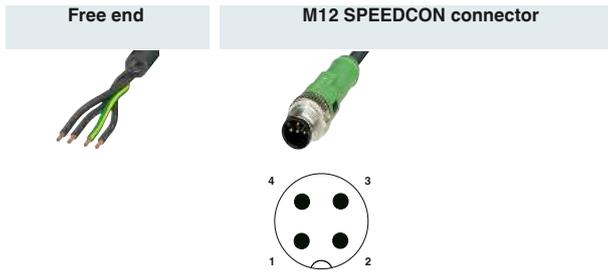
Technical data	
Connector	
Rated voltage	[V] 24
Rated current	[A] 4
Contact material	CuSn
M12 contact surface material	Ni/Au
Valve connector contact surface material	Sn
Grip body material	TPU
Knurl material	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Plug/socket	[°C] -25 ... 90
Valve connectors	[°C] -20 ... 85

Sensor/actuator cabling

Assembled cables

Valve connector, pressure switch without wiring

Notes:
For information about the cable qualities, see page 320



Type AD	Ordering data		Ordering data		Ordering data	
	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.
	3 m	1438956				
	Variable	1400899	Variable	1400898		

Ordering data for unwired type AD valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, unwired type AD valve connector, and a 4-pos. straight M12 connector, the ordering data is as follows:

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - black, 0.5 mm ²	PUR	BK1 1	1
PVC - black, 0.5 mm ²	PVC	BK2 2	2
PVC - black, 0.75 mm ²	534	BK3 3	4
		GNYE	5

Order No.	Cable type	Length [m]
1400898	PUR	4.5
Minimum order amount:		40 m, maximum
25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Technical data

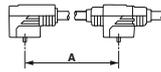
Connector	
Rated voltage	[V] 60
Rated current	[A] 4
Contact material	CuSn
M12 contact surface material	Ni/Au
Valve connector contact surface material	Sn
Grip body material	TPU
Knurl material	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Plug/socket	[°C] -25 ... 90
Valve connectors	[°C] -20 ... 85

Double valve connector with Zener diode

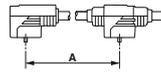
Notes:

For information about the cable qualities, see page 320

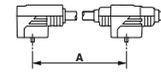
Free end
A = 10 cm



Free end
A = 15 cm



Free end
A = 20 cm



| Ordering data | |
|---------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|
| | Order No. |

Type		1.5 m	3 m	5 m	10 m	1.5 m	3 m	5 m	10 m	1.5 m	3 m	5 m	10 m
Type A		1.5 m	1457982	1.5 m	1458020	1.5 m	1458062	1.5 m	1458075	1.5 m	1458088	1.5 m	1458091
		3 m	1457995	3 m	1458033	3 m	1458075	3 m	1458088	3 m	1458091	3 m	1458091
		5 m	1458004	5 m	1458046	5 m	1458088	5 m	1458091	5 m	1458091	5 m	1458091
		10 m	1458017	10 m	1458059	10 m	1458091						
		10 m	1458017	10 m	1458059	10 m	1458091						
Type B		1.5 m	1458169	1.5 m	1458208	1.5 m	1458240	1.5 m	1458253	1.5 m	1458266	1.5 m	1458279
		3 m	1458172	3 m	1458211	3 m	1458253	3 m	1458266	3 m	1458279	3 m	1458279
		5 m	1458185	5 m	1458224	5 m	1458266	5 m	1458279	5 m	1458279	5 m	1458279
		10 m	1458198	10 m	1458237	10 m	1458279						
		10 m	1458198	10 m	1458237	10 m	1458279						
Type BI		1.5 m	1458347	1.5 m	1458389	1.5 m	1458428	1.5 m	1458431	1.5 m	1458444	1.5 m	1458457
		3 m	1458350	3 m	1458392	3 m	1458431	3 m	1458444	3 m	1458457	3 m	1458457
		5 m	1458363	5 m	1458402	5 m	1458444	5 m	1458457	5 m	1458457	5 m	1458457
		10 m	1458376	10 m	1458415	10 m	1458457						
		10 m	1458376	10 m	1458415	10 m	1458457						

Technical data

Connector

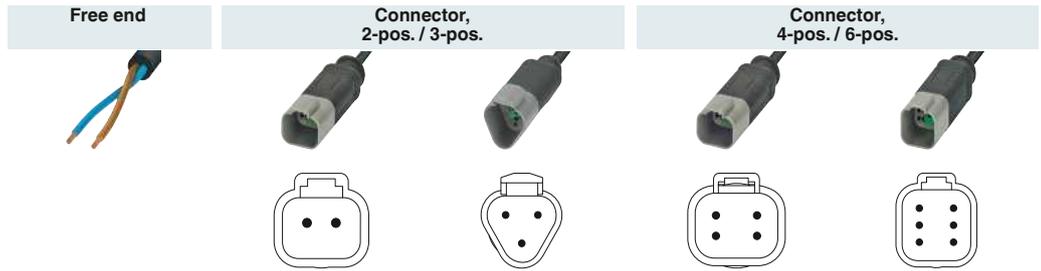
Rated voltage	[V]	24
Rated current	[A]	4
Valve connector contact surface material		Sn
Degree of protection		IP65 / IP67
Temperature data		
Valve connectors	[°C]	-25 ... 85

Sensor/actuator cabling

Assembled cables

Valve connector, Deutsch DT06 and DT04, without wiring

Notes:
For information about the cable qualities, see page 320



		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Free end		Order No.		Order No.		Order No.		Order No.		Order No.	
					1.5 m	1414999		1.5 m	1415012	1.5 m	1415030
					3 m	1415000		3 m	1415013	3 m	1415031
					5 m	1415001		5 m	1415014	5 m	1415032
					10 m	1415002		10 m	1415015	10 m	1415033
Socket, 2-pos.		1.5 m	1410723	0.3 m	1414991						
		3 m	1410724	0.6 m	1414992						
		5 m	1410726	1.5 m	1414993						
		10 m	1410727	3 m	1414994						
Socket, 3-pos.		1.5 m	1414995			0.3 m	1415003				
		3 m	1414996			0.6 m	1415004				
		5 m	1414997			1.5 m	1415005				
		10 m	1414998			3 m	1415006				
Socket, 4-pos.		1.5 m	1415007					0.3 m	1415016		
		3 m	1415008					0.6 m	1415017		
		5 m	1415010					1.5 m	1415019		
		10 m	1415011					3 m	1415025		
Socket, 6-pos.		1.5 m	1415026							0.3 m	1415035
		3 m	1415027							0.6 m	1415036
		5 m	1415028							1.5 m	1415037
		10 m	1415029							3 m	1415038

Technical data

		Connector
Rated voltage	[V]	48
Rated current	[A]	8
Contact material		Cu alloy
M12 contact surface material		Nickel-plated
Grip body material		PA
Knurl material		not available
Degree of protection		IP67
Temperature data		
Plug/socket	[°C]	-20 ... 85

**Valve connector,
Deutsch DT06-2S with LED**

Free end

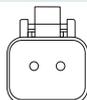


Notes:

For information about the cable qualities, see page 320

Ordering data

Socket, 2-pos.



	Order No.
1.5 m	1410728
3 m	1410729
5 m	1410730
10 m	1410731

Technical data

Connector

Rated voltage	[V]	24
Rated current	[A]	8
Contact material		Cu alloy
M12 contact surface material		Nickel-plated
Grip body material		PA
Knurl material		not available
Degree of protection		IP67
Temperature data		
Plug/socket	[°C]	-20 ... 85

Assembled cables

Valve connector, Deutsch DT06-2S with freewheeling diode

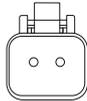
Notes:

For information about the cable qualities, see page 320

Free end



Socket, 2-pos.



Ordering data

	Order No.
1.5 m	1410732
3 m	1410733
5 m	1410734
10 m	1410735

Technical data

		Connector
Rated voltage	[V]	24
Rated current	[A]	3
Contact material		Cu alloy
M12 contact surface material		Nickel-plated
Grip body material		PA
Knurl material		not available
Degree of protection		IP67
Temperature data		
Plug/socket	[°C]	-20 ... 85

Valve connector, Superseal

Free end Connector



Notes:

For information about the cable qualities, see page 320

Ordering data Ordering data Ordering data

Free end	Order No.	Order No.	Order No.
		1.5 m	1410752
		3 m	1410753
		5 m	1410755
		10 m	1410756
Socket, straight 		0.3 m	1410757
		0.6 m	1410759
		1.5 m	1410760
		3 m	1410761
		1.5 m	1410748
	3 m	1410749	
	5 m	1410750	
	10 m	1410751	

Technical data

		Connector
Rated voltage	[V]	24
Rated current	[A]	8
Contact material		CuZn
Grip body material		PA
Knurl material		not available
Degree of protection		IP67
Temperature data		
Plug/socket	[°C]	-20 ... 85

Sensor/actuator cabling

Distributors and adapters

M8 Y-cable, 3-pos., two cable outlets

Notes:
For information about the cable qualities, see page 320

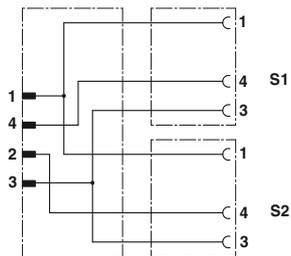
M8 Y-connector



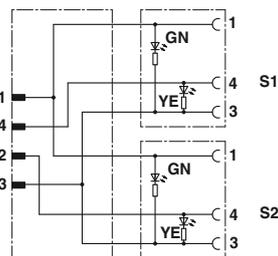
Ordering data

Free end	Order No.
	1.5 m 1458622
	3 m 1458635
	5 m 1458648
	10 m 1458651
M8 socket, straight 	0.3 m 1458664
	0.6 m 1458677
	1.5 m 1458680
	3 m 1458693
M8 socket, angled 	0.3 m 1458703
	0.6 m 1458716
	1.5 m 1458729
	3 m 1458732
M8 socket, angled, with 2 LEDs 	0.3 m 1458745
	0.6 m 1458758
	1.5 m 1458761
	3 m 1458774

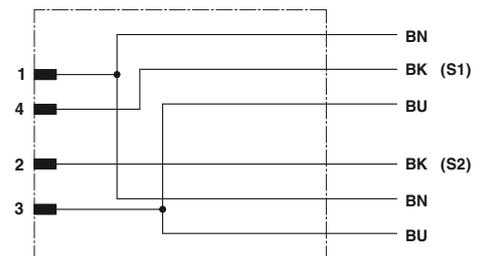
Cable description	Cable type	Color coding	Pin assignment, 3-pos.	
			Connector	Socket
PUR, halogen-free - black	PUR	BN	1	1
		BK	2 + 4	4
		BU	3	3



Contact assignment of the M8 connector and the M8 sockets



Contact assignment of the M8 connector and the M8 sockets, with LEDs

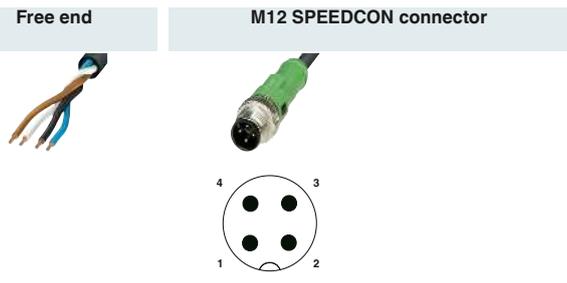


Contact assignment of the M8 Y-connector

		Technical data	
		Y-M8	Y-M8 with LEDs
Rated voltage	[V]	30	24
Rated current	[A]	4	4
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
Knurl material		Zinc die-cast, nickel-plated	Zinc die-cast, nickel-plated
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Plug/socket	[°C]	-25 ... 90	-25 ... 90

**M12 Y-cable,
4-pos.,
one cable outlet**

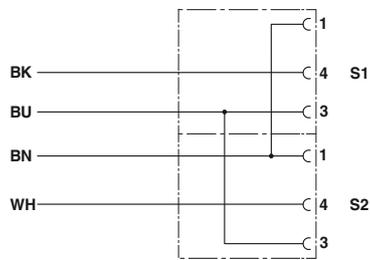
Notes:
For information about the cable qualities, see page 320
Further combinations on request.



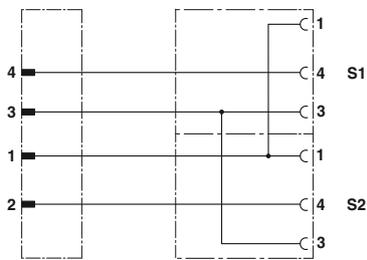
Y-connector with 2 x M12 SPEEDCON socket	Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.
	1.5 m	1436165	0.3 m	1436204		
	3 m	1436178	0.6 m	1436217		
	5 m	1436181	1.5 m	1436220		
	10 m	1436194	3 m	1436233		

Cable description	Cable type	Suitable for:
PUR, halogen-free - black	PUR	M12 4-pos.

Color coding	Pin assignment		
	M12 4-pos.	S1	M12-Y S2
BN	1	1	1
BK	4	4	-
WH	2	-	4
BU	3	3	3



Contact assignment: Y-distributor to free end



Contact assignment: Y-distributor to M12 SPEEDCON

Technical data	
Y-M12	
Rated voltage	[V] 60
Rated current	[A] 4
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	TPU GF
M12 circular connector according to:	IEC 61076-2-101
Degree of protection	IP65 / IP67
Temperature data	
Plug/socket	[°C] -25 ... 90

Sensor/actuator cabling

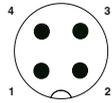
Distributors and adapters

M12 Y-cable, 4-pos., two cable outlets

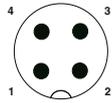
Notes:
For information about the cable qualities, see page 320



M12 Y-connector



M12 Y-connector, SPEEDCON



		Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.	
Free end		1.5 m	1669686	1.5 m	1524200		
		3 m	1669699	3 m	1524213		
		5 m	1669754	5 m	1524226		
		10 m	1694473	10 m	1524239		
		Variable	1697357	Variable	1524242		
M8 socket, straight		0.3 m	1671331				
		0.6 m	1671344				
		1.5 m	1671357				
		3 m	1671360				
		Variable	1697399	Variable	1541885		
M8 socket, angled		0.3 m	1671373				
		0.6 m	1671386				
		1.5 m	1671399				
		3 m	1671409				
		Variable	1697409	Variable	1541898		
M8 socket, angled, with 2 LEDs		0.3 m	1671412				
		0.6 m	1671425				
		1.5 m	1671438				
		3 m	1671441				
		Variable	1697412	Variable	1541908		
M12 socket, straight (2nd column M12 socket, SPEEDCON)							
		Variable	1699766	Variable	1542198		
M12 socket, angled (2nd column M12 SPEEDCON socket)							
		Variable	1506419	Variable	1542004		
M12 socket, straight, pin 2 - 4 bridged (2nd column M12 socket, SPEEDCON)		0.3 m	1668959				
		0.6 m	1668962				
		1.5 m	1668975				
		3 m	1668988				
		Variable	1697360	Variable	1542169		
M12 socket, angled, pin 2 - 4 bridged (2nd column M12 SPEEDCON socket)		0.3 m	1668991				
		0.6 m	1669000				
		1.5 m	1669013				
		3 m	1669026				
		Variable	1697373	Variable	1542172		
M12 socket, angled, with LED, pins 2 - 4 bridged (2nd column socket M12 SPEEDCON)		0.3 m	1669039				
		0.6 m	1669042				
		1.5 m	1669055				
		3 m	1669068				
		Variable	1697386	Variable	1542185		

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, with a straight 4-pos. M12 Y-connector and two straight M12 sockets, the ordering data is as follows:

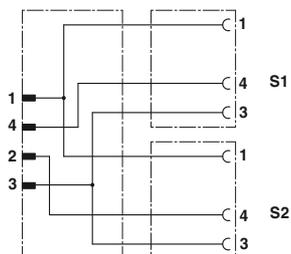
Order No.	Cable type	Length [m] 40 m, maximum
1699766	PUR	4.5
Minimum order amount:		Increments:
25 pcs.		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

Cable description	Cable type	Suitable for:
PUR, halogen-free - black E221474	PUR	M8/M12
PUR, halogen-free - gray E221474	280	M12
TPE-U highly flexible - gray E221474	800	M8/M12
PUR irradiated - orange E221474	150	M12
PVC - black E221474	PVC	M8/M12
PVC - gray E221474	500	M8/M12
PVC - yellow E221474	540	M12
PVC 105° - yellow E221474	542	M12

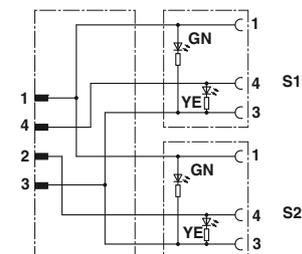
Color coding	Pin assignment, 3-pos.	
	Connector	Socket
BN	1	1
BK	2 + 4	4
BU	3	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

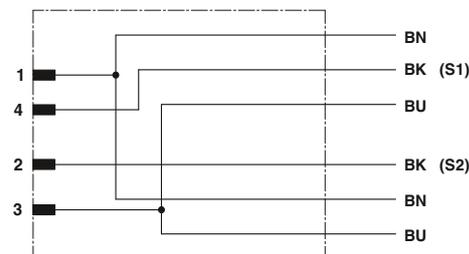
Technical data	Technical data	Technical data	Technical data
Y-M8	Y-M8 with LEDs	Y-M12	Y-M12 with LEDs
Rated voltage [V]	60	250	24
Rated current [A]	4	4	4
Contact material	CuSn	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:	IEC 61076-2-104	-	-
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Plug/socket [°C]	-25 ... 90	-25 ... 90	-25 ... 90



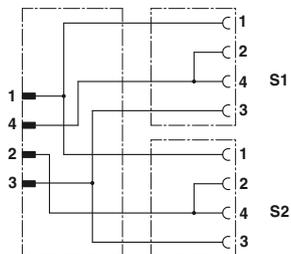
Contact assignment of the M12 connector and the M8/M12 sockets



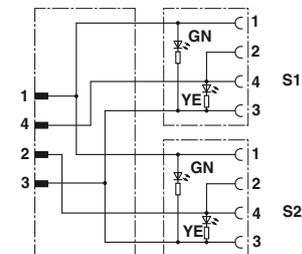
Contact assignment of the M12 connector and the M8 sockets, with LEDs



Contact assignment of the M12 Y-connector



Contact assignment of the M12 connector and the M12 socket, bridged



Contact assignment of the M12 connector and the M12 socket, with LEDs, bridged

Sensor/actuator cabling

Distributors and adapters

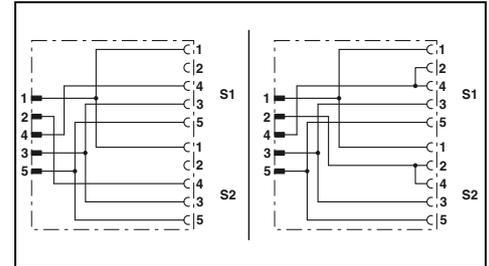
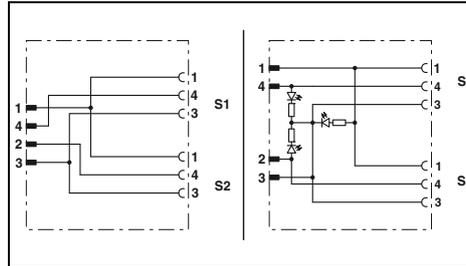
M8 and M12 Y-distributors, M12 T-distributor



3-pos.



3+PE-pos.



Technical data

	Without LED	With 3 LEDs
General data		
M8 circular connector according to:	IEC 61076-2-104	-
M12 circular connector according to:	IEC 61076-2-101	-
Degree of pollution	3	-
Degree of protection	IP65/IP67	-
Electrical data		
Rated voltage	60 V	24 V
Rated current		4 A
Material data		
Contact material		CuZn
Contact surface material		Ni/Au
Flammability rating according to UL 94		HB
Temperature data		
Plug/socket		-25 ... 90

Technical data

	Not bridged	Pins 2 and 4 bridged
General data		
M8 circular connector according to:	-	-
M12 circular connector according to:	IEC 61076-2-101	-
Degree of pollution	3	-
Degree of protection	IP65/IP67	-
Electrical data		
Rated voltage	60 V	-
Rated current	4 A	-
Material data		
Contact material		CuZn
Contact surface material		Ni/Au
Flammability rating according to UL 94		HB
Temperature data		
Plug/socket		-25 ... 90

Ordering data

Description	Center distance	Without LED		With 3 LEDs	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
M8/M12 Y-distributor					
M8 connector to 2x M8 sockets	12 mm	1696183	5		
M12 connector to 2x M8 sockets	12 mm	1683471	5		
M8/M12 SPEEDCON Y-distributor					
M12 connector to 2x M8 sockets	12 mm	1523984	5		
M12 Y-distributor					
M12 connector to 2x M12 sockets	18 mm				
M12 connector to 2x M12 sockets	21 mm				
M12 SPEEDCON Y-distributor					
M12 connector to 2x M12 sockets	18 mm				
M12 connector to 2x M12 sockets	21 mm			1403627	5
T-distributor					
M12 connector to 2x M12 sockets					

Ordering data

Description	Center distance	Not bridged		Pins 2 and 4 bridged	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
M8/M12 Y-distributor					
M8 connector to 2x M8 sockets	12 mm				
M12 connector to 2x M8 sockets	12 mm				
M8/M12 SPEEDCON Y-distributor					
M12 connector to 2x M8 sockets	12 mm				
M12 Y-distributor					
M12 connector to 2x M12 sockets	18 mm	1683455	5	1683413	5
M12 connector to 2x M12 sockets	21 mm	1511789	5	1514016	5
M12 SPEEDCON Y-distributor					
M12 connector to 2x M12 sockets	18 mm	1523971	5	1523968	5
M12 connector to 2x M12 sockets	21 mm				
T-distributor					
M12 connector to 2x M12 sockets				1519723	1

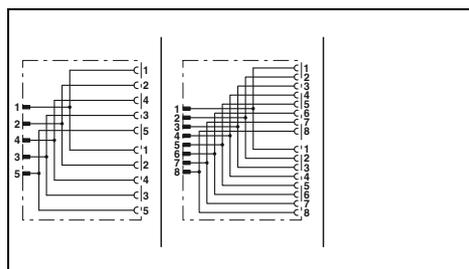
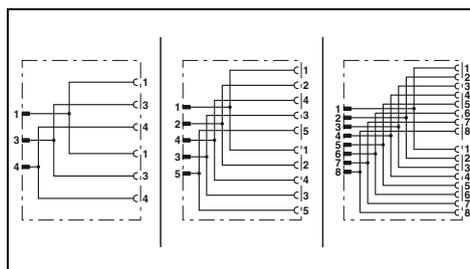
**M8 and M12 Y-distributors, parallel,
M12 T-distributor, parallel**



3-, 5-, 8-pos.



5-, 8-pos.,
shielded



Technical data

3-pos.	5-pos.	8-pos.
IEC 61076-2-104		
IEC 61076-2-101		
3		
IP65/IP67		
60 V		30 V
4 A		2 A
CuZn		
Ni/Au		
-25 ... 90		

Technical data

5-pos.	8-pos.
IEC 61076-2-101	
3	
IP65/IP67	
60 V	30 V
4 A	2 A
CuZn	
Ni/Au	
-25 ... 90	

Ordering data

Description	Center distance	3-pos.		5-pos.		8-pos.	
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
M8/M12 Y-distributor							
M8 connector to 2x M8 sockets	12 mm	1696222	5				
M12 connector to 2x M8 sockets	12 mm	1683549	5				
M12 Y-distributor							
M12 connector to 2x M12 sockets	18 mm			1683468	5		
M12 connector to 2x M12 sockets	21 mm			1514029	5		
M12 SPEEDCON Y-distributor							
M12 connector to 2x M12 sockets	18 mm			1546068	5		
M12 connector to 2x M12 sockets	21 mm					1454972	5
M12 connector to M12 connector/M12 socket	21 mm						
M12 socket to 2x M12 connectors	21 mm						
M12 socket to M12 connector/M12 socket	21 mm						
M12 T-distributor							
M12 pin to 2x M12 socket				1541186	1		
M12-SPEEDCON T-distributor, with two mounting holes							
M12 socket to M12 connector/M12 socket				1424712	1		

Ordering data

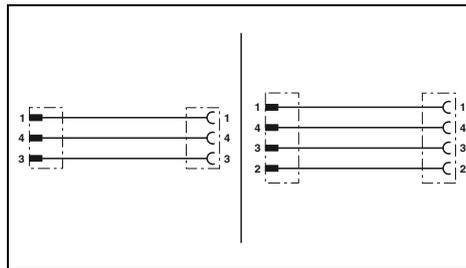
Description	Center distance	5-pos.		8-pos.	
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
M12 connector to 2x M12 sockets	18 mm	1419920	5	1454969	5
M12 connector to 2x M12 sockets	21 mm	1438079	5		
M12 socket to 2x M12 connectors	21 mm	1419946	5		
M12 socket to M12 connector/M12 socket	21 mm	1419933	5		

M8/M12 adapters



3-, 4-pos.

ERC



Technical data

	3-pos.	4-pos.
General data		
M8 circular connector according to:		IEC 61076-2-104
M12 circular connector according to:		IEC 61076-2-101
Degree of pollution		3
Degree of protection		IP65/IP67
Electrical data		
Rated voltage	60 V	30 V
Rated current		4 A
Material data		
Contact material		CuSn
Contact surface material		Ni/Au
Flammability rating according to UL 94		HB
Temperature data		
Plug/socket	[°C]	-25 ... 90

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3-pos.		4-pos.	
Adapter				
M8 connector to M12 socket	1519749	5	1519736	5
M12 connector to M8 socket	1519752	5	1519765	5
M12 connector to M8 snap-in socket	1519781	5	1519778	5

Sensor/actuator cabling

Distributors and adapters

Valve connector adapters with M12 SPEEDCON connector

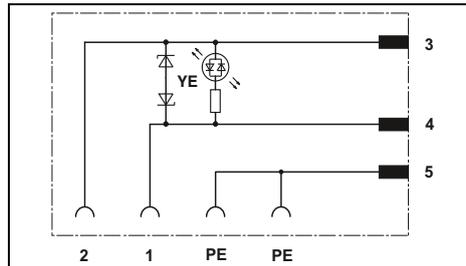


Valve connector type A



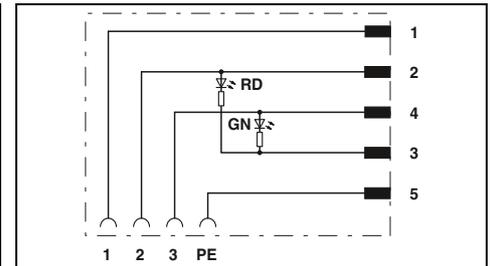
Valve connector, AD design, Pressure switch

ERE (R)



Technical data

ERE (R)



Technical data

General data

M12 circular connector according to:
Valve connector according to:

Electrical data in acc. with IEC 61076-2-101
Rated voltage
Rated current
Cut-off peak
Status display

Material data

Valve connector contact material
Valve connector contact surface material
Contact material M12 connector
M12 connector contact surface material
Valve connector material housing
Flammability rating according to UL 94
Temperature data

Ambient temperature (operation)

IEC 61076-2-101
EN 175301-803

24 V AC/DC
4 A
≤ 55 V
Yellow LED

CuSn
Sn
CuSn
Ni/Au
TPU
HB

-25°C ... 85°C (valve connector)

Ordering data

Description

Valve connector type A, PE bridged, 18 mm contact spacing

- Vertical M12 SPEEDCON connector
- Horizontal M12 SPEEDCON connector

Valve connector type AD, 18 mm contact spacing

- Vertical M12 SPEEDCON connector
- Horizontal M12 SPEEDCON connector

Valve connector type B, 10 mm contact spacing

- Vertical M12 SPEEDCON connector
- Horizontal M12 SPEEDCON connector

Valve connector type BI, 11 mm contact spacing

- Vertical M12 SPEEDCON connector
- Horizontal M12 SPEEDCON connector

DESINA valve connector type A, 18 mm contact spacing

- Vertical M12 SPEEDCON connector

Type	Order No.	Pcs. / Pkt.
SAC-3P-MS/A-1L-Z SCO	1458525	1
SAC-3P-MR/A-1L-Z SCO	1458538	1

IEC 61076-2-101
EN 175301-803

24 V AC/DC
4 A
-
2 LEDs

CuSn
Sn
CuSn
Ni/Au
TPU
HB

-25°C ... 85°C (valve connector)

Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-5P-MS/AD-2L SCO	1458596	1
SAC-5P-MR/AD-2L SCO	1458606	1



Valve connector type B

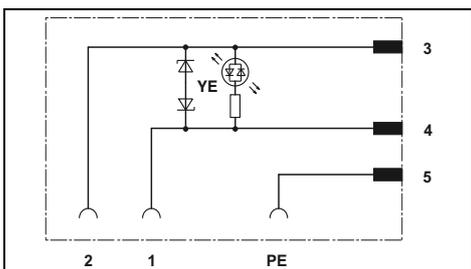


Valve connector type BI



DESINA valve connector type A

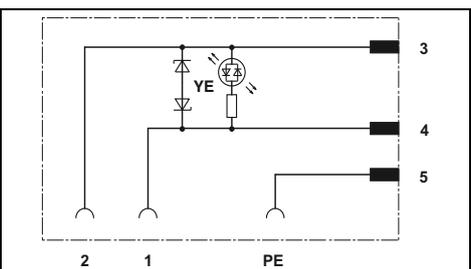
ERC



Technical data

IEC 61076-2-101 EN 175301-803
24 V AC/DC 4 A ≤ 55 V Yellow LED
CuSn Sn CuSn Ni/Au TPU HB
-25°C ... 85°C (valve connector)

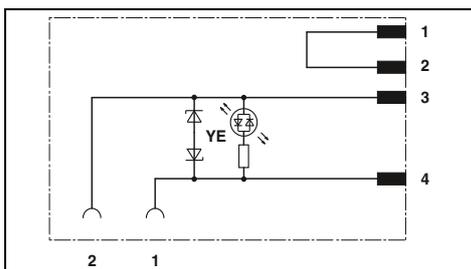
ERC



Technical data

IEC 61076-2-101 -
24 V AC/DC 4 A ≤ 55 V Yellow LED
CuSn Sn CuSn Ni/Au TPU HB
-25°C ... 85°C (valve connector)

ERC



Technical data

IEC 61076-2-101 EN 175301-803
24 V AC/DC 4 A ≤ 55 V Yellow LED
CuSn Sn CuSn Ni/Au TPU HB
-25°C ... 85°C (valve connector)

Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-3P-MS/B-1L-Z SCO	1458541	1
SAC-3P-MR/B-1L-Z SCO	1458554	1

Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-3P-MS/BI-1L-Z SCO	1458567	1
SAC-3P-MR/BI-1L-Z SCO	1458570	1

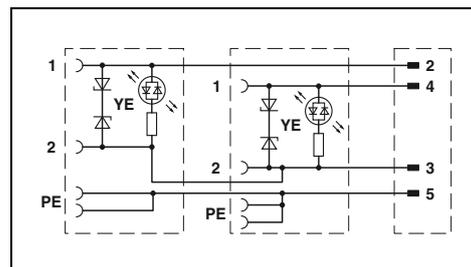
Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-4P-MS/A-1L-Z D SCO	1458583	1

Double valve connector adapter with M12 SPEEDCON connector, type A



Type A



Technical data

General data	
M12 circular connector according to:	IEC 61076-2-101
Valve connector according to:	EN 175301-803
Degree of protection	IP65/IP67
Electrical data	
Rated voltage	24 V AC/DC
Rated current	4 A
Material data	
M12 material contact	CuSn
Material contact valve connector	CuSn
M12 contact surface material	Ni/Au
Valve connector contact surface material	Sn
Valve connector material housing	TPU
Temperature data	
Valve connectors	-25 ... 85 [°C]

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Double valve connector , plug distance: 10 cm, valve connector leading to valve connector adapter with: - Vertical M12 SPEEDCON connector - Horizontal M12 SPEEDCON connector	SAC-MS/0,1-116/2XA-1L-Z SCO	1458101	1
	SAC-MR/0,1-116/2XA-1L-Z SCO	1458130	1
Double valve connector , plug distance: 15 cm, valve connector leading to valve connector adapter with: - Vertical M12 SPEEDCON connector - Horizontal M12 SPEEDCON connector	SAC-MS/0,15-116/2XA-1L-Z SCO	1458114	1
	SAC-MR/0,15-116/2XA-1L-Z SCO	1458143	1
Double valve connector , plug distance: 20 cm, valve connector leading to valve connector adapter with: - Vertical M12 SPEEDCON connector - Horizontal M12 SPEEDCON connector	SAC-MS/0,2-116/2XA-1L-Z SCO	1458127	1
	SAC-MR/0,2-116/2XA-1L-Z SCO	1458156	1

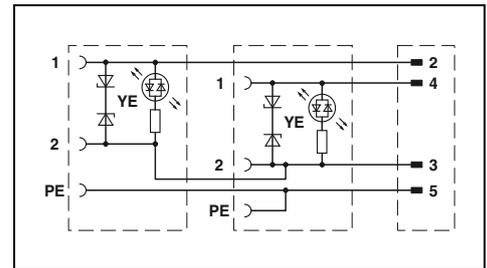
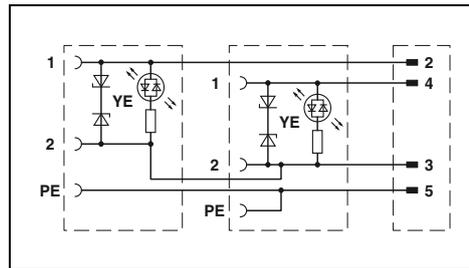
Double valve connector adapter with M12 SPEEDCON connector, type B and BI



Type B



Type BI



Technical data

Technical data

General data	
M12 circular connector according to:	IEC 61076-2-101
Valve connector according to:	EN 175301-803
Degree of protection	IP65/IP67
Electrical data	
Rated voltage	24 V AC/DC
Rated current	4 A
Material data	
M12 material contact	CuSn
Material contact valve connector	CuSn
M12 contact surface material	Ni/Au
Valve connector contact surface material	Sn
Valve connector material housing	TPU
Temperature data	
Valve connectors	-25 ... 85 [°C]

General data	
M12 circular connector according to:	IEC 61076-2-101
Valve connector according to:	EN 175301-803
Degree of protection	IP65/IP67
Electrical data	
Rated voltage	24 V AC/DC
Rated current	4 A
Material data	
M12 material contact	CuSn
Material contact valve connector	CuSn
M12 contact surface material	Ni/Au
Valve connector contact surface material	Sn
Valve connector material housing	TPU
Temperature data	
Valve connectors	-25 ... 85 [°C]

Ordering data

Ordering data

Description
Double valve connector , plug distance: 10 cm, valve connector leading to valve connector adapter with: - Vertical M12 SPEEDCON connector - Horizontal M12 SPEEDCON connector
Double valve connector , plug distance: 15 cm, valve connector leading to valve connector adapter with: - Vertical M12 SPEEDCON connector - Horizontal M12 SPEEDCON connector
Double valve connector , plug distance: 20 cm, valve connector leading to valve connector adapter with: - Vertical M12 SPEEDCON connector - Horizontal M12 SPEEDCON connector

Type	Order No.	Pcs. / Pkt.
SAC-MS/0,1-116/2XB-1L-Z SCO	1458282	1
SAC-MR/0,1-116/2XB-1L-Z SCO	1458318	1
SAC-MS/0,15-116/2XB-1L-Z SCO	1458295	1
SAC-MR/0,15-116/2XB-1L-Z SCO	1458321	1
SAC-MS/0,2-116/2XB-1L-Z SCO	1458305	1
SAC-MR/0,2-116/2XB-1L-Z SCO	1458334	1

Type	Order No.	Pcs. / Pkt.
SAC-MS/0,1-116/2XBI-1L-Z SCO	1458460	1
SAC-MR/0,1-116/2XBI-1L-Z SCO	1458499	1
SAC-MS/0,15-116/2XBI-1L-Z SCO	1458473	1
SAC-MR/0,15-116/2XBI-1L-Z SCO	1458509	1
SAC-MS/0,2-116/2XBI-1L-Z SCO	1458486	1
SAC-MR/0,2-116/2XBI-1L-Z SCO	1458512	1

Distributor boxes

M8 distributor with metal thread



With a master cable



M12 connector-in connection, vertical



M12 connector-in connection, vertical

General data

Degree of protection in acc. with IEC 60529/EN 60529
M8 circular connector according to:
M12 circular connector according to:

Electrical data

Rated current for each I/O signal [A]
Rated current per slot [A]
Rated current, total [A]

Dimensions

Width x height [mm]
(Length (4 / 6 / 8 / 10 slots) [mm]

Temperature data

Distributor box [°C]
Master cable, fixed installation [°C]
Master cable, flexible installation [°C]

Status indication	Signal type	Rated voltage	Slots	Cable length
With LED	PNP	24 V DC	4	-
With LED	PNP	24 V DC	4	5 m
With LED	PNP	24 V DC	4	10 m
With LED	PNP	24 V DC	4	Variable
With LED	PNP	24 V DC	6	-
With LED	PNP	24 V DC	6	5 m
With LED	PNP	24 V DC	6	10 m
With LED	PNP	24 V DC	6	Variable
With LED	PNP	24 V DC	8	-
With LED	PNP	24 V DC	8	5 m
With LED	PNP	24 V DC	8	10 m
With LED	PNP	24 V DC	8	Variable
With LED	PNP	24 V DC	10	-
With LED	PNP	24 V DC	10	5 m
With LED	PNP	24 V DC	10	10 m
With LED	PNP	24 V DC	10	Variable

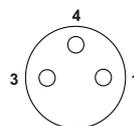
For accessories, see page
Master cable rings see page
For master cable data, see page

Technical data		Technical data		Technical data	
IP65 / IP67 IEC 61076-2-104 -		IP65 / IP67 IEC 61076-2-104 IEC 61076-2-101		IP65 / IP67 IEC 61076-2-104 IEC 61076-2-101	
2 2 6		2 2 4		1.5 1.5 1.5	
30 x 22 102 / 122 / 141 / 161		30 x 27 93 / 113 / - / -		30 x 27 - / - / 133 / 152	
-30 ... 80 - -		-30 ... 80 - -		-30 ... 80 - -	
Ordering data		Ordering data		Ordering data	
Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy
-	-	1516234	-	-	-
1516014	-	-	-	-	-
1516027	-	-	-	-	-
1516137	-	-	-	-	-
-	-	1516247	-	-	-
1516030	-	-	-	-	-
1516043	-	-	-	-	-
1516140	-	-	-	-	-
-	-	-	-	1434840	-
1516056	1516111	-	-	-	-
1516069	1516124	-	-	-	-
1516153	1516179	-	-	-	-
-	-	-	-	1434853	-
1516072	-	-	-	-	-
1516085	-	-	-	-	-
1516166	-	-	-	-	-
Notes:		Notes:		Notes:	
313		313		313	
332		307		307	

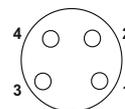
Ordering example for products with variable master cable:

For a distributor with 4 single-occupancy slots and a master cable length of 34.5 m, the ordering data is as follows:

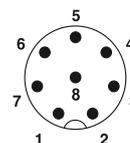
Order No.	Length [m]
1516137	34.5
Increment: 0.5 m	
Minimum length: 0.5 m	
Maximum length: 50 m	



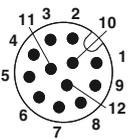
Pin assignment of M8 socket, 3-pos.



Pin assignment of M8 socket, 4-pos.



Connector pin assignment for M12 connector-in connection, 8-pos.



Pin assignment for M12 connector-in connection, 12-pos.



M16 plug-in connection, vertical



Spring connection, horizontal



Plug-in screw connection, horizontal



Header for plug-in screw connection

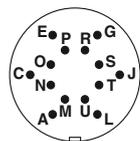


Connector hood, with a master cable



Connector hood, without master cable

Technical data		Technical data		Technical data		Technical data		Technical data		Technical data	
IP65 / IP67 IEC 61076-2-104		IP65 / IP67 IEC 61076-2-104		IP65 / IP67 IEC 61076-2-104		IP65 / IP67 IEC 61076-2-104		IP65 / IP67		IP65 / IP67	
-		-		-		-		-		-	
2		2		2		2		2		2	
2		2		2		2		-		-	
6		6		8		8		8		-	
30 x 26 93 / 113 / 132 / 152		30 x 44 122 / 142 / 176 / 196		30 x 44 122 / 142 / 176 / 196		30 x 20 122 / 142 / 176 / 196		30 x 24 - / - / - / -		30 x 24 - / - / - / -	
-30 ... 80		-30 ... 80		-30 ... 80		-30 ... 80		-30 ... 80 -40 ... 90 -5 ... 80		-30 ... 80	
-		-		-		-		-		-	
Ordering data		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy
1516182	-	1503386	-	1503412	-	1516250	-	-	-	1521229	-
-	-	-	-	-	-	-	-	1516292	-	-	-
-	-	-	-	-	-	-	-	1516302	-	-	-
-	-	-	-	-	-	-	-	1516373	-	-	-
1516195	-	1503399	-	1503425	-	1516263	-	-	-	1521216	-
-	-	-	-	-	-	-	-	1516315	-	-	-
-	-	-	-	-	-	-	-	1516328	-	-	-
-	-	-	-	-	-	-	-	1516386	-	-	-
1516205	-	1511747	1503454	1511750	1503467	1516276	-	-	-	1516425	-
-	-	-	-	-	-	-	-	1516331	-	-	-
-	-	-	-	-	-	-	-	1516344	-	-	-
-	-	-	-	-	-	-	-	1516399	-	-	-
1516218	-	1503409	-	1503438	-	1516289	-	-	-	1516412	-
-	-	-	-	-	-	-	-	1516357	-	-	-
-	-	-	-	-	-	-	-	1516360	-	-	-
-	-	-	-	-	-	-	-	1516409	-	-	-
Notes:		Notes:		Notes:		Notes:		Notes:		Notes:	
312 307		312 307		312 307		312		312 332			



Connector pin assignment for M16 plug-in connection, 14-pos.

Sensor/actuator cabling

Distributor boxes

M12 distributor with plastic thread, middle duty



With a master cable



Spring connection, horizontal



Push-in spring connection, horizontal

General data	
Degree of protection in acc. with IEC 60529/EN 60529	
M12 circular connector according to:	
Electrical data	
Rated current for each I/O signal	[A]
Rated current per slot	[A]
Rated current, total	[A]
Dimensions	
Width x height	[mm]
(Length (4 / 6 / 8 / 10 slots))	[mm]
Temperature data	
Distributor box	[°C]
Master cable, fixed installation	[°C]
Master cable, flexible installation	[°C]

Technical data	Technical data	Technical data
IP65 / IP67 IEC 61076-2-101	IP65 / IP67 IEC 61076-2-101	IP65 / IP67 IEC 61076-2-101
2 4 12	2 4 12	2 4 -
54 x 23 117 / 123 / 149 / -	54 x 42 117 / 123 / 149 / -	54 x 43 117 / 123 / 149 / -
-25 ... 80 -40 ... 90 -5 ... 80	-25 ... 80 - -	-25 ... 80 - -

Status indication	Signal type	Rated voltage	Slots	Cable length
Without LED	Universal	120 V	4	-
Without LED	Universal	120 V	4	5 m
Without LED	Universal	120 V	4	10 m
Without LED	Universal	120 V	6	-
Without LED	Universal	120 V	6	5 m
Without LED	Universal	120 V	6	10 m
Without LED	Universal	120 V	8	-
Without LED	Universal	120 V	8	5 m
Without LED	Universal	120 V	8	10 m
With LED	PNP	24 V DC	4	-
With LED	PNP	24 V DC	4	5 m
With LED	PNP	24 V DC	4	10 m
With LED	PNP	24 V DC	4	Variable
With LED	PNP	24 V DC	6	-
With LED	PNP	24 V DC	6	5 m
With LED	PNP	24 V DC	6	10 m
With LED	PNP	24 V DC	6	Variable
With LED	PNP	24 V DC	8	-
With LED	PNP	24 V DC	8	5 m
With LED	PNP	24 V DC	8	10 m
With LED	PNP	24 V DC	8	Variable
With LED	NPN	24 V DC	4	5 m
With LED	NPN	24 V DC	4	10 m
With LED	NPN	24 V DC	6	5 m
With LED	NPN	24 V DC	6	10 m
With LED	NPN	24 V DC	8	5 m
With LED	NPN	24 V DC	8	10 m

Ordering data		Ordering data		Ordering data	
Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy
-	-	1452929	1452932	-	-
1452398	1452424	-	-	-	-
1452408	1452437	-	-	-	-
-	-	1452945	1452958	-	-
1452453	1452482	-	-	-	-
1452466	1452495	-	-	-	-
-	-	1452961	1452974	-	-
1452518	1452547	-	-	-	-
1452521	1452550	-	-	-	-
-	-	1452987	1452990	-	1412058
1452576	1452602	-	-	-	-
1452589	1452615	-	-	-	-
1401376	1401419	-	-	-	-
-	-	1453009	1453012	-	1412059
1452631	1452660	-	-	-	-
1452644	1452673	-	-	-	-
1401379	1401380	-	-	-	-
-	-	1453025	1453038	-	1412060
1452699	1452725	-	-	-	-
1452709	1452738	-	-	-	-
1401382	1401383	-	-	-	-
1405678	1405713	-	-	-	-
1405687	1405732	-	-	-	-
1405733	1405735	-	-	-	-
1405734	1405736	-	-	-	-
1405737	1405739	-	-	-	-
1405738	1405740	-	-	-	-

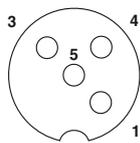
For accessories, see page
Master cable rings see page
For master cable data, see page

Notes:	Notes:	Notes:
314 333	314 307	314 307

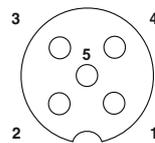
Ordering example for products with variable master cable:

For a distributor with 4 single-occupancy slots and a master cable length of 34.5 m, the ordering data is as follows:

Order No. 1401376	Length [m] 34.5
Increment: 0.5 m Minimum length: 0.5 m Maximum length: 50 m	



Pin assignment of M12 socket, 4-pos.



Pin assignment of M12 socket, 5-pos.

Sensor/actuator cabling

Distributor boxes

M12 distributor with metal thread, heavy-duty



With a master cable



With halogen-free master line



Plug-in screw connection, horizontal

General data

Degree of protection in acc. with IEC 60529/EN 60529
M12 circular connector according to:

Electrical data

Rated current for each I/O signal	[A]	2
Rated current per slot	[A]	4
Rated current, total	[A]	12
Total rated current for electrical isolation	[A]	-

Dimensions

Width x height	[mm]	58 x 26
(Length (4 / 6 / 8 / 10 slots))	[mm]	117 / 126 / 153 / -
Temperature data		
Distributor box	[°C]	-30 ... 90
Master cable, fixed installation	[°C]	-40 ... 90
Master cable, flexible installation	[°C]	-5 ... 80

Status indication	Signal type	Rated voltage	Slots	Cable length
Without LED	Universal	120 V	4	-
Without LED	Universal	120 V	4	5 m
Without LED	Universal	120 V	4	10 m
Without LED	Universal	120 V	6	-
Without LED	Universal	120 V	6	5 m
Without LED	Universal	120 V	6	10 m
Without LED	Universal	120 V	8	-
Without LED	Universal	120 V	8	5 m
Without LED	Universal	120 V	8	10 m
With LED	PNP	24 V DC	4	-
With LED	PNP	24 V DC	4	5 m
With LED	PNP	24 V DC	4	10 m
With LED	PNP	24 V DC	4	Variable
With LED	PNP	24 V DC	6	-
With LED	PNP	24 V DC	6	5 m
With LED	PNP	24 V DC	6	10 m
With LED	PNP	24 V DC	6	Variable
With LED	PNP	24 V DC	8	-
With LED	PNP	24 V DC	8	1.5 m
With LED	PNP	24 V DC	8	5 m
With LED	PNP	24 V DC	8	10 m
With LED	PNP	24 V DC	8	Variable
With LED	NPN	24 V DC	4	-
With LED	NPN	24 V DC	4	Variable
With LED	NPN	24 V DC	6	-
With LED	NPN	24 V DC	6	Variable
With LED	NPN	24 V DC	8	-
With LED	NPN	24 V DC	8	Variable

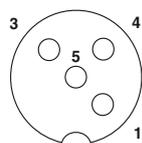
For accessories, see page
Master cable rings see page
For master cable data, see page

Technical data		Technical data		Technical data	
IP65 / IP67 / IP69K IEC 61076-2-101		IP65 / IP67 / IP69K IEC 61076-2-101		IP65 / IP67 / IP69K IEC 61076-2-101	
Ordering data		Ordering data		Ordering data	
Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy
-	-	-	-	1516849	1516852
1516962	1516988	-	1517204	-	-
1516975	1516991	-	1517217	-	-
-	-	-	-	1516865	1516878
1517000	1517026	-	1517220	-	-
1517013	1517039	-	1517233	-	-
-	-	-	-	1516881	1516894
1517042	1517068	-	1517246	-	-
1517055	1517071	-	1517259	-	-
-	-	-	-	1516784	1516797
1517084	1517107	-	1517262	-	-
1517097	1517110	-	1517275	-	-
1516904	1516917	-	-	-	-
-	-	-	-	1516807	1516810
1517123	1517149	-	1517288	-	-
1517136	1517152	-	1517291	-	-
1516920	1516933	-	-	-	-
-	-	-	-	1516823	1516836
-	-	-	-	-	-
1517165	1517181	-	1517301	-	-
1517178	1517194	-	1517314	-	-
1516946	1516959	-	-	-	-
-	-	-	-	1537077	1537103
1537019	1537048	-	-	-	-
-	-	-	-	1537080	1537116
1537022	1537051	-	-	-	-
-	-	-	-	1537093	1537129
1537035	1537064	-	-	-	-
Notes:		Notes:		Notes:	
315		315		315	
333		335		307	

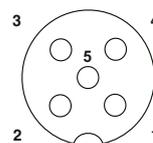
Ordering example for products with variable master cable:

For a distributor with 4 single-occupancy slots and a master cable length of 34.5 m, the ordering data is as follows:

Order No.	Length [m]
1516904	34.5
Increment: 0.5 m	
Minimum length: 0.5 m	
Maximum length: 50 m	



Pin assignment of M12 socket, 4-pos.



Pin assignment of M12 socket, 5-pos.

Sensor/actuator cabling

Distributor boxes

QUICKON distributor,
connection cross section:
0.14 mm² ... 0.34 mm²



With a master cable



Plug-in screw connection,
horizontal

General data	
Degree of protection in acc. with IEC 60529/EN 60529	
Electrical data	
Rated current for each I/O signal	[A]
Rated current per slot	[A]
Rated current, total	[A]
Total rated current for electrical isolation	[A]
Dimensions	
Width x height	[mm]
(Length (4 / 6 / 8 / 10 slots))	[mm]
Temperature data	
Distributor box	[°C]
Master cable, fixed installation	[°C]
Master cable, flexible installation	[°C]

.FA US EAC		.FA US EAC	
Technical data		Technical data	
IP65 / IP67 / IP69K		IP65 / IP67 / IP69K	
2	4	2	4
12	-	10	2x 8
58 x 45	116 / - / 153 / -	58 x 45	117 / 126 / 153 / -
-30 ... 80	-40 ... 90	-30 ... 80	-
-5 ... 80	-	-	-

Status indication	Signal type	Rated voltage	Slots	Cable length
Without LED	Universal	48 V	4	-
Without LED	Universal	48 V	4	Variable
Without LED	Universal	48 V	6	-
Without LED	Universal	48 V	8	-
Without LED	Universal	48 V	8	Variable
With LED	PNP	24 V DC	4	-
With LED	PNP	24 V DC	4	5 m
With LED	PNP	24 V DC	4	10 m
With LED	PNP	24 V DC	4	Variable
With LED	PNP	24 V DC	6	-
With LED	PNP	24 V DC	8	-
With LED	PNP	24 V DC	8	5 m
With LED	PNP	24 V DC	8	10 m
With LED	PNP	24 V DC	8	Variable

Ordering data		Ordering data	
Single occupancy	Double occupancy	Single occupancy	Double occupancy
-	-	1548354	1548419
1548642	1548671	-	-
-	-	1548367	1548422
-	-	1548370	1548435
1548668	1548697	-	-
-	-	1548325	1548383
1548448	1548532	-	-
1548451	1548545	-	-
1548503	1548590	-	-
-	-	1548338	1548396
-	-	1548341	1548406
1548480	1548574	-	-
1548493	1548587	-	-
1548529	1548613	-	-

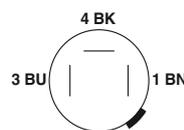
For accessories, see page
 Master cable rings see page
 For master cable data, see page

Notes:	Notes:
317	317
332	307

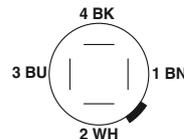
Ordering example for products with variable master cable:

For a distributor with 4 single-occupancy QUICKON slots and a master cable length of 34.5 m, the ordering data is as follows:

Order No.	Length [m]
1548503	34.5
Increment: 0.5 m	
Minimum length: 0.5 m	
Maximum length: 50 m	



Pin assignment for QUICKON connection, 3-pos.



Pin assignment for QUICKON connection, 4-pos.

**QUICKON distributor,
connection cross section:
0.34 mm² ... 0.75 mm²**



With a master cable



Spring connection,
horizontal

General data	
Degree of protection in acc. with IEC 60529/EN 60529	
Electrical data	
Rated current for each I/O signal	[A]
Rated current per slot	[A]
Rated current, total	[A]
Dimensions	
Width x height	[mm]
(Length (4 / 6 / 8 / 10 slots)	[mm]
Temperature data	
Distributor box	[°C]
Master cable, fixed installation	[°C]
Master cable, flexible installation	[°C]

Technical data	Technical data
IP65 / IP67	IP65 / IP67
4	4
4	4
12	12
60 x 44	60 x 44
97 / 134 / 170 / -	132 / 168 / 205 / -
-25 ... 60	-25 ... 60
-40 ... 90	-
-5 ... 80	-

Status indication	Signal type	Rated voltage	Slots	Cable length
Without LED	Universal	120 V	4	-
Without LED	Universal	120 V	4	5 m
Without LED	Universal	120 V	4	10 m
Without LED	Universal	120 V	6	-
Without LED	Universal	120 V	6	5 m
Without LED	Universal	120 V	6	10 m
Without LED	Universal	120 V	8	-
Without LED	Universal	120 V	8	5 m
Without LED	Universal	120 V	8	10 m
With LED	PNP	24 V DC	4	-
With LED	PNP	24 V DC	4	5 m
With LED	PNP	24 V DC	4	10 m
With LED	PNP	24 V DC	4	Variable
With LED	PNP	24 V DC	6	-
With LED	PNP	24 V DC	6	5 m
With LED	PNP	24 V DC	6	10 m
With LED	PNP	24 V DC	6	Variable
With LED	PNP	24 V DC	8	-
With LED	PNP	24 V DC	8	5 m
With LED	PNP	24 V DC	8	10 m
With LED	PNP	24 V DC	8	Variable
With LED	NPN	24 V DC	4	-
With LED	NPN	24 V DC	6	-
With LED	NPN	24 V DC	8	-

Ordering data		Ordering data	
Single occupancy	Double occupancy	Single occupancy	Double occupancy
-	-	1683633	-
1683662	-	-	-
1683675	-	-	-
-	-	1683646	-
1683688	-	-	-
1683691	-	-	-
-	-	1683659	-
1683701	-	-	-
1683714	-	-	-
-	-	1662939	-
1695223	-	-	-
1695236	-	-	-
1695249	-	-	-
-	-	1662942	-
1695252	-	-	-
1695265	-	-	-
1695278	-	-	-
-	-	1662955	-
1695281	-	-	-
1695294	-	-	-
1695304	-	-	-
-	-	1680856	-
-	-	1680869	-
-	-	1680872	-

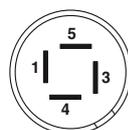
For accessories, see page
Master cable rings see page
For master cable data, see page

Notes:	Notes:
318	318
333	307

**Ordering example for products
with variable master cable:**

For a distributor with 4 single-occupancy QUICKON slots and a master cable length of 34.5 m, the ordering data is as follows:

Order No.	Length [m]
1695249	34.5
	Increment: 0.5 m
	Minimum length: 0.5 m
	Maximum length: 50 m



Pin assignment for QUICKON
connection, 4-pos.

Distributor boxes

M12 distributors, shielded, with metal housing



With a master cable



M23 connector-in connection, vertical

General data	
Degree of protection in acc. with IEC 60529/EN 60529	
M12 circular connector according to:	
Electrical data	
Rated current for each I/O signal	[A]
Rated current per slot	[A]
Rated current, total	[A]
Dimensions	
Width x height	[mm]
(Length (4 / 6 / 8 / 10 slots))	[mm]
Temperature data	
Distributor box	[°C]
Master cable, fixed installation	[°C]
Master cable, flexible installation	[°C]

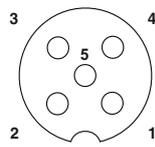
ERC		ERC	
Technical data		Technical data	
IP65 / IP67		IP65 / IP67	
IEC 61076-2-101		IEC 61076-2-101	
2	4	2	4
12	12	12	12
61 x 24	61 x 31	61 x 24	61 x 31
116 / 129 / 156 / -	117 / 130 / 157 / -	116 / 129 / 156 / -	117 / 130 / 157 / -
-25 ... 70	-25 ... 70	-25 ... 70	-25 ... 70
-40 ... 90	-	-40 ... 90	-
-5 ... 80	-	-5 ... 80	-

Status indication	Signal type	Rated voltage	Slots	Cable length
Without LED	Universal	48 V	4	-
Without LED	Universal	48 V	4	5 m
Without LED	Universal	48 V	4	10 m
Without LED	Universal	48 V	6	-
Without LED	Universal	48 V	6	5 m
Without LED	Universal	48 V	6	10 m
Without LED	Universal	48 V	8	-
Without LED	Universal	48 V	8	5 m
Without LED	Universal	48 V	8	10 m

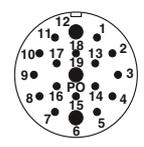
Ordering data		Ordering data	
Single occupancy	Double occupancy	Single occupancy	Double occupancy
-	-	-	1695757
-	1695786	-	-
-	1695799	-	-
-	-	-	1695760
-	1695809	-	-
-	1695812	-	-
-	-	-	1695773
-	1695825	-	-
-	1695838	-	-

For accessories, see page
 Master cable rings see page
 For master cable data, see page

Notes:	Notes:
316	316
334	307



Pin assignment of M12 socket, 5-pos.



Pin assignment M23 connector, 19-pos.

M5 distributor with metal thread



With a master cable

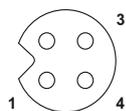


M12 connector-in connection, vertical

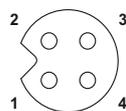
General data	
Degree of protection in acc. with IEC 60529/EN 60529	
M5 circular connector according to:	
M12 circular connector according to:	
Electrical data	
Rated current for each I/O signal	[A]
Rated current per slot	[A]
Rated current, total	[A]
Dimensions	
Width x height	[mm]
Length (4 / 6 / 8 / 10 slots)	[mm]
Temperature data	
Distributor box	[°C]
Master cable, fixed installation	[°C]
Master cable, flexible installation	[°C]

ERC		ERC	
Technical data		Technical data	
IP67		IP67	
IEC 61076-2-105		IEC 61076-2-105	
-		IEC 61076-2-101	
1		1	
1		1	
3		3	
20 x 14		20 x 28	
76 / - / 116 / -		76 / - / 116 / -	
-25 ... 80		-25 ... 80	
-30 ... 70		-	
-5 ... 70		-	
Ordering data		Ordering data	
Single occupancy	Double occupancy	Single occupancy	Double occupancy
-	-	1530760	-
1530663	1530702	-	-
1530676	1530715	-	-
-	-	1530773	-
1530689	1530744	-	-
1530692	1530757	-	-

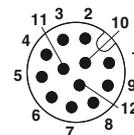
Status indication	Signal type	Rated voltage	Slots	Cable length
With LED	PNP	24 V DC	4	-
With LED	PNP	24 V DC	4	5 m
With LED	PNP	24 V DC	4	10 m
With LED	PNP	24 V DC	8	-
With LED	PNP	24 V DC	8	5 m
With LED	PNP	24 V DC	8	10 m



Pin assignment of M5 socket, 3-pos.



Pin assignment of M5 socket, 4-pos.



Pin assignment for M12 connector-in connection, 12-pos.



Versatile

Whether in the railway station, for control tasks or within rolling stock – our cables for the railway industry support flexible use.



Connectors for assembly

With our M12 connectors for assembly, you can adapt the cabling flexibly to your requirements. In addition to connectors with convenient QUICKON (IDC) connection, we also offer versions with robust crimp and spring connection.



Assembled cables

The molded connectors in our M12 RAIL series provide a reliable cabling system for all control levels in the train. Choose your cabling from assembled sensor/actuator cables and data cables for communication networks and passenger information systems.



Flame-retardant

An important aspect in the selection of the plastics used in the railway industry is their flame retardancy. We satisfy stringent requirements regarding behavior in fire thanks to our irradiated railway cables and PA 6.6 molding material.



Securely locked

The special vibration brake prevents the unintentional loosening of the plug-in connection in the event of vibrations.

The connectors are tested according to EN 50155 for resistance to shock and vibrations.



Temperature-resistant

Particularly high or low temperatures and temperature shocks also must not affect the electrical function of the components used. Our products are intensively tested for an extended temperature range and for resistance to temperature shocks.



Certified according to IRIS

The Phoenix Contact Group is currently IRIS-certified. IRIS is an international rail industry standard for quality management systems.

Find out more with the web code

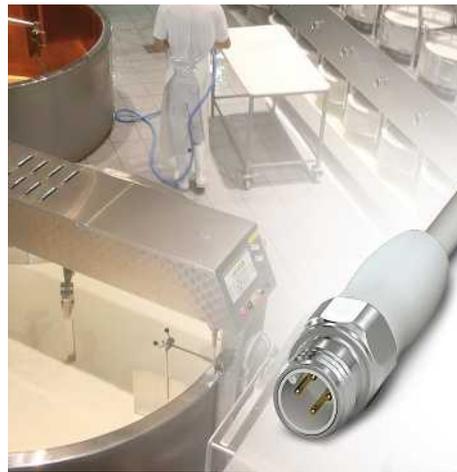
Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.





Resistance to cleaning agents

The connectors in hygienic and washdown design are tested for resistance to cleaning agents commonly used in the food industry in accordance with Diversey and ECOLAB standards.



Product-contacting area

The components and devices used here must meet the highest hygienic requirements. Our cabling, with its hygienic design, is suitable for use in this area.



Splash zone

Products featuring washdown design are suitable for the splash zone. Cost-effective features include resistance to cleaning agents and cleaning methods.



Connectors for the splash zone

For the special requirements of the food industry, we offer flush-type connectors, as well as connectors with stainless steel components for assembly.



Assembled cables for all areas

Molded cables are available with connectors in sizes M8 and M12 in hygienic or washdown design.



Distributor boxes for the splash zone

Distributor boxes with stainless steel housing and permanently connected PVC master cable in washdown design are available for the splash zone.



Mechanical resistance

All components for the food industry are IP69K tested. This means guaranteed sealing for applications with steam jets, even after repeated temperature shocks.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.



Sensor/actuator cabling

Cabling for outdoor applications



Adapted to the relevant requirements

Through the selection of special materials, the components are designed for use outdoors. The materials are resistant to UV, ozone, corrosion, and temperatures.



For a variety of applications

Outdoor components are particularly suitable for use in traffic management systems, snow cats and snow cannons, photovoltaic systems or wind turbine generators.



UV and ozone test

Testing with special climate cabinets ensures that the connectors and cables are suitable for the control of solar plants, for example, without any restrictions.



Connectors for assembly

The connector knurls are made from stainless steel and the plastics are resistant to atmospheric influences. The connectors are available with insulation displacement connection and screw connection.



Assembled cables

In addition to 3- to 8-pos. shielded and unshielded versions, PROFINET and Ethernet cables are also available for data applications.



Distributor boxes

Robust, fully molded sensor/actuator distributor boxes with 8 slots are available with fixed master cable or plug-in screw connection.



IP69K protection

For outdoor applications, a high IP protection class is essential because products are exposed to direct atmospheric influences.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.



Sensor/actuator cabling

Cabling for robots and drag chains



High level of durability

With their special design, our cables provide a high level of durability under alternating bending stress, e.g., in drag chains.



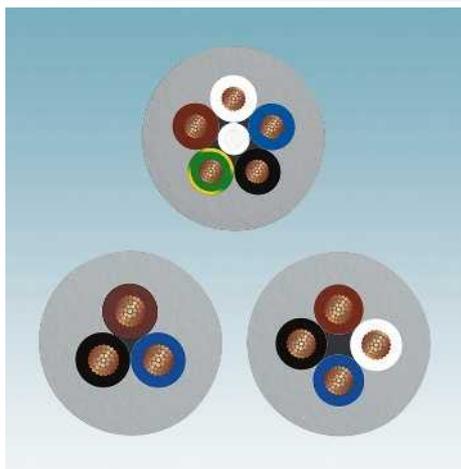
High level of resistance to welding sparks

The robust TPE-U outer sheath of the highly flexible cables is resistant to welding sparks. The cables can therefore be used in resistance welding processes.



High level of durability under torsional stress

Our cables achieve a high level of durability – even with large angles of torsion and simultaneous bending stress.



Large selection of number of positions

Our sensor/actuator cables for robots and drag chains are available in 3-, 4-, and 5-pos. versions.



Large selection of connectors

Sensor/actuator cables with molded plug-in plugs are available both as plugs and sockets and with a straight or angled cable outlet.



Highly flexible master cable

For the distribution or grouping of signals at industrial robots, we offer a corresponding sensor/actuator box with special master cable.



100% tested

All supplied components are 100% electrically checked by Quality Assurance.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.





Maximum power in a compact design

You can use the compact M12 power connectors to supply devices with up to 16 A or up to 630 V depending on the version. The M12 size therefore opens up new areas of application for supplying energy to your electrical devices.



DC application

The M12 power T and L DC codings are particularly suitable for the supply connection for distributed I/O modules or for DC motors.



AC application

The M12 power S, K, and M codings are designed for AC applications such as the power connection of a three-phase motor.



Connectors for assembly

M12 connectors in straight and angled version with screw connection are available for power transmission.



Safe transmission

With 360° shielded connectors and cables, you can transmit signals reliably even in critical EMI applications.



Power distributors

M12 boxes with and without diagnostics function plus a Y-distributor with T-coding are available for power distribution.



100% tested

All supplied components are 100% electrically checked by Quality Assurance.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.



M12 cabling for power applications

M12 power connector, screw connection

new

Further power codings can be found on our website under web code:

i #0024



Metal knurl, 2- and 3-pos.+PE



Metal knurl, 4-pos.



Technical data	
S-coded, 2-pos. + PE	S-coded, 3-pos. + PE
3	3
IP67	IP67
Screw connection	Screw connection
0.75 mm ² ... 1.5 mm ²	0.75 mm ² ... 1.5 mm ²
230 V AC	630 V AC
16 A (when using 1.5 mm ² conductors)	12 A (when using 1.5 mm ² conductors)
> 10 GΩ	> 10 GΩ
CuZn / Au	CuZn / Au
PA	PA
V0	V0
-40 ... 85	-40 ... 85



Technical data	
T-coded, 4-pos.	
3	
IP67	
Screw connection	
0.75 mm ² ... 1.5 mm ²	
63 V DC	
12 A (when using 1.5 mm ² conductors)	
> 10 GΩ	
CuZn / Au	
PA	
V0	
-40 ... 85	

General data
Degree of pollution
Degree of protection
Connection method
Connection cross section [mm ²]
Electrical data
Rated voltage
Rated current
Insulation resistance
Material data
Contact/contact surface material
Contact carrier material
Flammability rating according to UL 94
Temperature data
Plug/socket [°C]

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
S-coded, 2-pos. + PE		S-coded, 3-pos. + PE	

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
T-coded, 4-pos.			

Description

Connector, cable diameter: 6 mm ... 8 mm
Socket, straight
Plug, straight
Socket, angled
Plug, angled
Connector, cable diameter: 8 mm ... 10 mm
Socket, straight
Plug, straight
Socket, angled
Plug, angled

1419640	1		
1419639	1		
1419642	1		
1419641	1		
		1404642	1
		1404641	1
		1408987	1
		1408985	1

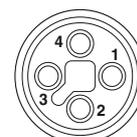
		1404644	1
		1404643	1
		1408989	1
		1408988	1



Pin assignment of M12 socket, 2-pos.+PE, S-coded, socket side view



Pin assignment of M12 socket, 3-pos.+PE, S-coded, socket side view



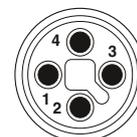
Pin assignment of M12 socket, 4-pos., T-coded, socket side view



Pin assignment of M12 connector, 2-pos.+PE, S-coded, pin side view



Pin assignment of M12 connector, 3-pos.+PE, S-coded, pin side view



Connector pin assignment of M12 connector, 4-pos., T-coded, view of pin side

M12 power device connector, modular, 25 mm square flange, pre-assembled



Flange housing, 2.7 mm housing bore holes



Preassembled contact carrier and insulating body with 0.5 m long litz wires

ERIC

ERIC

Technical data

Technical data

General data		Electrical data		Material data	
Degree of pollution	-	Rated voltage	-	Contact/contact surface material	- / -
Degree of protection	-	Rated current	-	Contact carrier material	-
Connection method	-	Overvoltage category	-	Cable gland material	Zinc die-cast, nickel-plated
Electrical data		Material data		Cable type	
Rated voltage	-	Contact/contact surface material	- / -	Temperature data	-
Rated current	-	Contact carrier material	-	Plug/socket	-40 ... 85 [°C]
Overvoltage category	-	Cable gland material	Zinc die-cast, nickel-plated		
Material data		Cable type			
Contact/contact surface material	- / -	Temperature data	-		
Contact carrier material	-	Plug/socket	-40 ... 85 [°C]		

S-coded, 3-pos. + PE		T-coded, 4-pos.	
3	3	Individual wires	Individual wires
IP67	IP67	630 V	63 V
Individual wires	Individual wires	12 A	12 A
III	III	PP litz wire	PP litz wire
CuZn / Au	CuZn / Au	-25 ... 85	-25 ... 85
PA6	PA6		
-	-		
PP litz wire	PP litz wire		

Ordering data

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Square flange housing, with flat gasket	1424131	10	
Assembled contact carrier and insulating body, with 0.5 m litz wires and crimp contacts				
Connector				

S-coded, 3-pos. + PE		T-coded, 4-pos.	
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
1424129	1	1424130	1

Sensor/actuator cabling

M12 cabling for power applications

M12 power device connector, 2-pos.+PE, S-coded

- M16 fastening thread
- With 0.5 m long litz wires
- S-coded



S-coded,
2-pos. + PE



Technical data

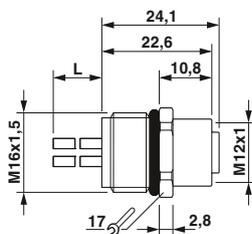
	Technical data	
	Front mounting	Rear mounting
General data		
Degree of pollution	3	3
Degree of protection	IP65/IP67	IP65/IP67
Connection method	Individual wires	Individual wires
Electrical data		
Rated voltage	630 V	630 V
Rated current	16 A	16 A
Material data		
Contact/contact surface material	CuZn / Au	CuZn / Au
Contact carrier material	PA	PA
Flammability rating according to UL 94	V0	V0
Cable type	PP litz wire	PP litz wire
Conductor cross section	1.5 mm ²	1.5 mm ²
Temperature data		
Plug/socket	-25 ... 105	-25 ... 105

Ordering data

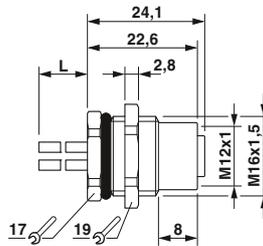
Description	Coding	Order No.		Pcs. / Pkt.	
		Front mounting	Rear mounting	Front mounting	Rear mounting
Power device connectors					
Socket	S power	1411654	1411652	1	1
Plug	S power	1411655	1411653	1	1

Accessories

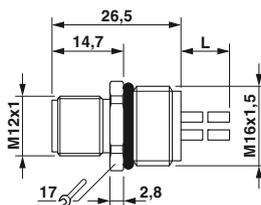
Flat nut, with: M16 thread	SACC-E-MU-M16	1504097	100
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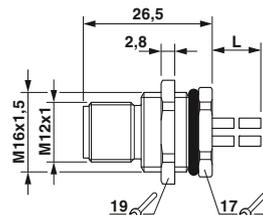
Dimensions: socket,
front mounting



Dimensions: socket,
rear mounting



Dimensions: connector,
front mounting



Dimensions: connector,
rear mounting

**M12 power device connector,
3-pos.+PE, S-coded,
4-pos., T-coded**

- M16 fastening thread
- With 0.5 m long litz wires



S-coded,
3-pos. + PE



T-coded,
4-pos.



	Technical data	
	Front mounting	Rear mounting
General data		
Degree of pollution	3	3
Degree of protection	IP65/IP67	IP65/IP67
Connection method	Individual wires	Individual wires
Electrical data		
Rated voltage	630 V	630 V
Rated current	12 A	12 A
Material data		
Contact/contact surface material	CuZn / Au	CuZn / Au
Contact carrier material	PA	PA
Flammability rating according to UL 94	V0	V0
Cable type	PP litz wire	PP litz wire
Conductor cross section	1.5 mm ²	1.5 mm ²
Temperature data		
Plug/socket	-25 ... 85	-25 ... 85



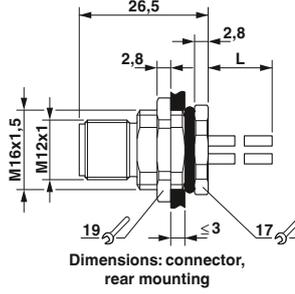
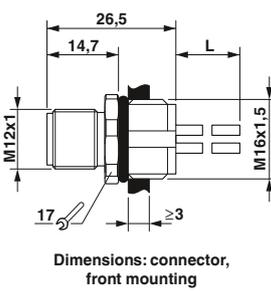
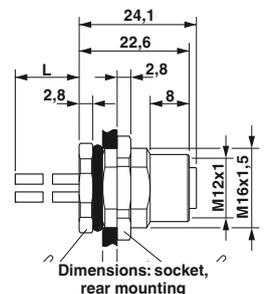
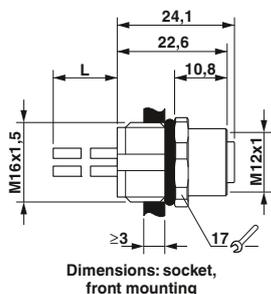
	Technical data	
	Front mounting	Rear mounting
General data		
Degree of pollution	3	3
Degree of protection	IP65/IP67	IP65/IP67
Connection method	Individual wires	Individual wires
Electrical data		
Rated voltage	63 V	63 V
Rated current	12 A	12 A
Material data		
Contact/contact surface material	CuZn / Au	CuZn / Au
Contact carrier material	PA	PA
Flammability rating according to UL 94	V0	V0
Cable type	PP litz wire	PP litz wire
Conductor cross section	1.5 mm ²	1.5 mm ²
Temperature data		
Plug/socket	-25 ... 85	-25 ... 85

Description	Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Front mounting		Rear mounting	
Power device connectors				
Socket	1424137	1	1424133	1
Plug	1424139	1	1424132	1

Description	Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Front mounting		Rear mounting	
Power device connectors				
Socket	1424138	1	1424134	1
Plug	1424140	1	1424136	1

Accessories	Order No.	Pcs. / Pkt.
	Flat nut, with: M16 thread	SACC-E-MU-M16

Accessories	Order No.	Pcs. / Pkt.
	Flat nut, with: M16 thread	SACC-E-MU-M16



Sensor/actuator cabling

M12 cabling for power applications

M12 power XL device connector, 3-pos.+PE, S-coded, 4-pos., T-coded

- M16 fastening thread
- With 0.5 m long litz wires
- Tightening limitation
- Wrench size 19



S-coded,
3-pos. + PE



T-coded,
4-pos.



General data	
Degree of pollution	3
Degree of protection	IP65/IP67
Connection method	Individual wires
Electrical data	
Rated voltage	630 V
Rated current	12 A
Material data	
Contact/contact surface material	CuZn / Au
Contact carrier material	PA
Flammability rating according to UL 94	V0
Cable type	PP litz wire
Conductor cross section	1.5 mm ²
Temperature data	
Plug/socket	-25 ... 85 [°C]

Technical data			
Front mounting		Rear mounting	
Degree of pollution	3	Degree of pollution	3
Degree of protection	IP65/IP67	Degree of protection	IP65/IP67
Connection method	Individual wires	Connection method	Individual wires
Rated voltage	630 V	Rated voltage	630 V
Rated current	12 A	Rated current	12 A
Contact/contact surface material	CuZn / Au	Contact/contact surface material	CuZn / Au
Contact carrier material	PA	Contact carrier material	PA
Flammability rating according to UL 94	V0	Flammability rating according to UL 94	V0
Cable type	PP litz wire	Cable type	PP litz wire
Conductor cross section	1.5 mm ²	Conductor cross section	1.5 mm ²
Temperature data		Temperature data	
Plug/socket	-25 ... 85 [°C]	Plug/socket	-25 ... 85 [°C]

Technical data			
Front mounting		Rear mounting	
Degree of pollution	3	Degree of pollution	3
Degree of protection	IP65/IP67	Degree of protection	IP65/IP67
Connection method	Individual wires	Connection method	Individual wires
Rated voltage	63 V	Rated voltage	63 V
Rated current	12 A	Rated current	12 A
Contact/contact surface material	CuZn / Au	Contact/contact surface material	CuZn / Au
Contact carrier material	PA	Contact carrier material	PA
Flammability rating according to UL 94	V0	Flammability rating according to UL 94	V0
Cable type	PP litz wire	Cable type	PP litz wire
Conductor cross section	1.5 mm ²	Conductor cross section	1.5 mm ²
Temperature data		Temperature data	
Plug/socket	-25 ... 85 [°C]	Plug/socket	-25 ... 85 [°C]

Description	
Power device connectors	
Socket	
Plug	

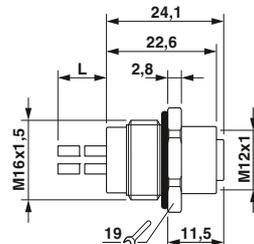
Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Front mounting		Rear mounting	
1411605	1	1411598	1
1411607	1	1411603	1

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Front mounting		Rear mounting	
1411606	1	1411599	1
1411608	1	1411604	1

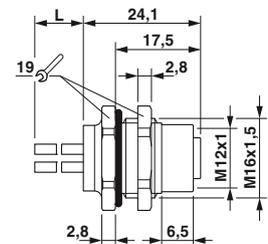
Accessories	
Flat nut, with: M16 thread	

Accessories		
Accessories	Order No.	Pcs. / Pkt.
Flat nut, with: M16 thread	SACC-E-MU-M16	1504097 100

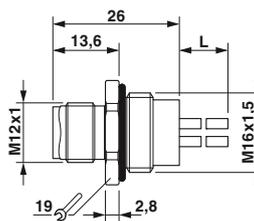
Accessories		
Accessories	Order No.	Pcs. / Pkt.
Flat nut, with: M16 thread	SACC-E-MU-M16	1504097 100



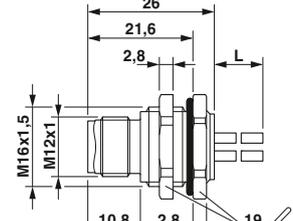
Dimensions: socket,
front mounting



Dimensions: socket,
rear mounting



Dimensions: connector,
front mounting



Dimensions: connector,
rear mounting

M12 power XL device connector, 4-pos.+PE, K-coded

- M16 fastening thread
- With 0.2 m long litz wires
- Tightening limitation
- Wrench size 19



K-coded,
cable cross section: 2.5 mm²,
4-pos.+PE

	Technical data			
	Front mounting	Rear mounting		
General data				
Degree of pollution	3	3		
Degree of protection	IP65/IP67	IP65/IP67		
Connection method	Individual wires	Individual wires		
Electrical data				
Rated voltage	630 V	630 V		
Rated current	16 A	16 A		
Material data				
Contact/contact surface material	CuZn / Au	CuZn / Au		
Contact carrier material	PA	PA		
Flammability rating according to UL 94	V0	V0		
Cable type	PEX litz wire	PEX litz wire		
Conductor cross section	2.5 mm ²	2.5 mm ²		
Temperature data				
Plug/socket	-25 ... 85	-40 ... 85		
	Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Front mounting		Rear mounting	
Power device connectors				
Socket	1415292	1	1415294	1
Plug	1415291	1	1415293	1
	Accessories			
Flat nut, with: M16 thread	SACC-E-MU-M16	1504097	100	

Sensor/actuator cabling

M12 cabling for power applications

M12 power XL device connector, 4-pos.+FE, L-coded, 5-pos.+PE, M-coded

- M16 fastening thread
- With 0.2 m long litz wires
- Tightening limitation
- Wrench size 19



L-coded,
4-pos.+FE



M-coded,
5-pos.+PE

	Technical data			
	Front mounting		Rear mounting	
General data				
Degree of pollution	3		3	
Degree of protection	IP65/IP67		IP65/IP67	
Connection method	Individual wires		Individual wires	
Electrical data				
Rated voltage	63 V		63 V	
Rated current	16 A		16 A	
Material data				
Contact/contact surface material	CuZn / Au		CuZn / Au	
Contact carrier material	PA		PA	
Flammability rating according to UL 94	V0		V0	
Cable type	PEX litz wire		PEX litz wire	
Conductor cross section	2.5 mm ²		2.5 mm ²	
Temperature data				
Plug/socket	-25 ... 85 [°C]		-40 ... 85	
	Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Description	Front mounting		Rear mounting	
Power device connectors				
Socket	1415296	1	1415299	1
Plug	1415295	1	1415297	1
	Accessories			
	SACC-E-MU-M16		1504097	100

M12 SPEEDCON power cable, 2-pos.+PE, S-coded, cable type: PVC, unshielded

Notes:
For information about the cable qualities, see page 320



Ordering data **Ordering data** **Ordering data**

Free end	Order No.	Order No.	Order No.
	1 m	1411636	1 m 1411640
	2 m	1411637	2 m 1411641
	5 m	1411638	5 m 1411642
	10 m	1411639	10 m 1411643

M12 socket, SPEEDCON, straight	Order No.
	1 m 1411644
	2 m 1411645
	5 m 1411646
	10 m 1411647

M12 socket, SPEEDCON, angled	Order No.
	1 m 1411648
	2 m 1411649
	5 m 1411650
	10 m 1411651

Cable description	Cable type	Color coding	Pin assignment
PVC - black	PVC	BK1 1	1
		BK2 2	3
		GNYE	PE

		Technical data
		M12
Rated voltage	[V]	230
Rated current	[A]	16
Inflammability class in acc. with UL 94		V0
M12 material contact		CuZn
M12 contact surface material		Au
M12 material handle		TPU, hardly inflammable, self-extinguishing
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP67
Temperature data		
Plug/socket	[°C]	-25 ... 105

Sensor/actuator cabling

M12 cabling for power applications

M12-SPEEDCON power cable, 3-pos.+PE, S-coded, cable type: PUR

Notes:

For information about the cable qualities, see page 320



Free end	Ordering data		Ordering data		Ordering data		Ordering data	
	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	
	1 m	1408835	1 m	1408839	1.5 m	1424104	1.5 m	1424108
	2 m	1408836	2 m	1408840	3 m	1424105	3 m	1424109
	5 m	1408837	5 m	1408841	5 m	1424245	5 m	1424110
	10 m	1408838	10 m	1408842	10 m	1424107	10 m	1424111

M12 socket, SPEEDCON, straight	Ordering data
	1 m 1408843
	2 m 1408844
	5 m 1408845
	10 m 1408846

M12 socket, SPEEDCON, angled	Ordering data
	1 m 1408848
	2 m 1408852
	5 m 1408853
	10 m 1408854

M12 socket, SPEEDCON, straight, 360° shielded	Ordering data
	1.5 m 1424096
	3 m 1424097
	5 m 1424098
	10 m 1424099

M12 socket, SPEEDCON, angled, 360° shielded	Ordering data
	1.5 m 1424100
	3 m 1424101
	5 m 1424102
	10 m 1424103

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - black (unshielded)	PUR	BK1	1
		BK2	2
		BK3	3
PUR, halogen-free - orange (shielded)	PUR	GNYE	PE

Technical data	
M12	
Rated voltage	[V] 630
Rated current	[A] 12
M12 material contact	CuZn
M12 material contact surface	Au
M12 material handle	TPU, hardly inflammable, self-extinguishing
Knurl material	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Plug/socket	[°C] -25 ... 85

M12-SPEEDCON power cable, 4-pos., T-coded, cable type: PUR

Notes:
For information about the cable qualities, see page 320



	Ordering data		Ordering data		Ordering data		Ordering data		
Free end	Order No.		Order No.		Order No.		Order No.		
		1 m	1408812	1 m	1408816	1.5 m	1424120	1.5 m	1424124
		2 m	1408813	2 m	1408819	3 m	1424121	3 m	1424125
		5 m	1408814	5 m	1408820	5 m	1424122	5 m	1424126
		10 m	1408815	10 m	1408822	10 m	1424123	10 m	1424127
M12 socket, SPEEDCON, straight 		1 m	1408823	1 m	1408808				
		2 m	1408824	2 m	1408809				
		5 m	1408825	5 m	1408810				
		10 m	1408826	10 m	1408811				
M12 socket, SPEEDCON, angled 		1 m	1408827			1 m	1415196		
		2 m	1408828			2 m	1415197		
		5 m	1408829			5 m	1415198		
		10 m	1408830			10 m	1415199		
M12 socket, SPEEDCON, straight, 360° shielded 		1.5 m	1424112						
		3 m	1424113						
		5 m	1424114						
		10 m	1424115						
M12 socket, SPEEDCON, angled, 360° shielded 		1.5 m	1424116					1.5 m	1415202
		3 m	1424117					3 m	1415203
		5 m	1424118					5 m	1415204
		10 m	1424128					10 m	1415205

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - black	PUR	BN	1
		WH	2
		BK	4
		BU	3

		Technical data
		M12
Rated voltage	[V]	63
Rated current	[A]	12
M12 material contact		CuZn
M12 material contact surface		Au
M12 material handle		TPU, hardly inflammable, self-extinguishing
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 85

Sensor/actuator cabling

M12 cabling for power applications

M12-SPEEDCON power cable, 4-pos.+PE, K-coded, cable type: PUR

Notes:
For information about the cable qualities, see page 320



Free end	Order No.					
	1.5 m	1414866	1.5 m	1414833	1.5 m	1414867
	3 m	1414870	1.5 m	1414837	3 m	1414871
	5 m	1414875	1.5 m	1414841	5 m	1414876
	10 m	1414879	1.5 m	1414846	10 m	1414880

M12 socket, SPEEDCON, straight	Order No.	Order No.
	1.5 m	1414770
	3 m	1414788
	5 m	1414804
	10 m	1414821

M12 socket, SPEEDCON, angled	Order No.	Order No.
	1.5 m	1414766
	3 m	1414784
	5 m	1414800
	10 m	1414817

M12 socket, SPEEDCON, straight, 360° shielded	Order No.	Order No.
	1.5 m	1414771
	3 m	1414789
	5 m	1414805
	10 m	1414822

M12 socket, SPEEDCON, angled, 360° shielded	Order No.	Order No.
	1.5 m	1414767
	3 m	1414785
	5 m	1414801
	10 m	1414818

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - black (unshielded)	PUR	BK1 1 BK2 2	1 2
PUR, halogen-free - orange (shielded)	PUR	BK3 3 BK4 4 GNYE	3 4 PE

Technical data	
M12	
Rated voltage [V]	630
Rated current [A]	16
M12 material contact	CuSn
M12 material contact surface	Ni/Au
M12 material handle	PA
Knurl material	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67 / IP68
Temperature data	
Plug/socket [°C]	-25 ... 85

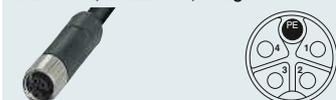
M12-SPEEDCON power cable, 4-pos.+PE, K-coded, cable type: PVC

Notes:
For information about the cable qualities, see page 320



	Ordering data		Ordering data		Ordering data		Ordering data	
Free end	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	
	1.5 m	1414868	1.5 m	1414835	1.5 m	1414869	1.5 m	1414836
	3 m	1414872	3 m	1414839	3 m	1414874	3 m	1414840
	5 m	1414877	5 m	1414843	5 m	1414878	5 m	1414845
	10 m	1414881	10 m	1414848	10 m	1414882	10 m	1414849

M12 socket, SPEEDCON, straight



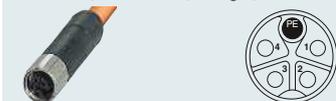
1.5 m	1414780
3 m	1414796
5 m	1414812
10 m	1414829

M12 socket, SPEEDCON, angled



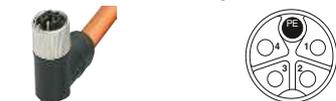
1.5 m	1414774
3 m	1414792
5 m	1414808
10 m	1414825

M12 socket, SPEEDCON, straight, 360° shielded



1.5 m	1414781
3 m	1414797
5 m	1414813
10 m	1414830

M12 socket, SPEEDCON, angled, 360° shielded



1.5 m	1414775
3 m	1414793
5 m	1414809
10 m	1414826

Cable description	Cable type	Color coding		Pin assignment
PVC - black (unshielded)	PVC	BK1	1	1
		BK2	2	2
		BK3	3	3
PVC - orange (shielded)	PVC	BK4	4	4
		GNYE		PE

		Technical data
		M12
Rated voltage	[V]	630
Rated current	[A]	16
M12 material contact		CuSn
M12 material contact surface		Ni/Au
M12 material handle		PA
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-25 ... 85

Sensor/actuator cabling

M12 cabling for power applications

M12-SPEEDCON power cable, 4-pos.+FE, L-coded, cable type: PUR, unshielded

Notes:
 For information about the cable qualities, see page 320
 For shielded power cables, visit phoenixcontact.net/products



Free end	Ordering data				
	Order No.				
	1.5 m	1414883	1.5 m	1414850	1.5 m
	3 m	1414887	3 m	1414854	3 m
	10 m	1414895	10 m	1414862	10 m
M12 socket, SPEEDCON, straight, wire cross section: 2.5 mm ² 	1.5 m	1414772	0.3 m	1425009	
	3 m	1414790	0.6 m	1425010	
	10 m	1414823	3 m	1425012	
M12 socket, SPEEDCON, angled, wire cross section: 2.5 mm ² 	1.5 m	1414768			
	3 m	1414786			
	10 m	1414819			
M12 socket, SPEEDCON, straight, wire cross section: 1.5 mm ² 	1.5 m	1424601		0.3 m	1425017
	3 m	1424602		0.6 m	1425018
	10 m	1424604		3 m	1425020
M12 socket, SPEEDCON, angled, wire cross section: 1.5 mm ² 	1.5 m	1424605			
	3 m	1424606			
	10 m	1424608			

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - gray Cable type 280 for 2.5 mm ²	280	BN	1
		WH	2
PUR, halogen-free - gray Cable type 290 for 1.5 mm ²	290	BU	3
		BK	4
		GY	5

		Technical data
		M12
Rated voltage	[V]	63
Rated current	[A]	16
M12 material contact		CuSn
M12 material contact surface		Ni/Au
M12 material handle		PA
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-25 ... 85

M12-SPEEDCON power cable, 4-pos.+FE, L-coded, cable type: PVC, unshielded

Notes:
 For information about the cable qualities, see page 320
 For shielded power cables, visit phoenixcontact.net/products



Free end	Ordering data					
	Order No.					
	1.5 m	1414885	1.5 m	1414852	1.5 m	1424609
	3 m	1414889	3 m	1414856	3 m	1424610
	5 m	1414893	5 m	1414860	5 m	1424611
	10 m	1414897	10 m	1414864	10 m	1424612

M12 socket, SPEEDCON, straight, wire cross section: 2.5 mm ²	Order No.	Order No.
	1.5 m 1414782	0.3 m 1425013
	3 m 1414798	0.6 m 1425014
	5 m 1414814	1.5 m 1425015
	10 m 1414831	3 m 1425016

M12 socket, SPEEDCON, angled, wire cross section: 2.5 mm ²	Order No.
	1.5 m 1414777
	3 m 1414794
	5 m 1414810
	10 m 1414827

M12 socket, SPEEDCON, straight, wire cross section: 1.5 mm ²	Order No.	Order No.
	1.5 m 1424617	0.3 m 1425021
	1.5 m 1424618	0.6 m 1425022
	1.5 m 1424619	1.5 m 1425023
	1.5 m 1424620	3 m 1425024

M12 socket, SPEEDCON, angled, wire cross section: 1.5 mm ²	Order No.
	1.5 m 1424621
	3 m 1424622
	5 m 1424623
	10 m 1424624

Cable description	Cable type	Color coding	Pin assignment
PVC - gray Cable type 500 for 2.5 mm ²	500	BN	1
		WH	2
PVC - gray Cable type 510 for 1.5 mm ²	510	BU	3
		BK	4
		GY	5

		Technical data
		M12
Rated voltage	[V]	63
Rated current	[A]	16
M12 material contact		CuSn
M12 material contact surface		Ni/Au
M12 material handle		PA
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-25 ... 85

Sensor/actuator cabling

M12 cabling for power applications

M12-SPEEDCON power cable, 4-pos., L-coded, cable type: PUR, unshielded

Notes:
 For information about the cable qualities, see page 320
 For shielded power cables, visit phoenixcontact.net/products



	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Free end	Order No.	Order No.	Order No.							
		1.5 m	1425065	1.5 m	1425069	1.5 m	1425025	1.5 m	1425029	
		3 m	1425066	3 m	1425070	3 m	1425026	3 m	1425030	
		5 m	1425067	5 m	1425071	5 m	1425027	5 m	1425031	
		10 m	1425068	10 m	1425072	10 m	1425028	10 m	1425032	
M12 socket, SPEEDCON, straight, wire cross section: 2.5 mm²		1.5 m	1425073	0.3 m	1425081					
		3 m	1425074	0.6 m	1425082					
		5 m	1425075	1.5 m	1425083					
		10 m	1425076	3 m	1425084					
M12 socket, SPEEDCON, angled, wire cross section: 2.5 mm²		1.5 m	1425077							
		3 m	1425078							
		5 m	1425079							
		10 m	1425080							
M12 socket, SPEEDCON, straight, wire cross section: 1.5 mm²		1.5 m	1425033			0.3 m	1425041			
		3 m	1425034			0.6 m	1425042			
		5 m	1425035			1.5 m	1425043			
		10 m	1425036			3 m	1425044			
M12 socket, SPEEDCON, angled, wire cross section: 1.5 mm²		1.5 m	1425037							
		3 m	1425038							
		5 m	1425039							
		10 m	1425040							

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - black Cable type PUR for 2.5 mm ²	PUR	BN WH	1 2
PUR, halogen-free - black Cable type 105 for 1.5 mm ²	105	BU BK	3 4

		Technical data
		M12
Rated voltage	[V]	63
Rated current	[A]	16
M12 material contact		CuSn
M12 material contact surface		Ni/Au
M12 material handle		PA
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-25 ... 85

M12-SPEEDCON power cable, 4-pos., L-coded, cable type: PVC, unshielded

Notes:
 For information about the cable qualities, see page 320
 For shielded power cables, visit phoenixcontact.net/products



	Ordering data		Ordering data		Ordering data		Ordering data	
Free end	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	
	1.5 m	1425085	1.5 m	1425089	1.5 m	1425045	1.5 m	1425049
	3 m	1425086	3 m	1425090	3 m	1425046	3 m	1425050
	5 m	1425087	5 m	1425091	5 m	1425047	5 m	1425051
	10 m	1425088	10 m	1425092	10 m	1425048	10 m	1425052
M12 socket, SPEEDCON, straight, wire cross section: 2.5 mm² 	1.5 m	1425093	0.3 m	1425101				
	3 m	1425094	0.6 m	1425102				
	5 m	1425095	1.5 m	1425103				
	10 m	1425096	3 m	1425104				
M12 socket, SPEEDCON, angled, wire cross section: 2.5 mm² 	1.5 m	1425097						
	3 m	1425098						
	5 m	1425099						
	10 m	1425100						
M12 socket, SPEEDCON, straight, wire cross section: 1.5 mm² 	1.5 m	1425053			0.3 m	1425061		
	3 m	1425054			0.6 m	1425062		
	5 m	1425055			1.5 m	1425063		
	10 m	1425056			3 m	1425064		
M12 socket, SPEEDCON, angled, wire cross section: 1.5 mm² 	1.5 m	1425057						
	3 m	1425058						
	5 m	1425059						
	10 m	1425060						

Cable description	Cable type	Color coding	Pin assignment
PVC - black Cable type PVC for 2.5 mm ²	PVC	BN	1
		WH	2
PVC - black Cable type 110 for 1.5 mm ²	110	BU	3
		BK	4

		Technical data
		M12
Rated voltage	[V]	63
Rated current	[A]	16
M12 material contact		CuSn
M12 material contact surface		Ni/Au
M12 material handle		PA
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-25 ... 85

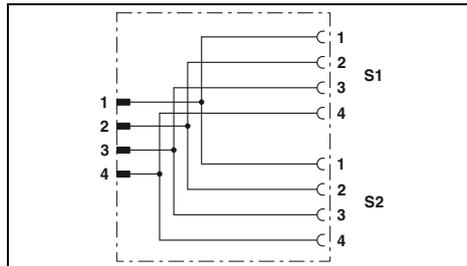
Sensor/actuator cabling

M12 cabling for power applications

M12 Y-distributor for power connectors



Y-distributor, T-coded, 4-pos.



Technical data

General data	
Degree of pollution	3
Degree of protection	IP65 / IP67
Electrical data	
Rated voltage	63 V DC
Rated current	2x 12 A (at 40°C)
Material data	
Contact material	CuZn
Contact surface material	Ni/Au
Flammability rating according to UL 94	HB
Temperature data	
Plug/socket	[°C] -25 ... 80

Ordering data

Description	Center distance	Type	Order No.	Pcs. / Pkt.
Y-distributor, M12-SPEEDCON, unshielded, M12 connector (T-coded) to 2 x M12 socket (T-coded)	21 mm	SAC-4PY-MT/2XFT VP	1410632	5

M12 distributor for power connectors



**Power distributor
with plug-in crimp connection,
horizontal**

Technical data	
General data	
Degree of protection	IP66 / IP67
Electrical data	
Rated voltage	24 V DC
Perm. operating voltage	30.5 V DC
Rated current for each I/O signal	10 A (M12 diagnostic socket for each channel max. 50 mA)
Rated current per slot	2x 9.25 A (at 40°C)
Total rated current	-
Housing material	PBT
Dimensions	
Width x height x length [mm]	60 x 52 x 212
Temperature data	
Distributor box	-25°C ... 60°C

Ordering data			
Description	Type	Order No.	Pcs. / Pkt.
Power distributor , M12-SPEEDCON socket, 4 slots, 4-pos., unshielded, status indicator: yes			
- with diagnostics port	SACB-4/T-L-8FUSE DIAG CT AXL	1411048	1
- without diagnostic port	SACB-4/T-L-8FUSE CT AXL	1413929	1

Accessories			
Description	Type	Order No.	Pcs. / Pkt.
M12 screw plug with SPEEDCON fast locking system			
for unused M12 sockets of sensor/actuator cables, boxes, and device connectors	PROT-MS SCO	1553129	5
UniCard , for labeling Phoenix Contact devices, AxioLine			
Lettering field size: 7 x 10 mm, 30 individual labels	UCT-EM (7X10)	0830765	10
Torque screwdriver			
With preset torque of 0.4 Nm and 4 mm hexagonal drive	TSD 04 SAC	1208429	1
Nut			
for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive	SAC BIT M12-D15	1208432	1
Nut			
for assembling M12 connectors for assembly, with a knurl diameter of 20 mm, for 4 mm hexagonal drive	SACC BIT M12-D20	1208445	1

Sensor/actuator cabling

By the meter

Cable rings for sensor cables

The standard SAC cables are also available in 100 m cable rings for connecting the M8 and M12 connectors for assembly.

Cables between 110 m and 500 m in length are supplied on cable drums. Please refer to the ordering example below.

Notes:
For information about the cable qualities, see page 320



Cable ring, 100 m, unshielded

Description	Ordering data		
	Type	Order No.	Pcs./Pkt.
PUR, halogen-free - black, cable type: PUR			
3 x 0.25 mm ² , conductor colors: BN/BU/BK	SAC-3P-100,0-PUR/0,25	1501689	1
3 x 0.34 mm ² , conductor colors: BN/BU/BK	SAC-3P-100,0-PUR/0,34	1501650	1
4 x 0.25 mm ² , conductor colors: BN/WH/BU/BK	SAC-4P-100,0-PUR/0,25	1501692	1
4 x 0.34 mm ² , conductor colors: BN/WH/BU/BK	SAC-4P-100,0-PUR/0,34	1501663	1
5 x 0.34 mm ² , conductor colors: BN/WH/BU/BK/GNYE	SAC-5P-100,0-PUR/0,34	1501676	1
6 x 0.25 mm ² , conductor colors: BN/WH/BU/BK/GY/PK	SAC-6P-100,0-PUR/0,25	1550614	1
8 x 0.25 mm ² , conductor colors: WH/BN/GN/YE/GY/PK/BU/RD	SAC-8P-100,0-PUR/0,25	1550630	1
PVC - black, cable type: PVC			
3 x 0.25 mm ² , conductor colors: BN/BU/BK	SAC-3P-100,0-PVC/0,25	1501854	1
3 x 0.34 mm ² , conductor colors: BN/BU/BK	SAC-3P-100,0-PVC/0,34	1501825	1
4 x 0.25 mm ² , conductor colors: BN/WH/BU/BK	SAC-4P-100,0-PVC/0,25	1501867	1
4 x 0.34 mm ² , conductor colors: BN/WH/BU/BK	SAC-4P-100,0-PVC/0,34	1501838	1
5 x 0.34 mm ² , conductor colors: BN/WH/BU/BK/GNYE	SAC-5P-100,0-PVC/0,34	1501841	1
8 x 0.25 mm ² , conductor colors: WH/BN/GN/YE/GY/PK/BU/RD	SAC-8P-100,0-PVC/0,25	1550698	1
12 x 0.14 mm ² , conductor colors: BN/BU/WH/GN/PK/YE/BK/GY/RD/VT/GYPK/RDBU	SAC-12P-100,0-PVC/0,14	1441532	1
17 x 0.14 mm ² , conductor colors: BN/BU/WH/GN/PK/YE/BK/GY/RD/VT/GYPK/RDBU/WHGN/BNGN/WHYE/YEBN/WHGY	SAC-17P-100,0-PVC/0,14	1441545	1
PUR/PVC - black, twisted pair, cable type: 35T			
12 x 0.14 mm ² , conductor colors: (BN/BU)/(WH/GN)/(PK/YE)/(BK/GY)/(RD/VT)/(GYPK/RDBU)			

Ordering example for cable drums with variable cable length:

For cable type: PVC, black, 5 x 0.34 mm², shielded and 340 m in length, the ordering data is as follows:

Order No.	Length [m]
1408527	340
	Increment: 10 m
	Minimum length: 110 m
	Maximum length: 500 m



Cable drum, 110 m to 500 m, unshielded



Cable ring, 100 m, shielded



Cable drum, 110 m to 500 m, shielded

Ordering data			Ordering data			Ordering data		
Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
SAC-3P-PUR-0,25/...	1408505	1	SAC-3P-100,0-PUR/SH-0,25	1526525	1	SAC-3P-PUR-0,25-SH/...	1408511	1
SAC-3P-PUR-0,34/...	1408506	1	SAC-3P-100,0-PUR/SH-0,34	1501702	1	SAC-3P-PUR-0,34-SH/...	1408512	1
SAC-4P-PUR-0,25/...	1408507	1	SAC-4P-100,0-PUR/SH-0,25	1535794	1	SAC-4P-PUR-0,25-SH/...	1408513	1
SAC-4P-PUR-0,34/...	1408508	1	SAC-4P-100,0-PUR/SH-0,34	1501715	1	SAC-4P-PUR-0,34-SH/...	1408514	1
SAC-5P-PUR-0,34/...	1408509	1	SAC-5P-100,0-PUR/SH-0,34	1501728	1	SAC-5P-PUR-0,34-SH/...	1408515	1
			SAC-6P-100,0-PUR/SH-0,14	1550627	1			
SAC-8P-PUR-0,25/...	1408510	1	SAC-8P-100,0-PUR/SH-0,25	1550643	1	SAC-8P-PUR-0,25-SH/...	1408516	1
SAC-3P-PVC-0,25/...	1408518	1						
SAC-3P-PVC-0,34/...	1408519	1	SAC-3P-100,0-PVC/SH-0,34	1550656	1	SAC-3P-PVC-0,34-SH/...	1408525	1
SAC-4P-PVC-0,25/...	1408521	1						
SAC-4P-PVC-0,34/...	1408522	1	SAC-4P-100,0-PVC/SH-0,34	1550669	1	SAC-4P-PVC-0,34-SH/...	1408526	1
SAC-5P-PVC-0,34/...	1408523	1	SAC-5P-100,0-PVC/SH-0,34	1550672	1	SAC-5P-PVC-0,34-SH/...	1408527	1
SAC-8P-PVC-0,25/...	1408524	1	SAC-8P-100,0-PVC/SH-0,25	1550708	1	SAC-8P-PVC-0,25-SH/...	1408528	1
			SAC-12P-100,0-35T/SH-0,14	1405789	1			

Sensor/actuator cabling

By the meter

Cable rings for valve connector cables

The special SAC cables are also available in 100 m cable rings for connecting the valve connectors for assembly.

Cables between 110 m and 500 m in length are supplied on cable drums. Please refer to the ordering example below.

Notes:
For information about the cable qualities, see page 320



Cable ring, 100 m, unshielded



Cable drum, 110 m to 500 m, unshielded

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
PUR, halogen-free - black, cable type: PUR						
3 x 0.5 mm ² , conductor colors: BK 1/BK 2/GNYE	SAC-3P-100,0-PUR/0,5	1457393	1	SAC-3P-PUR-0,5/...	1408529	1
5 x 0.5 mm ² , conductor colors: BK 1/BK 2/BK 3/BK 4/GNYE	SAC-5P-100,0-PUR/0,5	1457403	1	SAC-5P-PUR-0,5/...	1408530	1
PVC - black, cable type: 534						
3 x 0.75 mm ² , conductor colors: BK 1/BK 2/GNYE	SAC-3P-100,0-534/0,75	1457432	1			
5 x 0.75 mm ² , conductor colors: BK 1/BK 2/BK 3/BK 4/GNYE	SAC-5P-100,0-534/0,75	1457445	1			

Ordering example for cable drums with variable cable length:

For cable type: PUR, halogen-free, black, 5 x 0.5 mm², unshielded and 340 m in length, the ordering data is as follows:

Order No.	Length [m]
1408530	340
	Increment: 10 m Minimum length: 110 m Maximum length: 500 m

Master cable rings for sensor/actuator boxes

Master cable rings are available for distributor boxes with spring connection or plug-in screw connection. Similarly, master cables can also be connected to hoods and M23 sockets for assembly.

Notes:

For information about the cable qualities, see page 332



Description	Ordering data		
	Type	Order No.	Pcs. / Pkt.
Master cable ring with PE conductor, PUR/PVC, unshielded, length: 50 m			
4 x 0.34 mm ² / 3 x 0.75 mm ²	SACB- 4X0,34/ 3X0,75-50,0 PUR	1503328	1
6 x 0.34 mm ² / 3 x 0.75 mm ²	SACB- 6X0,34/ 3X0,75-50,0 PUR	1503331	1
8 x 0.34 mm ² / 3 x 0.75 mm ²	SACB- 8X0,34/ 3X0,75-50,0 PUR	1503344	1
8 x 0.5 mm ² / 3 x 1.0 mm ²	SACB- 8X0,5/ 3X1,0-50,0 PUR	1503357	1
12 x 0.5 mm ² / 3 x 1.0 mm ²	SACB-12X0,5/ 3X1,0-50,0 PUR	1503360	1
16 x 0.5 mm ² / 3 x 1.0 mm ²	SACB-16X0,5/ 3X1,0-50,0 PUR	1503373	1
Master cable ring with PE conductor, PUR/PVC, unshielded, length: 200 m			
16 x 0.5 mm ² / 3 x 1.0 mm ²	SACB-16X0,5/ 3X1,0-200,0 PUR	1559893	1
Master cable ring with PE conductor, PUR/PVC, shielded, length: 50 m			
8 x 0.5 mm ² / 3 x 1.0 mm ²	SACB-8X0,5/3X1,0-50 PUR SH	1401240	1
12 x 0.5 mm ² / 3 x 1.0 mm ²	SACB-12X0,5/3X1,0-50 PUR SH	1401239	1
16 x 0.5 mm ² / 3 x 1.0 mm ²	SACB-16X0,5/3X1,0-50 PUR SH	1539156	1
Master cable ring with PE conductor, PUR/PP halogen-free, unshielded, length: 50 m			
8 x 0.5 mm ² / 3 x 1.0 mm ²	SACB-8X0,5/3X1,0-50,0 HPUR	1401690	1
16 x 0.5 mm ² / 3 x 1.0 mm ²	SACB-16X0,5/ 3X1,0-50,0 VPUR	1430938	1
Master cable ring with PE conductor, PUR/PP, halogen-free, highly flexible, unshielded, length: 50 m			
16 x 0.5 mm ² / 3 x 1.0 mm ²	SACB-16X0,5/ 3X1,0-50,0 80MC	1402304	1
Master cable ring without PE conductor, PUR/PVC, unshielded, length: 50 m			
4 x 0.34 mm ² / 2 x 0.75 mm ²	SACB- 4X0,34/2X0,75-50 PUR	1517576	1
6 x 0.34 mm ² / 2 x 0.75 mm ²	SACB- 6X0,34/2X0,75-50 PUR	1517589	1
8 x 0.34 mm ² / 2 x 0.75 mm ²	SACB- 8X0,34/2X0,75-50 PUR	1517592	1
10 x 0.34 mm ² / 2 x 0.75 mm ²	SACB-10X0,34/2X0,75-50 PUR	1517602	1
16 x 0.34 mm ² / 2 x 0.75 mm ²	SACB-16X0,34/2X0,75-50 PUR	1539350	1

Sensor/actuator cabling

Accessories

Assembly tools for sensor/actuator cables

The screwdriver with preset torque is the ideal tool for screwing in all M12 and M8 circular connectors with lengthwise knurl. The advantage of this tool becomes particularly evident when connecting distributor boxes. The tight arrangement and the large number of slots rarely makes it possible to install them correctly by hand. Thanks to the open design of the top unit, tracking is especially easy when screwing in.



		Ordering data		
Description		Type	Order No.	Pcs./Pkt.
Torque screwdriver With preset torque of 0.2 Nm and 4 mm hexagonal drive	①	TSD 02 SAC	1208487	1
Nut For assembling M8 connectors with longitudinal knurl and a knurl diameter of 10 mm, for 4 mm hexagonal drive	②	SAC BIT M8-D10	1208461	1
Nut For assembling M8 connectors with longitudinal knurl and a knurl diameter of 12 mm, for 4 mm hexagonal drive	③	SACC BIT M8-D12	1208474	1
Torque screwdriver With preset torque of 0.4 Nm and 4 mm hexagonal drive	④	TSD 04 SAC	1208429	1
Nut For assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive	⑤	SAC BIT M12-D15	1208432	1
Nut For assembling M12 connectors for assembly, with a knurl diameter of 20 mm, for 4 mm hexagonal drive	⑥	SACC BIT M12-D20	1208445	1

Assembly tools for sensor/actuator cables

To achieve tight plug-in connections, we recommend using assembly tools. M12 and 7/8" circular connectors can be assembled using a torque screwdriver and plug attachment.

The benefits of the plug attachment become particularly clear when connecting the connectors to the distributor boxes. Thanks to the open design, it enables quick adjustment and installation even when space is at a premium.

The version for M12 connectors with hexagonal high-grade steel knurl is also made from high-grade steel. This prevents the connector knurls from being contaminated by corrosive materials.

For greater flexibility, screwdrivers with adjustable torque are available. When used in conjunction with the adapter insert, the available nuts can also be accommodated.



		Ordering data		
Description		Type	Order No.	Pcs./Pkt.
Torque screwdriver With a preset torque of 0.8 Nm and a 4 mm hexagonal drive	①	TSD 08 SAC	1212597	1
Nut For assembling 7/8" connectors, with a knurl diameter of 25 mm, with 4 mm hexagonal drive	②	SAC BIT MIN-D25	1212512	1
Torque screwdriver With preset torque of 0.4 Nm and 4 mm hexagonal drive	③	TSD 04 SAC	1208429	1
Nut For assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a hexagonal knurl wrench size of 14 mm, with 4 mm hexagonal drive	④	SAC BIT M12-W14	1212513	1
Torque screwdriver , accuracy according to standard EN ISO 6789 Adjustable from 0.3 - 1.2 Nm Adjustable from 1.2 - 3 Nm Adjustable from 3 - 6 Nm	⑤	TSD-M 1,2NM TSD-M 3NM TSD-M 6NM	1212224 1212225 1212226	1 1 1
Adapter insert For torque screwdrivers with adjustable torque, for accommodating plug attachments with 4 mm hexagonal drive	⑥	TSD-M SAC-BIT ADAPTER	1212600	1

Sealing elements

During transport or when in the field, unused plug-in connections must be protected or sealed. Plastic or metal screw plugs, sealing caps, and sealing plugs can be used for this. IP65/IP67 and IP69K protection is achieved.



Description	Ordering data		
	Type	Order No.	Pcs./Pkt.
M5 screw plug for unused M5 sockets of sensor/actuator cables, boxes, and device connectors	① PROT-M5	1533288	10
M8 screw plug for unused M8 sockets of sensor/actuator cables, boxes, and device connectors	② PROT-M8	1682540	5
M12 screw plug for unused M12 sockets of sensor/actuator cables, boxes, and device connectors	③ PROT-M12	1680539	5
M12 screw plug with SPEEDCON fast locking system for unused M12 sockets of sensor/actuator cables, boxes, and device connectors	④ PROT-MS SCO	1553129	5
M12 sealing cap for unused M12 connectors of sensor/actuator cables, device connectors, and I/O devices in the field	⑤ PROT-M12 FS	1560251	5
M12 screw plug, metal for unused M12 sockets of shielded sensor/actuator cables, boxes, and device connectors	⑥ PROT-M12 SH	1503302	5
Metal M12 sealing cap for unused M12 connectors of sensor/actuator cables, device connectors, and I/O devices in the field	⑦ PROT-M12 FS-M	1430488	10
Stainless steel M12 screw plug for unused M12 sockets of sensor/actuator cables, boxes, and device connectors in the food and outdoor range	⑧ PROT-M12 FB	1555538	5
Closing cap for Pg9/ Pg11, to close unoccupied connections	⑨ Q-PROT 9/11	1670235	10
M16 screw plug with flat nut for oval housing cutouts	⑩ SACC-M16-SEALING PLUG SET	1453368	10

Sealing elements with holding band or fixing chain

All IP67 interfaces can be closed tightly using the screw plugs and sealing caps in the sizes M8, M12 and 7/8". The holding bands are fastened on the cable or the housing and are thus held captive.

The M12 metal protective cap with fixing chain is suitable for all pin versions. It is used in harsh industrial environments or for EMC applications.



Ordering data			
Description	Type	Order No.	Pcs./Pkt.
Screw plug made from plastic with retaining strap, for sealing unused sockets ①			
M8 for SAC cables	PROT-M 8 MS-PA-CHAIN	1430860	10
M8 with 3 mm fastening eye	PROT-M 8 MS-PA-CHAIN-EYE-DM3	1441105	10
M8 with 12 mm fastening eye	PROT-M 8 MS-PA-CHAIN-EYE	1441095	10
M12 for SAC cables	PROT-M12 MS-PA-CHAIN	1430899	5
M12 with 15 mm fastening eye	PROT-M12 MS-PA-CHAIN-EYE-DM14	1456200	5
7/8" for SAC cables	PROT-MINMS-PA-CHAIN	1430925	10
Plastic sealing cap with holding band, for closing unoccupied connectors ②			
M8 for SAC cables	PROT-M 8 FS-PA-CHAIN	1430857	10
M8 with 8 mm fastening eye	PROT-M 8 FS-PA-CHAIN-EYE	1441082	10
M12 for SAC cables	PROT-M12 FS-PA-CHAIN	1430873	5
M12 with 12 mm fastening eye	PROT-M12 FS-PA-CHAIN-EYE-DM12	1456187	5
M12 with 15 mm fastening eye	PROT-M12 FS-PA-CHAIN-EYE-DM14	1456190	5
7/8" for SAC cables	PROT-MINFS-PA-CHAIN	1430912	10
Sealing cap made of metal with fixing chain and 16 mm fastening eye, for sealing: ③			
unused M12 connectors	PROT-M12 FS-M-CHAIN	1430491	10

Accessories

Accessories for M8 distributor boxes with plug-in master cable connection

The torque screwdriver with an M8 nut is the ideal tool for screwing in all M8 connectors with lengthwise knurl.

A replacement connector hood is available for distributors with 4 to 10 slots. The corresponding screwdriver, torque screwdriver, and W24 nut for defined tightening of the pressure nut can be found in the ordering data.

The PROT M8 screw plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.



Notes:

Additional marking material and tools can be found in Catalog 3.

Description	Ordering data		
	Type	Order No.	Pcs./Pkt.
Sensor/actuator connector hood , with marking label, for sensor/actuator box with:			
4 single-occupancy M8 slots	SACB-C-H180- 4/3-M8	1521229	1
6 single-occupancy M8 slots	SACB-C-H180- 6/3-M8	1521216	1
8 single-occupancy M8 slots	SACB-C-H180- 8/3-M8	1516425	1
Ten single-occupancy M8 slots	SACB-C-H180-10/3-M8	1516412	1
M8 screw plug	PROT-M8	1682540	5
for unused M8 sockets of sensor/actuator cables, boxes, and device connectors			
Labeling material , 10-section			
- Unprinted	ZBF10:UNBEDRUCKT	0809997	10
- Configurable	ZBF10 CUS	0825031	1
Torque screwdriver	TSD 02 SAC	1208487	1
with preset torque of 0.2 Nm and 4 mm hexagonal drive			
Nut	SAC BIT M8-D10	1208461	1
for assembling M8 connectors with longitudinal knurl and a knurl diameter of 10 mm, for 4 mm hexagonal drive			
Nut	SACC BIT M8-D12	1208474	1
for assembling M8 connectors with longitudinal knurl and a knurl diameter of 12 mm, for 4 mm hexagonal drive			
Screwdriver	SZK PZ2 VDE	1206463	10
Size: PZ2 x 100 mm, length: 205 mm			
Torque screwdriver	TSD 25 SAC	1212315	1
with a preset torque of 2.5 Nm and 4 mm hexagonal drive			
Nut	SAC BIT HOOD-W 24	1212486	1
for secure tightening of the pressure nuts with 24 mm wrench size, for TSD 25 SAC, for 2.5 Nm			

Accessories for M8 distributor boxes with M12 and M16 plug-in connection

Corresponding sockets in angled format for distributors with 4 to 10 slots are available in the ordering data. In order to use a master cable according to the specific requirements, sockets for free assembly are available in straight and angled format.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.

The torque screwdriver with matching nuts is the ideal tool for screwing together all M8 connectors with lengthwise knurl.

The PROT M8 screw plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.



Notes:
Additional marking material and tools can be found in Catalog 3.

Description	
M16 socket , angled, with master cable, for sensor/actuator box with:	①
4 slots, cable length: 5 m	
4 slots, cable length: 10 m	
6 slots, cable length: 5 m	
6 slots, cable length: 10 m	
8 slots, cable length: 5 m	
8 slots, cable length: 10 m	
10 slots, cable length: 5 m	
10 slots, cable length: 10 m	
M12 socket , angled, with connected master cable, for sensor/actuator box with:	②
4 slots, cable length: 5 m	
4 slots, cable length: 10 m	
4 slots, cable length: variable	
6 slots, cable length: 5 m	
6 slots, cable length: 10 m	
6 slots, cable length: variable	
M16 socket , 14-pos., straight, freely configurable, with solder connection, for external cable diameter of 6.0 mm ... 8.0 mm	③
M16 socket , 14-pos., angled, freely configurable, with solder connection, for external cable diameter of 6.0 mm ... 8.0 mm	④
M8 screw plug for unused M8 sockets of sensor/actuator cables, boxes, and device connectors	⑤
Labeling material , 10-section - Unprinted - Configurable	⑥
Torque screwdriver with preset torque of 0.2 Nm and 4 mm hexagonal drive	⑦
Nut for assembling M8 connectors with longitudinal knurl and a knurl diameter of 10 mm, for 4 mm hexagonal drive	⑧
Nut for assembling M8 connectors with longitudinal knurl and a knurl diameter of 12 mm, for 4 mm hexagonal drive	⑨

Ordering data		
Type	Order No.	Pcs./Pkt.
SAC-8P- 5,0-PUR/M16FR	1693681	1
SAC-8P-10,0-PUR/M16FR	1693694	1
SAC-10P- 5,0-PUR/M16FR	1693704	1
SAC-10P-10,0-PUR/M16FR	1693717	1
SAC-12P- 5,0-PUR/M16FR	1693720	1
SAC-12P-10,0-PUR/M16FR	1693733	1
SAC-14P- 5,0-PUR/M16FR	1693746	1
SAC-14P-10,0-PUR/M16FR	1693759	1
SAC-6P- 5,0-PURMC/M12FR	1407820	1
SAC-6P-10,0-PURMC/M12FR	1407821	1
SAC-6P-M12FR-PURMC/	1520987	1
SAC-8P- 5,0-PURMC/M12FR	1407822	1
SAC-8P-10,0-PURMC/M12FR	1407823	1
SAC-8P-M12FR-PURMC/	1520990	1
SACC-M16FS-14CON-M	1500554	1
SACC-M16FR-14CON-M	1500253	1
PROT-M8	1682540	5
ZBF10:UNBEDRUCKT	0809997	10
ZBF10 CUS	0825031	1
TSD 02 SAC	1208487	1
SAC BIT M8-D10	1208461	1
SACC BIT M8-D12	1208474	1

Ordering example for a socket with variable master cable:

For an M12 socket for 4 slots and a master cable length of 15 m, the ordering data is as follows:

Order No.	Length [m] 40 m, maximum
1520987	15.0
	Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Accessories

Accessories for M12 distributor boxes with plastic thread and connector hood

The torque screwdriver with M12 nut is the ideal tool for screwing all M12 connectors with longitudinal knurl.

A replacement connector hood is available for the distributors. The corresponding screwdriver, torque screwdriver, and W24 nut for defined tightening of the pressure nut can be found in the ordering data.

The PROT-MS SCO screw plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.



Notes:
Additional marking material and tools can be found in Catalog 3.

		Ordering data		
Description	Type	Order No.	Pcs./Pkt.	
Connector hood with integrated connector , for M12 sensor/actuator boxes with plastic thread and plug-in screw connection, for 4, 6 or 8 slots ①				
M12 screw plug with SPEEDCON fast locking system for unused M12 sockets of sensor/actuator cables, boxes, and device connectors ②	SACB-C-H180-8/16 SCO P	1453229	1	
Labeling material , 5-section ③ - Unprinted, white - Unprinted, yellow - Configurable, white - Configurable, yellow	PROT-MS SCO	1553129	5	
Torque screwdriver with preset torque of 0.4 Nm and 4 mm hexagonal drive ④	SS-ZB 17,5 WH SS-ZB 17,5 YE SS-ZB 17,5 WH CUS SS-ZB 17,5 YE CUS	0804963 0804976 0824468 0824469	50 50 1 1	
Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive ⑤	TSD 04 SAC	1208429	1	
Nut for assembling M12 connectors for assembly, with a knurl diameter of 20 mm, for 4 mm hexagonal drive ⑥	SAC BIT M12-D15	1208432	1	
Screwdriver Size: PZ2 x 100 mm, length: 205 mm ⑦	SACC BIT M12-D20	1208445	1	
Torque screwdriver with a preset torque of 2.5 Nm and 4 mm hexagonal drive ⑧	SZK PZ2 VDE	1206463	10	
Nut for secure tightening of the pressure nuts with 24 mm wrench size, for TSD 25 SAC, for 2.5 Nm ⑨	TSD 25 SAC	1212315	1	
Screwdriver , suitable for all screw terminal blocks up to 1.5 mm ² connection cross section, without VDE approval Blade: 0,4 x 2,0 x 60 mm, length: 157 mm ⑩	SAC BIT HOOD-W 24	1212486	1	
Ferrules , without plastic sleeves, CSA-certified ⑪	SZS 0,4X2,0	1205202	10	
0.5 mm ²	A 0,5 - 6	3200218	1000	
0.75 mm ²	A 0,75-10	3200234	1000	
1.0 mm ²	A 1 -10	3200250	1000	
1.5 mm ²	A 1,5 -10	3200276	1000	

Accessories for M12 distributor boxes with metal thread and plug-in screw connection

The torque screwdriver with M12 nut is the ideal tool for screwing all M12 connectors with longitudinal knurl.

A replacement connector hood is available for the distributors. The corresponding screwdriver, torque screwdriver, and W24 nut for defined tightening of the pressure nut can be found in the ordering data.

The PROT-MS SCO screw plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.



Notes:

Additional marking material and tools can be found in Catalog 3.

Description

Connector hood with integrated connector, for M12 sensor/actuator boxes with metal thread and plug-in screw connection, for 4, 6 or 8 slots ①

M12 screw plug with SPEEDCON fast locking system for unused M12 sockets of sensor/actuator cables, boxes, and device connectors ②

Labeling material, 5-section ③
 - Unprinted, white
 - Unprinted, yellow
 - Configurable, white
 - Configurable, yellow

Torque screwdriver ④
 with preset torque of 0.4 Nm and 4 mm hexagonal drive

Nut ⑤
 for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive

Nut ⑥
 for assembling M12 connectors for assembly, with a knurl diameter of 20 mm, for 4 mm hexagonal drive

Screwdriver ⑦
 Size: PZ1 x 80 mm, length: 178 mm

Torque screwdriver ⑧
 with a preset torque of 2.5 Nm and 4 mm hexagonal drive

Nut ⑨
 for secure tightening of the pressure nuts with 24 mm wrench size, for TSD 25 SAC, for 2.5 Nm

Ordering data

Type	Order No.	Pcs./Pkt.
SACB-C-H180 8/16 SCO	1516713	10
PROT-MS SCO	1553129	5
SS-ZB 17,5 WH	0804963	50
SS-ZB 17,5 YE	0804976	50
SS-ZB 17,5 WH CUS	0824468	1
SS-ZB 17,5 YE CUS	0824469	1
TSD 04 SAC	1208429	1
SAC BIT M12-D15	1208432	1
SACC BIT M12-D20	1208445	1
SZK PZ1 VDE	1206450	10
TSD 25 SAC	1212315	1
SAC BIT HOOD-W 24	1212486	1

Accessories

Accessories for shielded M12 distributor boxes

For the distributors, suitable shielded sockets are available in angled design with a pre-assembled master cable. Further accessories include straight and angled M23 sockets for free assembly.

The PROT M12 SH screw plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.

The torque screwdriver with matching nuts is the ideal tool for screwing together all M12 connectors with lengthwise knurl.



Notes:
Additional marking material and tools can be found in Catalog 3.

		Ordering data		
Description	Type	Order No.	Pcs./Pkt.	
M23 socket , 19-pos., angled, shielded, with connected master cable ①				
Conductor length: 5 m	RCK-TWGM/BL16+3/ 5,0PUR SH	1519529	1	
Conductor length: 10 m	RCK-TWGM/BL16+3/10,0PUR SH	1511828	1	
M23 socket , 19-pos., straight, shielded, freely configurable, with solder connection, for cable Ø: 9.5 mm ... 14.5 mm ②				
	RC/TGGM/KVD/LBL 16+3	1685505	1	
M23 socket , 19-pos., angled, shielded, freely configurable, with solder connection, for cable Ø: 9.5 mm ... 14.5 mm ③				
	RC/TWGM/KVD/LBL 16+3	1685518	1	
Special pipe spanner ④	PLUSCON-RCS	1665062	1	
Auxiliary tool for mounting the M23 connector housing that can be assembled				
M12 screw plug, metal ⑤	PROT-M12 SH	1503302	5	
for unused M12 sockets of shielded sensor/actuator cables, boxes, and device connectors				
Metal M23 sealing cap , for unused M23 connectors ⑥	MSK 1	1665897	10	
- without steel wire	MSK 2	1665907	1	
- with steel wire				
Sealing cap made of plastic , for unoccupied M23 connectors ⑦	KSK 1	1685013	10	
Labeling material ⑧	ZBN 18:UNBEDRUCKT	2809128	10	
- Unprinted, white	UC-TMF 16 YE	0819259	10	
- Unprinted, yellow	ZBN 18 CUS	0825059	1	
- Configurable, white	ZBN 18 YE CUS	0825058	1	
- Configurable, yellow				
Torque screwdriver ⑨	TSD 04 SAC	1208429	1	
with preset torque of 0.4 Nm and 4 mm hexagonal drive				
Nut ⑩	SAC BIT M12-D15	1208432	1	
for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive				
Nut ⑪	SACC BIT M12-D20	1208445	1	
for assembling M12 connectors for assembly, with a knurl diameter of 20 mm, for 4 mm hexagonal drive				

Accessories for QUICKON distributor boxes with a connection cross section of 0.14 mm² ... 0.34 mm²

The Q-PROT 9/11 sealing plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.

A torque screwdriver with W13 nut is available for the fast connection pressure nut. The handling of the tools is self-explanatory.

A replacement connector hood is available for the distributors. The corresponding screwdriver, torque screwdriver, and W24 nut for defined tightening of the pressure nut can be found in the ordering data.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.

The QUICKON replacement set, consisting of splice ring, pressure nut, and cable seal.



Notes:

Additional marking material and tools can be found in Catalog 3.

Description	
Connector hood with an integrated connector, for sensor/actuator boxes with QUICKON fast connection technology and plug-in screw connection, for 4, 6 or 8 slots	①
Closing cap for Pg9/ Pg11, to close unoccupied connections	②
Labeling material , 5-section - Unprinted, white - Unprinted, yellow - Configurable, white - Configurable, yellow	③
QUICKON set for replacement purposes, consisting of splice ring, pressure nut and conductor seal	④
Screwdriver Size: PZ1 x 80 mm, length: 178 mm	⑤
Torque screwdriver with a preset torque of 2.0 Nm and 4 mm hexagonal drive	⑥
Nut for secure tightening of the pressure nuts with 13 mm wrench size, for TSD 20 SAC, for 0.8 Nm, and 2.0 Nm	⑦
Torque screwdriver with a preset torque of 2.5 Nm and 4 mm hexagonal drive	⑧
Nut for secure tightening of the pressure nuts with 24 mm wrench size, for TSD 25 SAC, for 2.5 Nm	⑨

Ordering data		
Type	Order No.	Pcs./ Pkt.
SACB-C-H180 8/4 QO-0,34	1560235	1
Q-PROT 9/11	1670235	10
SS-ZB 17,5 WH	0804963	50
SS-ZB 17,5 YE	0804976	50
SS-ZB 17,5 WH CUS	0824468	1
SS-ZB 17,5 YE CUS	0824469	1
QO-SET	1548626	20
SZK PZ1 VDE	1206450	10
TSD 20 SAC	1212020	1
SAC BIT QUICKON-W13	1212033	1
TSD 25 SAC	1212315	1
SAC BIT HOOD-W 24	1212486	1

Sensor/actuator cabling

Accessories

Accessories for QUICKON distributor boxes with a connection cross section of 0.34 mm² ... 0.75 mm²

The distributors are supplied as standard with a black rubber seal for an external cable diameter of 6.5 mm to 9.5 mm. Further rubber seals for master cables from 4.0 mm to 6.5 mm (yellow seal) or 9.0 mm to 13.0 mm (red seal) are available in the ordering data. The torque screwdriver with W24 nut is suitable for the defined tightening of the pressure nut.

The QUICKON replacement set consists of pressure nut, cap, cable seal, and splice ring.

The socket wrench is used to conveniently loosen and fasten the QUICKON pressure nut.

The Q-PROT 9/11 sealing plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.

Notes:

Additional marking material and tools can be found in Catalog 3.



Description	
Rubber seal for Pg13.5 screw connection for cable Ø: 4.0 mm ... 6.5 mm	①
Rubber seal for Pg13.5 screw connection for cable Ø: 6.5 mm ... 9.5 mm	②
Rubber seal for Pg13.5 screw connection for cable Ø: 9.0 mm ... 13.0 mm	③
Closing cap for Pg9/ Pg11, to close unoccupied connections	④
Labeling material - Unprinted, white - Unprinted, yellow - Configurable, white - Configurable, yellow	⑤
QUICKON set for replacement purposes, consisting of pressure nut, cap, conductor seal and splice ring	⑥
Screwdriver Size: PZ1 x 80 mm, length: 178 mm	⑦
Slotted socket wrench for QUICKON nuts and panel feed-throughs, for wrench size: 22 mm	⑧
Torque screwdriver with a preset torque of 2.5 Nm and 4 mm hexagonal drive	⑨
Nut for secure tightening of the pressure nuts with 24 mm wrench size, for TSD 25 SAC, for 2.5 Nm	⑩

Ordering data			
Type	Order No.	Pcs./ Pkt.	
SACB-D PG 13,5 (4,0-6,5) YE	1680377	10	
SACB-D PG 13,5 (6,5-9,5) BK	1680380	10	
SACB-D PG 13,5 (9,0-13,0) RD	1680393	10	
Q-PROT 9/11	1670235	10	
ZBN 18:UNBEDRUCKT UC-TMF 16 YE ZBN 18 CUS ZBN 18 YE CUS	2809128 0819259 0825059 0825058	10 10 1 1	
Q SET-11/4 COD1 SACB-Q	1670743	25	
SZK PZ1 VDE	1206450	10	
QSS 22	1670206	1	
TSD 25 SAC	1212315	1	
SAC BIT HOOD-W 24	1212486	1	

Sensor/actuator cabling

Sensor/actuator cable – cable range

Symbol key

	With UL Style		Suitable for drag chain applications		Resistant to welding sparks
	UV-resistant		Flame-retardant		High temperature resistance
	Good oil resistance		Good resistance to chemicals		Suitable for torsional stress
	Halogen-free		Suitable for the food industry		Suitable for railway applications

PUR, halogen-free – PHOENIX CONTACT standard



Permanently flexible control cables designed for use in drag chains, revolving/swivel tables, and as machine control cables for extreme operating conditions. The control cables are suitable for bending cycle loads with long-term durability. The special PUR outer sheath offers excellent resistance to oils according to DIN EN 60811-2-1, lubricants, cooling agents, and other aggressive substances.

Additional features of the control cables: halogen- and PVC-free, no silicone or substances that would hinder coating with paint or varnish, resistant to hydrolysis and flame-retardant according to UL-FT2.

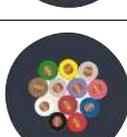
Outer sheath material	PUR
Min. bending cycles	4 million
Minimum bending radius	10 x D
Traverse path	10 m
Acceleration	10 m/s²
Speed	3 m/s
Tested at	+20°C ... +25°C

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR Black	3-pos.	M8	3 x 0.25 mm ² (32 x 0.1 mm)		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	192 254 256 304
		M8 Shielded	3 x 0.25 mm ² (32 x 0.1 mm) Shielding: copper braid		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	199 304
		M12	3 x 0.34 mm ² (42 x 0.1 mm)		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	192 256 304
		M12 Shielded	3 x 0.34 mm ² (42 x 0.1 mm) Shielding: copper braid		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	199
		Valve connectors	3 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	236 to 244 306

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR Black	4-pos.	M8	4 x 0.25 mm ² (32 x 0.1 mm)		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	192 200 304
		M8 Shielded	4 x 0.25 mm ² (32 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	205 304
		M12	4 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	200 255 304
		M12 Shielded	4 x 0.34 mm ² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	205 304
		M12 Power	4 x 1.5 mm ² (84 x 0.15 mm)		Brown, white, blue, black	PP	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C	295
		M12 Power	4 x 1.5 mm ² (84 x 0.15 mm)		Black 1, black 2, black 3, green-yellow	PP	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C	294
		M12 Power Shielded	4 x 1.5 mm ² (78 x 0.15 mm) Shielding: copper braid		Brown, white, blue, black	PP	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C	295
		M12 Power	4 x 2.5 mm ² (141 x 0.15 mm)		Brown, white, blue, black	PP	Mobile: -30°C ... +80°C Fixed: -50°C ... +80°C	300
		Valve connectors	4 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, black 3, green-yellow	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	236 to 244
	5-pos.	M12	5 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black, green-yellow	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	207 304
		M12 Shielded	5 x 0.34 mm ² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black, gray	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	210 304
		Valve connectors	5 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	248 306

Sensor/actuator cabling

Sensor/actuator cable – cable range

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR Black	5-pos.	M12 Power	5 x 2.5 mm ² (141 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	296
		M12 Power Shielded	5 x 2.5 mm ² (141 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	296
	6-pos.	M8	6 x 0.25 mm ² (32 x 0.1 mm)		Brown, white, blue, black, gray, pink	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	211 304
		M8 Shielded	6 x 0.14 mm ² (18 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black, gray, pink	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	212 304
		M12 Power	6 x 1.5 mm ² (78 x 0.15 mm)		Black 1, black 2, black 3, black 4, black 5, green-yellow	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	See: phoenix contact.net/ products
		M12 Power Shielded	6 x 1.5 mm ² (78 x 0.15 mm)		Black 1, black 2, black 3, black 4, black 5, green-yellow	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	See: phoenix contact.net/ products
	8-pos.	M8	8 x 0.14 mm ² (18 x 0.1 mm)		According to DIN 47100	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	213
		M8 Shielded	8 x 0.14 mm ² (18 x 0.1 mm) Shielding: copper braid		According to DIN 47100	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	216
		M12	8 x 0.25 mm ² (32 x 0.1 mm)		According to DIN 47100	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	214 304
		M12 Shielded	8 x 0.25 mm ² (32 x 0.1 mm) Shielding: copper braid		According to DIN 47100	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	217 304
	12-pos.	M12	12 x 0.14 mm ² (18 x 0.1 mm)		According to DIN 47100	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	218
	17-pos.	M12	17 x 0.14 mm ² (18 x 0.1 mm)		According to DIN 47100	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	218

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR Orange	4-pos.	M12 Power Shielded	4 x 1.5 mm ² (78 x 0.15 mm) Shielding: copper braid		Black 1, black 2, black 3, green-yellow	PP	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C	294
115 Black	5-pos.	M8	5 x 0.25 mm ² (32 x 0.1 mm)		Brown, white, blue, black, gray	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	206
		M12	5 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black, gray	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	207
121 Black	3-pos.	Valve connectors	3 x 1.0 mm ² (32 x 0.20 mm)		Black 1, black 2, green-yellow	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	236 238
240 Yellow	3-pos.	Valve connectors	3 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	236 to 244
	4-pos.	M12	4 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	200
	5-pos.	Valve connectors	5 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	236 to 244
280 Gray	3-pos.	M8	3 x 0.25 mm ² (32 x 0.1 mm)		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	192 194 256
		M12	3 x 0.34 mm ² (42 x 0.1 mm)		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	194 256
	4-pos.	Valve connectors	3 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	236 to 244
		M12	4 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	200

Sensor/actuator cabling

Sensor/actuator cable – cable range

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
280 Gray	5-pos.	Valve connectors	5 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	248
		M12 Power	5 x 2.5 mm ² (141 x 0.15 mm)		Brown, white, blue, black, gray	PP	Mobile: -30°C ... +80°C Fixed: -50°C ... +80°C	298
	8-pos.	M12 Shielded	8 x 0.25 mm ² (32 x 0.1 mm) Shielding: copper braid		According to DIN 47100	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	217
290 Gray	5-pos.	M12 Power	5 x 1.5 mm ² (78 x 0.15 mm)		Brown, white, blue, black, gray	PP	Mobile: -30°C ... +80°C Fixed: -50°C ... +80°C	298

PUR/PVC (also applies to type PUR for M5 connectors)



The cables are designed for robust use in machine tools, assembly/production lines, as well as production involving metal cutting. The cables are free of silicone and substances that would hinder coating with paint or varnish and have a high resistance to abrasion. The outer sheath also offers excellent resistance to oil and chemicals according to DIN EN 60811-2-1 and is

flame-retardant according to DIN EN 50265.

The outer sheath is manufactured using the coextrusion process.

Outer sheath material PUR
Inner sheath material PVC

Min. bending cycles 2 million
Minimum bending radius 10 x D

Traversal path 5 m
For type 35 T 10 m

Acceleration 5 m/s²
For type 35 T 10 m/s²

Speed 3 m/s
Tested at +20°C ... +25°C

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
35T Black Twisted pair	12-pos.	M12 Shielded	6 x 2 x 0.14 mm ² (18 x 0.1 mm) Shielding: copper braid		According to DIN 47100	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	220
	17-pos.	M12 Shielded	7 x 2 x 0.14 mm ² 1 x 3 x 0.14 mm ² (18 x 0.1 mm) Shielding: copper braid		According to DIN 47100	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	221
PUR Black For M5	3-pos.	M5	3 x 0.14 mm ² (18 x 0.1 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -15°C ... +80°C	190
	4-pos.	M5	4 x 0.14 mm ² (18 x 0.1 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -15°C ... +80°C	190

PUR irradiated, resistant to welding sparks



Due to the irradiation of the PUR outer sheath, the properties typical of PUR, e.g., resistance to temperature, UV, and welding sparks, are greatly improved. The cables are designed for robust use in the field of robot technology. Thanks to their very high durability, the cables are particularly suitable for welding robots. Flame-retardant according to DIN VDE 0472, Part 804, test type B.

Outer sheath material PUR irradiated

Min. bending cycles	5 million
Minimum bending radius	10 x D
Traverse path	10 m
Acceleration	10 m/s²
Speed	3 m/s
Torsion	±360°
Tested at	+20°C ... +25°C

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
150 Orange	3-pos.	M12	3 x 0.34 mm ² (42 x 0.1 mm)		Brown, blue, black	Halogen-free polyester-based plastic	Mobile: -40°C ... +105°C Fixed: -50°C ... +105°C	194 256
		Valve connectors	3 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, green-yellow	Halogen-free polyester-based plastic	Mobile: -40°C ... +105°C Fixed: -50°C ... +105°C	236 to 244
	4-pos.	M12	4 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black	Halogen-free polyester-based plastic	Mobile: -40°C ... +105°C Fixed: -50°C ... +105°C	200
	5-pos.	M12	4 x 0.34 mm ² + 1 x 0.5 mm ² (42 x 0.1 mm, 24 x 0.15 mm)		Brown, white, blue, black, green-yellow	Halogen-free polyester-based plastic	Mobile: -40°C ... +105°C Fixed: -50°C ... +105°C	207
		Valve connectors	5 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	Halogen-free polyester-based plastic	Mobile: -40°C ... +105°C Fixed: -50°C ... +105°C	248
160 Yellow	4-pos.	M12	4 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black	Halogen-free polyester-based plastic	Mobile: -40°C ... +105°C Fixed: -50°C ... +105°C	200

Sensor/actuator cabling

Sensor/actuator cable – cable range

TPE-U highly flexible



Permanently flexible cables excellent for use in drag chains and industrial robots. The cables can be used wherever extreme bending and torsional stress are present simultaneously and considerably longer durability has to be achieved. The control cables are resistant to welding sparks and are thus suitable only for use in resistance welding processes. The use of new materials eliminates irradiation cross-linking, which makes the cables easier to recycle. The cables thus meet the requirements of DIN EN ISO 14001.

Further features of the control cables: halogen- and PVC-free, flame-retardant according to UL-FT1, VWV1, and 1581 §1061, very good resistance to oils according to VDE 0250 Part 407, chemicals, lubricants, and coolants as well as other aggressive substances.

Due to the very robust outer sheath, the cable sheath is only removed in 5 cm increments.

Outer sheath material TPE-U

Min. bending cycles 10 million
Minimum bending radius
 Fixed 5 x D
 Mobile 7.5 x D

Traversal path 5 m
Acceleration 20 m/s²
Speed 3.33 m/s

Torsion angle ± 360°
Min. torsion cycles 13 million

Tested at +20°C ... +25°C

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
800 Gray	3-pos.	M8	3 x 0.25 mm ² (32 x 0.1 mm)		Brown, blue, black	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	192 194 256
		M12	3 x 0.34 mm ² (42 x 0.1 mm)		Brown, blue, black	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	194 256 198
	4-pos.	M8	4 x 0.25 mm ² (32 x 0.1 mm)		Brown, white, blue, black	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	192 200
		M12	4 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	200 204
	5-pos.	M12	5 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black, gray	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	207
	8-pos.	M12	8 x 0.25 mm ² (32 x 0.1 mm)		According to DIN 47100	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	214
802 Gray	5-pos.	M12	5 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black, green-yellow	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	209

PVC – 80°C and 105°C



This very reasonably priced high-quality cable is suitable for use under dry conditions and average mechanical strain associated with machine tools, packaging machines, and assembly/production lines. The cable offers a certain degree of resistance to oil and chemicals and is less susceptible to wear. Flame-retardant to VW-1 according to UL 758.

VW-1 is the toughest flame-resistance test for single cables.

Outer sheath material PVC

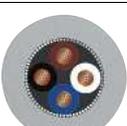
Minimum bending radius 10 x D

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PVC Black	3-pos.	M8	3 x 0.25 mm ² (14 x 0.15 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	194 256 304
		M12	3 x 0.34 mm ² (19 x 0.15 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	194 256 304
		M12 Shielded	3 x 0.34 mm ² (42 x 0.1 mm) Shielding: copper braid		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	199 304
		Valve connectors	3 x 0.5 mm ² (16 x 0.2 mm)		Black 1, black 2, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	236 to 244
	4-pos.	M8	4 x 0.25 mm ² (14 x 0.15 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	200 304
		M12	4 x 0.34 mm ² (19 x 0.15 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	200 304
		M12 Shielded	4 x 0.34 mm ² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	205 304
		Valve connectors	4 x 0.5 mm ² (16 x 0.2 mm)		Black 1, black 2, black 3, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	248
		M12 Power	4 x 2.5 mm ² (141 x 0.15 mm)		Brown, white, blue, black	PVC	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	301

Sensor/actuator cabling

Sensor/actuator cable – cable range

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page	
PVC Black	5-pos.	M12	5 x 0.34 mm ² (19 x 0.15 mm)		Brown, white, blue, black, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	207 304	
		M12 Shielded	5 x 0.34 mm ² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	210 304	
		Valve connectors	5 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	236 to 244	
		M12 Power	5 x 2.5 mm ² (141 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PVC	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	297	
		M12 Power Shielded	5 x 2.5 mm ² (141 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PVC	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	297	
	6-pos.	M12 Power	6 x 1.5 mm ² (78 x 0.15 mm)		Black 1, black 2, black 3, black 4, black 5, green-yellow	PVC	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	See: phoenix contact.net/ products	
		M12 Power Shielded	6 x 1.5 mm ² (78 x 0.15 mm)		Black 1, black 2, black 3, black 4, black 5, green-yellow	PVC	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	See: phoenix contact.net/ products	
	8-pos.	M12	8 x 0.25 mm ² (14 x 0.15 mm)		White, brown, green, yellow, gray, pink, blue, red	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	214 304	
		M12 Shielded	8 x 0.25 mm ² (32 x 0.1 mm) Shielding: copper braid and filler litz wire		White, brown, green, yellow, gray, pink, blue, red	PVC	Mobile: -5°C ... +105°C Fixed: -25°C ... +105°C	217 304	
	12-pos.	M12	12 x 0.14 mm ² (18 x 0.1 mm)		According to DIN 47100	PVC	Mobile: -5°C ... +90°C Fixed: -40°C ... +90°C	219 304	
	17-pos.	M12	17 x 0.14 mm ² (18 x 0.1 mm)		According to DIN 47100	PVC	Mobile: -5°C ... +90°C Fixed: -25°C ... +90°C	219 304	
	110 Black	4-pos.	M12 Power	4 x 1.5 mm ² (78 x 0.15 mm)		Brown, white, blue, black	PVC	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	301

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
500 Gray	3-pos.	M8	3 x 0.25 mm ² (14 x 0.15 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	194 256
		M12	3 x 0.34 mm ² (19 x 0.15 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	194 256
		M12 Shielded	3 x 0.34 mm ² (42 x 0.1 mm) Shielding: copper braid		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	199
	4-pos.	M8	4 x 0.25 mm ² (14 x 0.15 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	200
		M12	4 x 0.34 mm ² (19 x 0.15 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	200
		M12 Shielded	4 x 0.34 mm ² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	205
	5-pos.	M12	5 x 0.34 mm ² (19 x 0.15 mm)		Brown, white, blue, black, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	207
		M12 Shielded	5 x 0.34 mm ² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black, gray	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	210
		M12 Power	5 x 2.5 mm ² (141 x 0.15 mm)		Brown, white, blue, black, gray	PVC	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	299
	8-pos.	M12	8 x 0.25 mm ² (14 x 0.15 mm)		White, brown, green, yellow, gray, pink, blue, red	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	214
510 Gray	5-pos.	M12 Power	5 x 1.5 mm ² (78 x 0.15 mm)		Brown, white, blue, black, gray	PVC	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	299
515 Black	5-pos.	M12	5 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black, gray	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	207

Sensor/actuator cabling

Sensor/actuator cable – cable range

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
534 Black	3-pos.	Valve connectors	3 x 0.75 mm ² (24 x 0.2 mm)		Black 1, black 2, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	236 to 244 306
	4-pos.	Valve connectors	4 x 0.75 mm ² (24 x 0.2 mm)		Black 1, black 2, black 3, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	248
	5-pos.	Valve connectors	5 x 0.75 mm ² (24 x 0.2 mm)		Black 1, black 2, black 3, black 4, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	248 306
540 Yellow	3-pos.	M12	3 x 0.34 mm ² (42 x 0.1 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	194 256
	4-pos.	M12	4 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	200
	5-pos.	M12	5 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black, gray	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	207
542 Yellow	3-pos.	M12	3 x 0.34 mm ² (42 x 0.1 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +105°C Fixed: -25°C ... +105°C	194 256
	4-pos.	M12	4 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +105°C Fixed: -25°C ... +105°C	200
	5-pos.	M12	5 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black, gray	PVC	Mobile: -5°C ... +105°C Fixed: -25°C ... +105°C	207

Sensor/actuator cabling

Sensor/actuator boxes – cable range

PUR/PVC (for sensor/actuator boxes)



The cables are designed for robust use in machine tools, assembly/production lines, as well as production involving metal cutting. The cables are free of silicone and substances that would hinder coating with paint or varnish and have a high resistance to abrasion. The outer sheath also offers excellent resistance to oil and chemicals according to VDE 0472 Part 803, is flame-retardant according to DIN EN 50265, and is resistant to hydrolysis. The outer sheath

is manufactured using the coextrusion process.

Outer sheath material PUR
Inner sheath material PVC

Min. bending cycles 1.5 ... 2 million
Minimum bending radius 10 x D
Traverse path 2 m
Speed 2 m/s
Tested at +20°C ... +25°C

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR/PVC Black	3-pos., single- occupancy	M8 and QUICKON up to 0.34 mm ² 4 slots	4 x 0.34 mm ² 2 x 0.75 mm ²		White, green, yellow, gray, brown, blue	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	266 272 307
		M8 and QUICKON up to 0.34 mm ² 6 slots	6 x 0.34 mm ² 2 x 0.75 mm ²		White, green, yellow, gray, pink, red, brown, blue	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	266 272 307
		M8 and QUICKON up to 0.34 mm ² 8 slots	8 x 0.34 mm ² 2 x 0.75 mm ²		White, green, yellow, gray, pink, red, black, violet, brown, blue	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	266 272 307
		M8 10 slots	10 x 0.34 mm ² 2 x 0.75 mm ²		White, green, yellow, gray, pink, red, black, violet, white-pink, pink-brown, brown, blue	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	266 307
	4-pos., double- occupancy	QUICKON up to 0.34 mm ² 4 slots	8 x 0.34 mm ² 2 x 0.75 mm ²		White, green, yellow, gray, gray-pink, red-blue, white-green, brown-green, brown, blue	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	272
		M8 and QUICKON up to 0.34 mm ² 8 slots	16 x 0.34 mm ² 2 x 0.75 mm ²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	266 272 307

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR/PVC Black	4-pos., single- occupancy	M12 and QUICKON up to 0.75 mm ² 4 slots	4 x 0.34 mm ² 3 x 0.75 mm ²		White, green, yellow, gray, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	268 270 273 307
		M12 and QUICKON up to 0.75 mm ² 6 slots	6 x 0.34 mm ² 3 x 0.75 mm ²		White, green, yellow, gray, pink, red, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	268 270 273 307
		M12 and QUICKON up to 0.75 mm ² 8 slots	8 x 0.34 mm ² 3 x 0.75 mm ²		White, green, yellow, gray, pink, red, black, violet, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	268 270 273 307
	5-pos., double- occupancy	M12 4 slots	8 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, yellow, gray, gray-pink, red-blue, white-green, brown-green, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	268 270 307
		M12 6 slots	12 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, pink, red, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	268 270 307
		M12 8 slots	16 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	268 270 307

Sensor/actuator cabling

Sensor/actuator boxes – cable range

PUR/PVC shielded (for sensor/actuator boxes)



The cables are designed for robust use in machine tools, assembly/production lines, as well as production involving metal cutting. Thanks to the tin-plated copper braid with 85% coverage, the cables reliably protect analog signals against electromagnetic influences. The cables are free of silicone and substances that would hinder coating with paint or varnish and

have a high resistance to abrasion. The outer sheath also offers excellent resistance to oil and chemicals according to VDE 0472 Part 803, is flame-retardant according to DIN EN 50265, and is resistant to hydrolysis.

Outer sheath material PUR
Inner sheath material PVC

Min. bending cycles 1.5 ... 2 million
Minimum bending radius 10 x D
Traverse path 2 m
Speed 2 m/s
Tested at +20°C ... +25°C

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR/PVC shielded Black	5-pos., double-occupancy	M12 4 slots	8 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, gray-pink, red-blue, white-green, brown-green, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	274 307
		M12 6 slots	12 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, pink, red, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	274 307
		M12 8 slots	16 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	274 307

PVC – for the food industry (for sensor/actuator boxes)



Master cable that is resistant to cleaning agents designed for use in the splash zone. Can be used together with our stainless steel sensor/actuator box to implement signal distribution in a washdown design. The cable is flame-retardant according to IEC 60332-1-2 and UL 758 FT2 and has an oil-resistant outer sheath according to DIN EN 60811-404.

Outer sheath material PVC
Minimum bending radius
Fixed 5 x D
Mobile 10 x D

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PVC Black	5-pos., double-occupancy	M12 8 slots	16 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PVC	Mobile: -5°C ... +90°C Fixed: -40°C ... +90°C	See: phoenix contact.net/ products

PUR, halogen-free (for sensor/actuator boxes)



Permanently flexible control cables designed for use in drag chains and as machine control cables for extreme operating conditions. The cables are suitable for bending cycle loads with long-term durability. The special PUR outer sheath offers excellent resistance to oils according to VDE 0472 Part 803, lubricants, cooling agents, and other aggressive

substances. Additional features: halogen- and PVC-free, no silicone or substances that would hinder coating with paint or varnish, resistant to hydrolysis, and flame-retardant according to DIN EN 50265.

Outer sheath material PUR

Min. bending cycles 1.5 ... 2 million
Minimum bending radius 10 x D
Traverse path 2 m
Speed 2 m/s
Tested at +20°C ... +25°C

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR Black	5-pos., double- occupancy	M12 4 slots	8 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, gray-pink, red-blue, white-green, brown-green, brown, blue, green-yellow	PP	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	270 307
		M12 6 slots	12 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, pink, red, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, brown, blue, green-yellow	PP	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	270 307
		M12 8 slots	16 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PP	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	270 307

80 MC – highly flexible (for sensor/actuator boxes)



Permanently flexible cables designed for use in drag chains, industrial robots or portal tables. The cables are suitable for bending cycle loads and torsional stress with long-term durability. The special PUR outer sheath offers excellent resistance to oils according to DIN EN 60811-2-1, chemicals, and hydrolysis.

The cable is also flame-retardant according to DIN EN 50265-2-1 and is halogen-free.

Outer sheath material PUR

Min. bending cycles 5 million
Minimum bending radius 10 x D
Traverse path 5 m
Acceleration 5 m/s²
Speed 3 m/s
Torsion angle +/- 120°
Min. torsion cycles 3 million
Test length 1 m
Tested at +20°C ... +25°C

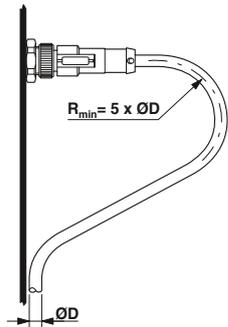
Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
80MC Black	5-pos., double- occupancy	M12 8 slots	16 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PP	Mobile: +5°C ... +70°C Fixed: -30°C ... +70°C	307



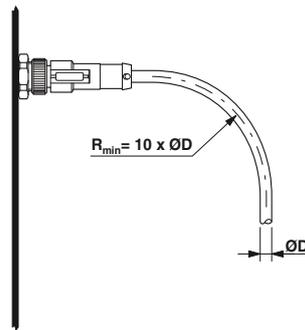
The following pages provide an overview of the appropriate installation of SAC cables in harsh industrial environments that will guarantee a long service life and reduce costs.

Bending radius

In the case of mobile installation, a generous bending radius can be advantageous. The greater the bending radius, the lower the stress that occurs as a result of movement. The result is an increased cable service life (take into account the minimum cable-specific bending radii).



Fixed installation



Mobile installation

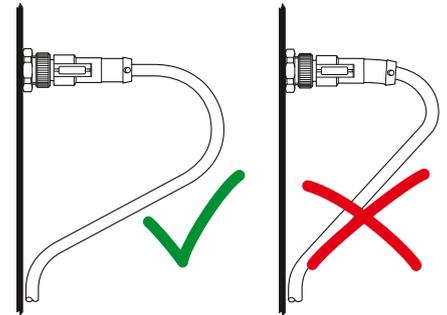
Mobile installation

In the case of a mobile installation, the cable length should be sufficient to adequately absorb the tensile loads as efficiently as possible. This can be implemented, for example, using cable loops and C drag chains.



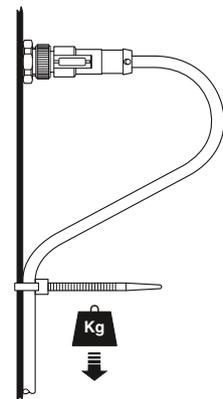
Load

Prevent the material from aging prematurely by creating a sufficient cable loop at the connection point. This provides sufficient play for absorbing any additional stress that may occur.



Strain relief for connectors

When installing connectors, make sure that they are protected against tensile loads that may occur. This applies in particular to flexible installation. Support the cables with cable binders, for example.



Cables in power track chains

Where possible, cables should be laid individually and loosely next to each other within power track chains.

Isolating segments or bridges should be placed between the various cables. Or the cables may be arranged in separate bore holes in the neutral zone.

The laying of cables that have very different outer diameters next to or across each other is generally not recommended. If, however, this cannot be avoided for design reasons, isolating segments or bridges should be installed for a reasonable service life. If it is not possible to install isolating segments between each cable, we recommend that cables with an outer diameter of < 10 mm are laid loose in a guide tube. As such, cables with similar cross sections should be combined in the same tube.

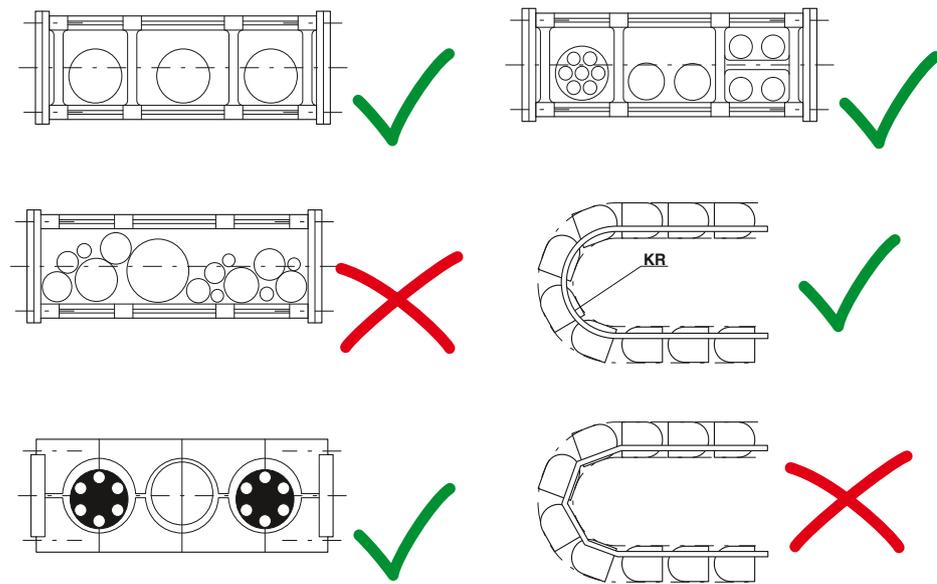
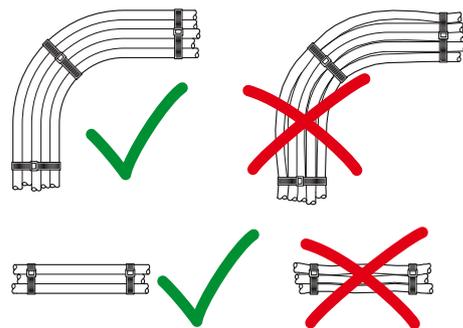
In terms of the arrangement of the cables, it is important to ensure that heavy cables are routed outwards and light cables, such as the SAC cables, are routed inwards. Ensure that there is strain relief on both sides, or on the moving end of the drag chain as a minimum. As a guide value, the distance between the moving end and the attachment should be 20 to 30 times the outer diameter.

The cables must be able to move completely freely within the radius of curvature in order to prevent forced guidance of the drag chain. Guide value: 10% of the outer diameter should be allocated as free space.

Note: When laying the cables, observe the information provided by the drag chain manufacturer.

Cable bundling

When bundling several individual cables, it is important to ensure that the cables can move freely within the bundle. The cables must not become deformed. Round cables with greatly varying outer diameters should only be laid next to each other when bridges are used.



KR = radius of curvature



Data connectors and cables

Complex automation processes call for high volumes of data at ever-increasing transmission speeds. Transmit this data safely and reliably using connectors from Phoenix Contact which are suitable for industrial use.

When it comes to implementing networks, we offer solutions for Industrial Ethernet and PROFINET as well as EtherCAT®. Furthermore, we offer components for fieldbus systems such as PROFIBUS, CANopen®/DeviceNet™, and FOUNDATION Fieldbus.

The product range includes assembled cables, cable connectors, device connectors, and connectors for field assembly. For FO and copper-based cabling we also offer connector systems with innovative connection technologies that can be wired quickly and safely without special tools.

Active components for networks and fieldbus systems can be found in Catalog 6.

Copper-based data connectors

- Future-proof high-speed cabling up to 10 Gbps
- Solutions for IP20, IP65/IP67, and IP69K
- IDC, Push-in or pierce connection

Fiber optic-based data connectors

- Transmission speeds of up to 40 Gbps
- Solutions for IP20 and IP65/IP67
- POF, PCF, and GOF fiber types (multi and single mode)

 Your web code: [#0296](#)

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Ethernet

Ethernet

Ethernet



Ethernet

EtherNet/IP

EtherNet/IP

Area of application	Ethernet M8 (4-pos.) All industrial environments	Ethernet M12 (4-pos.) All industrial environments	Ethernet M12 (8-pos.) All industrial environments	Ethernet M12/10G (8-pos.) All industrial environments	Ethernet hybrid M12 (8-pos.) All industrial environments
Topology	Star, tree or line topology	Star, tree or line topology	Star, tree or line topology	Star, tree or line topology	Star, tree or line topology
Data transmission	Up to 100 Mbps	Up to 100 Mbps	Up to 1 Gbps	Up to 10 Gbps	Up to 100 Mbps

Special connectors

M12 with shield crossover

M12 with Y-shield

Pin assignment	Connector			Connector			Connector			Connector		
	Signal des.	RJ45	M8	Signal des.	RJ45	M12	Signal des.	RJ45	M12	Signal des.	M12	
TD+	1	1	TD+	1	1	D1+	1	6	D1+	1	TD+	1
TD-	2	4	TD-	2	3	D1-	2	4	D1-	2	TD-	2
RD+	3	2	RD+	3	2	D3-	5	1	D3-	5	RD+	3
RD-	6	3	RD-	6	4	D3+	4	7	D3+	4	RD-	4
						D2+	3	5	D2+	3		
						D2-	6	8	D2-	6		
						D4+	7	2	D4+	7		
						D4-	8	3	D4-	8		

Signal designation
Wire assignment

Wire color	Signal								
YE	TD+	WHOG	TD+	WHOG	D1+	WHOG	D1+	WHOG	TD+
OG	TD-	OG	TD-	OG	D1-	OG	D1-	OG	TD-
WH	RD+	WHGN	RD+	WHBU	D3-	WHBU	D3-	WHGN	RD+
BU	RD-	GN	RD-	BU	D3+	BU	D3+	GN	RD-
				WHGN	D2+	WHGN	D2+	BU	
				GN	D2-	GN	D2-	WH	
				WHBN	D4+	WHBN	D4+	BN	
				BN	D4-	BN	D4-	BK	

Segment length

Up to 100 m from hub/switch to terminal device	Up to 100 m from hub/switch to terminal device	Up to 100 m from hub/switch to terminal device	Up to 100 m from hub/switch to terminal device	Up to 100 m from hub/switch to terminal device
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User organization

www.odva.org (EtherNet/IP™)

www.odva.org (EtherNet/IP™)

Standardization of cabling

ISO/IEC 24702

ISO/IEC 24702

ISO/IEC 24702 (Ethernet)
IEC 61784-5-2 (EtherNet/IP™)

ISO/IEC 24702 (Ethernet)
IEC 61784-5-2 (EtherNet/IP™)

Connector pin assignments

	Connector	Socket	M8, 4-pos.		Connector	Socket	M12, 4-pos., D-coded		Connector	Socket	M12, 8-pos., A-coded		Connector	Socket	M12, 8-pos., X-coded		Connector	Socket	M12, hybrid, 8-pos., Y-coded
	Connector	Socket	RJ45, 8-pos.		Connector	Socket	RJ45, 8-pos.		Connector	Socket	RJ45, 8-pos.		Connector	Socket	RJ45, 8-pos.				

Topology

See phoenixcontact.net/products

See phoenixcontact.net/products

See phoenixcontact.net/products

See phoenixcontact.net/products

See phoenixcontact.net/products



Production, process automation in the automotive industry	Production, process automation in the automotive industry	Production, process automation in the automotive industry	Automation technology	Motion control applications	Automation technology
Usually active star topology	Star, line, tree, and ring structures. Hybrid forms also supported	Star, line, tree, and ring structures. Hybrid forms also supported	Line, tree, star, and combinations of these	Line, ring, and hierarchical, cascaded network structures	Tree, line, and star topology
Up to 10 Gbps	100 Mbps	1 Gbps to 10 Gbps	100 Mbps, upgrade to Gigabit Ethernet possible	Fast Ethernet with 100 Mbps	Up to Gigabit Ethernet

M12 with shield crossover

2+4 Power/Ethernet connection technology (IP65 and IP67)

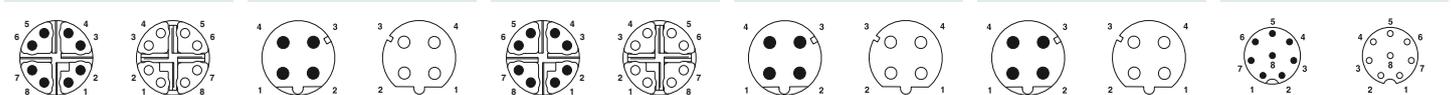
Signal des.	Connector													
	RJ45	M12												
D1+	1	1	TD+	1	1	D1+	1	1	TD+	1	1	TD+	2	2
D1-	2	2	TD-	2	3	D1-	2	2	TD-	2	3	TD-	1	3
D3-	5	7	RD+	3	2	D3-	5	7	RD+	3	2	RD+	3	5
D3+	4	8	RD-	6	4	D3+	4	8	RD-	6	4	RD-	6	8
D2+	3	3				D2+	3	3						
D2-	6	4				D2-	6	4						
D4+	7	5				D4+	7	5						
D4-	8	6				D4-	8	6						

Wire color	Signal										
WHOG	D1+	YE	TD+	WHOG	D1+	YE	TD+	YE	TD+	n. c.	
OG	D1-	OG	TD-	OG	D1-	OG	TD-	OG	TD-	OG	TD-
WHBU	D3-	WH	RD+	WHBU	D3-	WH	RD+	WH	RD+	WHOG	TD+
BU	D3+	BU	RD-	BU	D3+	BU	RD-	BU	RD-	n. c.	
WHGN	D2+			WHGN	D2+					WHGN	RD+
GN	D2-			GN	D2-					BU	
WHBN	D4+			WHBN	D4+					BN	
BN	D4-			BN	D4-					GN	RD-

Up to 100 m from hub/switch to terminal device	Up to 100 m from hub/switch to terminal device	Up to 100 m from hub/switch to terminal device	Up to 100 m from hub/switch to terminal device	Up to 100 m from hub/switch to terminal device	Up to 100 m from hub/switch to terminal device
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www.cc-link.org	www.profinet.com	www.profinet.com	www.ethercat.org	www.sercos.de	www.varan-bus.net
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IEEE 802.3	IEC 61784-5-3	IEC 61784-5-3	IEC 61784-5-12	IEC 61784-5-16	
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Connector	Socket										
M12, 8-pos., X-coded		M12, 4-pos., D-coded		M12, 8-pos., X-coded		M12, 4-pos., D-coded		M12, 4-pos., D-coded		M12, 8-pos., A-coded	
RJ45, 8-pos.		RJ45, 8-pos.		RJ45, 8-pos.		RJ45, 8-pos.		RJ45, 8-pos.		RJ45, 8-pos.	

See phoenixcontact.net/products



Area of application	Sensor/actuator level, process automation, monitoring PC	Distributed I/O devices for networking several controllers	Process automation for potentially explosive areas (Ex zones 0 and 1)	Automation technology																																																																																			
Topology	Active ring structure	Line, tree, ring or star depending on the physical network design	Line, tree or ring	Line																																																																																			
Data transmission	Between 500 kbps and 16 Mbps depending on the segment length	Up to 12 Mbps	Up to 31.25 kbps	Up to 500 kBaud																																																																																			
Special connectors																																																																																							
Pin assignment	<table border="1"> <thead> <tr> <th>Signal designation</th> <th colspan="2">Connector</th> </tr> <tr> <th></th> <th>D-SUB 9</th> <th>M12</th> </tr> </thead> <tbody> <tr> <td>DO</td> <td>1</td> <td>2</td> </tr> <tr> <td>DO</td> <td>6</td> <td>1</td> </tr> <tr> <td>DI</td> <td>2</td> <td>4</td> </tr> <tr> <td>DI</td> <td>7</td> <td>3</td> </tr> <tr> <td>GND</td> <td>3</td> <td>5</td> </tr> </tbody> </table>	Signal designation	Connector			D-SUB 9	M12	DO	1	2	DO	6	1	DI	2	4	DI	7	3	GND	3	5	<table border="1"> <thead> <tr> <th>Signal designation</th> <th colspan="2">Connector</th> </tr> <tr> <th></th> <th>D-SUB 9</th> <th>M12</th> </tr> </thead> <tbody> <tr> <td>A cable</td> <td>8</td> <td>2</td> </tr> <tr> <td>B cable</td> <td>3</td> <td>4</td> </tr> </tbody> </table>	Signal designation	Connector			D-SUB 9	M12	A cable	8	2	B cable	3	4	<table border="1"> <thead> <tr> <th>Signal designation</th> <th colspan="2">Connector</th> </tr> <tr> <th></th> <th>M12</th> <th></th> </tr> </thead> <tbody> <tr> <td>DATA+</td> <td>1</td> <td></td> </tr> <tr> <td>DATA-</td> <td>3</td> <td></td> </tr> <tr> <td>Shield</td> <td>4</td> <td></td> </tr> </tbody> </table>	Signal designation	Connector			M12		DATA+	1		DATA-	3		Shield	4		<table border="1"> <thead> <tr> <th>Signal designation</th> <th colspan="4">Connector</th> </tr> <tr> <th></th> <th>COMBICON</th> <th>M12</th> <th>7/8"</th> <th>M8</th> </tr> </thead> <tbody> <tr> <td>CAN_L</td> <td>2</td> <td>5</td> <td>5</td> <td>5</td> </tr> <tr> <td>CAN_H</td> <td>4</td> <td>4</td> <td>4</td> <td>3</td> </tr> <tr> <td>V+</td> <td>5</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>V-</td> <td>1</td> <td>3</td> <td>3</td> <td>4</td> </tr> <tr> <td>Drain</td> <td>3</td> <td>1</td> <td>1</td> <td>1</td> </tr> </tbody> </table>	Signal designation	Connector					COMBICON	M12	7/8"	M8	CAN_L	2	5	5	5	CAN_H	4	4	4	3	V+	5	2	2	2	V-	1	3	3	4	Drain	3	1	1	1
Signal designation	Connector																																																																																						
	D-SUB 9	M12																																																																																					
DO	1	2																																																																																					
DO	6	1																																																																																					
DI	2	4																																																																																					
DI	7	3																																																																																					
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Signal designation	Connector																																																																																						
	COMBICON	M12	7/8"	M8																																																																																			
CAN_L	2	5	5	5																																																																																			
CAN_H	4	4	4	3																																																																																			
V+	5	2	2	2																																																																																			
V-	1	3	3	4																																																																																			
Drain	3	1	1	1																																																																																			
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	Shield on housing	Shield on housing	Shield on pin	Shield on pin																																																																																			
Segment length	400 m segment length between two devices; max. 13 km total length	Up to 1200 m with copper installation, up to 15 km with fiber optic installation	1900 m, maximum	Up to 500 m																																																																																			
User organization	www.interbusclub.com	www.profibus.com	www.profibus.com	www.odva.org																																																																																			
Standardization of cabling	IEC 61158	IEC 61158/IEC 61784	IEC 61158/IEC 61784	IEC 61158 IEC 61784-1 CPF 2/3																																																																																			
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Topology	See phoenixcontact.net/products	See phoenixcontact.net/products	See phoenixcontact.net/products	See phoenixcontact.net/products																																																																																			



Automation technology and for networking within complex devices	Sensor/actuator level	Process automation	All industrial environments	Production level applications
Line or tree (when using repeaters)	Bus, star, ring, and tree structures	Point-to-point line (with branch lines), tree structure, combination of all topologies	Star topology; the connection is established at the star nodes via hubs	Bus, multi-drop, T-branching, star
10 kBaud to 1 Mbaud	167 kbps	H1: 31.25 kbps, IEC physical transmission channel, including Ex bus H2: 1.0 and 2.5 Mbps data rate, via two-wire cable or fiber optics	Up to 480 Mbps	Up to 10 Mbps

Signal designation	Connector					Signal designation	Connector	Signal designation	Connector		Signal designation	Connector		Signal designation	Connector
	COMBICON	D-SUB 9	M12	RM45	7/8"				M12	7/8"		M12, MINI-USB	USB		
CAN_L	2	2	5	2	5	AS-ii	1	DATA+	2	2	V _{BUS}	1	1	SLD	1
CAN_H	4	7	4	1	4	AS-i-	3	DATA-	1	1	D-	2	2	DB	2
V+	5	9	2	8	2			Shield	3	3	D+	3	3	DG	3
V-	1	3	3	3	3						ID	4	4	DA	4
Drain	3	4	1	6	1						GND	5	4		

Wire color	Signal	Wire color	Signal	Wire color	Signal	Wire color	Signal	Wire color	Signal
BU	CAN_L	BN	AS-i-	OG	DATA+	WHOG	D-	Shield	SLD
WH	CAN_H	WH				WH	V _{BUS}	WH	DB
RD	V+	BU	AS-i+	BU	DATA-	OG	D+	YE	DG
BK	V-	BK				n.c.	ID	BU	DA
					Filler litz wire	BK	GND		

Shield on pin		Shield on pin 3		
Up to 1000 m depending on the transmission speed, can be increased by using repeaters	Max. 100 m cable length, 300 m with termination resistors, 500 m with repeaters	Max. 1900 m; max. 9500 m when using repeaters depending on the selected cable	5 m per segment	Max. 1200 m; max. 13.2 km with repeaters
www.can-cia.de	www.as-interface.net	www.fieldbus.org	www.usb.org	www.clpa-europe.com
EN 50325-4	EN 50295 and IEC 62026-2	IEC 1158, IEC 61158	Not specified	IEC 61784-1 CPF 8
Connector: M12, 5-pos., A-coded Socket: D-SUB 9	Connector: M12, 4-pos., A-coded Socket: M12, 4-pos., A-coded	Connector: M12, 4-pos., A-coded Socket: M12, 4-pos., A-coded	Connector, type A: USB, 4-pos. Socket, type B: USB, 4-pos.	Connector: M12, 4-pos., A-coded Socket: M12, 4-pos., A-coded
Connector: 7/8" 16UNF, 5-pos. Socket: 7/8" 16UNF, 5-pos.		Connector: 7/8" 16UNF, 4-pos. Socket: 7/8" 16UNF, 4-pos.	Connector: M12 mini-USB, 5-pos. Socket: M12 mini-USB, 5-pos.	
Connector: D-SUB 9 Socket: D-SUB 9				
See phoenixcontact.net/products	See phoenixcontact.net/products	See phoenixcontact.net/products	See phoenixcontact.net/products	See phoenixcontact.net/products

Connector and cable connector, for assembly



QUICKON insulation displacement connection



Piercecon® and crimp connection

ERC

ERC

M12 circular connector according to:

Degree of pollution	
Degree of protection	
Connection method	
Electrical data	
Rated voltage	50 V AC
Rated current	0.6 A (30 W)
Insulation resistance	≥ 100 MΩ
Transmission characteristics (category)	CAT6 _A
Material data	
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Flammability rating according to UL 94	V0
Coding	X - data
No. of pos.	8
Temperature data	
Plug/socket	[°C] -40 ... 85

Technical data	
Ethernet	PROFINET
IEC 61076-2-109	IEC 61076-2-109
3	3
IP65 / IP67	IP65 / IP67
IDC connection technology	IDC connection technology
50 V AC	50 V AC
0.6 A (30 W)	0.6 A (30 W)
≥ 100 MΩ	≥ 100 MΩ
CAT6 _A	CAT6 _A
CuSn	CuSn
Ni/Au	Ni/Au
PA 6.6	PA 6.6
V0	V0
X - data	X - data
8	8
-40 ... 85	-40 ... 85

Technical data	
Ethernet	Ethernet/PROFINET
IEC 61076-2-109	IEC 61076-2-109
3	3
IP65	IP65 / IP67
Piercecon®	Crimp connection
50 V AC	50 V AC
0.5 A	0.6 A (30 W)
≥ 100 MΩ	≥ 100 Ω
CAT6 _A	CAT6 _A
CuSn	-
Ni/Au	-
PP	PA 6.6
V0	V0
X - data	X - data
8	8
-40 ... 85	-40 ... 85

Ordering data	
Description	
Connector, shielded, color-coded and numbered connection area, cable diameter: 5.0 mm ... 9.7 mm	
Connector, straight	1411043 1
Socket, straight	1414586 1
Cable connector, shielded, color-coded and numbered connection area, cable diameter: 5.0 mm ... 9.7 mm	
	1414412 1
Connector, shielded, color-coded connection area, cable diameter: 4.0 mm ... 8.0 mm	
Connector, straight	1417430 1
Connector, angled	1417443 1
Connector, without contacts, color-coded and numbered contact manager, cable diameter: 6.0 mm ... 10.0 mm	
Connector, straight	1422844 1
Connector, angled	1422845 1

Ordering data	
Order No.	Pcs. / Pkt.
Ethernet	
1411043	1
1414586	1
1414412	1
PROFINET	
1411044	1
1414587	1
1414413	1

Ordering data	
Order No.	Pcs. / Pkt.
Ethernet	
1417430	1
1417443	1
Ethernet/PROFINET	
1422844	1
1422845	1

Accessories	
Description	
Crimp contacts, gold-plated	
Pin, for X-coded, 0.14 mm ² ... 0.34 mm ²	
Crimping pliers, for turned contacts, universal cross section setting, up to a maximum of 2.5 mm², digital display with 0.01 mm increments, unlockable pressure lock, lateral entry, including positioning tool	
for turned contacts, four-mandrel crimping	
Stripping tool, for multiple-stage repositioning of shielded conductors	

Accessories	
Order No.	Pcs. / Pkt.
VS-CABLE-STRIP-VARIO	1657407 1

Accessories	
Order No.	Pcs. / Pkt.
CC0,6-TS-0,34M AU PU100	1423643 100
CRIMPFOX-TC MP	1212510 1
VS-CABLE-STRIP-VARIO	1657407 1

Connector and cable connector, for assembly

new

new



QUICKON insulation displacement connection



Push-in connection

ERC

M12 circular connector according to:

Degree of pollution
Degree of protection
Connection method
Electrical data
Insulation resistance
Transmission characteristics (category)
Material data
Contact material
Contact surface material
Flammability rating according to UL 94
Temperature data
Plug/socket

Technical data	
D-coded	A-coded
IEC 61076-2-101	IEC 61076-2-101
3	3
IP65 / IP67	IP65 / IP67
IDC connection technology	IDC connection technology
≥ 100 MΩ	≥ 100 MΩ
CAT5	CAT5
CuSn	CuSn
Ni/Au	Ni/Au
V0	V0
-40 ... 85	-40 ... 85

Technical data	
D-coded	
IEC 61076-2-101	
3	
IP65 / IP67	
Spring-cage connection	
≥ 100 MΩ	
CAT5	
CuSn	
Ni/Au	
V0	
-40 ... 85	

Ordering data	
Order No.	Pcs. / Pkt.

Ordering data	
Order No.	Pcs. / Pkt.
D-coded	A-coded

Ordering data	
Order No.	Pcs. / Pkt.
D-coded	

Connector, 100 Mbps, Ethernet CAT5, 4-pos., shielded, color-coded connection area

Connector, straight	1411066	1
Connector, angled	1553624	1
Socket, straight	1411069	1
Socket, angled	1553637	1

Connector, 100 Mbps, PROFINET CAT5, 4-pos., shielded, color-coded connection area

Connector, straight	1411068	1
Connector, angled	1554539	1
Socket, straight	1411071	1
Socket, angled	1554542	1

Connector, 1 Gbps, Ethernet CAT5, 8-pos., shielded, color-coded connection area

Connector, straight	1421679	1
Connector, angled	1553653	1
Socket, straight	1421680	1
Socket, angled	1553666	1

Connector, VARAN, 6-pos., shielded, color-coded connection area

Connector, straight	1429130	1
Connector, angled	1429156	1
Socket, straight	1429143	1
Socket, angled	1429169	1

Cable connector, 100 Mbps, Ethernet CAT5, 4-pos., shielded, color-coded and numbered connection area

	1414415	1
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Cable connector, 100 Mbps, PROFINET CAT5, 4-pos., shielded, color-coded and numbered connection area

	1414416	1
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Accessories		
VS-CABLE-STRIP-VARIO	1657407	1

Accessories		
VS-CABLE-STRIP-VARIO	1657407	1

Accessories		
VS-CABLE-STRIP-VARIO	1657407	1

Device connector, with 0.5 m litz wires



Front mounting,
D-coded



Rear mounting,
D-coded



Technical data	
SACC-E-...-4CON-M16/0,5 SCO	
Electrical data	
Nominal voltage U_N	250 V
Rated current	4 A
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Contact material	CuZn
Grip body material	-
Flammability rating according to UL 94	V0
Connection method	Individual wires
Insertion/withdrawal cycles	> 100
Temperature data	
Plug/socket	-25 ... 85 [°C]

Ordering data		
Type	Order No.	Pcs. / Pkt.
SACC-E-FSD-4CON-M16/0,5 SCO	1535202	1
SACC-EC-FSD-4CON-M16/0,5 SCO	1535215	1



Technical data	
SACC-DSI-FSD-4CON...	
Electrical data	
Nominal voltage U_N	250 V
Rated current	4 A
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Contact material	CuZn
Grip body material	-
Flammability rating according to UL 94	V0
Connection method	Individual wires
Insertion/withdrawal cycles	≥ 100
Temperature data	
Plug/socket	-25 ... 85

Ordering data		
Type	Order No.	Pcs. / Pkt.
SACC-DSI-FSD-4CON-PG9/0,5 SCO	1551529	1

Description	Bus system flush-type socket, PROFINET, 4-pos., M12 SPEEDCON, D-coded, front/screw mounting with M16 thread, with 0.5 m TPE litz wire, 4 x 0.34 mm²
Socket	Bus system flush-type socket, PROFINET, 4-pos., M12 SPEEDCON, D-coded, front/screw mounting with M16 thread, can be positioned, with 0.5 m TPE litz wire, 4 x 0.34 mm²
Socket	Bus system flush-type socket, PROFINET, 4-pos., M12 SPEEDCON, D-coded, rear/screw mounting with Pg9 thread, with 0.5 m TPE litz wire, 4 x 0.34 mm²
Socket	

new

Control cabinet feed-through, bulkhead, M12 to RJ45 socket



Bulkhead, 10 Gbps



Bulkhead, 100 Mbps and 1 Gbps



Technical data	
VS-BH-M12FSX-10G-RJ45...	
Electrical data	
Nominal voltage U_N	60 V
Rated current	0.5 A
Transmission characteristics (category)	CAT6 _A
Contact material	Copper alloy
Grip body material	PA
Flammability rating according to UL 94	V0
Insertion/withdrawal cycles	≥ 100
Temperature data	
Plug/socket	-25 ... 85 [°C]



Technical data	
CUC-BH-M12A1PBK-A/R4BE	CUC-BH-M12D1PBK-A/R4BE
Electrical data	
Nominal voltage U_N	60 V
Rated current	0.5 A
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Contact material	Copper alloy
Grip body material	PA
Flammability rating according to UL 94	V0
Insertion/withdrawal cycles	≥ 100
Temperature data	
Plug/socket	-25 ... 85

Ordering data			
Description	Type	Order No.	Pcs. / Pkt.
Control cabinet feed-through, CAT6_A, M12, 8-pos., X-coded to RJ45 socket			
Socket exit 90°	VS-BH-M12FSX-10G-RJ45/90	1404548	1
Socket exit 180°	VS-BH-M12FSX-10G-RJ45/180	1404549	1
Control cabinet feed-through, M12, 8-pos., A-coded on RJ45 socket			
Socket exit 90°			
Socket exit 180°			
Control cabinet feed-through, M12, 4-pos., D-coded on RJ45 socket			
Socket exit 90°			
Socket exit 180°			

Ordering data			
Description	Type	Order No.	Pcs. / Pkt.
Control cabinet feed-through, M12, 8-pos., A-coded on RJ45 socket			
Socket exit 90°	CUC-BH-M12A1PBK-A/R4BE	1414393	1
Socket exit 180°	CUC-BH-M12A1PBK-S/R4BE	1414396	1
Control cabinet feed-through, M12, 4-pos., D-coded on RJ45 socket			
Socket exit 90°	CUC-BH-M12D1PBK-A/R4BE	1414397	1
Socket exit 180°	CUC-BH-M12D1PBK-S/R4BE	1414398	1

Terminal outlets, IP65/IP67

- Easy installation, thanks to captive cover screws
- Rugged design
- Integrated cable management system



**Terminal outlet
with 2 x M12 slots**

ERC

Technical data

Electrical data	VS-TO-RO-MCBK-F142...
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Material data	
Housing material	Aluminum cast alloy, powder-coated
Mechanical data	
Color	Black
Degree of protection	IP65/IP67

VS-TO-RO-MCBK-F142...
CAT5 (IEC 11801:2002)
Aluminum cast alloy, powder-coated
Black
IP65/IP67

Ordering data

Description	
Terminal outlet, M12, IP65/67, 2 slots, with protective plugs, 2 cable entries	
M12 with 2 x sockets, 8-pos., A-keyed	
M12 with 2 x socket, 4-pos., D-coded	

Type	Order No.	Pcs. / Pkt.
VS-TO-RO-MCBK-F1422/1422	1404304	1
VS-TO-RO-MCBK-F1421/1421	1404294	1

RJ45 connector, IP65/67



RJ45 connector

Technical data

VS-V1-C-RJ45-MNNA-PG9-8-I-5-S

Electrical data	
Rated voltage	50 V
Rated current	1.75 A
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Overvoltage category	I
Material data	
Housing material	Zinc die-cast
Flammability rating according to UL 94	V0
Degree of pollution	2
Connection data	
Connection method	IDC connection
Connection cross section AWG	27 ... 24 (stranded)
External cable diameter	5 mm ... 10 mm
Insertion/withdrawal cycles	750
Temperature data	
Ambient temperature (operation)	-40°C ... 70°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
RJ45 connector , IP67, with bayonet interlocking, metal housing, CAT5, 8-pos.	VS-V1-C-RJ45-MNNA-PG9-8-I-5-S	1419182	1

Accessories

Stripping tool , for multiple-stage repositioning of shielded conductors	VS-CABLE-STRIP-VARIO	1657407	1
Protective cover , IP67, plastic, for covering the contact insert in the RJ45, LC, and SC-RJ connector	VS-V1-C-PC-POBK	1419183	1

**RJ45 panel mounting frame,
IP65/67**



**Panel mounting frame
with RJ45 coupling module**



**Panel mounting frame
with RJ45 cable connection module**

ERIC

Technical data		
Electrical data		
Transmission characteristics (category)	CAT5 (IEC 11801:2002)	
Housing material	Zinc die-cast	
Flammability rating according to UL 94	V0	
No. of pos.	8	
Connection cross section AWG	-	
Insertion/withdrawal cycles	750	
Temperature data		
Ambient temperature (operation)	-40°C ... 70°C	
Ordering data		
Type	Order No.	Pcs. / Pkt.
VS-V1-F-RJ45-MNNA-1-C-S-JJ-S	1419184	1
Accessories		
VS-V1-F-PC-POBK	1419186	1

ERIC

Technical data		
Electrical data		
Transmission characteristics (category)	CAT5 (IEC 11801:2002)	
Housing material	Zinc die-cast	
Flammability rating according to UL 94	V0	
No. of pos.	8	
Connection cross section AWG	26 ... 22 (stranded)	
Insertion/withdrawal cycles	750	
Temperature data		
Ambient temperature (operation)	-40°C ... 70°C	
Ordering data		
Type	Order No.	Pcs. / Pkt.
VS-V1-F-RJ45-MNNA-1-C-S-JI-S	1419185	1
Accessories		
VS-V1-F-PC-POBK	1419186	1

Electrical data	
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Housing material	Zinc die-cast
Flammability rating according to UL 94	V0
No. of pos.	8
Connection cross section AWG	-
Insertion/withdrawal cycles	750
Temperature data	
Ambient temperature (operation)	-40°C ... 70°C

Description	
RJ45 panel mounting frame, IP67, for bayonet locking, metal, with female/female contact insert, for round mounting cutout, with seal, without mounting screws	
RJ45 panel mounting frame, IP67, for bayonet locking, metal, with contact insert for cable connection, for round mounting cutout, with seal, without mounting screws	

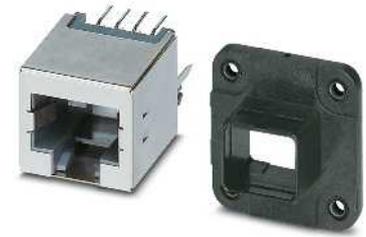
Protective cover, IP67, plastic, for covering the contact insert in the RJ45, LC, and SC-RJ panel mounting frame	
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RJ45 connector, IP65/67

- Compact design
- IP67 protection class
- Push-pull interlocking



RJ45 connector



Panel mounting frames and RJ45 modules

ERC	
Technical data	
Electrical data	
Transmission characteristics (category)	CAT6 _A
Material data	
Housing material	Plastic
Flammability rating according to UL 94	V0
Mechanical data	
No. of pos.	8
Connection method	Crimp connection
Connection cross section AWG	28 ... 24 (stranded)
Temperature data	
Ambient temperature (operation)	-40°C ... 70°C

Ordering data	
Description	
RJ45 connector , IP67, with push/pull interlocking (version 4), plastic housing, for 10 Gbps, for 24 ... 28 AWG stranded conductors	
RJ45 socket insert , 1-way, for PCB mounting, CAT5, 8-pos., shielded	
Straight solder pins	
Angled solder pins	
Panel mounting frame	
For 180° socket insert	
For 90° socket insert	
Panel mounting frame set	
Socket / socket	

Accessories	
Stripping tool , for multiple-stage repositioning of shielded conductors	
Electronic diagonal cutter , tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version	
Crimping pliers , for assembling the RJ45 connectors	

ERC		
Technical data		
CAT5		
Copper alloy		
V0		
8		
Solder connection		
-		
-40°C ... 70°C		

Ordering data		
Type	Order No.	Pcs. / Pkt.
CUC-V04-RJ45-POBK-8	1407413	1
CUC-V04-BU-180	1407409	1
CUC-V04-BU-90	1407408	1
CUC-V04-F-POBK-180	1407410	1
CUC-V04-F-POBK-90	1407411	1
CUC-V04-F-BU/BU-RJ45	1407412	1

Accessories		
VS-CABLE-STRIP-VARIO	1657407	1
MICROFOX-SP-1	1212487	1
FL CRIMPTOOL	2744869	1

ERC		
Technical data		
CAT5		
Copper alloy		
V0		
8		
Solder connection		
-		
-40°C ... 70°C		

Ordering data		
Type	Order No.	Pcs. / Pkt.
CUC-V04-BU-180	1407409	1
CUC-V04-BU-90	1407408	1
CUC-V04-F-POBK-180	1407410	1
CUC-V04-F-POBK-90	1407411	1
CUC-V04-F-BU/BU-RJ45	1407412	1

Accessories		

RJ45 connector, IP65/67

new



RJ45 connector



RJ45 connector with field and crimp connection

Electrical data	
Rated voltage	50 V
Rated current	1.75 A
Overtoltage category	I
Material data	
Housing material	PA
Contact material	Copper alloy
Flammability rating according to UL 94	V0
Degree of pollution	2
Connection data	
Connection method	IDC fast connection
Connection cross section AWG	26 ... 23 (solid)
Connection cross section AWG	26 ... 23 (stranded)
External cable diameter	5 mm ... 8.5 mm
Insertion/withdrawal cycles	≥ 1000
Temperature data	
Ambient temperature (operation)	-20°C ... 70°C

Technical data	
VS-08-RJ45-5-Q/IP67...	CUC-V06-C1...-S/R4...8:1
Rated voltage	125 V
Rated current	1 A
Overtoltage category	I
Material data	
Housing material	PA
Contact material	Phosphor bronze
Flammability rating according to UL 94	V0
Degree of pollution	2
Connection data	
Connection method	Crimp connection
Connection cross section AWG	24 ... 27 (stranded)
Connection cross section AWG	-
External cable diameter	5 mm ... 8.5 mm
Insertion/withdrawal cycles	≥ 750
Temperature data	
Ambient temperature (operation)	-25°C ... 60°C

Technical data	
VS-08-T-H-RJ45...	VS-08-ST-H...-RJ45
Rated voltage	125 V
Rated current	0.5 A
Overtoltage category	I
Material data	
Housing material	PA
Contact material	Copper alloy
Flammability rating according to UL 94	V2
Degree of pollution	2
Connection data	
Connection method	IDC connection technology
Connection cross section AWG	27 ... 26 (stranded)
Connection cross section AWG	-
External cable diameter	5 mm ... 8.5 mm
Insertion/withdrawal cycles	≥ 1000
Temperature data	
Ambient temperature (operation)	-40°C ... 80°C

Description	
RJ45 connector , 8-pos., CAT5, with QUICKON fast connection technology, for 26 ... 24 AWG Military gray RAL 7042 deep black RAL 9005	
RJ45 connector , 8-pos., CAT6, 1 Gbps, with crimp connection, for 27 ... 24 AWG Military gray RAL 7042 deep black RAL 9005	
RJ45 connector , 8-pos., CAT6 _A , 10 Gbps, with crimp connection, for 27 ... 24 AWG Military gray RAL 7042 deep black RAL 9005	
Sleeve housing , for VS-08-ST-H...-RJ45 pin insert, for cable diameter of 5.0 mm ... 8.5 mm Military gray RAL 7042 deep black RAL 9005	
RJ45 pin insert , 8-pos., shielded, IDC connection technology, for 27 ... 26 AWG litz wires, with strain relief	
CAT5	
CAT6	
RJ45 male insert , 8-pos., shielded, IDC pierce connection, for litz wires AWG 27 ... 24, with strain relief	
CAT6	
RJ45 pin insert , CAT6 _A , 10 Gbps	

Ordering data		
Type	Order No.	Pcs. / Pkt.
VS-08-RJ45-5-Q/IP67	1656990	1
VS-08-RJ45-5-Q/IP67-BK	1658493	1
CUC-V06-C1PGY-S/R4CE8:1	1414383	1
CUC-V06-C1PBK-S/R4CE8:1	1414408	1
CUC-V06-C1PGY-S/R4CEA:1	1414406	1
CUC-V06-C1PBK-S/R4CEA:1	1414410	1
VS-08-T-H-RJ45/IP67	1652732	5
VS-08-T-H-RJ45/IP67-BK	1658671	5
VS-08-ST-H11-RJ45	1652716	5
VS-08-ST-H21-RJ45	1652729	5
VS-08-ST-H21P-RJ45	1404388	5
VS-08-RJ45-10G/C	1418853	5

Ordering data		
Type	Order No.	Pcs. / Pkt.
VS-08-T-H-RJ45/IP67	1652732	5
VS-08-T-H-RJ45/IP67-BK	1658671	5
VS-08-ST-H11-RJ45	1652716	5
VS-08-ST-H21-RJ45	1652729	5
VS-08-ST-H21P-RJ45	1404388	5
VS-08-RJ45-10G/C	1418853	5

Accessories	
Stripping tool , for multiple-stage repositioning of shielded conductors	
Crimp tool , pliers with die, for VS-08-ST-H...-RJ45	

Accessories		
Type	Order No.	Pcs. / Pkt.
VS-CABLE-STRIP-VARIO	1657407	1

Accessories		
Type	Order No.	Pcs. / Pkt.
VS-CABLE-STRIP-VARIO	1657407	1
VS-CT-RJ45-H	1653265	1

RJ45 panel mounting frames and Freetnet socket inserts, IP20



Keystone panel mounting frames and keystones

Freetnet panel mounting frames and modules

	Technical data			Technical data		
	CUC-K-J1ZNI-S/R4IDC8	VS-08-...-RJ45-...		CUC-F-...-S/R4IDC8	VS-08-BU-RJ45-5-F/PK	
Electrical data						
Nominal voltage U _N	-	-		-	50 V	
Rated current	-	-		-	1 A	
Housing material	Zinc die-cast	-		Zinc die-cast	Copper alloy	
Contact material	CuSn	Copper alloy		CuSn	Copper alloy	
Flammability rating according to UL 94	-	V0		-	V0	
No. of pos.	8	8		8	8	
Connection method	IDC connection	Female		IDC connection	IDC	
Insertion/withdrawal cycles	≥ 750	≥ 750		≥ 750	≥ 750	
Temperature data						
Ambient temperature (operation)	-10°C ... 60°C	-40°C ... 70°C		-10°C ... 60°C	-20°C ... 70°C	
	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
RJ45 socket insert , 8-pos., shielded, with cable connection						
CAT6 _A	CUC-K-J1ZNI-S/R4IDC8	1419021	1			
RJ45 socket insert , 8-pos., shielded, socket to socket						
CAT5	VS-08-BU-RJ45/BU	1689064	5			
CAT6	VS-08-BU-RJ45-6-MOD/BU	1653155	5			
RJ45 keystone panel mounting frame , Version 6, for round mounting cutout, with seal and central nut						
Military gray RAL 7042	VS-08-A-RJ45/MOD-1-R-IP67	1689844	1			
deep black RAL 9005	VS-08-A-RJ45/MOD-1-R-IP67 BK	1658053	5			
RJ45 keystone panel mounting frame , Version 6, with rectangular mounting cutout, with seal, without mounting screws						
Military gray RAL 7042	VS-08-A-RJ45/MOD-1-IP67	1689080	5			
deep black RAL 9005	VS-08-A-RJ45/MOD-1-IP67-BK	1658642	5			
RJ45 Freetnet socket insert , 8-pos., shielded, with cable connection						
10 Gbps, CAT6 _A				CUC-F-J1ZNI-S/R4IDC8	1418984	1
RJ45 Freetnet socket insert , 8-pos., shielded, with cable connection						
1 Gbps, CAT5				VS-08-BU-RJ45-5-F/PK	1652936	1
RJ45 Freetnet socket insert , 8-pos., shielded, socket to socket						
1 Gbps, CAT6				CUC-F-D1ZNI-S/R4GC8	1419022	1
Freetnet panel mounting frame , Version 6, for round mounting cutout, with seal, without mounting screws						
Military gray RAL 7042				VS-A-F-IP67	1653744	5
deep black RAL 9005				VS-A-F-IP67-BK	1658668	5
	Accessories			Accessories		
Protective cover for Version 6 panel mounting frame						
Military gray RAL 7042	VS-08-SD-F	1652606	5	VS-08-SD-F	1652606	5
deep black RAL 9005	VS-08-SD-F-BK	1658066	5	VS-08-SD-F-BK	1658066	5
Stripping tool , for multiple-stage repositioning of shielded conductors	VS-CABLE-STRIP-VARIO	1657407	1	VS-CABLE-STRIP-VARIO	1657407	1

RJ45 terminal outlets, IP65/IP67

- Rugged design
- Including covers to protect against environmental influences
- Integrated cable management system



**Terminal outlet
with 2 x RJ45 slots**

ERC

Technical data

Electrical data

Transmission characteristics (category)

Material data

Housing material

Mechanical data

Color

Degree of protection

VS-TO-RO-MCBK-F141...

CAT6

Aluminum cast alloy, powder-coated

Black

IP65/IP67

Ordering data

Description

**Terminal outlet RJ45 IP65/67, 2 slots version 6,
with protective plugs, 2 cable entries**

2x RJ45

Type

Order No.

Pcs./
Pkt.

VS-TO-RO-MCBK-F1418/1418

1404278

1

Field coupling, IP65/67

- Fixed mounting is also an option
- Including covers to protect against environmental influences



Field coupling with RJ45



Technical data

VS-08-KU-IP67

Electrical data	
Rated voltage	50 V
Rated current	1 A
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Material data	
Housing material	PBT
Contact material	Copper alloy
Flammability rating according to UL 94	V0
Mechanical data	
No. of pos.	8
Degree of protection	IP65/IP67
Temperature data	
Ambient temperature (operation)	-10°C ... 60°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
RJ45 coupling, IP67, CAT5, with protective cover			
Military gray RAL 7042	VS-08-KU-IP67	1689268	1
deep black RAL 9005	VS-08-KU-IP67-BK	1658684	1

FO connectors, IP65/67

Notes:

For further technical data, see:
phoenixcontact.net/products



**SC-RJ connector
for polymer fiber 980/1000 µm**

ERIC

Material data
Housing material
Ferrule material
Flammability rating according to UL 94
Color
Degree of protection
External cable diameter
Wire diameter
Ferrule diameter
Insertion/withdrawal cycles
Temperature data
Ambient temperature (operation)

Technical data	
PA	
Copper alloy	
V0	
Gray	
IP67	
5 mm ... 8.5 mm	
2.2 mm	
2.50 mm	
≥ 1000	
-20°C ... 70°C	

Description
FO connector SC-RJ , duplex, with fast connection
POF fiber 980/1000 µm PCF fiber 200/230 µm SC-RJ socket insert , duplex, for VARIOSUB IP67 panel mounting frame, can be used for GOF multimode, GOF single mode, PCF, and POF fiber types
1x SC-RJ/SC-RJ (duplex) VS-SC-RJ panel mounting frame , for use with an AVAGO transceiver, type: AFBR 5978Z
Freet panel mounting frame , Version 6, for round mounting cutout, with seal, without mounting screws
Military gray RAL 7042 deep black RAL 9005

Ordering data		
Type	Order No.	Pcs. / Pkt.
VS-SCRJ-POF-FA-IP67	1657009	1

Protective cover SC-RJ/IP67 , for covering the SC-RJ male insert on the SC-RJ/IP67 sleeve housing
Protective cover for Version 6 panel mounting frame
Military gray RAL 7042 deep black RAL 9005
Tool set for POF assembly , for field installation of SC connectors

Accessories		
Type	Order No.	Pcs. / Pkt.
VS-SCRJ-PC	1653757	5
TF-SCRJ-POF KONF SET	1405246	1



SC-RJ connector
for PCF fiber 200/230 μm



Panel mounting frame
and SC-RJ coupling module

ERIC ®

ERIC

Technical data
PA
Copper alloy
V0
Gray
IP67
5 mm ... 8.5 mm
2.9 mm
2.50 mm
≥ 1000
-20°C ... 70°C

Technical data
PBT
Zirconia ceramics
V0
Black
IP20
-
-
2.50 mm
≥ 500
-25°C ... 70°C

Ordering data		
Type	Order No.	Pcs. / Pkt.
VS-SCRJ-HCS-FA-IP67	1657012	1

Ordering data		
Type	Order No.	Pcs. / Pkt.
VS-SCRJ-GOF-BU/BU	1652978	1
VS-SCRJ-A-TC-IP67	1658545	1
VS-A-F-IP67	1653744	5
VS-A-F-IP67-BK	1658668	5

Accessories		
Type	Order No.	Pcs. / Pkt.
VS-SCRJ-PC	1653757	5

Accessories		
Type	Order No.	Pcs. / Pkt.
VS-08-SD-F	1652606	5
VS-08-SD-F-BK	1658066	5

SC-RJ terminal outlet, IP65/67

- Easy installation, thanks to captive cover screws
- Rugged design
- Including covers to protect against environmental influences
- Integrated cable management system



**Terminal outlet, IP67,
with 2 x SC-RJ slots**

ERC

Technical data

Material data	
Housing material	Aluminum cast alloy, powder-coated
Ferrule material	
	Zirconia ceramics
Mechanical data	
Color	Black
Degree of protection	IP65/IP67
Fiber type	GOF, PCF, POF
Connection profile	SCRJ according to DIN EN 50377-6-1
Insertion/withdrawal cycles	≥ 500

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
	SC-RJ terminal outlet, IP65/IP67, 2 slots, Version 6, with protective plugs, 2 cable entries	VS-TO-RO-MCBK-F1420/1420	1404317
			1

**SC-RJ coupling,
IP65/67**

- Fixed mounting is also an option
- Including covers to protect against environmental influences
- Can be used for all fiber types



SC-RJ field coupling

ERC

Technical data

Material data	
Housing material	PBT
Contact material	-
Ferrule material	Zirconia ceramics
Flammability rating according to UL 94	V0
Mechanical data	
No. of pos.	2
Color	Gray
Degree of protection	IP65/IP67
Temperature data	
Ambient temperature (operation)	-10°C ... 60°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
	SC-RJ coupling, IP67, duplex, can be used for GOF (multimode and single mode), PCF, and polymer fiber types	1410050	1
	FOC-V06-D1PGY-S/SJBE4		

Push-Pull ADVANCE connector, IP65/67

new

new

- High resistance to ESD and EMI for reliable transmission
- Easy handling, thanks to one-piece design
- Locking system to prevent unintentional removal
- Consistent 360° shielding concept



RJ45 connector, straight cable outlet



RJ45 connector, straight cable outlet

	Technical data				Technical data			
Degree of protection	Ethernet IP65/IP67		PROFINET IP65/IP67		Ethernet IP65/IP67		PROFINET IP65/IP67	
Connection cross section AWG	26 ... 24 (solid)		23 ... 22 (solid)		26 ... 24 (solid)		23 ... 22 (solid)	
Transmission speed	1 Gbps		1 Gbps		1 Gbps		1 Gbps	
Housing material	Zinc die-cast		Zinc die-cast		Zinc die-cast		Zinc die-cast	
External cable diameter	5.5 mm ... 10 mm							
Insertion/withdrawal cycles	≥ 750		≥ 750		≥ 750		≥ 750	
Temperature data								
Ambient temperature (operation)	-40°C ... 70°C							
	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.						
	Ethernet		PROFINET		Ethernet		PROFINET	
Push-pull ADVANCE , RJ45 industrial connector, IP67, 8-pos.								
Single pack	1422661	1	1422664	1	1422663	1	1422667	1
Pack of 10	1422680	10	1422669	10	1422679	10	1422674	10
	Accessories				Accessories			
Stripping tool , for multiple-stage repositioning of shielded conductors	VS-CABLE-STRIP-VARIO	1657407	1		VS-CABLE-STRIP-VARIO	1657407	1	
Electronic diagonal cutter , tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version	MICROFOX-SP-1	1212487	1		MICROFOX-SP-1	1212487	1	

Push-Pull ADVANCE connector, IP65/67



RJ45 connector, cable outlet at the bottom



RJ45 connector

ERIC

Degree of protection
Connection cross section AWG
Transmission speed
Housing material
External cable diameter
Insertion/withdrawal cycles
Temperature data
Ambient temperature (operation)

Technical data	
Ethernet	PROFINET
IP65/IP67	IP65/IP67
26 ... 24 (solid)	23 ... 22 (solid)
1 Gbps	1 Gbps
Zinc die-cast	Zinc die-cast
5.5 mm ... 10 mm	5.5 mm ... 10 mm
≥ 750	≥ 750
-40°C ... 70°C	-40°C ... 70°C

Technical data	
IP65/IP67	IP65/IP67
27 ... 24 (stranded)	26 ... 22 (solid)
10 Gbps	-
Plastic	PA-GF
5 mm ... 8 mm	5 mm ... 8 mm
≥ 200	≥ 500
-25°C ... 60°C	-10°C ... 60°C

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Push-pull ADVANCE , RJ45 industrial connector, IP67, 8-pos.				
Single pack	1422662	1	1422665	1
Pack of 10	1422677	10	1422672	10
Push-pull connector (Version 14) for 10 Gbps, with RJ45 crimp connection, for 26 ... 24 AWG stranded conductors, 5.0 mm ... 8.0 mm cable diameter				
Plastic housings			1422205	1
Push-pull connector (version 14) for PROFINET with RJ45 QUICKON fast connection technology, for 22 AWG 1 and 7-wire conductors, cable diameter of 5.0 mm ... 8.0 mm				
4-pos., 100 Mbps			1608126	1
8-pos., 1 Gbps			1657834	1

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Ethernet		PROFINET	

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.

Stripping tool , for multiple-stage repositioning of shielded conductors	VS-CABLE-STRIP-VARIO	1657407	1
Electronic diagonal cutter , tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version	MICROFOX-SP-1	1212487	1
Protective cover, IP65 , with push/pull locking, for covering the contact insert in the push/pull connector for RJ45 and SC-RJ, plastic	VS-PPC-F1-PC-POBK	1405316	1
Shielding foil set , 25 pcs., replacement for VS-PN-RJ45-5-Q/IP20	VS-08-RJ45-FOLIEN-SET	1417184	1

Accessories		

Accessories		

RJ45 panel mounting frames and Freenet socket inserts, IP20



Freenet panel mounting frames and modules



Freenet panel mounting frame with central nut and modules

Electrical data	VS-08-BU-RJ45-5-F/PK
Nominal voltage U_N	50 V
Rated current	1 A
Housing material	Copper alloy
Contact material	Copper alloy
Flammability rating according to UL 94	V0
No. of pos.	8
Connection method	IDC
Insertion/withdrawal cycles	≥ 750
Temperature data	
Ambient temperature (operation)	-20°C ... 70°C

Technical data		
VS-08-BU-RJ45-5-F/PK		
50 V		
1 A		
Copper alloy		
Copper alloy		
V0		
8		
IDC		
≥ 750		
-20°C ... 70°C		

Technical data		
CUC-F...-S/R4IDC8		
72 V		
1.5 A		
Zinc die-cast		
Copper alloy		
-		
8		
Female		
≥ 750		
-10°C ... 60°C		

Description	
RJ45 Freenet socket insert , 8-pos., shielded, with cable connection 10 Gbps, CAT6 _A	
RJ45 Freenet socket insert , 8-pos., shielded, with cable connection 1 Gbps, CAT5	
RJ45 Freenet socket insert , 8-pos., shielded, socket to socket 1 Gbps, CAT6	
RJ45 Freenet panel mounting frame , Version 14, IP65/IP67, for rectangular mounting cutout, with seal and mounting screws Zinc die-cast housing	
RJ45 Freenet panel mounting frame , Version 14, IP65/IP67, for round mounting cutout, with seal and central nut Metal housing	
RJ45 panel mounting frame with socket insert, Version 14, IP65/IP67, for rectangular mounting cutout, with seal and mounting screws, 8-pos., shielded, with cable connection, CAT6 _A Zinc die-cast housing	
RJ45 panel mounting frame with socket insert, Version 14, IP65/IP67, for rectangular mounting cutout, with seal and mounting screws, 8-pos., shielded, socket to socket, CAT6 Zinc die-cast housing	
Adapter , zinc die-cast 45° 180°	

Ordering data		
Type	Order No.	Pcs. / Pkt.
CUC-F-J1ZNI-S/R4IDC8	1418984	1
VS-08-BU-RJ45-5-F/PK	1652936	1
CUC-F-D1ZNI-S/R4GC8	1419022	1
CUC-V14-F1ZNI-EM/R40	1413963	1
CUC-V14-F1ZNI-EM/R4F8	1413961	1
CUC-V14-F1ZNI-EM/R4B8	1413962	1
CUC-V14-A1ZNI-R45	1413988	1
CUC-V14-A1ZNI-S180	1413989	1

Ordering data		
Type	Order No.	Pcs. / Pkt.
CUC-F-J1ZNI-S/R4IDC8	1418984	1
VS-08-BU-RJ45-5-F/PK	1652936	1
CUC-F-D1ZNI-S/R4GC8	1419022	1
VS-PPC-F1-RJ45-MNNA-1C-F	1405222	1

Accessories	
Protective cover , for data port	
Stripping tool , for multiple-stage repositioning of shielded conductors	
Adapter , with filler plug and marking element	
Marking element , without filler plug	
Protective cover , with spring lid	
Screw set , M3x20 V2A, including plastic washers, toothed lock washers, and nuts	
Strain relief plate	

Accessories		
VS-PPC-C1-PC-ROBK-L	1405293	1
VS-CABLE-STRIP-VARIO	1657407	1
CUC-V14-A1RBK-PC	1413985	1
CUC-V14-A1PBK-BA:50	1413979	50
CUC-V14-A1PBK-PC	1413970	1
CUC-V14-A-SCREW-M3:20	1413987	20
CUC-V14-A3ST-SR	1413990	1

Accessories		
VS-PPC-C1-PC-ROBK-L	1405293	1
VS-CABLE-STRIP-VARIO	1657407	1

Field couplings,
IP65/67



RJ45 and power field coupling
with cable connection



RJ45 field coupling
with cable connection

	Technical data			Technical data		
Electrical data	VS-MP-PPC/CG-PO/10G			VS-MP-PPC/CG-10G		
Transmission characteristics (category)	CAT6 _A			CAT6 _A		
Material data	Aluminum press-drawn section / die-cast zinc			Aluminum press-drawn section / die-cast zinc		
Connection data	Spring connection / IDC			IDC		
Connection method	-			-		
Connection cross section AWG	5 mm ... 8 mm (Data cable gland)			5 mm ... 8 mm (Data cable gland)		
Cable diameter	> 1000 (Data)			> 1000 (Data)		
Insertion/withdrawal cycles	-			-		
Temperature data	-40°C ... 70°C			-40°C ... 70°C		
Ambient temperature (operation)	-			-		
	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Multi-port connection , for passive PROFINET cabling to robots, including mounting foot	VS-MP-PPC/CG-PO/10G	1403682	1	VS-MP-PPC/CG-10G	1403678	1
Multi-port power connection : push-pull power, for passive PROFINET cabling to robots, including mounting foot	VS-MP-PPC/CG-PO	1403681	1			
	Accessories			Accessories		
Protective cover	VS-PPC-C1-PC-ROBK-L	1405293	1	VS-PPC-C1-PC-ROBK-L	1405293	1
for data port	VS-PPC-C2-PC-ROBK-L	1405303	1	VS-PPC-C2-PC-ROBK-L	1405303	1
for power port	VS-CABLE-STRIP-VARIO	1657407	1	VS-CABLE-STRIP-VARIO	1657407	1
Stripping tool , for multiple-stage repositioning of shielded conductors						

Power and data field couplings, IP65/67

- Fixed mounting is also an option
- Rugged design
- Including covers to protect against environmental influences



RJ45 and power field coupling

ERC

Technical data

VS-MP-PPC/PPC-1G

Electrical data	
Rated voltage	-
Rated current	-
Transmission characteristics (category)	CAT5
Material data	
Housing material	Aluminum press-drawn section / die-cast zinc
Contact material	Phosphor bronze
Flammability rating according to UL 94	V0
Mechanical data	
No. of pos.	8
Degree of protection	IP65
Temperature data	
Ambient temperature (operation)	-40°C ... 70°C

Ordering data

Description	
Multi-port data coupling: for passive PROFINET cabling to robots, including mounting foot	
Metal housing	
Multi-port power coupling: for passive PROFINET cabling to robots, including mounting foot	

Type	Order No.	Pcs. / Pkt.
VS-MP-PPC/PPC-1G	1403685	1
VS-MP-PPC/PPC-PO	1403684	1

**Terminal outlets,
IP65/67**

- Easy installation, thanks to captive cover screws
- Rugged design
- Including covers to protect against environmental influences
- Integrated cable management system



**Terminal outlet
with 2 x RJ45 slots**



**Terminal outlet
with RJ45 and power slots**

ERIC

Technical data		
Electrical data		
Rated voltage	-	
Rated current	-	
Transmission characteristics (category)	CAT6	
Material data		
Housing material	Aluminum cast alloy, powder-coated	
Mechanical data		
Color	Black	
Degree of protection	IP65/IP67	
Ordering data		
Type	Order No.	Pcs. / Pkt.
VS-TO-RO-MCBK-F1411/1411	1404281	1

ERIC

Technical data		
Electrical data		
Rated voltage	-	
Rated current	-	
Transmission characteristics (category)	CAT6	
Material data		
Housing material	Aluminum cast alloy, powder-coated	
Mechanical data		
Color	Black	
Degree of protection	IP65/IP67	
Ordering data		
Type	Order No.	Pcs. / Pkt.
VS-TO-RO-MCBK-F1411/1413	1404333	1

Electrical data	
Rated voltage	-
Rated current	-
Transmission characteristics (category)	CAT6
Material data	
Housing material	Aluminum cast alloy, powder-coated
Mechanical data	
Color	Black
Degree of protection	IP65/IP67
Description	
Terminal outlet, IP65/IP67, 2 slots, Version 14, with protective plugs, 2 cable entries Push-pull with 2 x RJ45	
Terminal outlet, IP65/IP67, 2 slots, Version 14, with protective plugs, 2 cable entries Push-pull with 1 x Power and 1 x RJ45	

Push-pull power connectors, IP65/67

- Fixed coding for PROFINET
- Flexible coding (on request)
- Various solder versions
- Spring connection



Push-pull connector



Push-pull panel mounting side



	Technical data			Technical data		
Electrical data	CUC-PPC-C2ZNI-S.../24FKP5			VS-MSTBA...-BK-A VS-PPC-F2-MSTB-MNNA...		
Rated current	16 A (at 20°C)			16 A -		
Material data	Zinc die-cast			- Zinc die-cast		
Housing material	V0			V0		
Flammability rating according to UL 94	0.75 mm ² ... 2.5 mm ²			-		
Conductor cross section	18 ... 13			-		
Connection cross section AWG	≥ 100			≥ 100 ≥ 500		
Insertion/withdrawal cycles	-40°C ... 85°C			-40°C ... 70°C -40°C ... 80°C		
Temperature data						
Ambient temperature (operation)						
	Ordering data			Ordering data		
Description	Type	Order No.	Pcs./Pkt.	Type	Order No.	Pcs./Pkt.
MSTB connector, IP67 , with push-pull interlocking, 5-pos., with spring connection, metal housing, 24 V, molded coding						
for cable diameter of 6.5 mm ... 9 mm	CUC-PPC-C2ZNI-SX/24FKP5	1421783	1			
for cable diameter of 9 mm ... 13 mm	CUC-PPC-C2ZNI-SS/24FKP5	1421785	1			
MSTB connector, IP67 , with push-pull interlocking, 5-pos., with spring connection, metal housing, 24 V, variable coding						
for cable diameter of 6.5 mm ... 9 mm	CUC-PPC-C2ZNI-SS/24FKP5:FC	1425515	1			
for cable diameter of 9 mm ... 13 mm	CUC-PPC-C2ZNI-SX/24FKP5:FC	1425514	1			
MSTB contact insert , for PCB mounting, 24 V, 5-pos., RAL 9005 (black), for panel mounting frame VS-PPC-F2-MSTB-...-1R-P						
Angled solder pins				VS-MSTBAH 2,5/ 5-GB-5,08-BK-A	1657915	50
Straight solder pins				VS-MSTBVA 2,5/ 5-GB-5,08-BK-A	1609565	50
MSTB panel mounting frame, IP67 , for Push-Pull locking, for PCB connection, for rectangular assembly opening, with gasket, without mounting screws						
Metal housing				VS-PPC-F2-MSTB-MNNA-1R-P	1608087	1
MSTB panel mounting frame, IP67 , for push-pull interlocking, with integrated contact insert for conductor connection, spring connection, for rectangular mounting cutout, with seal, without mounting screws						
24 V, metal				VS-PPC-F2-MSTB-MNNA-1R-SPSA5	1608249	1
MSTB panel mounting frame, IP67 , for push-pull interlocking, metal, with integrated contact insert for conductor connection, spring connection, for round mounting cutout, with seal, without mounting screws						
24 V				VS-PPC-F2-MSTB-MNNA-1C-SPSA5	1405248	1
Protective cover, IP67 , to cover the contact insert in the Power push-pull panel mounting frame						
Metal housing				VS-PPC-C2-PC67-MNNA	1404045	1
Protective cover for power port				VS-PPC-C2-PC-ROBK-L	1405303	1
Protective cap, IP65 , with push-pull locking for covering the contact insert in the push-pull connector for Power, plastic						
				VS-PPC-F2-PC-POBK	1405329	1

Push-pull power distributors, IP65/67



Push-pull Y-distributor



Push-pull H-distributor

ERC

Technical data

Electrical data	VS-PPC-J-1220-1227-1020-0,2
Rated voltage	24 V
Rated current	16 A
Material data	
Housing material	Aluminum die-cast
Mechanical data	
No. of pos.	5
Degree of protection	IP65/IP67
Temperature data	
Ambient temperature (operation)	-40°C ... 70°C (cable, fixed installation)

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
PROFINET Y-distributor with assembled power cable, 5-pos., IP65/IP67, MSTB connector with metal housing to 2 x socket in the metal housing, cable length:			
0.2 m	VS-PPC-J-1220-1227-1020-0,2	1404799	1
Variable	VS-PPC-J-1220-1227-1020-...	1405484	1
PROFINET Y-distributor with assembled power cable, 5-pos., IP65/IP67, 7/8" connector with metal housing to 2 x socket in the metal housing, cable length:			
0.2 m	VS-PPC-J-1226-1227-1021-0,2	1404812	1
Variable	VS-PPC-J-1226-1227-1021-...	1405497	1
Power H-distributor , 4 x MSTB contact inserts, metal housing, without mounting screws			

Accessories

Mounting foot for power distributors, plastic	VS-PPC-J-M	1405390	1
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ERC

Technical data

Electrical data	VS-PPC-J-4X-1227
Rated voltage	24 V
Rated current	16 A (at 20°C)
Material data	
Housing material	Zinc die-cast
Mechanical data	
No. of pos.	5
Degree of protection	IP65/IP67
Temperature data	
Ambient temperature (operation)	-40°C ... 85°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Power H-distributor , 4 x MSTB contact inserts, metal housing, without mounting screws	VS-PPC-J-4X-1227	1405387	1

Accessories

Mounting foot for power distributors, plastic	VS-PPC-J-M	1405390	1
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Ordering example for products with variable cable:

For a distributor with a cable length of 34.5 m, the ordering data is as follows:

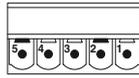
Order No.	Length [m]
1405484	34.5
	Increment: 0.5 m
	Maximum length: 50 m

Data connectors and cables

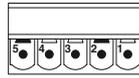
Network components – version 14 connectors

Assembled power cables 1.5 mm² and 2.5 mm²

Power, metal, 24 V
1.5 mm²



Power, metal, 24 V
2.5 mm²



		Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.	
		Power, 7/8", 1.5 mm ²	1 m	1609219			
			2 m	1609222			
			5 m	1609235			
			Variable	1609248			
		Power, metal, 24 V, 1.5 mm ²	1 m	1609170			
			2 m	1609183			
			5 m	1609196			
			Variable	1609206			

Ordering example for cable with variable cable length:

Assembled PROFINET power cable for 24 V, with a metal push-pull connector and a 7/8" connector and a cable length of 34.5 m.

Order No.	Length [m]
1609248	34.5
Increments: 1.0 ... 3.0 m = 0.1 m > 3.0 m = 0.5 m	

Ordering example for cable with variable cable length:

Assembled PROFINET power cable for 24 V, with two metal push-pull connectors and a cable length of 34.5 m.

Order No.	Length [m]
1609206	34.5
Increments: 1.0 m ... 3.0 m = 0.1 m > 3.0 m = 0.5 m	

Technical data	Technical data	
	Power, metal, 24 V 1.5 mm ²	Power, metal, 24 V 2.5 mm ²
Housing material	Zinc die-cast/PBT	Zinc die-cast
Outer sheath, material	PVC	PVC
Conductor cross section	1.5	2.5
External cable diameter	10	11.8
Degree of protection	IP65	IP65
Ambient temperature		
Fixed installation	-40 ... 70	-40 ... 70
Flexible installation	-5 ... 70	-5 ... 70
Plug/socket	-40 ... 70	-40 ... 70

Push-Pull ADVANCE connector, IP65/67

- Available for POF, PCF, and GOF
- Easy handling, thanks to one-piece design
- Locking system to prevent unintentional removal



SC-RJ connector, straight cable outlet



SC-RJ connector, cable outlet at the top

ERIC

Technical data			
POF		PCF	
Degree of protection	IP65/IP67	Degree of protection	IP65/IP67
Housing material	Zinc die-cast	Housing material	Zinc die-cast
External cable diameter	5.5 mm ... 10 mm	External cable diameter	5.5 mm ... 10 mm
Insertion/withdrawal cycles	≥ 500	Insertion/withdrawal cycles	≥ 50
Temperature data			
Ambient temperature (operation)		-25°C ... 70°C	
		-40°C ... 70°C	
Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
POF		PCF	
1407896	1	1407897	1
1408047	1	1408048	1
Accessories			
TF-SCRJ-POF KONF SET		1405246	1

ERIC

Technical data			
POF		PCF	
Degree of protection	IP65/IP67	Degree of protection	IP65/IP67
Housing material	Zinc die-cast	Housing material	Zinc die-cast
External cable diameter	5.5 mm ... 10 mm	External cable diameter	5.5 mm ... 10 mm
Insertion/withdrawal cycles	≥ 50	Insertion/withdrawal cycles	≥ 50
Temperature data			
Ambient temperature (operation)		-40°C ... 70°C	
		-40°C ... 70°C	
Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
POF		PCF	
1408028	1	1408029	1
1408093	1	1408094	1
Accessories			
TF-SCRJ-POF KONF SET		1405246	1

Degree of protection	IP65/IP67
Housing material	Zinc die-cast
External cable diameter	5.5 mm ... 10 mm
Insertion/withdrawal cycles	≥ 500
Temperature data	
Ambient temperature (operation)	

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Push-pull ADVANCE , SC-RJ connector	POF		PCF	
	1407896	1	1407897	1
Single pack	1408047	1	1408048	1
Pack of 10				

Tool set for POF assembly, for field installation of SC connectors.			
TF-SCRJ-POF KONF SET		1405246	1

Push-Pull ADVANCE connector, IP65/67



SC-RJ connector,
cable outlet at the bottom



SC-RJ connector

ERIC

ERIC

	ERIC				ERIC			
	Technical data		Technical data		Technical data		Technical data	
	POF	PCF	POF	PCF	POF	PCF	POF	PCF
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67
Housing material	Zinc die-cast	Zinc die-cast	Zinc die-cast	Zinc die-cast	PA-GF	PA-GF	PA-GF	PA-GF
External cable diameter	5.5 mm ... 10 mm	5.5 mm ... 10 mm	5.5 mm ... 10 mm	5.5 mm ... 10 mm	6.5 mm ... 9.5 mm	6.5 mm ... 9.5 mm	6.5 mm ... 9.5 mm	6.5 mm ... 9.5 mm
Insertion/withdrawal cycles	≥ 50	≥ 50	≥ 50	≥ 50	≥ 500	≥ 500	≥ 500	≥ 500
Temperature data								
Ambient temperature (operation)	-40°C ... 70°C		-40°C ... 70°C		-20°C ... 70°C		-20°C ... 70°C	
	ERIC				ERIC			
	Ordering data		Ordering data		Ordering data		Ordering data	
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	POF		PCF		POF		PCF	
Push-pull ADVANCE , SC-RJ connector								
Single pack	1407902	1	1407904	1				
Pack of 10	1408053	1	1408055	1				
FO connector SC-RJ , IP67, with push-pull locking, duplex, with fast connection technology								
Plastic housings					1657850	1	1657863	1
	ERIC				ERIC			
	Accessories				Accessories			
Tool set for POF assembly , for field installation of SC connectors								
	TF-SCRJ-POF KONF SET	1405246		1	TF-SCRJ-POF KONF SET	1405246		1

FO connectors, panel mounting frames, and couplings

new



SC-RJ panel mounting side

Technical data

Housing material	Zinc die-cast
Flammability rating according to UL 94	V0
Degree of protection	IP65/IP67
Insertion/withdrawal cycles	≥ 50
Temperature data	
Ambient temperature (operation)	-40°C ... 70°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
SC-RJ panel mounting frame, IP67 , for push-pull interlocking, for rectangular mounting cutout, for AVAGO transceiver (type: AFBR5978BZ) on PCB, with seal and mounting screws			
Zinc die-cast housing SC-RJ panel mounting frame, IP67, incl. SC-RJ coupling , for push-pull interlocking, for rectangular mounting cutout, with seal and mounting screws	FOC-V14-F1ZNI-EM/SJO	1413981	1
Zinc die-cast housing SC-RJ panel mounting frame, IP67, incl. SC-RJ coupling , for push-pull interlocking, for round mounting cutout, with seal	FOC-V14-F1ZNI-EM/SJB	1413964	1
Adapter , zinc die-cast	VS-PPC-F1-SCRJ-MNNA-1C-F	1405235	1
45°	CUC-V14-A1ZNI-R45	1413988	1
180°	CUC-V14-A1ZNI-S180	1413989	1

Accessories

Protective cover , for data port	VS-PPC-C1-PC-ROBK-L	1405293	1
Adapter , with filler plug and marking element	CUC-V14-A1RBK-PC	1413985	1
Marking element , without filler plug	CUC-V14-A1PBK-BA:50	1413979	50
Protective cover , with spring lid	CUC-V14-A1PBK-PC	1413970	1
Screw set , M3x20 V2A, including plastic washers, toothed lock washers, and nuts	CUC-V14-A-SCREW-M3:20	1413987	20

Power and data field couplings, IP65/67



SC-RJ and power field coupling with cable connection



SC-RJ field coupling with cable connection

ERC

Technical data

Material data	VS-MP-PPC/CG-PO/FO	VS-MP-PPC/CG-PO
Housing material	Aluminum press-drawn section / die-cast zinc	Aluminum press-drawn section / die-cast zinc
Connection data	Data/power: SCRJ/5-pos. ≥ 500 (Data) // ≤ 100 (Power)	Power: 5-pos. ≤ 100 (Power)
Temperature data	-40°C ... 70°C	-40°C ... 70°C

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-MP-PPC/CG-PO/FO	1404321	1
VS-MP-PPC/CG-PO	1403681	1
VS-MP-PPC/PPC-PO	1403684	1

Accessories

VS-PPC-C1-PC-ROBK-L	1405293	1
VS-PPC-C2-PC-ROBK-L	1405303	1
VS-CABLE-STRIP-VARIO	1657407	1

ERC

Technical data

Material data	VS-MP-PPC/CG-FO
Housing material	Aluminum press-drawn section / die-cast zinc
Connection data	Data: SCRJ ≥ 500 (Data)
Temperature data	-40°C ... 70°C

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-MP-PPC/CG-FO	1404319	1

Accessories

VS-CABLE-STRIP-VARIO	1657407	1
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Material data	VS-MP-PPC/CG-PO/FO
Housing material	Aluminum press-drawn section / die-cast zinc
Connection data	Data/power: SCRJ/5-pos. ≥ 500 (Data) // ≤ 100 (Power)
Temperature data	-40°C ... 70°C

Description	<p>Multi-port connection, for passive PROFINET cabling to robots, including mounting foot</p> <p>Multi-port power connection: push-pull power, for passive PROFINET cabling to robots, including mounting foot</p> <p>Multi-port power coupling: for passive PROFINET cabling to robots, including mounting foot</p>
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Protective cover for data port	VS-PPC-C1-PC-ROBK-L	1405293	1
Protective cover for power port	VS-PPC-C2-PC-ROBK-L	1405303	1
Stripping tool, for multiple-stage repositioning of shielded conductors	VS-CABLE-STRIP-VARIO	1657407	1

Terminal outlet and coupling, IP65/67

- Easy installation, thanks to captive cover screws
- Rugged design
- Including covers to protect against environmental influences
- Integrated cable management system



Terminal outlet with SC-RJ and power slots



SC-RJ field coupling

ERIC

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Technical data			
Material data	Housing material		
	Aluminum cast alloy, powder-coated		
Connection data	Connection profile		
	-		
	Insertion/withdrawal cycles		
	-		
Temperature data	Ambient temperature (operation)		
	-40°C ... 70°C		
Ordering data			
Description	Type	Order No.	Pcs. / Pkt.
Terminal outlet SC-RJ/Power IP65/67 push-pull, 2 slots version 14, with protective plugs, 2 cable entries	VS-TO-RO-MCBK-F1417/1413	1404346	1
Terminal outlet SC-RJ IP65/67 push-pull, 2 slots version 14, with protective plugs, 2 cable entries	VS-TO-RO-MCBK-F1417/1417	1404320	1

Technical data			
Material data	Housing material		
	Zinc die-cast		
Connection data	Connection profile		
	-		
	Insertion/withdrawal cycles		
	≥ 500		
Temperature data	Ambient temperature (operation)		
	-40°C ... 70°C		
Ordering data			
Description	Type	Order No.	Pcs. / Pkt.
SC-RJ push-pull coupling, IP67, metal, with protective cover, color: nickel-plated	VS-PPC-J-1-SCRJ-MNBK	1405206	1

RJ45 connector, IP20

new



RJ45 crimp connectors



RJ45 field connection connectors

ERC

ERC

	Technical data		Technical data	
	VS-08-RJ45-10G/C	VS-08-ST-H...-RJ45	VS-08-RJ45-5-Q/IP20...	CUC-STD-C1P..
Electrical data				
Transmission characteristics (category)	CAT6 _A	-	CAT5 (IEC 11801:2002)	CAT6
Overvoltage category	I	I	I	-
Material data				
Housing material	-	-	PA	PA
Contact material	Phosphor bronze	Copper alloy	Copper alloy	Phosphor bronze
Flammability rating according to UL 94	V2	V2	V0	V2
Degree of pollution	-	2	1	2
External cable diameter	-	-	4.5 mm ... 8 mm	7 mm
Insertion/withdrawal cycles	≥ 750	≥ 750	≥ 1000	≥ 750
Temperature data				
Ambient temperature (operation)	-25°C ... 60°C	-25°C ... 60°C	-20°C ... 70°C	-25°C ... 60°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs./Pkt.	Type	Order No.	Pcs./Pkt.
RJ45 connector , IP20, CAT5, 8-pos., with QUICKON fast connection technology, for 1 and 7-wire conductors 26 ... 23 AWG gray black				VS-08-RJ45-5-Q/IP20 VS-08-RJ45-5-Q/IP20 BK	1656725 1658008	1 1
RJ45 connector , IP20, CAT6 _A , 8-pos., with QUICKON fast connection technology, for 26 ... 24 AWG 1-wire and 7-wire conductors, color: black				VS-08-RJ45-10G/Q	1419001	1
RJ45 connector , 4-pos., with QUICKON fast connection technology, for 22 AWG, color: gray				VS-PN-RJ45-5-Q/IP20	1658435	1
RJ45 connector , IP20, CAT6, 8-pos., with crimp connection, for 27 ... 24 AWG, color: gray green	CUC-STD-C1PGY-S/R4E8:1 CUC-STD-C1PGN-S/R4E8:1	1414382 1414400	1 1			
RJ45 connector , IP20, CAT6 _A , 8-pos., with crimp connection, for 27 ... 24 AWG, color: gray green	CUC-STD-C1PGY-S/R4EA:1 CUC-STD-C1PGN-S/R4EA:1	1414395 1414402	1 1			
RJ45 pin insert , CAT6 _A , 10 Gbps	VS-08-RJ45-10G/C	1418853	5			
RJ45 pin insert , 8-pos., shielded, IDC connection technology, for 27 ... 26 AWG litz wires, with strain relief CAT5	VS-08-ST-H11-RJ45	1652716	5			
RJ45 bend protection sleeve , for VS-08-ST-H11-RJ45 and VS-08-RJ45-10G/C pin inserts, for cable diameter up to 7 mm, color: gray green	VS-08-KS-H/GY VS-08-KS-H/GN	1654743 1654756	5 5			

	Accessories			Accessories		
Crimp tool , pliers with die, for VS-08-ST-H...-RJ45	VS-CT-RJ45-H	1653265	1			
Stripping tool , for multiple-stage repositioning of shielded conductors	VS-CABLE-STRIP-VARIO	1657407	1	VS-CABLE-STRIP-VARIO	1657407	1
Shielding foil set , 25 pcs., replacement for VS-PN-RJ45-5-Q/IP20				VS-08-RJ45-FOLIEN-SET	1417184	1

RJ45 industrial connectors, IP20

- Optimized for industrial use with a high degree of resistance to vibration
- High resistance to ESD and EMI for reliable transmission
- Easy handling, thanks to one-piece design
- Metal locking mechanism



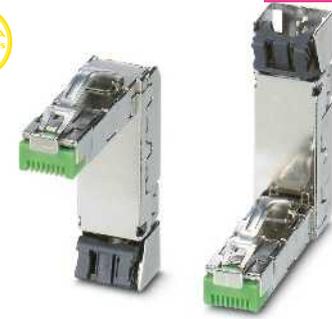
new



RJ45 industrial, straight cable outlet



new



RJ45 industrial, cable outlet at the bottom and top

Degree of protection	IP20
Connection cross section AWG	26 ... 24 (solid)
Connection cross section AWG	26 ... 24 (stranded)
Transmission speed	1 Gbps
Housing material	Zinc die-cast
External cable diameter	5 mm ... 9 mm
Insertion/withdrawal cycles	≥ 750
Temperature data	
Ambient temperature (operation)	-40°C ... 70°C

Technical data			
Ethernet		PROFINET	
IP20		IP20	
26 ... 24 (solid)		23 ... 22 (solid)	
26 ... 24 (stranded)		23 ... 22 (stranded)	
1 Gbps		1 Gbps	
Zinc die-cast		Zinc die-cast	
5 mm ... 9 mm		5 mm ... 9 mm	
≥ 750		≥ 750	
-40°C ... 70°C		-40°C ... 70°C	

Technical data			
Ethernet		PROFINET	
IP20		IP20	
26 ... 24 (solid)		23 ... 22 (solid)	
26 ... 24 (stranded)		23 ... 22 (stranded)	
1 Gbps		1 Gbps	
Zinc die-cast		Zinc die-cast	
5 mm ... 9 mm		5 mm ... 9 mm	
≥ 750		≥ 750	
-40°C ... 70°C		-40°C ... 70°C	

Description					
RJ45 industrial connector, 8-pos.					
Single pack					
RJ45 industrial connector, 8-pos., cable outlet at the bottom					
Single pack					
RJ45 industrial connector, 8-pos., cable outlet at the top					
Single pack					

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Ethernet		PROFINET	
1421607	1	1421126	1

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Ethernet		PROFINET	
1421877	1	1421128	1
1421876	1	1421127	1

Stripping tool , for multiple-stage repositioning of shielded conductors					
Electronic diagonal cutter , tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version					
Markers for terminal blocks, roll , unmarked, can be marked with: THERMOMARK ROLL, THERMOMARK X, THERMOMARK S1.1					
white					
red					
green					
Marker for terminal blocks, sheet , white, unmarked, can be marked with: BLUEMARK CLED, BLUEMARK LED, plotter					

Accessories			
VS-CABLE-STRIP-VARIO	1657407	1	
MICROFOX-SP-1	1212487	1	
TMT 5 R	0816430	1	
TMT 5 R RD	0816427	1	
TMT 5 R GN	0816401	1	
UC-TMF 5	0818153	10	

Accessories			
VS-CABLE-STRIP-VARIO	1657407	1	
MICROFOX-SP-1	1212487	1	
TMT 5 R	0816430	1	
TMT 5 R RD	0816427	1	
TMT 5 R GN	0816401	1	
UC-TMF 5	0818153	10	

RJ45 panel mounting frames and inserts, IP20



Keystone panel mounting frames and keystones

ERC

Technical data

Electrical data	VS-08-BU-RJ45-6/KA/LSA
Rated current	2 A
Transmission characteristics (category)	-
Material data	
Housing material	Nickel-plated brass
Contact material	Copper alloy
Flammability rating according to UL 94	V0
Mechanical data	
No. of pos.	8
Connection method	LSA
Conductor cross section	0.13 mm ² ... 0.32 mm ² (solid)
Connection cross section AWG	26 ... 22 (solid)
Temperature data	
Ambient temperature (operation)	-20°C ... 70°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
RJ45 socket insert , 8-pos., shielded, socket to socket			
CAT5	VS-08-BU-RJ45/BU	1689064	5
RJ45 socket insert , 8-pos., shielded, with cable connection			
CAT6 _A	CUC-K-J1ZNI-S/R4IDC8	1419021	1
RJ45 panel mounting frame , single, for modular female inserts (Keystone), without mounting screws			
	VS-08-A-RJ45/MOD-1-IP20	1689433	5

Accessories

Split-core tool , for connecting the copper wires to the LSA Plus strips	CT-WZ/A	2765505	1
Stripping tool , for multiple-stage repositioning of shielded conductors	VS-CABLE-STRIP-VARIO	1657407	1

RJ45 patch panel, IP20



Patch panel with various connection types



Patch panel with IDC fast connection

ERIC

Technical data	
Electrical data	FL-PP-RJ45-...
Rated voltage	-
Rated current	-
Transmission characteristics (category)	-
Material data	
Housing material	PVC / PA
Contact material	-
Flammability rating according to UL 94	-
Mechanical data	
No. of pos.	-
Color	green
Degree of protection	IP20
Connection method	-
Conductor cross section	-
Connection cross section AWG	-
Temperature data	
Ambient temperature (operation)	-25°C ... 70°C

ERIC

Technical data	
Electrical data	VS-PP-F-RJ45-CAT6
Rated voltage	50 V
Rated current	1 A
Transmission characteristics (category)	CAT6
Material data	
Housing material	PC-GF
Contact material	Copper alloy
Flammability rating according to UL 94	V0
Mechanical data	
No. of pos.	8
Color	gray
Degree of protection	IP20
Connection method	IDC fast connection
Conductor cross section	0.2 mm ² ... 0.32 mm ²
Connection cross section AWG	24 ... 22
Temperature data	
Ambient temperature (operation)	-10°C ... 60°C

Ordering data			
Description	Type	Order No.	Pcs. / Pkt.
Patch panel, one RJ45 socket to 8 IDC connection terminal blocks (1:1 assignment), CAT5, 10/100/1000 Mbps, DIN rail mounting, IP20, option of shield contacting on DIN rail via jumpers			
- RJ45 to LSA connection terminal blocks (without ATEX approval)	FL-PP-RJ45-LSA	2901645	10
Patch panel, one RJ45 socket to 8 screw connection terminal blocks (1:1 assignment), CAT5, 10/100/1000 Mbps, DIN rail mounting, IP20, option of shield contacting on DIN rail via jumpers			
- RJ45 to screw connection terminal blocks	FL-PP-RJ45-SC	2901643	10
Patch panel, two RJ45 sockets (1:1 assignment), CAT5, 10/100/1000 Mbps, DIN rail mounting, IP20, option of shield contacting on DIN rail via jumpers			
	FL-PP-RJ45/RJ45	2901646	10
Patch panel, one RJ45 socket to 8 connection terminal blocks (1:1 assignment), CAT5, 10/100/1000 Mbps, DIN rail mounting, IP20, option of shield contacting on DIN rail via jumpers			
- RJ45 to spring connection terminal blocks	FL-PP-RJ45-SCC	2901642	10
DIN rail adapter, IP20, coupler module CAT6 for 1 Gbps			
DIN rail adapter, IP20, CAT6_A, connection cross section: 26 ... 22 AWG CAT6 _A for 10 Gbps			

Ordering data			
Description	Type	Order No.	Pcs. / Pkt.
	CUC-PP-D1PGY/R4GC8	1418094	1
	CUC-PP-D1PGY/R4IDC8	1419024	1

FO connectors, IP20



POF, 980/1000 μm



PCF, 200/230 μm, 2.9 mm

ERC

Technical data

Material data
Housing material
Ferrule material
Flammability rating according to UL 94
Color
Degree of protection
Insertion/withdrawal cycles
Temperature data
Ambient temperature (operation)

PBT
Copper alloy
V0
black
IP20
≥ 500
-25°C ... 70°C

Ordering data

Description
FO connector SC-RJ, duplex, with fast connection
IP20
IP20, for single wire diameter: 2.9 mm
IP20, for single wire diameter: 2.2 mm
FO connector for 200/230 μm PCF fibers, crimp connection
- SC-RJ
- SC duplex
Connector set for polymer fibers (diameter of the individual elements: 2.2 mm), for self-assembly, with bend protection
- F-SMA set, 4 connectors
Connector set for PCF fibers (diameter of the individual elements: 2.9 mm), for self-assembly, with bend protection
- F-SMA set, 4 connectors
- B-FOC (ST®) set, 4 connectors
Connector set for PROFINET PCF fibers (diameter of the individual elements: 2.2 mm), for self-assembly, with bend protection
- SC duplex set, 2 duplex connectors
- B-FOC (ST®) set, 4 connectors

Type	Order No.	Pcs. / Pkt.
VS-SCRJ-POF-FA-IP20	1654879	1
PSM-SET-FSMA/4-KT	2799720	1

Accessories

Tool set for POF assembly , for field installation of SC connectors
Tool set for PCF assembly , for field installation of SC connectors

TF-SCRJ-POF KONF SET	1405246	1
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ERC

Technical data

PBT
Copper alloy
V0
black
IP20
≥ 1000
-20°C ... 70°C

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-SCRJ-HCS-FA-IP20	1654866	1
PSM-SET-FSMA/4-HCS	2799487	1
PSM-SET-B-FOC/4-HCS	2708481	1

Accessories

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PCF, 200/230 μm, 2.2 mm



PCF, 200/230 μm

ERIC

ERIC

Technical data
PBT
Copper alloy
V0
black
IP20
≥ 1000
-20°C ... 70°C

Technical data
PBT
Zirconia ceramics
V0
beige
IP20
≥ 500
-40°C ... 70°C

Ordering data		
Type	Order No.	Pcs. / Pkt.
VS-SCRJ-HCS-FA-IP20-PN	1404087	1
PSM-SET-SC-DUPLEX/2-HCS/PN	2313779	1
PSM-SET-B-FOC/4-HCS/PN	2313782	1

Ordering data		
Type	Order No.	Pcs. / Pkt.
FOC-C-SCRJ-PCF	1411304	1
FOC-C-SCDU-PCF	1411305	1

Accessories		

Accessories		
FOC-TOOL-PCF KONF SET	1411051	1

Network components – IP20 connectors

FO connector, IP20, field connection

- Cleave technology
- Reusable connectors
- Optimum attenuation values with easy assembly
- No bonding or polishing



LC duplex connector,
1.25 mm - ferrules



LC simplex connector for pigtails,
1.25 mm - ferrules

ERC

Technical data

Material data	
Housing material	PBT
Ferrule material	Zirconia ceramics
Flammability rating according to UL 94	V0
Color	beige
Degree of protection	IP20
Insertion/withdrawal cycles	≥ 500 (according to IEC 61300-2-2)
Temperature data	
Ambient temperature (operation)	-10°C ... 60°C (IEC 61300-2)

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
FO connector, fast connection, reusable			
GOF, 50/125 μm, multimode	FOC-C-LCDU-GOF-MM	1411052	1
GOF, 9/125 μm, single mode (APC)	FOC-C-LCDU-GOF-SM-APC	1412472	1
GOF, 9/125 μm, single mode (PC)	FOC-C-LCDU-GOF-SM-PC	1411053	1
FO connector, fast connection, reusable, value pack			
GOF, 50/125 μm, multimode	FOC-C-LCDU-GOF-MM/10	1411298	1
GOF, 9/125 μm, single mode (APC)	FOC-C-LCDU-GOF-SM-APC/10	1412479	1
GOF, 9/125 μm, single mode (PC)	FOC-C-LCDU-GOF-SM-PC/10	1411299	1

Accessories

Tool set for GOF assembly, for field installation of LC and SC connectors	FOC-TOOL-GOF KONF SET	1411049	1
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ERC

Technical data

Material data	
Housing material	-
Ferrule material	Zirconia ceramics
Flammability rating according to UL 94	V0
Color	beige
Degree of protection	IP20
Insertion/withdrawal cycles	≥ 500 (according to IEC 61300-2-2)
Temperature data	
Ambient temperature (operation)	-10°C ... 60°C (IEC 61300-2)

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
LC simplex connector for pigtails, 1.25 mm - ferrules			
GOF, 50/125 μm, multimode	FOC-C-LC:P-GOF-MM	1411294	1
GOF, 9/125 μm, single mode (APC)	FOC-C-LC:P-GOF-SM-APC	1412476	1
GOF, 9/125 μm, single mode (PC)	FOC-C-LC:P-GOF-SM-PC	1411295	1

Accessories

Tool set for GOF assembly, for field installation of LC and SC connectors	FOC-TOOL-GOF KONF SET	1411049	1
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SC duplex connector,
2.5 mm - ferrules



SC simplex connector for pigtails,
2.5 mm - ferrules



SC-RJ connector,
2.5 mm - ferrules

ERC

ERC

ERC

Technical data
-
Zirconia ceramics
V0
green
IP20
≥ 500 (according to IEC 61300-2-2)
-10°C ... 60°C (IEC 61300-2)

Technical data
-
Zirconia ceramics
V0
blue
IP20
≥ 500 (according to IEC 61300-2-2)
-10°C ... 60°C (IEC 61300-2)

Technical data
-
Zirconia ceramics
V0
beige
IP20
≥ 500 (according to IEC 61300-2-2)
-10°C ... 60°C (IEC 61300-2)

Ordering data		
Type	Order No.	Pcs. / Pkt.
FOC-C-SCDU-GOF-MM	1411292	1
FOC-C-SCDU-GOF-SM-APC	1412474	1
FOC-C-SCDU-GOF-SM-PC	1411293	1
FOC-C-SCDU-GOF-MM/10	1411302	1
FOC-C-SCDU-GOF-SM-APC/10	1412481	1
FOC-C-SCDU-GOF-SM-PC/10	1411303	1

Ordering data		
Type	Order No.	Pcs. / Pkt.
FOC-C-SC:P-GOF-MM	1411296	1
FOC-C-SC:P-GOF-SM-APC	1412478	1
FOC-C-SC:P-GOF-SM-PC	1411297	1

Ordering data		
Type	Order No.	Pcs. / Pkt.
FOC-C-SCRJ-GOF-MM	1411290	1
FOC-C-SCRJ-GOF-SM-APC	1412473	1
FOC-C-SCRJ-GOF-SM-PC	1411291	1
FOC-C-SCRJ-GOF-MM/10	1411300	1
FOC-C-SCRJ-GOF-SM-APC/10	1412480	1
FOC-C-SCRJ-GOF-SM-PC/10	1411301	1

Accessories		
Type	Order No.	Pcs. / Pkt.
FOC-TOOL-GOF KONF SET	1411049	1

Accessories		
Type	Order No.	Pcs. / Pkt.
FOC-TOOL-GOF KONF SET	1411049	1

Accessories		
Type	Order No.	Pcs. / Pkt.
FOC-TOOL-GOF KONF SET	1411049	1

Fiber optic couplings

- Suitable for fiber types:
- POF (980/1000 μm), PCF (200/230 μm), GOF MM (50/125 μm), GOF SM (9/125 μm)



SC-RJ coupling



Couplings for connecting FO cables

ERC

Technical data

Material data
Housing material
Ferrule material
Flammability rating according to UL 94
Color
Degree of protection
Insertion/withdrawal cycles
Temperature data
Ambient temperature (operation)

PBT
Zirconia ceramics
V0
black
IP20
≥ 500

-25°C ... 70°C

Ordering data

Description
SC-RJ coupling , for terminal outlets VS-TO-... and 19" patch panels VS-PP-19-1HE-16-F and front plate VS-SI-FP-2F
1x SC-RJ (duplex)
Coupling ; set, consisting of:
2 x F-SMA/F-SMA
2 x B-FOC (ST®)/B-FOC (ST®)
1x SC-RJ/SC-RJ (duplex)
1 x LC/LC (duplex, multimode fiber)
1x LC/LC (duplex, single-mode fiber (PC))
1x SC duplex/SC duplex

Type	Order No.	Pcs. / Pkt.
VS-SCRJ-GOF-KU	1654358	1

ERC

Technical data

-
-
V0
bare metallic
IP20
-

-25°C ... 85°C

Ordering data

Type	Order No.	Pcs. / Pkt.
PSM-SET-FSMA-LINK/2	2799416	1
PSM-SET-BFOC-LINK/2	2799429	1
VS-SCRJ-GOF-BU/BU	1652978	1
FL MM PATCH COUPLER LC-LC	2700312	1
FL SM PATCH COUPLER LC-LC	2700313	1
FL COUPLER SC-DUPLEX	2901788	1

FO patch panel and splice box

- Patch panel suitable for fiber types:
 - POF (980/1000 μm), PCF (200/230 μm), GOF MM (50/125 μm), GOF SM (9/125 μm)
- Splice box:
 - Compact dimensions despite large splice comb
 - Snap-in adapter for easy DIN rail mounting
 - Ready for equipotential bonding
 - Suitable for industrial applications



SC-RJ patch panel, socket/socket



Splice box for DIN rail

ERC

	Technical data			Technical data		
Material data						
Housing material	PC-GF			Sheet steel		
Ferrule material	Zirconia ceramics			-		
Flammability rating according to UL 94	V0			V0		
Color	gray			light grey RAL 7035		
Degree of protection	IP20			IP20		
Insertion/withdrawal cycles	≥ 500			> 500		
Temperature data						
Ambient temperature (operation)	-10°C ... 60°C			-25°C ... 70°C (according to IEC 61300-2)		
	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
SC-RJ patch panel , DIN rail mounting, IP20, 1 slot	VS-PP-F-SCRJ	1658121	1	FOC-PP-SB-LC:6	1411901	1
Splice box , for DIN rail, robust metal housing, for GOF multimode, unassembled 6 x LC duplex 6 x SC duplex 12 x ST				FOC-PP-SB-SC:6	1411902	1
Splice box , for DIN rail, robust metal housing, for GOF multimode, fully assembled ready to splice				FOC-PP-SB-ST:6	1411903	1
				FOC-PP-SB-LC:6-OM2-PT	1420318	1
	Accessories			Accessories		
Cable gland , M20				G-INS-M20-S68N-PNES-GY	1411125	5
Locking nut, M20				A-INL-M20-P-GY	1411207	5

FO 19" splice box

new



19" splice box

Technical data			
Material data			
Housing material	Sheet steel		
Flammability rating according to UL 94	V0		
Color	light grey RAL 7035		
Degree of protection	IP20		
Insertion/withdrawal cycles	min. 1000		
Temperature data			
Ambient temperature (operation)	-10°C ... 60°C		
Ordering data			
Description	Type	Order No.	Pcs. / Pkt.
19" splice box, 1 RU, fully pre-assembled ready to splice, for 12x LC duplex gray, OM2	FOC-SB-FR19:1U-LCD12-OM2 GY	1418815	1
19" splice box, 1 RU, fully pre-assembled ready to splice, for 12x LC duplex black, OM4	FOC-SB-FR19:1U-LCD12-OM4 BK	1418817	1
19" splice box, 1 RU, fully pre-assembled ready to splice, for 24x LC duplex gray, OM2	FOC-SB-FR19:1U-LCD24-OM2 GY	1418816	1
19" splice box, 1 RU, fully pre-assembled ready to splice, for 24x LC duplex black, OM4	FOC-SB-FR19:1U-LCD24-OM4 BK	1418818	1

Accessories for fiber optic assembly



Ferrule cleaner



Fiber stripper

Ordering data		Ordering data	
Description	Type	Order No.	Pcs. / Pkt.
Ferrule cleaner, approx. 500 cleaning cycles			
1.25 mm, for LC	FOC-TOOL-FERRULECLEANER-1.25	1407032	1
2.50 mm, for ST, SC, FC	FOC-TOOL-FERRULECLEANER-2.50	1407029	1
Stick cleaner for couplings and plug end faces			
1.25 mm, for LC	FOC-TOOL-STICKCLEANER-1.25	1407000	1
2.50 mm, for ST, SC, FC	FOC-TOOL-STICKCLEANER-2.50	1407002	1

Tools for processing fiber optics



Fiber and T-stripper



Solvent dispenser and ceramic blade

Description	Ordering data			Type	Ordering data		
	Type	Order No.	Pcs. / Pkt.		Order No.	Pcs. / Pkt.	
Fiber stripper , for stripping the coating from 250 µm to 125 µm							
For 1 fiber	FOC-TOOL-STRIPPING-1HOLE-250	1407004	1				
For 2 fibers	FOC-TOOL-STRIPPING-2HOLE-250	1407008	1				
T-stripper							
AWG 18 ... 10/1.0 mm ... 2.6 mm	FOC-TOOL-STRIPPING-T-1	1407016	1				
AWG 30 ... 22 / 0.25 mm ... 0.64 mm	FOC-TOOL-STRIPPING-T-2	1407014	1				
Solvent dispenser , 100 ml, lockable pump dispenser				FOC-TOOL-DISPENSER	1406995	1	
Ceramic blade				FOC-TOOL-CERAMIC-BLADE	1407019	1	

Polishing fiber optic connectors



Polishing film



Polishing disc

Description	Ordering data			Type	Ordering data		
	Type	Order No.	Pcs. / Pkt.		Order No.	Pcs. / Pkt.	
Polishing film , silicon carbide 15 µm	FOC-POLISHINGFILM-SK-15.0	1407034	25				
Polishing film , ALO ² 1 µm	FOC-POLISHINGFILM-AO-01.0	1407037	25				
3 µm	FOC-POLISHINGFILM-AO-03.0	1407039	25				
Polishing film , diamond 0.1 µm	FOC-POLISHINGFILM-D-00.1	1407046	10				
1 µm	FOC-POLISHINGFILM-D-01.0	1407042	10				
9 µm	FOC-POLISHINGFILM-D-09.0	1407044	10				
Polishing disc 1.25 mm, for LC				FOC-POLISHINGDISC-1.25	1407024	1	
2.50 mm, for ST, SC, FC				FOC-POLISHINGDISC-2.50	1407021	1	

Data connectors and cables

Network components – accessories

Tools for FO cabling, POF

- For quick and easy field assembly
- No bonding or polishing
- Blade can be replaced easily on site
- Optimum attenuation values with easy assembly
- Reusable connectors



Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Polishing tool set SC-RJ, for polymer fiber , for field assembly of connectors SC-RJ/IP20 and SC-RJ/IP67 with fast connection system	VS-SCRJ-POF-KONFTOOL-POLISH	1658820	1			
Refill set for VS-SC-RJ-POF-KONFTOOL-POLISH , consisting of two polishers and a polishing disc - For SCRJ connectors	VS-SCRJ-POF-POLISH	1656673	1			
Tool set for POF assembly , for field installation of SC connectors				TF-SCRJ-POF KONF SET	1405246	1
Cutting tool , SC-RJ, for polymer fiber				CUTFOX-SCRJ-POF	1405247	1
Sheath stripping tool , for polymer fiber				WIREFOX-PN POF	1405249	1
Electrician's scissors , high cutting performance, thanks to micro-serrated cutting area, suitable for copper, aluminum (stranded), Kevlar® fibers, and plastic, two-component non-slip soft-grip handles, ergonomic design, adjustable screw joint				CUTFOX-ES	1212621	1

**Tools for FO cabling,
PCF**

- Cleave technology
- For quick and easy field assembly
- No bonding or polishing
- A real alternative to splicing
- Optimum attenuation values with easy assembly



Description	Ordering data		
	Type	Order No.	Pcs./ Pkt.
Tool set for PCF assembly , for field installation of SC connectors	FOC-TOOL-PCF KONF SET	1411051	1

**Tools for FO cabling,
GOF**

- Cleave technology
- For quick and easy field assembly
- No bonding or polishing
- A real alternative to splicing
- Optimum attenuation values with easy assembly
- Reusable connectors



Description	Ordering data		
	Type	Order No.	Pcs./ Pkt.
Tool set for GOF assembly , for field installation of LC and SC connectors	FOC-TOOL-GOF KONF SET	1411049	1

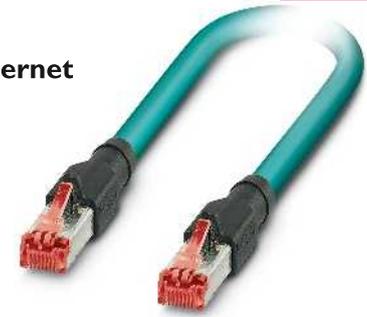
RJ45 Ethernet cable

new

Notes:

For accessories, refer to page: 392

Ethernet



RJ45 Ethernet cable for IP20 applications

Technical data

Cable, properties	
Transmission characteristics (category)	CAT5
Conductor structure	7x 0.16 mm
Conductor cross section	4x 2x 0.14 mm ²
Conductor structure for signal	7x 0.16 mm
AWG signal line	26
Cable diameter	6.2 mm
Conductor resistance	≤ 290 Ω/km (at 20°C)
Type of shield	Tinned copper braided shield
Conductor material	Bare Cu litz wires
Outer sheath material	PUR
Color of outer sheath	water blue RAL 5021
Color, single wire	white/blue-blue, white/orange-orange, white/green-green, white/brown-brown

General data	
Ambient temperature (operation)	-20°C ... 70°C (RJ45 connector)

Ordering data

Description	Length of cable	Type	Order No.	Pcs./ Pkt.
Ethernet cable, CAT5, pre-assembled				
	0.3 m	NBC-R4AC/0,3-94Z/R4AC	1423032	1
	0.5 m	NBC-R4AC/0,5-94Z/R4AC	1403926	1
	1 m	NBC-R4AC/1,0-94Z/R4AC	1403927	1
	1.75 m	NBC-R4AC/1,75-94Z/R4AC	1423433	1
	2 m	NBC-R4AC/2,0-94Z/R4AC	1403929	1
	3 m	NBC-R4AC/3,0-94Z/R4AC	1403930	1
	5 m	NBC-R4AC/5,0-94Z/R4AC	1403933	1
	10 m	NBC-R4AC/10,0-94Z/R4AC	1403934	1
	15 m	NBC-R4AC/15,0-94Z/R4AC	1410797	1
	20 m	NBC-R4AC/20,0-94Z/R4AC	1423033	1

RJ45 patch cables

Notes:

For accessories, refer to page: 392

Ethernet



RJ45 patch cables for IP20 applications

ERIC

Technical data

Cable, properties
External diameter
Single wire, material
Individual wires per module
Single wire, cross section
Outer sheath, material
Smallest bending radius, fixed installation
Shielding
Plug
Contact resistance
General data
Ambient temperature (operation)

FL CAT5 PATCH 0,3	FL CAT6 PATCH 0,3
5.5 mm	5.5 mm
Cu litz wire	Cu litz wire
8	8
0.14 mm ²	0.14 mm ²
LSFROH	LSFROH
30 mm	30 mm
SF/UTP	S/FTP
≤ 0.003 Ω (IEC 60603-7)	≤ 0.003 Ω (IEC 60603-7)
-10°C ... 60°C	-10°C ... 60°C

Ordering data

Description	Length of cable	Type	Order No.	Pcs./ Pkt.
Patch cable, CAT5, preassembled	0.3 m	FL CAT5 PATCH 0,3	2832250	10
	0.5 m	FL CAT5 PATCH 0,5	2832263	10
	1 m	FL CAT5 PATCH 1,0	2832276	10
	1.5 m	FL CAT5 PATCH 1,5	2832221	10
	2 m	FL CAT5 PATCH 2,0	2832289	10
	3 m	FL CAT5 PATCH 3,0	2832292	10
	5 m	FL CAT5 PATCH 5,0	2832580	10
	7.5 m	FL CAT5 PATCH 7,5	2832616	10
	10 m	FL CAT5 PATCH 10,0	2832629	10
	Patch cable, CAT6, preassembled	0.3 m	FL CAT6 PATCH 0,3	2891181
0.5 m		FL CAT6 PATCH 0,5	2891288	10
1 m		FL CAT6 PATCH 1,0	2891385	10
1.5 m		FL CAT6 PATCH 1,5	2891482	10
2 m		FL CAT6 PATCH 2,0	2891589	10
3 m		FL CAT6 PATCH 3,0	2891686	10
5 m		FL CAT6 PATCH 5,0	2891783	10
7.5 m		FL CAT6 PATCH 7,5	2891880	10
10 m		FL CAT6 PATCH 10	2891877	10
12.5 m		FL CAT6 PATCH 12,5	2891369	5
15 m		FL CAT6 PATCH 15,0	2891372	5
20 m		FL CAT6 PATCH 20,0	2891576	5

Accessories

The reliability of networks is becoming more and more important and is a decisive factor for the future of entire companies. Independent studies show that more than 70% of network errors and crashes are due to faulty cabling infrastructure and manipulation of the connecting cables.

With the new accessories for Factoryline patch cables, the various safety requirements for automation are comprehensively met.



Dust protection for SFN switches and FL MC 1000 and 2000 media converters



Security lock for SFN switches and FL MC 1000 and 2000 media converters

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Dust protection with color marking , for SFN switch and angled patch connector - Black - Blue - Brown - Yellow - Gray - Green - Red - Violet - White	FL DUST CVR BK FL DUST CVR BU FL DUST CVR BN FL DUST CVR YE FL DUST CVR GY FL DUST CVR GN FL DUST CVR RD FL DUST CVR VT FL DUST CVR WH	2891107 2891204 2891301 2891408 2891505 2891602 2891709 2891806 2891903	10 10 10 10 10 10 10 10 10			
Security frame for SFN switch and patch fields - Green - Red - White				FL PLUG GUARD GN FL PLUG GUARD RD FL PLUG GUARD WH	2891615 2891712 2891819	20 20 20
Locking element for security frame FL PLUG GUARD... - Locking element - Key				FL PORT GUARD FL PLUG GUARD KEY	2891220 2891327	20 1
Color marking for FL CAT... Patch... - Black - Blue - Brown - Yellow - Gray - Green - Red - Violet						
Security element for FL CAT ...patch... - Security element - Security element, lockable - Key						
Dust protection cap for RJ45 socket						





Color coding for RJ45 FL patch cables



Security element for RJ45 FL patch cables



Dust protection for RJ45 sockets

Ordering data			Ordering data			Ordering data		
Type	Order No.	Pcs./ Pkt.	Type	Order No.	Pcs./ Pkt.	Type	Order No.	Pcs./ Pkt.
FL PATCH CCODE BK	2891194	20						
FL PATCH CCODE BU	2891291	20						
FL PATCH CCODE BN	2891495	20						
FL PATCH CCODE YE	2891592	20						
FL PATCH CCODE GY	2891699	20						
FL PATCH CCODE GN	2891796	20						
FL PATCH CCODE RD	2891893	20						
FL PATCH CCODE VT	2891990	20						
			FL PATCH SAFE CLIP	2891246	20			
			FL PATCH GUARD	2891424	20			
			FL PATCH GUARD KEY	2891521	1			
						FL RJ45 PROTECT CAP	2832991	10



Modular distribution panel

- Plug-and-Play
- Extremely robust design
- GHMT-certified
- Front release without special tool
- Modules can be replaced



Assembled modules
for 19" mounting frames



19" mounting frame

	Technical data			Technical data		
Electrical data	CAT6 _A			CUC-PP-FRAME-19		
Transmission characteristics (category)	Class E _A			-		
Material data	Stainless steel			Steel, powder-coated		
Housing material	V0			V0		
Flammability rating according to UL 94	-			-		
Connection data	18 mm ... 18 mm			-		
External cable diameter	≥ 750			-		
Insertion/withdrawal cycles	-			-		
Temperature data	-20°C ... 60°C			-20°C ... 60°C		
Ambient temperature (operation)	-			-		
	Ordering data			Ordering data		
Description	Type	Order No.	Pcs./Pkt.	Type	Order No.	Pcs./Pkt.
19-inch frame , empty, for using 8 modules (RJ45/ARJ45)				CUC-PP-FRAME-19	1407986	1
Gray (similar to RAL 7035) Black (similar to RAL 9005)				CUC-PP-FRAME-19 BK	1409140	1
RJ45 module , 6 x RJ45 to 6 x RJ45, CAT6 _A , can be unlocked from the front, variable length	CUC-PP-MODUL-RJ45:6-RJ45:6/...	1407995	1			
Patch bay , 19", for orderly cabling in the control cabinet				CUC-PP-PATCHBAY	1407994	1
gray, with plastic hooks						
Dummy frame , size of one module, for use in the frame	CUC-PP-MODUL-COVER	1407988	1			
	Accessories			Accessories		
Screw set , fixing material for the frame				CUC-PP-FRAME-SCREWSET	1407989	1
Cable binder , fixing material for module cable routing	CUC-PP-MODUL-CABLEFIXSET	1407991	1			

Ordering example for modules of variable length:

For an RJ45 module with a cable length of 25.0 m, the ordering data is as follows:

Order No.	Length [m]
1407995	80 m, maximum
	25
	Increment: 1.5 m ... 80 m = 0.5 m

19" patch panel

new



Ethernet



RJ45 patch panel for 19" rack and matching socket inserts



Ethernet



RJ45 patch bay for 19" rack and matching socket inserts

	Technical data			Technical data		
Material data	VS-PP-19-1HE-16-F			CUC-PP-FR19:1U-I-EMPTY:24		
Housing material	PC-GF			PC-GF		
Flammability rating according to UL 94	V0			V0		
Temperature data	5°C ... 55°C			5°C ... 55°C		
Ambient temperature (operation)	5°C ... 55°C			5°C ... 55°C		
	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Patch panel , 19" mounting, IP20, with 16 installation slots for contact inserts with Freenet system	VS-PP-19-1HE-16-F	1652994	1			
Patch bay , 19" mounting, IP20, with 24 installation slots for RJ45 cable connection module, adapter-free				CUC-PP-FR19:1U-I-EMPTY:24	1422978	1
gray				CUC-PP-FR19:1U-I-EMPTY:24 BK	1422979	1
black						
	Accessories			Accessories		
RJ45 Freenet socket insert , 8-pos., shielded, with cable connection 1 Gbps, CAT5	VS-08-BU-RJ45-5-F/PK	1652936	1			
RJ45 socket insert , 8-pos., shielded, with cable connection						
CAT6	VS-08-BU-RJ45-6-F/PK	1652949	1			
SC-RJ coupling , for terminal outlets VS-TO-... and 19" patch panels VS-PP-19-1HE-16-F and front plate VS-SI-FP-2F						
1x SC-RJ (duplex)	VS-SCRJ-GOF-KU	1654358	1			
LC/LC coupling for mounting in angled patch connectors and patch panels with Freenet slots						
1 x LC/LC (duplex, multimode fiber)	FL MM PATCH COUPLER LC-LC	2700312	1			
1x LC/LC (duplex, single-mode fiber (PC))	FL SM PATCH COUPLER LC-LC	2700313	1			
USB socket insert , 4-pos., socket USB to flat-ribbon cable terminal strip, 2.54 pitch, socket, type A	VS-04-BUA-FK-F/IP67	1653854	1			
USB socket insert , 4-pos., socket USB to flat-ribbon cable terminal strip, 2.54 pitch, socket, type B	VS-04-BUB-FK-F/IP67	1653867	1			
RJ45 socket insert , 8-pos., with cable connection (IDC fast connection), 26 ... 22 AWG				CUC-I-J1ZNI-S/R4IDC8	1417274	1

Data connectors and cables

Network components – assembled cables

Network cables, sold by the meter, PROFINET, EtherCAT®, shielded

Notes:
For information about the cable qualities, see page 454



4-wire, star quad, cable coils



4-wire, star quad, Cable drum

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
PVC solid - green , 1 x 4 x 22 AWG, CAT5, SF/TQ, type A						
Cable ring: 100 m	VS-OE-OE-93A-100,0	1416392	1			
Cable ring: 1 m ... 100 m	VS-93A/...	1416486	1			
PVC stranded - green , 1 x 4 x 22 AWG, CAT5, SF/TQ, type B						
Cable ring: 100 m	VS-OE-OE-93B-100,0	1416389	1			
Cable ring: 1 m ... 100 m	VS-OE-OE-93B/...	1417362	1	NBC-93B/...	1408537	1
Cable drum: 110 m ... 500 m						
PUR suitable for use with drag chain - green, 1 x 4 x 22 AWG, CAT5, SF/TQ, type C						
Cable ring: 100 m	VS-OE-OE-93C-100,0	1416376	1			
Cable ring: 1 m ... 100 m	VS-OE-OE-93C/...	1417491	1	NBC-93C/...	1408538	1
Cable drum: 110 m ... 500 m						
PUR suitable for use with robots - green, 1 x 4 x 22 AWG, CAT5, S/TQ						
Cable ring: 100 m	VS-OE-OE-93R-100,0	1416363	1			
Cable ring: 1 m ... 100 m	VS-OE-OE-93R/...	1417388	1	NBC-93R/...	1408539	1
Cable drum: 110 m ... 500 m						
RADOX® for railway applications - black, 1 x 4 x 22 AWG, CAT5, SF/TQ						
Cable ring: 1 m ... 100 m	VS-OE-OE-937/...	1402687	1	NBC-937/...	1408540	1
Cable drum: 110 m ... 500 m						

Ordering example for cables with variable cable length:

For a 34.0 m long **type 93A** network cable, the ordering data is as follows:

Order No.	Length [m] 100 m, maximum
1416486	34.0
	Increment: 1.0 m ... 100 m = 1.0 m 110 m ... 500 m = 10 m

**Network cables, sold by the meter,
Ethernet, shielded**

Notes:
For information about the cable qualities, see page 454

Ethernet



**2-pair,
twisted pair**

Ethernet



**4-pair,
twisted pair**

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
PUR stranded - blue, 2 x 2 x 26 AWG, CAT5, SF/UTP						
Cable ring: 100 m	VS-OE-OE-93E-100,0	1416295	1			
Cable ring: 1 m ... 100 m	VS-OE-OE-93E/...	1417320	1			
Cable drum: 110 m ... 500 m	NBC-93E/...	1408534	1			
PUR solid - blue, 4 x 2 x 24 AWG, CAT5, SF/UTP						
Cable ring: 100 m				VS-OE-OE-94A-100,0	1416305	1
Cable ring: 1 m ... 100 m				VS-94A/...	1416415	1
PUR stranded - blue, 4 x 2 x 26 AWG, CAT5, SF/UTP						
Cable ring: 100 m				VS-OE-OE-94B-100,0	1416567	1
Cable ring: 1 m ... 100 m				VS-OE-OE-94B/...	1417333	1
Cable drum: 110 m ... 500 m				NBC-94B/...	1408535	1
PUR suitable for use with drag chain - blue, 4 x 2 x 26 AWG, CAT5, S/UTP						
Cable ring: 100 m				VS-OE-OE-94C-100,0	1416318	1
Cable ring: 1 m ... 100 m				VS-OE-OE-94C/...	1417346	1
Cable drum: 110 m ... 500 m				NBC-94C/...	1408536	1
PVC stranded, outdoor - black, 4 x 2 x 26 AWG, CAT5, SF/UTP						
Cable ring: 100 m				VS-OE-OE-94D-100,0	1416334	1
Cable ring: 1 m ... 100 m				VS-94D/...	1416444	1
FRNC solid - blue, 4 x 2 x 23 AWG, CAT7, S/FTP						
Cable ring: 100 m				VS-OE-OE-94E-100,0	1416350	1
Cable ring: 1 m ... 100 m				VS-94E/...	1416460	1
PUR stranded - blue, 4 x 2 x 26 AWG, CAT6 _A , S/FTP						
Cable ring: 100 m				VS-OE-OE-94F-100,0	1416347	1
Cable ring: 1 m ... 100 m				VS-OE-OE-94F/...	1417359	1

**Ordering example for cables
with variable cable length:**

For a 34.0 m long **type 94A** network cable, the ordering data is as follows:

Order No.	Length [m]
1416415	100 m, maximum
	34.0
	Increment:
	1.0 m ... 100 m = 1.0 m
	110 m ... 500 m = 10 m

Data connectors and cables

Network components – assembled cables

Assembled cables,
PROFINET, EtherCAT®,
4-pos., shielded, CAT5



	RJ45 connector, IP20	RJ45 connector, IP20	RJ45 connector, Version 14, metal
	R4AC	R4ACR	R4RC
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
Open cable end			
OE	Variable	Variable	5 m
RJ45 connector, IP20	1411857	1411858	1411859
	1 m 1408968	1 m 1418248	
R4AC	2 m 1408969	2 m 1418277	
RJ45 connector, IP20	5 m 1408970		5 m 1416138
	10 m 1408971		
R4ACR	Variable 1411861	Variable 1411862	Variable 1411863
RJ45 connector, Version 14, metal		1 m 1409002	
		2 m 1409003	
R4RC		5 m 1409004	
RJ45 connector, Version 14, plastic		10 m 1409005	
		Variable 1411865	
R4QC			1 m 1408974
M12 SPEEDCON connector			2 m 1408975
			5 m 1408972
MSD SCO			10 m 1408976
M12 SPEEDCON connector			Variable 1411866
MRD SCO			

Information for products with fixed cable length:

Products with fixed cable length are produced with the **93B** cable type and are available from stock.

Ordering data for cables with variable cable length:

For a 4.5 m long type 93C network cable with M12 connector, straight and RJ45 connector, IP20, the ordering data is as follows:

Cable description	Cable type	Pin		Wire color	Signal
		M12	RJ45		
PVC stranded - green, 1 x 4, CAT5	93B	1	1	YE	TD+
PUR suitable for drag chain applications - green, 1 x 4, CAT5	93C	3	2	OG	TD-
PUR for robot applications - green, 1 x 4, CAT5	93R	2	3	WH	RD+
RADOX® for railway applications - black, 1 x 4, CAT5	937	4	6	BU	RD-
PUR stranded - green, 1 x 4, CAT5	93M				

Order No.	Cable type	Length [m] 100 m, maximum
1408639	93C	4.5
Minimum order amount: 25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

RJ45 connector, Version 14, plastic	M12 connector, SPEEDCON	M12 connector, SPEEDCON	M12 socket, SPEEDCON	M12 socket, SPEEDCON	M12 flush-type socket, rear mounting
					
R4QC	MSD SCO	MRD SCO	FSD SCO	FRD SCO	FSDBP
Ordering data	Ordering data				
Order No.	Order No.				
	1 m 1407495 2 m 1407496 5 m 1407497 10 m 1407498 Variable 1408640	Variable 1408633	1 m 1407528 2 m 1407529 5 m 1407530 10 m 1407531 Variable 1408623	Variable 1408615	1 m 1437779 2 m 1437782 5 m 1437795
5 m 1416168	1 m 1407499 2 m 1407500 5 m 1407501 10 m 1407502 Variable 1408639	Variable 1408632	1 m 1407532 2 m 1407533 5 m 1407534 10 m 1407535 Variable 1408622	Variable 1408613	
Variable 1411860	1 m 1407508 2 m 1407509 5 m 1407510 10 m 1407511 Variable 1408638	Variable 1408631	1 m 1407536 2 m 1407537 5 m 1407538 10 m 1407539 Variable 1408621	Variable 1408612	
5 m 1416141	1 m 1407516 2 m 1407517 5 m 1407518 10 m 1407519 Variable 1408636	Variable 1408628	1 m 1407544 2 m 1407545 5 m 1407546 10 m 1407547 Variable 1408619	Variable 1408610	
Variable 1411864	1 m 1407520 2 m 1407521 5 m 1407522 10 m 1407523 Variable 1408635	Variable 1408626	1 m 1407548 2 m 1407549 5 m 1407551 10 m 1407552 Variable 1408618	Variable 1408609	
1 m 1408978 2 m 1408979 5 m 1408977 10 m 1408980 Variable 1411867	1 m 1407524 2 m 1407525 5 m 1407526 10 m 1407527 Variable 1408634	Variable 1408625	1 m 1407553 2 m 1407554 5 m 1407555 10 m 1407556 Variable 1408617	Variable 1408608	
		Variable 1408624	Variable 1408616	Variable 1408607	

	Technical data	Technical data	Technical data	Technical data
Transmission characteristics (category)	PROFINET PVC stranded CAT5 [93B]	PROFINET drag chain CAT5 [93C]	PROFINET robot CAT5 [93R]	PROFINET railway applications [937]
Cable structure	CAT5 1x4xAWG22/7; SF/TQ	CAT5 1x4xAWG22/7; SF/TQ	CAT5 1x4xAWG22/19; S/TQ	CAT5 1x4xAWG22/7; SF/TQ
Conductor cross section	4x 0.34 mm ²	4x 0.34 mm ²	4x 0.34 mm ²	4x 0.34 mm ²
Conductor structure for signal	7x 0.25 mm	7x 0.25 mm	19x 0.15 mm	7x 0.25 mm
AWG signal line	22	22	22	22
Cable diameter	6.5 mm	6.5 mm	6.5 mm	6.6 mm
Conductor resistance	-	-	-	≤ 54.4 Ω/km
Type of shield	Aluminum-coated foil, tinned copper braided shield	Aluminum-coated foil, tinned copper braided shield	Tinned copper braided shield	Plastic-coated aluminum foil, tinned copper braided shield
Conductor material	Tin-plated Cu litz wires	Tin-plated Cu litz wires	Tin-plated Cu litz wires	silver-plated Cu litz wires
Outer sheath material	PVC	PUR	PUR	PE-X
Color of outer sheath	green RAL 6018	green RAL 6018	green RAL 6018	black RAL 9005
Color, single wire	White, yellow, blue, orange	White, yellow, blue, orange	White, yellow, blue, orange	white-blue, orange-yellow
Ambient temperature				
Fixed installation	[°C] -40 ... 70	[°C] -40 ... 70	[°C] -40 ... 80	[°C] -50 ... 90
Flexible installation	[°C] -40 ... 70	[°C] -40 ... 70	[°C] -40 ... 80	[°C] -40 ... 90

Data connectors and cables

Network components – assembled cables

Assembled cables,
PROFINET, EtherCAT®, Ethernet,
4-pos., shielded



PROFINET Ethernet

EtherCAT

M8 connector

M8 socket



	M8MS		M8FS	
	Ordering data		Ordering data	
	Order No.		Order No.	
Open cable end				
	1 m	1407344		
	2 m	1407345		
	5 m	1407346		
	10 m	1407347		
OE	Variable	1408719	Variable	1408716
M8 connector				
	1 m	1407348		
	2 m	1407349		
	5 m	1407350		
	10 m	1407351		
M8MS	Variable	1408718	Variable	1408715
RJ45 connector, IP20				
	1 m	1407352		
	2 m	1407353		
	5 m	1407354		
	10 m	1407355		
R4AC	Variable	1408717	Variable	1408714

Information for products with fixed cable length:

Products with fixed cable length are produced with the 93B cable type and are available from stock.

Ordering data for cables with variable cable length:

For a 4.5 m long type 93B network cable with M8 connector, straight and RJ45 connector, IP20, the ordering data is as follows:

Order No.	Cable type	Length [m] 100 m, maximum
1408717	93B	4.5
Minimum order amount: 25 pcs.		
Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m		

Pin	Wire color		Signal
	M8	RJ45	
2	1	YE	TD+
3	2	OG	TD-
1	3	WH	RD+
4	6	BU	RD-

Technical data

PROFINET PVC stranded CAT5 [93B]

Transmission characteristics (category)
Cable structure
Conductor cross section
Conductor structure for signal
AWG signal line
Cable diameter
Conductor resistance
Type of shield

Conductor material
Outer sheath material
Color of outer sheath
Color, single wire

Ambient temperature
Fixed installation
Flexible installation

CAT5
1x4xAWG22/7; SF/TQ
4x 0.34 mm²
7x 0.25 mm
22
6.5 mm
-
Aluminum-coated foil, tinned copper braided shield
Tin-plated Cu litz wires
PVC
Green RAL 6018
White, yellow, blue, orange

[-°C] -40 ... 70
[°C] -40 ... 70

Data connectors and cables

Network components – assembled cables

Assembled cables, Ethernet, 4-pos., shielded, CAT5



Ethernet

Open cable end



OE

RJ45 connector, IP20



R4AC

RJ45 connector, Version 6



R4MC

RJ45 connector, Version 14, metal



R4RC

RJ45 connector, Version 14, plastic



R4QC

M12 SPEEDCON connector



MSD SCO

M12 SPEEDCON connector



MRD SCO

	RJ45 connector, IP20	RJ45 connector, Version 6	RJ45 connector, Version 14, metal
	R4AC	R4MC	R4RC
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
1 m	1405633	2 m	1405675
5 m	1405743		
Variable	1411827	Variable	1411828
Variable	1411831	Variable	1411832
1 m	1408933	1 m	1408937
2 m	1408934	2 m	1408938
5 m	1408935	5 m	1408939
10 m	1408936	10 m	1408940
Variable	1411829	Variable	1411835
Variable	1411833		
1 m			1408941
2 m			1408942
5 m			1408943
10 m			1408945
Variable			1411836

Information for products with fixed cable length:

Products with fixed cable length are produced with the 93E cable type and are available from stock.

Ordering data for cables with variable cable length:

For a 4.5 m long type 93E network cable with M12 connector, straight and RJ45 connector, IP20, the ordering data is as follows:

Order No.	Cable type	Length [m] 100 m, maximum
1408712	93E	4.5
Minimum order amount:		Increments:
25 pcs.		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

Cable description	Cable type	Pin		Wire color	Signal
		M12	RJ45		
PUR stranded - blue, 2 x 2, CAT5	93E	1	1	WHOG	TD+
		3	2	OG	TD-
		2	3	WHGN	RD+
		4	6	GN	RD-

RJ45 connector, Version 14, plastic	M12 connector, SPEEDCON	M12 connector, SPEEDCON	M12 socket, SPEEDCON	M12 socket, SPEEDCON	M12 flush-type socket, rear mounting
					
R4QC	MSD SCO	MRD SCO	FSD SCO	FRD SCO	FSDBP
Ordering data	Ordering data	Ordering data	Ordering data	Ordering data	Ordering data
Order No.	Order No.	Order No.	Order No.	Order No.	Order No.
	1 m 1407356 2 m 1407357 5 m 1407358 10 m 1407359 Variable 1408713	Variable 1408705	1 m 1407380 2 m 1407381 5 m 1407382 10 m 1407383 Variable 1408697	Variable 1408690	2 m 1405866
5 m 1405772 Variable 1411830	1 m 1407360 2 m 1407361 5 m 1407362 10 m 1407363 Variable 1408712	Variable 1408704	1 m 1407384 2 m 1407385 5 m 1407386 10 m 1407387 Variable 1408696	Variable 1408689	2 m 1406085
5 m 1406030 Variable 1411834	1 m 1407364 2 m 1407365 5 m 1407366 10 m 1407367 Variable 1408710	Variable 1408703	1 m 1407388 2 m 1407389 5 m 1407390 10 m 1407391 Variable 1408695	Variable 1408688	2 m 1406247
	1 m 1407368 2 m 1407369 5 m 1407370 10 m 1407371 Variable 1408709	Variable 1408702	1 m 1407392 2 m 1407393 5 m 1407394 10 m 1407395 Variable 1408694	Variable 1408687	2 m 1406519
1 m 1408947 2 m 1408948 5 m 1408946 10 m 1408949 Variable 1411837	1 m 1407372 2 m 1407373 5 m 1407374 10 m 1407375 Variable 1408707	Variable 1408701	1 m 1407396 2 m 1407397 5 m 1407398 10 m 1407399 Variable 1408693	Variable 1408686	2 m 1406603
	1 m 1407376 2 m 1407377 5 m 1407378 10 m 1407379 Variable 1408706	Variable 1408700	1 m 1407400 2 m 1407401 5 m 1407402 10 m 1407403 Variable 1408692	Variable 1408684	
		Variable 1408699	Variable 1408691	Variable 1408683	

Technical data	
PUR ETHERNET 2x2 FLEX [93E]	
CAT5	
2x2xAWG26/7; SF/UTP	
Transmission characteristics (category)	2x 2x 0.14 mm ²
Cable structure	7x 0.16 mm
Conductor cross section	26
Conductor structure for signal	6.4 mm
AWG signal line	-
Cable diameter	Aluminum-coated foil, tinned copper braided shield
Conductor resistance	
Type of shield	
Conductor material	Bare Cu litz wires
Outer sheath material	PUR
Color of outer sheath	Water blue RAL 5021
Color, single wire	White/orange-orange, White/green-green
Ambient temperature	
Fixed installation	[°C] -40 ... 80
Flexible installation	[°C] -20 ... 80

Network components – assembled cables

Assembled cables, Ethernet, 8-pos., shielded, CAT5



Ethernet

Open cable end



OE

RJ45 connector, IP20



R4AC

RJ45 connector, Version 6



R4MC

RJ45 connector, Version 14, metal



R4RC

RJ45 connector, Version 14, plastic



R4QC

M12 SPEEDCON connector



MS SCO

M12 SPEEDCON connector



MR SCO

	RJ45 connector, IP20	RJ45 connector, Version 6	RJ45 connector, Version 14, metal
	R4AC	R4MC	R4RC
Ordering data	Ordering data	Ordering data	Ordering data
Order No.	Order No.	Order No.	Order No.
5 m	1407699	5 m 1407725	5 m 1407783
Variable	1411838	Variable 1411839	Variable 1411840
1 m	1408950		
2 m	1408951		
5 m	1408952	5 m 1407932	5 m 1407990
10 m	1408953		
Variable	1411842	Variable 1411843	Variable 1411844
		1 m 1408955	
		2 m 1408956	
		5 m 1408954	
		10 m 1408958	
		Variable 1411846	
			1 m 1408961
			2 m 1408962
			5 m 1408959
			10 m 1408963
			Variable 1411847

Information for products with fixed cable length:

Products with fixed cable length are produced with the 94B cable type and are available from stock.

Ordering data for cables with variable cable length:

For a 4.5 m long type 94C network cable with M12 connector, straight and RJ45 connector, IP20, the ordering data is as follows:

Order No.	Cable type	Length [m] 100 m, maximum
1408681	94C	4.5
Minimum order amount:		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m
25 pcs.		

Cable description	Cable type	Pin		Wire color	Signal
		M12	RJ45		
PUR stranded - blue, 4 x 2, CAT5	94B	6	1	WHOG	D1+
		4	2	OG	D1-
PUR suitable for drag chain applications - blue, 4 x 2, CAT5	94C	1	5	WHBU	D3-
		7	4	BU	D3+
		5	3	WHGN	D2+
		8	6	GN	D2-
		2	7	WHBN	D4+
		3	8	BN	D4-

RJ45 connector, Version 14, plastic	M12 connector, SPEEDCON	M12 connector, SPEEDCON	M12 socket, SPEEDCON	M12 socket, SPEEDCON	M12 flush-type socket, rear mounting
					
R4QC	MS SCO	MR SCO	FS SCO	FR SCO	FSBP
Ordering data	Ordering data				
Order No.	Order No.				
	1 m 1407404 2 m 1407405 5 m 1407406 10 m 1407407 Variable 1408682	Variable 1408675	1 m 1407439 2 m 1407440 5 m 1407441 10 m 1407442 Variable 1408665	Variable 1408657	5 m 1407877
5 m 1407819	1 m 1407414 2 m 1407415 5 m 1407416 10 m 1407417 Variable 1408681		1 m 1407443 2 m 1407444 5 m 1407445 10 m 1407446 Variable 1408664		5 m 1412082
Variable 1411841	1 m 1407422 2 m 1407423 5 m 1407424 10 m 1407425 Variable 1408679	Variable 1408671	1 m 1407451 2 m 1407452 5 m 1407453 10 m 1407454 Variable 1408662	Variable 1408653	5 m 1412231
5 m 1412024	1 m 1407426 2 m 1407427 5 m 1407428 10 m 1407429 Variable 1408678	Variable 1408670	1 m 1407455 2 m 1407456 5 m 1407457 10 m 1407458 Variable 1408661		5 m 1412503
Variable 1411845	1 m 1407430 2 m 1407431 5 m 1407432 10 m 1407433 Variable 1408677	Variable 1408668	1 m 1407459 2 m 1407460 5 m 1407461 10 m 1407462 Variable 1408660	Variable 1408651	5 m 1412590
1 m 1408965 2 m 1408966 5 m 1408964 10 m 1408967 Variable 1411848	1 m 1407434 2 m 1407435 5 m 1407436 10 m 1407438 Variable 1408676	Variable 1408667	1 m 1407463 2 m 1407464 5 m 1407465 10 m 1407466 Variable 1408659	Variable 1408650	
		Variable 1408666	Variable 1408658	Variable 1408649	

	Technical data	Technical data
	Ethernet, flexible, CAT5 [94B]	Ethernet drag chain CAT5 [94C]
Transmission characteristics (category)	CAT5	CAT5
Cable structure	4x2xAWG26/7; SF/UTP	4x2xAWG26/19; S/UTP
Conductor cross section	4x 2x 0.14 mm ²	4x 2x 0.14 mm ²
Conductor structure for signal	7x 0.16 mm	19x 0.10 mm
AWG signal line	26	26
Cable diameter	6.4 mm	6.9 mm
Conductor resistance	≤ 290 Ω/km	-
Type of shield	Aluminum-coated foil, tinned copper braided shield	Tinned copper braided shield
Conductor material	Bare Cu litz wires	Bare Cu litz wires
Outer sheath material	PUR	PUR
Color of outer sheath	Water blue RAL 5021	Water blue RAL 5021
Color, single wire	White/blue-blue, white/orange-orange, white/green-green, white/brown-brown	White/blue-blue, white/orange-orange, white/green-green, white/brown-brown
Ambient temperature		
Fixed installation	[°C] -40 ... 80	-40 ... 80
Flexible installation	[°C] -20 ... 80	-20 ... 80

Data connectors and cables

Network components – assembled cables

Assembled cables,
Ethernet, CC-Link,
8-pos., shielded, CAT6_A



Ethernet

CC-Link IE

	RJ45 connector, IP20	RJ45 connector, Version 6	RJ45 connector, Version 14, metal
	R4AC	R4MC	R4RC
Ordering data	Ordering data	Ordering data	Ordering data
Order No.	Order No.	Order No.	Order No.
Open cable end			
OE	Variable 1411853	Variable 1415639	Variable 1415637
RJ45 connector, IP20			
R4AC			
RJ45 connector, Version 6			
R4MC		Variable 1414322	
RJ45 connector, Version 14, metal			
R4RC			Variable 1414323
RJ45 connector, Version 14, plastic			
R4QC			
M12 SPEEDCON connector			
MSX SCO			

Information for products with fixed cable length:

Products with fixed cable length are produced with the **94F** cable type and are available from stock.

Ordering data for cables with variable cable length:

For a **4.5 m long type 94F** network cable with **M12 connector, straight** and **RJ45 connector, IP20**, the ordering data is as follows:

Order No.	Cable type	Length [m] 100 m, maximum
1408647	94F	4.5
Minimum order amount: 25 pcs.		
Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m		

Cable description	Cable type	Pin		Wire color	Signal
		M12	RJ45		
PUR stranded - blue, 4 x 2, CAT6 _A	94F	1	1	WHOG	D1+
		2	2	OG	D1-
		7	5	WHBU	D3-
		8	4	BU	D3+
		3	3	WHGN	D2+
		4	6	GN	D2-
5	7	WHBN	D4+		
6	8	BN	D4-		

RJ45 connector, Version 14, plastic



R4QC

Ordering data

Order No.

Variable 1415638

Variable 1411856

M12 connector, SPEEDCON



MSX SCO

Ordering data

Order No.

1 m 1407467
2 m 1407468
5 m 1407469
10 m 1407470
Variable 1408648

1 m 1407471
2 m 1407472
5 m 1407473
10 m 1407474
Variable 1408647

M12 flush-type socket, rear mounting



FSBPX

Ordering data

Order No.

0.5 m 1424135
1 m 1424148
2 m 1424151
5 m 1424164

1 m 1407475
2 m 1407476
5 m 1407477
10 m 1407478
Variable 1408646

1 m 1407479
2 m 1407480
5 m 1407481
10 m 1407482
Variable 1408645

1 m 1407483
2 m 1407484
5 m 1407485
10 m 1407486
Variable 1408644

Technical data

Ethernet 10 Gbit [94F]

Transmission characteristics (category)
Cable structure
Conductor cross section
Conductor structure for signal
AWG signal line
Cable diameter
Conductor resistance
Type of shield

CAT6_A
4x2xAWG26/7; S/FTP
4x 2x 0.14 mm²
7x 0.16 mm
26
6.4 mm
-
Tinned copper braided shield

Type of pair shielding
Conductor material
Outer sheath material
Color of outer sheath
Color, single wire

Aluminum-lined foil
Bare Cu litz wires
PUR
Water blue RAL 5021
White/blue-blue, white/orange-
orange, white/green-green,
white/brown-brown

Ambient temperature

Fixed installation [°C]

Flexible installation [°C]

-40 ... 80

-20 ... 80

Assembled cables for railway applications, Ethernet, shielded, CAT6_A



M12 connector, SPEEDCON



MSX SCO

Ordering data

Order No.

Open cable end



OE

M12 SPEEDCON connector, straight



MSX SCO

2 m	1415599
5 m	1415600
10 m	1415601

2 m	1415595
5 m	1415598

Pin M12	Wire color	Signal
1	WHOG	D1+
2	OG	D1-
7	WHBU	D3-
8	BU	D3+
3	WHGN	D2+
4	GN	D2-
5	WHBN	D4+
6	BN	D4-

Transmission characteristics (category)
 Cable structure
 Conductor cross section
 Conductor structure for signal
 AWG signal line
 Cable diameter
 Conductor resistance
 Type of shield

Type of pair shielding

Conductor material
 Outer sheath material
 Color of outer sheath
 Color, single wire

Ambient temperature
 Fixed installation

[°C]

Technical data

Ethernet for rail applications [94S]

CAT7
 4x2xAWG26/7; S/FTP
 4x 2x 0.14 mm²
 7x 0.16 mm
 26
 6.6 mm
 ≤ 145 Ω/km
 Tinned copper braided shield
 Aluminum-lined polyester foil
 Tin-plated Cu litz wires
 PE-X
 Black
 White-blue, white-orange,
 white-green, white-brown

-40 ... 80

**Assembled cables,
Ethernet hybrid,
4+4-pos., shielded, CAT5**



Ethernet



Open cable end



OE

M12 SPEEDCON connector



MSY SCO

M12 connector,
SPEEDCON



MSY SCO

Ordering data

Order No.

1 m	1407487
2 m	1407488
5 m	1407489
10 m	1407490
Variable	1408642

M12 flush-type socket,
rear mounting



FSBPY

Ordering data

Order No.

0.5 m	1407504
1 m	1407505
2 m	1407506
5 m	1407507

**Information for products with
fixed cable length:**

Products with fixed cable length are produced with the 94H cable type and are available from stock.

**Ordering data for cables
with variable cable length:**

For a 4.5 m long type 94H network cable with M12 connector, straight and RJ45 connector, IP20, the ordering data is as follows:

Order No.	Cable type	Length [m] 100 m, maximum
1408717	94H	4.5
Minimum order amount: 25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Pin M12	Wire color	Signal
1	WHOG	TD+
2	OG	TD-
3	WHGN	RD+
4	GN	RD-
5	BU	
6	WH	
7	BN	
8	BK	

Transmission characteristics (category)
Cable structure
Conductor cross section for signal [mm²]
Conductor structure for signal
AWG signal line
Conductor cross section for power [mm²]
Conductor structure for power
AWG power supply
Cable diameter
Type of shield

Conductor material
Outer sheath material
Color of outer sheath
Color, single wire

Ambient temperature

Fixed installation	[°C]	-40 ... 90
Flexible installation	[°C]	-30 ... 70

Technical data

Ethernet hybrid [94H]

CAT5
1x4xAWG26+1x4xAWG20
0.15 [mm²]
19x 0.10 mm
26
0.6 [mm²]
19x 0.20 mm
20
7.6 mm
Tinned copper braided shield
Bare Cu litz wires
PUR
Black RAL 9005
White/orange, orange, white/green, green, white, blue, brown, black

Fiber optic patch cables

Connectors:

- LC
- SC duplex
- B-FOC (ST®)

Fixed lengths:

- 1 m
- 2 m
- 5 m

Fiber types:

- Single-mode fiberglass (SM)

Sheath colors:

- Single-mode: yellow

Technical data:

- Halogen-free
- Flame-retardant
- No corrosive or toxic fumes
- External dimensions: 2.8 mm x 5.7 mm



LC connector

		Technical data		
Cable properties				
Individual wire diameter		900 µm		
Outer sheath, material		FRNC		
Outer sheath, strain relief elements		Non-metallic, aramide fiber		
Lateral pressure, long-term		60 N/cm		
Tensile strength, short-term/long-term		600 N		
Halogen-free		According to IEC 60754-2		
General data				
Ambient temperature (storage/transport)		-25°C ... 70°C		
Ambient temperature (installation)		-5°C ... 50°C		
Ambient temperature (operation)		-5°C ... 70°C		
		Ordering data		
Description	Length of cable	Type	Order No.	Pcs. / Pkt.
FO patch cable with single mode fiberglass (OS1)				
- LC connector to LC, SC duplex or B-FOC connector				
	1 m	FL SM PATCH 1,0 LC-LC	2989187	1
	2 m	FL SM PATCH 2,0 LC-LC	2989284	1
	5 m	FL SM PATCH 5,0 LC-LC	2901826	1
FO patch cable with single mode fiberglass (OS1)				
- SC duplex connector to SC duplex or B-FOC connector				
	1 m			
	2 m			
	5 m			
FO patch cable with single mode fiberglass (OS1)				
- B-FOC connector to B-FOC connector				
	1 m			
	2 m			
	5 m			



SC duplex connector



B-FOC connector

Technical data
900 µm
FRNC
Non-metallic, aramide fiber
60 N/cm
600 N
According to IEC 60754-2
-25°C ... 70°C
-5°C ... 50°C
-5°C ... 70°C

Technical data
900 µm
FRNC
Non-metallic, aramide fiber
60 N/cm
600 N
According to IEC 60754-2
-25°C ... 70°C
-5°C ... 50°C
-5°C ... 70°C

Ordering data		
Type	Order No.	Pcs. / Pkt.
FL SM PATCH 1,0 LC-SC	2989190	1
FL SM PATCH 2,0 LC-SC	2989297	1
FL SM PATCH 5,0 LC-SC	2901827	1
FL SM PATCH 1,0 SC-SC	2901829	1
FL SM PATCH 2,0 SC-SC	2901830	1
FL SM PATCH 5,0 SC-SC	2901831	1

Ordering data		
Type	Order No.	Pcs. / Pkt.
FL SM PATCH 1,0 LC-ST	2989242	1
FL SM PATCH 2,0 LC-ST	2989349	1
FL SM PATCH 5,0 LC-ST	2901828	1
FL SM PATCH 1,0 SC-ST	2901832	1
FL SM PATCH 2,0 SC-ST	2901833	1
FL SM PATCH 5,0 SC-ST	2901834	1
FL SM PATCH 1,0 ST-ST	2901836	1
FL SM PATCH 2,0 ST-ST	2901837	1
FL SM PATCH 5,0 ST-ST	2901838	1

Network components – assembled fiber optic cables

Fiber optic outdoor cables, sold by the meter

- Robust round cable for outdoor installation
- Ozone- and UV-resistant
- Watertight lengthwise
- Integrated vapor barrier and rodent-proof scrim



GOF fiber type



PCF fiber type

	Technical data		Technical data	
	FOC-OE-OE-GB01/...	FOC-OE-OE-GB02/...	FOC-OE-OE-GB03/...	FOC-OE-OE-HB01/...
Cable data				
Cable abbreviation according to IEC 61977:2010				
Fibers	02-G50/FJ(ZNG)H...22 50/125 µm OM2	02-G50/FJ(ZN)Z...22 50/125 µm OM2	04-G50/FJ(ZNG)H...22 50/125 µm OM2	02-H200/VJ(ZNG)H...22 200/230 µm
Attenuation, typical	2.7 dB/km (at 850 nm); 0.8 dB/km (at 1300 nm)	2.7 dB/km (at 850 nm); 0.8 dB/km (at 1300 nm)	2.7 dB/km (at 850 nm); 0.8 dB/km (at 1300 nm)	10 dB/km (at 660 nm), 8 dB/km (at 850 nm)
Outer sheath				
Material	PE	PUR	PE	PE
Color	Black	Black	Black	Black
Strain relief elements	Aramide/glass fibers	Non-metallic, aramide fibers	Aramide/glass fibers	Aramide/glass fibers
Diameter	7.5 mm	7.5 - 8 mm	9 mm	7.5 mm
Individual wire				
Color	Black/orange	Black/orange	Black/orange	Black/orange
Diameter	2.2 mm	2.2 mm	2.15 mm	2.2 mm
Strain relief elements	Non-metallic, aramide fibers	Non-metallic, aramide fibers	Non-metallic, aramide fibers	Non-metallic, aramide fibers
General data				
Weight	59.00 kg/km	46.00 kg/km	90.00 kg/km	67.00 kg/km
Ambient temperature (operation)	-40°C ... 70°C	-40°C ... 85°C	-40°C ... 70°C	-20°C ... 70°C
Ambient temperature (storage/transport)	-45°C ... 70°C	-45°C ... 85°C	-40°C ... 70°C	-25°C ... 70°C
Ambient temperature (installation)	-20°C ... 60°C	-20°C ... 60°C	-20°C ... 60°C	-10°C ... 60°C
Halogen-free:	According to IEC 60754-1/2	According to IEC 60754-1/2	According to IEC 60754-1/2	According to IEC 60754-1/2

	Ordering data			Ordering data		
	Type	Order No.	Pcs./ Pkt.	Type	Order No.	Pcs./ Pkt.
Description						
GOF outdoor cable, 2-wire, full breakout cable for fixed installation	FOC-OE-OE-GB01/...	1406429	1			
GOF outdoor cable, 2-wire, full breakout cable for flexible installation	FOC-OE-OE-GB02/...	1406430	1			
GOF outdoor cable, 4-wire, full breakout cable for fixed installation	FOC-OE-OE-GB03/...	1406431	1			
PCF outdoor cable, 2-wire, full breakout cable for fixed installation	FOC-OE-OE-HB01/...	1406432	1			

Ordering example for cables with variable cable length:

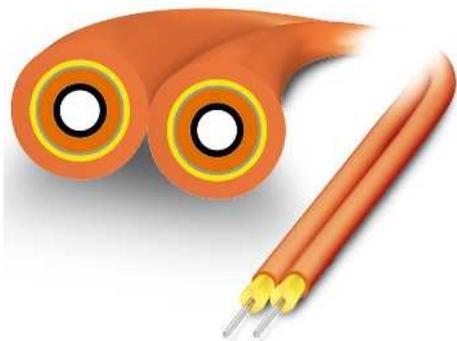
For a 34.0 m long FO outdoor type GB02 cable, the ordering data is as follows:

Order No.	Length [m] 1000 m, maximum
1406430	34.0
	Increment: 1.0 m ... 1000 m = 1.0 m

Data connectors and cables

Network components – assembled fiber optic cables

Zip cord fiberglass cable for assembly, OM1



- Multimode patch cable for indoor installation
- Ideal for use in distributor systems and for connecting terminal devices
- 2.8 mm single elements made from halogen-free and flame-retardant material
- UL approval type OFNR (riser) for USA and Canada

	Free end	FSMA connector, IP20	SC duplex connector, IP20
	OE	FSMA	SCDUP
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
Free end			
	Variable	1411566	
FSMA connector, IP20			
		1 m	1409855
		Variable	1406532
SC duplex connector, IP20			
		1 m	1409857
		Variable	1406536
SCDUP			
		Variable	1406536
B-FOC (ST®) connector, IP20			
		1 m	1409856
		Variable	1406535
BFOC			
		Variable	1413791
LC duplex connector, IP20			
		1 m	1413825
		Variable	1413787
LC			
		Variable	1413789

Ordering example for a configured cable:

For a 15 m long zip cord fiberglass cable, fitted with an FSMA connector, IP20, at one end and an SC duplex connector, IP20, at the other end, the ordering data is as follows:

Order No.	Length [m]
1406536	15

Length:	1 m, minimum 1000 m, maximum
Increment:	1 m 1 m ... 1000 m

B-FOC (ST®) connector, IP20



BFOC

Ordering data

Order No.

LC duplex connector, IP20



LC

Ordering data

Order No.

1 m	1409856	1 m	1413825
Variable	1406535	Variable	1413787
1 m	1413830	1 m	1413827
Variable	1413791	Variable	1413789
1 m	1413832	1 m	1413831
Variable	1413821	Variable	1413792
1 m	1413831	1 m	1413826
Variable	1413792	Variable	1413788

Technical data

Cable data

Cable abbreviation according to IEC 61977:2010

Fibers

Attenuation, typical

I-V(ZN)H

62.5/125 µm OM1

3.2 dB/km (at 850 nm);
0.9 dB/km (at 1300 nm)

Outer sheath

Material

Color

Diameter

Strain relief elements

Individual wire

Structure

Color

Diameter

General data

Weight

Ambient temperature (operation)

Ambient temperature (storage/transport)

Ambient temperature (installation)

Halogen-free:

-

Orange

2.8 - 5.7 mm

-

-

-

-

15.80 kg/km

-10°C ... 60°C

-10°C ... 60°C

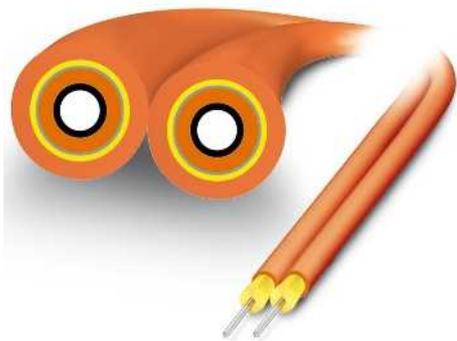
-5°C ... 50°C

According to IEC 60754-2

Data connectors and cables

Network components – assembled fiber optic cables

Zip cord fiberglass cable for assembly, OM2



- Multimode patch cable for indoor installation
- Ideal for use in distributor systems and for connecting terminal devices
- 2.8 mm single elements made from halogen-free and flame-retardant material
- UL approval type OFNR (riser) for USA and Canada

	Free end	SC-RJ connector, IP20	SC duplex connector, IP20
	OE	SCRJ	SCDUP
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
Free end			
	Variable	1411561	
SC-RJ connector, IP20			
		1 m 1409813 2 m 1400697	1 m 1409810 2 m 1400690
SCRJ		Variable 1405703	Variable 1405700
SC duplex connector, IP20			1 m 1409798 2 m 1400685
			Variable 1405697
SCDUP			
B-FOC (ST®) connector, IP20			
BFOC			
LC duplex connector, IP20			1 m 1409790 2 m 1400639
			Variable 1405691
LC			

Ordering example for a configured cable:

For a 15 m long zip cord fiberglass cable, fitted with an SC duplex connector, IP20, at one end and an SC-RJ connector, IP20, at the other end, the ordering data is as follows:

Order No.	Length [m]
1405700	15

Length:	1 m, minimum 1000 m, maximum
Increment:	1 m 1 m ... 1000 m

B-FOC (ST®) connector,
IP20

LC duplex connector,
IP20



BFOC

LC

Ordering data

Ordering data

Order No.

Order No.

1 m 1409822
2 m 1400706

1 m 1409793
2 m 1400682

Variable 1405710

Variable 1405694

1 m 1409819
2 m 1400703

Variable 1405708

1 m 1409824
2 m 1404768

Variable 1405712

1 m 1409816
2 m 1400701

1 m 1409787
2 m 1400604

Variable 1405706

Variable 1405688

Technical data

Cable data

Cable abbreviation according to IEC 61977:2010

Fibers

Attenuation, typical

I-V(ZN)H

50/125 µm OM2

2.7 dB/km (at 850 nm);
0.8 dB/km (at 1300 nm)

Outer sheath

Material

Color

Diameter

Strain relief elements

Individual wire

Structure

Color

Diameter

General data

Weight

Ambient temperature (operation)

Ambient temperature (storage/transport)

Ambient temperature (installation)

Halogen-free:

-

Orange

2.8 - 5.7 mm

-

-

900 µm

15.80 kg/km

-10°C ... 60°C

-10°C ... 60°C

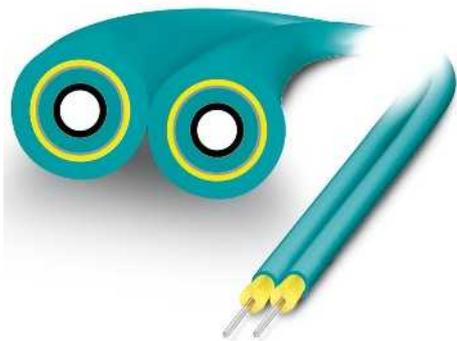
-5°C ... 50°C

According to IEC 60754-1/2

Data connectors and cables

Network components – assembled fiber optic cables

Zip cord fiberglass cable for assembly, OM3



- Multimode patch cable for indoor installation
- Ideal for use in distributor systems and for connecting terminal devices
- 2.8 mm single elements made from halogen-free and flame-retardant material
- UL approval type OFNR (riser) for USA and Canada
- Low-bend fiber
- Data rate: up to 10 Gbps up to 300 m

	Free end	SC-RJ connector, IP20	SC duplex connector, IP20
	OE	SCRJ	SCDUP
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
Free end			
	OE		
SC-RJ connector, IP20	Variable	1411563	
SCRJ			
SC duplex connector, IP20			
SCDUP			
LC duplex connector, IP20			
LC			
		1 m 1409814 2 m 1400699	1 m 1409811 2 m 1400691
		Variable 1405704	Variable 1405701
			1 m 1409799 2 m 1400688
			Variable 1405698
			1 m 1409791 2 m 1400673
			Variable 1405692

Ordering example for a configured cable:

For a 15 m long zip cord fiberglass cable, fitted with an SC duplex connector, IP20, at one end and an SC-RJ connector, IP20, at the other end, the ordering data is as follows:

Order No.	Length [m]
1405701	15

Length:	1 m, minimum 1000 m, maximum
Increment:	1 m 1 m ... 1000 m

B-FOC (ST®) connector,
IP20



BFOC

Ordering data

Order No.

LC duplex connector,
IP20



LC

Ordering data

Order No.

1 m 1409823
2 m 1400711

Variable 1405711

1 m 1409821
2 m 1400705

Variable 1405709

1 m 1409818
2 m 1400702

Variable 1405707

1 m 1409796
2 m 1400683

Variable 1405695

1 m 1409788
2 m 1400621

Variable 1405695

Technical data

Cable data

Cable abbreviation according to IEC 61977:2010

Fibers

Attenuation, typical

Smallest bending radius, fixed installation

Smallest bending radius, flexible installation

Outer sheath

Material

Color

Diameter

Strain relief elements

Individual wire

Structure

Color

Diameter

General data

Weight

Ambient temperature (operation)

Ambient temperature (storage/transport)

Ambient temperature (installation)

Halogen-free:

I-V(ZN)H

50/125 µm OM3

2.5 dB/km (at 850 nm),
0.7 dB/km (at 1300 nm)

15 mm

30 mm

-

Aqua

2.8 - 5.7 mm

-

-

-

-

15.80 kg/km

-10°C ... 60°C

-10°C ... 60°C

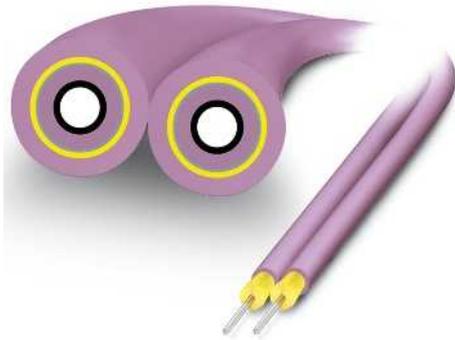
-5°C ... 50°C

According to IEC 60754-1/2

Data connectors and cables

Network components – assembled fiber optic cables

Zip cord fiberglass cable for assembly, OM4



- Multimode patch cable for indoor installation
- Ideal for use in distributor systems and for connecting terminal devices
- 2.8 mm single elements made from halogen-free and flame-retardant material
- UL approval type OFNR (riser) for USA and Canada
- Low-bend fiber
- Data rate: up to 10 Gbps up to 550 m

	Free end	SC-RJ connector, IP20	SC duplex connector, IP20
	OE	SCRJ	SCDUP
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
Free end			
	OE		
SC-RJ connector, IP20			
		SCRJ	
SC duplex connector, IP20			
			SCDUP
LC duplex connector, IP20			
			LC
	Variable	1411564	
		1 m 1409815 2 m 1400700	1 m 1409812 2 m 1400695
		Variable 1405705	Variable 1405702
			1 m 1409801 2 m 1400689
			Variable 1405699
			1 m 1409792 2 m 1400681
			Variable 1405693

Ordering example for a configured cable:

For a 15 m long zip cord fiberglass cable, fitted with an SC duplex connector, IP20, at one end and an SC-RJ connector, IP20, at the other end, the ordering data is as follows:

Order No.	Length [m]
1405702	15

Length:	1 m, minimum 1000 m, maximum
Increment:	1 m 1 m ... 1000 m

LC duplex connector,
IP20

LC

Ordering data

Order No.

1 m	1409797
2 m	1400684

Variable	1405696
----------	---------

1 m	1409789
2 m	1400622

Variable	1405690
----------	---------

Technical data

Cable data

Cable abbreviation according to IEC 61977:2010

Fibers

Attenuation, typical

I-V(ZN)H

50/125 µm OM4

2.5 dB/km (at 850 nm),
0.7 dB/km (at 1300 nm)

Smallest bending radius, fixed installation

15 mm

Smallest bending radius, movable installation

30 mm

Outer sheath

Material

Color

Diameter

Strain relief elements

Individual wire

Structure

Color

Diameter

General data

Weight

Ambient temperature (operation)

Ambient temperature (storage/transport)

Ambient temperature (installation)

Halogen-free:

I-V(ZN)H

50/125 µm OM4

2.5 dB/km (at 850 nm),
0.7 dB/km (at 1300 nm)

15 mm

30 mm

-

Violet

2.8 - 5.7 mm

-

-

-

-

15.80 kg/km

-10°C ... 60°C

-10°C ... 60°C

-5°C ... 50°C

According to IEC 60754-1/2

Connectors, for assembly



INTERBUS



PROFIBUS DP

M12 circular connector according to:

Degree of pollution
Degree of protection
Connection method
Electrical data
Rated voltage
Rated current
Insulation resistance
Material data
Contact material
Contact surface material
Contact carrier material
Flammability rating according to UL 94
Coding
No. of pos.
Temperature data
Plug/socket

Technical data	
Push-in connection	Screw connection
IEC 61076-2-101	IEC 61076-2-101
3	3
IP65/IP67	IP67
Spring-cage connection	Screw connection
60 V DC	60 V DC
4 A	4 A
≥ 100 MΩ	≥ 100 MΩ
CuSn	CuZn
Ni/Au	Au
PA 6.6	PA 66
V0	HB
B - inverse	B - inverse
5	5
-40 ... 85	-40 ... 85

Technical data	
Push-in connection	Screw connection
IEC 61076-2-101	IEC 61076-2-101
3	3
IP65/IP67	IP67
Spring-cage connection	Screw connection
60 V DC	60 V DC
4 A	4 A
≥ 100 MΩ	≥ 100 MΩ
CuSn	CuZn
Ni/Au	Au
PA 6.6	PA 66
V0	HB
B - inverse	B - inverse
2	5
-40 ... 85	-40 ... 85

Description
Connectors
Socket, straight
Plug, straight
Socket, angled
Plug, angled

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Push-in connection		Screw connection	
1424676	1	1507777	1
1424674	1	1507764	1
1424677	1	1430420	1
1424675	1	1430417	1

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Push-in connection		Screw connection	
1424680	1	1507777	1
1424678	1	1507764	1
1424681	1	1430420	1
1424679	1	1430417	1



PROFIBUS DP, PROFIBUS PA



new

CANopen®, DeviceNet™



new

CC-Link

ERIC

Technical data		Technical data		Technical data	
PROFIBUS DP IEC 61076-2-101 3 IP65/IP67 IDC connection technology	PROFIBUS PA IEC 61076-2-101 3 IP65/IP67 IDC connection technology	Push-in connection IEC 61076-2-101 3 IP65/IP67 Spring-cage connection	IDC connection technology IEC 61076-2-101 3 IP65/IP67 IDC connection technology	Push-in connection IEC 61076-2-101 3 IP65/IP67 Spring-cage connection	
60 V DC 4 A ≥ 100 MΩ	30 V DC 4 A ≥ 100 MΩ	60 V DC 4 A ≥ 100 MΩ	60 V AC/DC 4 A ≥ 100 MΩ	60 V DC 4 A ≥ 100 MΩ	
CuSn Ni/Au PA 6.6 V0 B - inverse 2	CuSn Ni/Au PA 6.6 V0 A - standard 2	CuSn Ni/Au PA 6.6 V0 A - standard 5	CuSn Ni/Au PA 6.6 V0 A - standard 5	CuSn Ni/Au PA 6.6 V0 A - standard 4	
-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85	
Ordering data		Ordering data		Ordering data	
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
PROFIBUS DP		PROFIBUS PA		Push-in connection	IDC connection technology
1413932	1	1413934	1	1424672	1
1413931	1	1413933	1	1424670	1
				1424673	1
				1424671	1
				1422760	1
				1422759	1
				1424700	1
				1424699	1

Device connectors, shielded



with 0.5 m long litz wires,
front mounting

ERC 

Technical data

M12 circular connector according to:	IEC 61076-2-101
Degree of pollution	3
Degree of protection	IP67
Connection method	Individual wires
Electrical data	
Rated voltage	250 V
Rated current	4 A
Contact resistance	≤ 3 mΩ
Insulation resistance	≥ 100 MΩ
Material data	
Contact/contact surface material	CuZn / Ni/Au
Contact carrier material	PA66 GF
Flammability rating according to UL 94	V0
Temperature data	
Plug/socket	-25 ... 85 [°C]

Ordering data

Description	Coding	Type	Order No.	Pcs. / Pkt.
Device connectors				
Socket	A - standard	SACC-E-M12FS-4CON-PG9/0,5 FFVA	1431429	1
Plug	A - standard	SACC-E-M12MS-4CON-PG9/0,5 FFVA	1431432	1

Device connectors, with assembled cable, type 900



Rear mounting



Front mounting, can be positioned

ERC

Technical data	
M16 fastening thread	Pg9 fastening thread
IEC 61076-2-101	IEC 61076-2-101
3	3
IP67	IP67
60 V	60 V
4 A	4 A
≤ 3 mΩ	≤ 3 mΩ
≥ 100 MΩ	≥ 100 MΩ
CuZn / Ni/Au	CuZn / Ni/Au
PA 66	PA 66
V0	V0
-25 ... 85	-25 ... 85

ERC

Technical data	
M16 fastening thread	
IEC 61076-2-101	
3	
IP67	
60 V	
4 A	
≤ 3 mΩ	
≥ 100 MΩ	
CuZn / Ni/Au	
PA 66	
V0	
-25 ... 85	

M12 circular connector according to:

Degree of pollution	
Degree of protection	
Electrical data	
Rated voltage	
Rated current	
Contact resistance	
Insulation resistance	
Material data	
Contact/contact surface material	
Contact carrier material	
Flammability rating according to UL 94	
Temperature data	
Plug/socket	[°C]

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
M16 fastening thread		Pg9 fastening thread	

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
M16 fastening thread			

Device connector, B-coded, with bus system cable, 6-wire, shielded, PUR, halogen-free, green outer sheath, 3 x 2 x 0.25 mm²

Description	Cable length
Socket	0.5 m
Plug	0.5 m
Socket	1 m
Plug	1 m
Socket	2 m
Plug	2 m
Socket	5 m
Plug	5 m

EMC hexagonal nut with fine tothing, for all device connectors with:

M16 fastening thread	1440164	10
Pg9 fastening thread		

1534546	1	1437601	1
1534504	1	1437643	1
1534559	1	1437614	1
1534517	1	1437656	1
1534562	1	1437627	1
1534520	1	1437669	1
1534575	1	1437630	1
1534533	1	1437672	1

1529742	1		
1529629	1		
1529755	1		
1530223	1		
1529768	1		
1529726	1		
1529771	1		
1529739	1		

1440177	10
---------	----

Device connectors, with assembled cable, type 910



Rear mounting



Front mounting, can be positioned

ERC

Technical data	
M16 fastening thread	Pg9 fastening thread
IEC 61076-2-101	IEC 61076-2-101
3	3
IP67	IP67
60 V	60 V
4 A	4 A
≤ 3 mΩ	≤ 3 mΩ
≥ 100 MΩ	≥ 100 MΩ
CuZn / Ni/Au	CuZn / Ni/Au
PA 66	PA 66
V0	V0
-25 ... 85	-25 ... 85

ERC

Technical data	
M16 fastening thread	
IEC 61076-2-101	
3	
IP67	
60 V	
4 A	
≤ 3 mΩ	
≥ 100 MΩ	
CuZn / Ni/Au	
PA 66	
V0	
-25 ... 85	

M12 circular connector according to:

Degree of pollution	
Degree of protection	
Electrical data	
Rated voltage	
Rated current	
Contact resistance	
Insulation resistance	
Material data	
Contact/contact surface material	
Contact carrier material	
Flammability rating according to UL 94	
Temperature data	
Plug/socket	[°C]

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
M16 fastening thread		Pg9 fastening thread	

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
M16 fastening thread			

Description Cable length

Device connector, B-coded, with bus system cable, 2-wire, shielded, PUR, halogen-free, violet outer sheath, 1 x 2 x 0.25 mm²

Socket	0.5 m
Plug	0.5 m
Socket	1 m
Plug	1 m
Socket	2 m
Plug	2 m
Socket	5 m
Plug	5 m

1534384	1	1437449	1
1534342	1	1437481	1
1534397	1	1437452	1
1534355	1	1437494	1
1534407	1	1437465	1
1534368	1	1437504	1
1534410	1	1437478	1
1534371	1	1437517	1

1525597	1
1525555	1
1525607	1
1525568	1
1519574	1
1519561	1
1525610	1
1525571	1

EMC hexagonal nut with fine toothing, for all device connectors with:

M16 fastening thread	1440164	10
Pg9 fastening thread	1440177	10

Device connectors,
with assembled cable,
type 920



ERC

Technical data

M16 fastening thread	Pg9 fastening thread
IEC 61076-2-101	IEC 61076-2-101
3	3
IP67	IP67
60 V	60 V
4 A	2 A
≤ 3 mΩ	≤ 3 mΩ
≥ 100 MΩ	≥ 100 MΩ
CuZn / Ni/Au	CuZn / Ni/Au
PA 66	PA 66
V0	V0
-25 ... 85	-25 ... 85

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
M16 fastening thread		Pg9 fastening thread	
1534465	1	1437520	1
1534423	1	1437562	1
1534478	1	1437533	1
1534436	1	1437575	1
1534481	1	1437546	1
1534449	1	1437588	1
1534494	1	1437559	1
1534452	1	1437591	1
1440164	10	1440177	10

ERC

Technical data

M16 fastening thread
IEC 61076-2-101
3
IP67
60 V
4 A
≤ 3 mΩ
≥ 100 MΩ
CuZn / Ni/Au
PA 66
V0
-25 ... 85

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
M16 fastening thread			
1525678	1		
1525623	1		
1525681	1		
1525636	1		
1525694	1		
1525649	1		
1525704	1		
1525652	1		

M12 circular connector according to:

Degree of pollution	
Degree of protection	
Electrical data	
Rated voltage	
Rated current	
Contact resistance	
Insulation resistance	
Material data	
Contact/contact surface material	
Contact carrier material	
Flammability rating according to UL 94	
Temperature data	
Plug/socket	[°C]

Device connector, A-coded, with bus system cable, 4-wire, shielded, PUR, halogen-free, violet outer sheath, 2 x 0.34 mm²; 2 x 0.25 mm²

Description	Cable length
Socket	0.5 m
Plug	0.5 m
Socket	1 m
Plug	1 m
Socket	2 m
Plug	2 m
Socket	5 m
Plug	5 m

EMC hexagonal nut with fine tooting, for all device connectors with:

M16 fastening thread	
Pg9 fastening thread	

Data connectors and cables

Fieldbus components – assembled cables

Assembled cables, INTERBUS, M12-SPEEDCON, and M12

Notes:
For information about the cable qualities, see page 454



	Free end	M12-SPEEDCON connector	M12 connector
	Ordering data	Ordering data	Ordering data
Free end	Order No.	Order No.	Order No.
	2 m 5 m 10 m 15 m Variable	1517877 1517880 1517893 1517903 1537996	2 m 5 m 10 m 15 m Variable
M12-SPEEDCON socket, straight	Order No.	Order No.	Order No.
	0.3 m 0.5 m 1 m 2 m 5 m 10 m 15 m Variable	1517958 1517961 1517974 1517987 1517990 1518009 1518012 1538034	1433184 1433210
M12-SPEEDCON socket, angled	Order No.	Order No.	Order No.
	Variable	1433197	1433207 1433223
M12 socket, straight	Order No.	Order No.	Order No.
	0.3 m 0.5 m 1 m 2 m 5 m 10 m 15 m Variable	1507117 1507120 1507133 1507146 1538005	1507065 1507078 1507081 1507094 1537983 1507162 1507175 1507188 1507191 1507201 1507214 1507227 1538021

Ordering example for a cable with connector assembly:

For an INTERBUS bus cable, straight M12 socket to straight M12 pin and 34.5 m cable length, the ordering data is as follows:

Order No.	Length [m]
1538021	40 m, maximum
	34.5
	Increments:
	0.2 ... 3.0 m = 0.1 m
	> 3.0 m = 0.5 m

Ordering example for a cable without connector assembly:

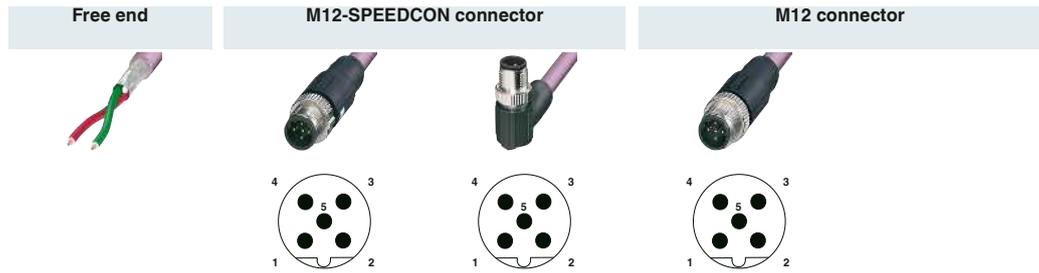
For an INTERBUS bus cable with 34.5 m cable length, the ordering data is as follows:

Order No.	Length [m]
2723123	400 m, maximum
	34.5
	Increments:
	0.5 ... 400.0 m = 0.5 m

Technical data	
M12	
Rated voltage	[V] 60
Rated current	[A] 4
Contact resistance	≤ 5 mΩ
Contact material	CuSn
Contact surface material	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing
Degree of protection	IP65 / IP67
Temperature data	
Plug/socket	[°C] -25 ... 90

Assembled cables, PROFIBUS DP, M12-SPEEDCON, and M12

Notes:
For information about the cable qualities, see page 454



	Ordering data	Ordering data	Ordering data	Ordering data	Ordering data
Free end	Order No.	Order No.	Order No.	Order No.	Order No.
	Variable 1511491	2 m 1518025 5 m 1518038 10 m 1518041 15 m 1518054 Variable 1538050	Variable 1433236	2 m 1507243 5 m 1507256 10 m 1507269 15 m 1507272 Variable 1538047	
M12-SPEEDCON socket, straight 	2 m 1518067 5 m 1518070 10 m 1518083 15 m 1518096 Variable 1538076	0.3 m 1518106 0.5 m 1518119 1 m 1518122 2 m 1518135 5 m 1518148 10 m 1518151 15 m 1518164 Variable 1538092	Variable 1433265		
M12-SPEEDCON socket, angled 	Variable 1433249	Variable 1433252	Variable 1433278		
M12 socket, straight 	2 m 1507298 5 m 1507308 10 m 1507311 15 m 1507324 Variable 1538063			0.3 m 1507340 0.5 m 1507353 1 m 1507366 2 m 1507379 5 m 1507382 10 m 1507395 15 m 1507405 Variable 1538089	

Ordering example for a cable with connector assembly:

For a PROFIBUS bus cable, straight M12 socket to straight M12 pin and 34.5 m cable length, the ordering data is as follows:

Order No.	Length [m]
1538089	34.5
	40 m, maximum
	Increments: 0.2 ... 3.0 m = 0.1 m > 3.0 m = 0.5 m

Ordering example for a cable without connector assembly:

For a PROFIBUS bus cable with 34.5 m cable length, the ordering data is as follows:

Order No.	Length [m]
1511491	34.5
	400 m, maximum
	Increments: 0.5 ... 400.0 m = 0.5 m

Technical data	
M12	
Rated voltage	[V] 250
Rated current	[A] 4
Contact resistance	≤ 5 mΩ
Contact material	CuSn
Contact surface material	Ni/Au
Grip/body material	TPU, hardly inflammable, self-extinguishing
Degree of protection	IP65 / IP67
Temperature data	
Plug/socket	[°C] -25 ... 90

Data connectors and cables

Fieldbus components – assembled cables

Assembled cables, PROFIBUS PA, M12 stainless steel

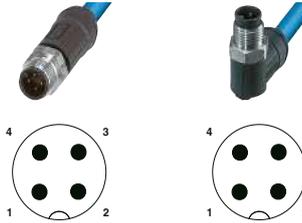
Notes:
For information about the cable qualities, see page 456



Free end



M12 connector



Ordering data

Ordering data

Ordering data

Free end	Order No.	Order No.	Order No.
	2 m	1419092	2 m 1419097
	5 m	1419093	5 m 1419098
	10 m	1419094	10 m 1419099
	15 m	1419095	15 m 1419100
	20 m	1419096	20 m 1419101
M12 socket, straight 	0.3 m	1419102	0.3 m 1419110
	0.5 m	1419103	0.5 m 1419111
	1 m	1419104	1 m 1419112
	2 m	1419105	2 m 1419113
	5 m	1419106	5 m 1419114
	10 m	1419107	10 m 1419115
	15 m	1419108	15 m 1419116
	20 m	1419109	20 m 1419117
	M12 socket, angled 	0.3 m	1419118
0.5 m		1419119	0.5 m 1419127
1 m		1419120	1 m 1419128
2 m		1419121	2 m 1419129
5 m		1419122	5 m 1419130
10 m		1419123	10 m 1419131
15 m		1419124	15 m 1419132
20 m		1419125	20 m 1419133

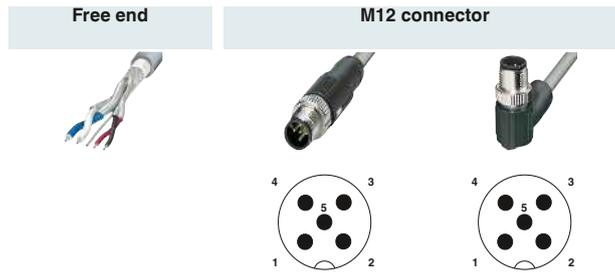
Color coding	Pin assignment M12
OG	1
n.c.	2
BU	3
Shield	4

Technical data

		M12
Rated voltage	[V]	60
Rated current	[A]	4
Contact resistance		≤ 5 mΩ
Contact material		CuSn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
Degree of protection		IP65 / IP67 / IP68 / IP69K
Temperature data		
Plug/socket	[°C]	-25 ... 90

**Assembled cables,
DeviceNet™/CANopen®,
M12-SPEEDCON**

Notes:
For information about the cable qualities, see page 455
Connector, unshielded.



Ordering data

Free end	Order No.	Order No.	Order No.
		2 m	1419039
		5 m	1419040
		10 m	1419041
		15 m	1419042
		20 m	1419043
		2 m	1419044
		5 m	1419045
		10 m	1419046
		15 m	1419047
		20 m	1419048

M12 socket, straight	Order No.	Order No.	Order No.	
		0.3 m	1419049	
		0.5 m	1419050	
		1 m	1419051	
	2 m	1419081	2 m	1419052
	5 m	1419030	5 m	1419053
	10 m	1419031	10 m	1419054
15 m	1419032	15 m	1419055	
20 m	1419033	20 m	1419056	
		0.3 m	1419057	
		0.5 m	1419058	
		1 m	1419059	
		2 m	1419060	
		5 m	1419061	
		10 m	1419062	
		15 m	1419063	
		20 m	1419064	

M12 socket, angled	Order No.	Order No.	Order No.	
		0.3 m	1419065	
		0.5 m	1419066	
		1 m	1419067	
	2 m	1419034	2 m	1419068
	5 m	1419035	5 m	1419069
	10 m	1419036	10 m	1419070
	15 m	1419037	15 m	1419071
	20 m	1419038	20 m	1419072
			0.3 m	1419073
			0.5 m	1419074
		1 m	1419075	
		2 m	1419076	
		5 m	1419077	
		10 m	1419078	
		15 m	1419079	
		20 m	1419080	

Color coding	Pin assignment
	M12
Shield	1
RD	2
BK	3
WH	4
BU	5

Technical data	
M12	
Rated voltage	[V] 60
Rated current	[A] 4
Contact resistance	< 5 mΩ
Contact material	CuSn
Contact surface material	Ni/Au
Grip body material	TPU
Degree of protection	IP65 / IP67
Temperature data	
Plug/socket	[°C] -25 ... 90

Data connectors and cables

Fieldbus components – assembled cables

Assembled cables, DeviceNet™/CANopen®, M8

Notes:
For information about the cable qualities, see page 455

Free end



M8 connector



DeviceNet™ CANopen®

	Ordering data	Ordering data	Ordering data
Free end	Order No.	Order No.	Order No.
		2 m	1575712
		5 m	1575725
		10 m	1575738
		15 m	1575754
		Variable	1575767
M8 socket, straight 		0.3 m	1575822
		0.5 m	1575835
		1 m	1575848
		2 m	1575851
		5 m	1575864
		10 m	1575877
		15 m	1575880
		Variable	1575819
		Variable	1575893
		Variable	1575903
M8 socket, angled 		Variable	1575916
		Variable	1575945

Ordering example for a cable with variable cable length:

For a DeviceNet™ bus cable, straight M8 socket to straight M8 pin and 34.5 m cable length, the ordering data is as follows:

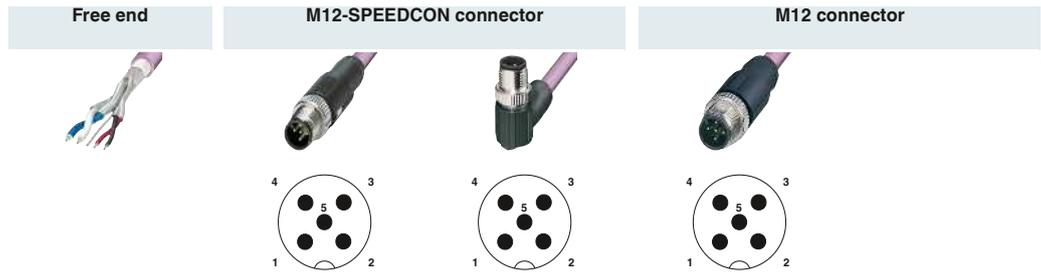
Order No.	Length [m]
1575893	34.5
Increments: 0.2 ... 3.0 m = 0.1 m > 3.0 m = 0.5 m	

Technical data

		M8
Rated voltage	[V]	30
Rated current	[A]	4
Contact resistance		≤ 5 mΩ
Contact material		CuSn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90

Assembled cables, DeviceNet™/CANopen®, M12-SPEEDCON, and M12

Notes:
For information about the cable qualities, see page 455



	Ordering data		Ordering data		Ordering data		Ordering data	
Free end	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	
	Variable 1511504	2 m 1518177 5 m 1518180 10 m 1518193 15 m 1518203	Variable 1538115	Variable 1433281	2 m 1507421 5 m 1507434 10 m 1507447 15 m 1507450	Variable 1538102		
M12 socket, SPEEDCON, straight 		0.3 m 1518258 0.5 m 1518261 1 m 1518274 2 m 1518287 5 m 1518290 10 m 1518300 15 m 1518313						
	2 m 1518216 5 m 1518229 10 m 1518232 15 m 1518245	Variable 1538131	Variable 1538157	Variable 1433317				
M12 socket, SPEEDCON, angled 								
			Variable 1433294	Variable 1433304	Variable 1433320			
M12 socket, straight 						0.3 m 1507528 0.5 m 1507531 1 m 1507544 2 m 1507557 5 m 1507560 10 m 1507573 15 m 1507586	Variable 1538128	
	2 m 1507476 5 m 1507489 10 m 1507492 15 m 1507502					Variable 1538144		

Ordering example for a cable with connector assembly:

For a DeviceNet™ bus cable, straight M12 socket to straight M12 pin and 34.5 m cable length, the ordering data is as follows:

Order No.	Length [m]
1538144	34.5
	40 m, maximum
	Increments: 0.2 ... 3.0 m = 0.1 m > 3.0 m = 0.5 m

Ordering example for a cable without connector assembly:

For a DeviceNet™ bus cable with 34.5 m cable length, the ordering data is as follows:

Order No.	Length [m]
1511504	34.5
	400 m, maximum
	Increments: 0.5 ... 400.0 m = 0.5 m

Technical data	
M12	
Rated voltage	[V] 60
Rated current	[A] 4
Contact resistance	≤ 5 mΩ
Contact material	CuSn
Contact surface material	Ni/Au
Grip/body material	TPU, hardly inflammable, self-extinguishing
Degree of protection	IP65 / IP67
Temperature data	
Plug/socket	[°C] -25 ... 90

M12 Y-distributors

Notes:
For information about the cable qualities, see page 455
Connector, unshielded.

DeviceNet
CANopen



Bus system cable

DeviceNet
CANopen



Bus system cable

ERC

Technical data

Electrical data	
Rated voltage	60 V
Rated current	4 A
Contact resistance	≤ 5 mΩ
Material data	
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	TPU GF
Flammability rating according to UL 94	HB
Mechanical data	
No. of pos.	5
Degree of pollution	3
Degree of protection	IP65/IP67
External cable diameter	6.70 mm
Conductor cross section for signal	0.2 mm ²
Conductor structure for signal line	19x 0.12 mm
Conductor cross section for power	0.32 mm ²
Conductor structure for voltage supply	19x 0.15 mm
Temperature data	
Plug/socket	[°C] -25 ... 90
Cable, fixed installation	[°C] -40 ... 80
Cable, flexible installation	[°C] -20 ... 80

ERC

Technical data

Electrical data	
Rated voltage	60 V
Rated current	4 A
Contact resistance	≤ 5 mΩ
Material data	
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	-
Flammability rating according to UL 94	HB
Mechanical data	
No. of pos.	5
Degree of pollution	3
Degree of protection	IP65/IP67
External cable diameter	6.70 mm
Conductor cross section for signal	0.2 mm ²
Conductor structure for signal line	19x 0.12 mm
Conductor cross section for power	0.32 mm ²
Conductor structure for voltage supply	19x 0.15 mm
Temperature data	
Plug/socket	[°C] -25 ... 90
Cable, fixed installation	[°C] -40 ... 80
Cable, flexible installation	[°C] -20 ... 80

Ordering data

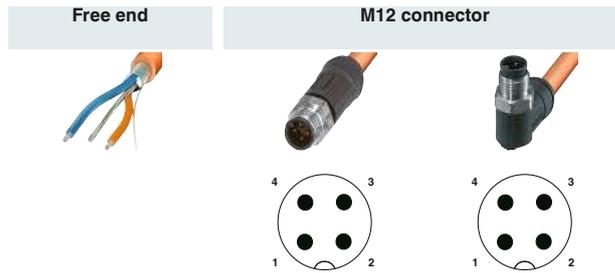
Description
Bus system Y-cable , 5-pos., shielded, PUR, halogen-free, violet, unshielded straight M12 Y-socket to straight M12 socket and straight M12 connector
- Conductor length 0.3 m
- Conductor length 0.5 m
- Conductor length 1.0 m
- Conductor length 2.0 m
- Conductor length 5.0 m
- Conductor length 10.0 m
- Conductor length 15.0 m
Bus system Y-cable , 5-pos., shielded, PUR, halogen-free, violet, unshielded straight M12 Y-connector to free cable ends
- Conductor length 2.0 m
- Conductor length 5.0 m
- Conductor length 10.0 m
- Conductor length 15.0 m
Bus system Y-cable , 5-pos., shielded, PUR, halogen-free, violet, unshielded straight M12 Y-socket to free cable ends
- Conductor length 2.0 m
- Conductor length 5.0 m
- Conductor length 10.0 m
- Conductor length 15.0 m

Type	Order No.	Pcs. / Pkt.
SAC-5PY-F/2X 0,3-920-MS-FS	1436013	1
SAC-5PY-F/2X 0,5-920-MS-FS	1436026	1
SAC-5PY-F/2X 1,0-920-MS-FS	1436039	1
SAC-5PY-F/2X 2,0-920-MS-FS	1436042	1
SAC-5PY-F/2X 5,0-920-MS-FS	1436055	1
SAC-5PY-F/2X10,0-920-MS-FS	1436068	1
SAC-5PY-F/2X15,0-920-MS-FS	1436071	1

Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-5PY-M/2X 2,0-920	1436084	1
SAC-5PY-M/2X 5,0-920	1436097	1
SAC-5PY-M/2X10,0-920	1436107	1
SAC-5PY-M/2X15,0-920	1436110	1
SAC-5PY-F/2X 2,0-920	1436123	1
SAC-5PY-F/2X 5,0-920	1436136	1
SAC-5PY-F/2X10,0-920	1436149	1
SAC-5PY-F/2X15,0-920	1436152	1

Assembled cables, FOUNDATION Fieldbus, M12 stainless steel



	Ordering data	Ordering data	Ordering data	
Free end	Order No.	Order No.	Order No.	
		2 m	1431173	
		5 m	1431186	
		10 m	1431199	
		15 m	1431209	
	Variable	1432389	Variable	1431322
M12 socket, straight 		0.3 m	1431254	
		0.5 m	1431267	
		1 m	1431270	
		2 m	1431283	
		5 m	1431296	
		10 m	1431306	
		15 m	1431319	
	Variable	1431348	Variable	1431364
	Variable	1431351	Variable	1431380
	Variable	1431377	Variable	1431393
M12 socket, angled 				
	Variable	1431351	Variable	1431380

Ordering example for products with variable cable:

For a 34.5 m long FOUNDATION Fieldbus cable, fitted with a straight M12 connector at one end and an M12 socket at the other end, the ordering data is as follows:

Order No.	Length [m] max. 50 m
1431364	34.5 Increment: 0.5 m

Color coding	Pin assignment
M12	
BU	1
BN	2
Shield	3
n. c.	4

Technical data	
Connectors	
M12	
Rated voltage	[V] 250
Rated current	[A] 4
Contact resistance	≤ 5 mΩ
Contact material	CuSn
Contact surface material	Ni/Au
Grip body material	TPU, hardly inflammable, self-extinguishing
Material of knurls	Stainless steel
Degree of protection	IP65 / IP67 / IP68 / IP69K
Temperature data	
Plug/socket	[°C] -25 ... 90

H-, Y-, and T-distributors



H- and Y-distributors

T-distributor

ERC

	Technical data		Technical data					
	H-distributor, 5-pos.	Y-distributor, 8-pos.	T-distributor, 4-pos.	T-distributor, 5-pos.				
General data								
Degree of protection	IP65 / IP67	IP67	IP65 / IP67 / IP68	IP65 / IP67				
Electrical data								
Rated voltage	60 V	30 V AC/DC (power and data)	60 V	60 V				
Insulation resistance	≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ				
Overvoltage category / Degree of pollution	II / 3	III / 3	II / 3	II / 3				
Material data								
Contact material	CuZn	CuZn	CuZn	CuZn				
Contact surface material	Ni/Au	Ni/Au	Ni/Au	Ni/Au				
Contact carrier material	TPU GF	-	TPU GF	TPU GF				
Grip body material	TPU, hardly inflammable, self-extinguishing							
Temperature data								
Plug/socket [°C]	-25 ... 90	-25 ... 80	-25 ... 90	-25 ... 90				
	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Description	H-distributor, 5-pos.		Y-distributor, 8-pos.		T-distributor, 4-pos.		T-distributor, 5-pos.	
Bus system H-distributor, for DeviceNet™ with two mounting holes M12 connector to 3x M12 sockets	1417414	1						
Y-distributor hybrid for Ethernet M12 connector (Y-coded) to M12 socket (D-coded) and M12 connector (A-coded)			1410630	1				
Bus system T-distributor, for PROFIBUS, B-coded, shielded 360° M12 socket to 2x M12 connector M12 socket to M12 connector and fixed M12 connector							1424711 1424713	1 1
Bus system T-distributor, for CANopen® and DeviceNet™ M12 socket to M12 socket and M12 connector							1541186 1424712	1 1
Bus system T-distributor, for CC-Link M12 socket to M12 socket and M12 connector					1559783	5		
Bus system T-distributor, for FOUNDATION Fieldbus and PROFIBUS PA (M12), with stainless steel knurl M12 socket to M12 socket and M12 connector					1431416	5		

Termination resistors



M8 termination resistor



M12 termination resistor

ERIC

Technical data

SAC-5P-M 8MS DN TR

Electrical data	
Nominal voltage U_N	30 V
Insulation resistance	-
Overvoltage category / Degree of pollution	II / 3
Material data	
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	TPU GF
Grip body material	TPU, hardly inflammable, self-extinguishing
Degree of protection	IP65/IP67/IP69K
Temperature data	
Plug/socket	-25 ... 90 [°C]

Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-5P-M 8MS DN TR	1435988	5

Description	
Termination resistor , M8 connector	
- DeviceNet™	
Termination resistor , M12 connector	
- PROFIBUS	
- DeviceNet™/CANopen®	
- CC-Link	
Termination resistor , M12 connector, stainless steel knurl	
- FOUNDATION Fieldbus	

ERIC

Technical data

SAC-5P-M12MS PB TR

SAC-4P-M12MS FF TR VA

Electrical data		
Nominal voltage U_N	60 V	24 V
Insulation resistance	$\geq 100 \text{ M}\Omega$	$\geq 100 \text{ M}\Omega$
Overvoltage category / Degree of pollution	II / 3	II / 3
Material data		
Contact material	CuSn	CuZn
Contact surface material	Ni/Au	Ni/Au
Contact carrier material	TPU GF	TPU GF
Grip body material	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
Degree of protection	-	IP65/IP68/IP69K
Temperature data		
Plug/socket	-25 ... 90	-25 ... 90

Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-5P-M12MS PB TR	1507803	5
SAC-5P-M12MS CAN TR	1507816	5
SAC-4P-M12MS CCL TR	1558470	1
SAC-4P-M12MS FF TR VA	1431403	5

Fieldbus components – AS-Interface

Flat-ribbon conductors, flat-ribbon conductor connectors, and panel feed-throughs



Flat-ribbon conductors and accessories



Flat-ribbon conductor connectors and panel feed-throughs with QUICKON fast connection technology



			Technical data			Technical data		
			VS-ASI-FC-PVC...	VS-ASI-FC-PUR...		Q 1,5/4IDC	Q 1,5/4M20	
Mechanical data								
No. of pos.			2	2		4	4	
Degree of protection			-	-		IP65/IP67	IP65/IP67	
Cable data								
Outer sheath material			PVC	PUR		-	-	
Conductor cross section			1.5 mm ²	1.5 mm ²		-	-	
Connector data for QUICKON connection								
Conductor cross section [mm ²]			-	-		0.75 mm ² ... 1.5 mm ²	0.75 mm ² ... 1.5 mm ²	
Conductor cross section [AWG]			-	-		18 ... 16	18 ... 16	
Temperature data								
Plug/socket			[°C]	-	-	-25 ... 80	-25 ... 80	
Cable, fixed installation			[°C]	-30 ... 90	-40 ... 85	-	-	
Cable, flexible installation			[°C]	-20 ... 90	-30 ... 85	-	-	
			Ordering data			Ordering data		
Description	Cable length		Type	Order No.	Pcs./Pkt.	Type	Order No.	Pcs./Pkt.
AS-Interface EPDM flat-ribbon conductor, 2 x 1.5 mm²								
Yellow	100 m		VS-ASI-FC-EPDM-YE 100M	1432402	1			
Yellow	1000 m		VS-ASI-FC-EPDM-YE 1000M	1434646	1			
Black	100 m		VS-ASI-FC-EPDM-BK 100M	1432415	1			
Black	1000 m		VS-ASI-FC-EPDM-BK 1000M	1434659	1			
AS-Interface PVC flat-ribbon conductor to UL, 2 x 1.5 mm²								
Yellow	100 m		VS-ASI-FC-PVC-UL-YE 100M	1404906	1			
Yellow	1000 m		VS-ASI-FC-PVC-UL-YE/1000	1404867	1			
Black	100 m		VS-ASI-FC-PVC-UL-BK 100M	1404919	1			
Black	1000 m		VS-ASI-FC-PVC-UL-BK/1000	1404870	1			
AS-Interface TPE flat-ribbon conductor to UL, 2 x 1.5 mm²								
Yellow	100 m		VS-ASI-FC-TPE-UL-YE 100M	1404922	1			
Yellow	1000 m		VS-ASI-FC-TPE-UL-YE 1000M	1434662	1			
Black	100 m		VS-ASI-FC-TPE-UL-BK 100M	1404935	1			
Black	1000 m		VS-ASI-FC-TPE-UL-BK 1000M	1434675	1			
AS-Interface PUR flat-ribbon conductor, 2 x 1.5 mm²								
Yellow	100 m		VS-ASI-FC-PUR-YE 100M	1404883	1			
Yellow	1000 m		VS-ASI-FC-PUR-YE/1000	1404841	1			
Black	100 m		VS-ASI-FC-PUR-BK 100M	1404896	1			
Black	1000 m		VS-ASI-FC-PUR-BK/1000	1404854	1			
Flat-ribbon conductor connector, 4-pos., for connecting one or two AS-i flat-ribbon conductors								
						Q 1,5/4IDC/24-24KU-KU-ASI-BK	1585058	1
Panel feed-through, for accommodating one or two AS-i flat-ribbon conductors, on the rear side with manual solder/slip-on connection 4.8 x 0.8 mm								
						Q 1,5/4FL/24-M20KU-ESA-ASI BK	1437261	1
Panel feed-through, for accommodating one or two AS-Interface flat-ribbon conductors, on the rear side with four individual 1.5 mm² wires								
						Q 1,5/4A50/24-M20KU-ESA-ASI BK	1437274	1
Metal gland, for AS-Interface flat-ribbon conductor								
Thread type: M20						HC-M-KV-M20(1ASI)	1584017	10
Thread type: M25						HC-M-KV-M25(1ASI)	1584020	10

Distributors with spring connection and with round cables



Flat-ribbon conductor distributor and distributor with spring connection



Distributor with round cable and molded M12 connector with SPEEDCON

	Technical data		Technical data	
	SAC-ASI-J-Y-B-FFKDS	SAC-ASI-J-Y-Y-N	SAC-ASI-J-Y-N...	SAC-ASI-J-Y-B...
Electrical data				
Rated voltage	≤ 35 V	≤ 32 V	≤ 32 V	≤ 32 V
Rated current	≤ 6 A	≤ 8 A	≤ 4 A	≤ 4 A
Material specifications for exit				
Grip body material	-	-	TPU	TPU
Material specifications for distributor				
Housing material	PBT	PBT	PBT	PBT
Mechanical data				
No. of pos.	4	4	2	4
Degree of protection	IP20	IP65/IP67	IP65/IP67	IP65/IP67
Connection data for spring-cage terminal blocks				
Conductor cross section	0.2 mm ² ... 1.5 mm ²	-	-	-
Connection cross section AWG	24 ... 16	-	-	-
Cable data				
Outer sheath material	-	-	PUR	PUR
External cable diameter	-	-	4.30 mm	4.30 mm
Conductor cross section	-	-	4x 0.34 mm ² (signal line)	4x 0.34 mm ² (signal line)
Temperature data				
Plug/socket	[°C]	-25 ... 75	-25 ... 75	-25 ... 75
Cable, fixed installation	[°C]	-	-40 ... 80	-40 ... 80
Cable, flexible installation	[°C]	-	-25 ... 80	-25 ... 80

Description	Cable length	Ordering data			Ordering data		
		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
AS-Interface distributor with IP20 protection for 2 flat-ribbon conductors, 4-pos., with spring terminal blocks		SAC-ASI-J-Y-B-FFKDS	1407579	1			
AS-Interface H-distributor with high degree of protection, parallel wired, for distribution from one to two flat-ribbon conductors		SAC-ASI-J-Y-Y-N	1405622	1			
AS-Interface distributor for 1 flat-ribbon conductor, with PUR round cable and molded, straight, A-coded, 2-pos. M12 socket with SPEEDCON	1 m 2 m				SAC-ASI-J-Y-N-PUR-1,0-FS SCO	1407573	1
AS-Interface distributor for 2 flat-ribbon conductors, with PUR round cable and molded, straight, A-coded, 4-pos. M12 socket with SPEEDCON	1 m 2 m				SAC-ASI-J-Y-N-PUR-2,0-FS SCO	1407574	1
AS-Interface distributor for 2 flat-ribbon conductors, with PUR round cable and molded, angled, A-coded, 4-pos. M12 socket with SPEEDCON	1 m 2 m				SAC-ASI-J-Y-B-PUR-1,0-FS SCO	1407575	1
					SAC-ASI-J-Y-B-PUR-2,0-FS SCO	1407576	1
					SAC-ASI-J-Y-B-PUR-1,0-FR SCO	1407577	1
					SAC-ASI-J-Y-B-PUR-2,0-FR SCO	1407578	1
AS-Interface distributor for 1 flat-ribbon conductor, with 2.0 m PUR round cable and open cable end	2 m				SAC-ASI-J-Y-N-PUR-2,0-OE	1407580	1
AS-Interface distributor for 2 flat-ribbon conductors, with 2.0 m PUR round cable and open cable end	2 m				SAC-ASI-J-Y-B-PUR-2,0-OE	1407581	1

Digital I/O devices with M8 connection technology

The digital I/O devices are particularly suitable for use in machines close to the process.

Features:

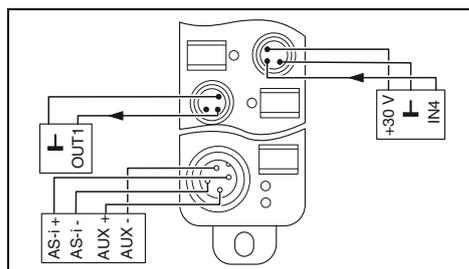
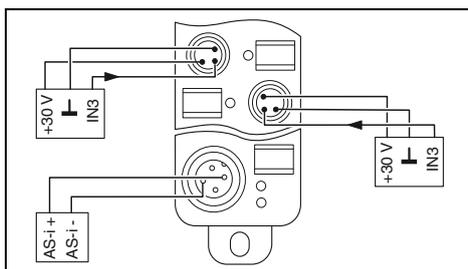
- Optimized for 30 mm mounting profile
- M12 connection technology with SPEEDCON fast locking system for the AS-Interface connection
- M8 connection technology for inputs and outputs



4 digital inputs



4 digital inputs and 4 digital outputs



Technical data

Technical data

Interface	
Fieldbus system	AS-i
Connection method	M12 connector, (A-coded)
AS-Interface	
AS-i specification	2.0
Required master specification	>= 2.0
AS-i profile	S-0.0
Digital inputs	
Connection method	M8 connector
Connection technology	2-, 3-conductor
Maximum number of inputs	-
Input characteristic curve	IEC 61131-2 type 2
Digital outputs	
Connection method	-
Connection technology	-
Maximum number of outputs	-
Maximum output current per channel	-
Maximum output current per module / terminal block	-
General data	
Weight	85 g
Drill hole spacing	93 mm
Dimensions	W / H / D 30 mm / 26 mm / 103 mm
Degree of protection	IP65/IP67
Ambient temperature (operation)	-25°C ... 70°C
EMC note	Class A product, see page 772

Interface	
Fieldbus system	AS-i
Connection method	M12 connector, (A-coded)
AS-Interface	
AS-i specification	2.0
Required master specification	>= 2.0
AS-i profile	S-7.0
Digital inputs	
Connection method	M8 connector
Connection technology	2-, 3-conductor
Maximum number of inputs	-
Input characteristic curve	IEC 61131-2 type 2
Digital outputs	
Connection method	M8 connector
Connection technology	2-conductor
Maximum number of outputs	-
Maximum output current per channel	1 A
Maximum output current per module / terminal block	4 A
General data	
Weight	125 g
Drill hole spacing	133 mm
Dimensions	W / H / D 30 mm / 26 mm / 143 mm
Degree of protection	IP65/IP67
Ambient temperature (operation)	-25°C ... 70°C
EMC note	Class A product, see page 772

Ordering data

Ordering data

Description	
Fieldline Extension AS-i digital input device	
- 4 inputs	
Fieldline Extension AS-i digital I/O device	
- 4 inputs, 4 outputs, 1 A	

Type	Order No.	Pcs. / Pkt.
FLX ASI DI 4 M8	2773403	1

Type	Order No.	Pcs. / Pkt.
FLX ASI DIO 4/4 M8-1A	2773416	1

Accessories

Accessories

M8 screw plug	PROT-M8	1682540	5
Zack marker strip, flat, 10-section, without color print	ZBF 8:UNBEDRUCKT	0808781	10
Manual addressing device, for AS-Interface devices	ASI CC ADR	2741338	1

M8 screw plug	PROT-M8	1682540	5
Zack marker strip, flat, 10-section, without color print	ZBF 8:UNBEDRUCKT	0808781	10
Manual addressing device, for AS-Interface devices	ASI CC ADR	2741338	1

M8 screw plug	PROT-M8	1682540	5
Zack marker strip, flat, 10-section, without color print	ZBF 8:UNBEDRUCKT	0808781	10
Manual addressing device, for AS-Interface devices	ASI CC ADR	2741338	1

Digital I/O devices with M12 connection technology

The innovative locking mechanism enables quick and easy installation of the I/O devices.

Features:

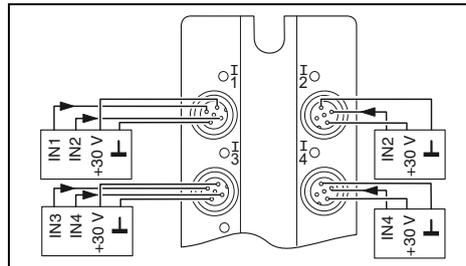
- Optimized for direct mounting and DIN rail mounting
- Tool-free connection to AS-Interface using penetration technique
- M12 connection technology with SPEEDCON fast locking system for the inputs and outputs



4 digital inputs

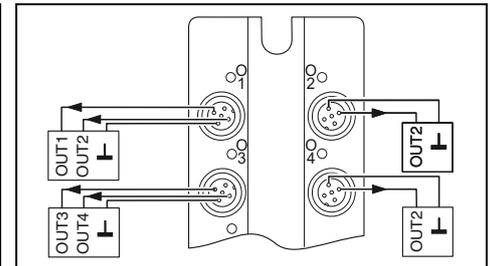


4 digital outputs



Technical data

Interface	
Fieldbus system	AS-i
Connection method	Flat-ribbon cable penetration technique
AS-Interface	
AS-i specification	2.1
Required master specification	>= 2.0
AS-i profile	S-0.A.2
Digital inputs	
Connection method	M12 connector
Connection technology	2-, 3-conductor
Maximum number of inputs	-
Input characteristic curve	IEC 61131-2 type 2
Digital outputs	
Connection method	-
Connection technology	-
Maximum number of outputs	-
Maximum output current per channel	-
Maximum output current per module / terminal block	-
General data	
Weight	195 g
Drill hole spacing	108 mm
Dimensions	58 mm / 118 mm / 35 mm
Degree of protection	IP65/IP67
Ambient temperature (operation)	-25°C ... 70°C
EMC note	Class A product, see page 772



Technical data

Interface	
Fieldbus system	AS-i
Connection method	Flat-ribbon cable penetration technique
AS-Interface	
AS-i specification	2.0
Required master specification	>= 2.0
AS-i profile	S-8.1
Digital inputs	
Connection method	-
Connection technology	-
Maximum number of inputs	-
Input characteristic curve	-
Digital outputs	
Connection method	M12 connector
Connection technology	2-conductor
Maximum number of outputs	4
Maximum output current per channel	2 A
Maximum output current per module / terminal block	4 A
General data	
Weight	195 g
Drill hole spacing	108 mm
Dimensions	58 mm / 118 mm / 35 mm
Degree of protection	IP65/IP67
Ambient temperature (operation)	-25°C ... 70°C
EMC note	Class A product, see page 772

Ordering data

Description	
Fieldline Extension AS-i digital input device	
- 4 inputs	
Fieldline Extension AS-i digital output device	
- 4 outputs, 2 A	
Fieldline Extension AS-i digital I/O device	
- 2 inputs, 2 outputs, 2 A	
- 4 inputs, 3 outputs, 2 A	
- 4 inputs, 4 outputs, 2 A	

Type	Order No.	Pcs. / Pkt.
FLX ASI DI 4 M12	2773429	1

Ordering data

Type	Order No.	Pcs. / Pkt.
FLX ASI DO 4 M12-2A	2773458	1

Accessories

M12 screw plug	PROT-M12	1680539	5
Label sheet for laser printers, 64 x 16 mm, color: white	BMKL 64X16 WH	0821807	2
Label sheet for laser printers, 108 x 16 mm, color: white			
Manual addressing device , for AS-Interface devices	ASI CC ADR	2741338	1
Programming cable , for addressing the AS-i devices	ASI CC ADR CAB CINCH	2741341	1

M12 screw plug	PROT-M12	1680539	5
Label sheet for laser printers, 64 x 16 mm, color: white	BMKL 64X16 WH	0821807	2
Label sheet for laser printers, 108 x 16 mm, color: white			
Manual addressing device , for AS-Interface devices	ASI CC ADR	2741338	1
Programming cable , for addressing the AS-i devices	ASI CC ADR CAB CINCH	2741341	1

Accessories

M12 screw plug	PROT-M12	1680539	5
Label sheet for laser printers, 64 x 16 mm, color: white	BMKL 64X16 WH	0821807	2
Label sheet for laser printers, 108 x 16 mm, color: white			
Manual addressing device , for AS-Interface devices	ASI CC ADR	2741338	1
Programming cable , for addressing the AS-i devices	ASI CC ADR CAB CINCH	2741341	1



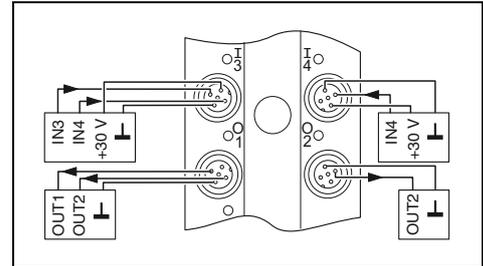
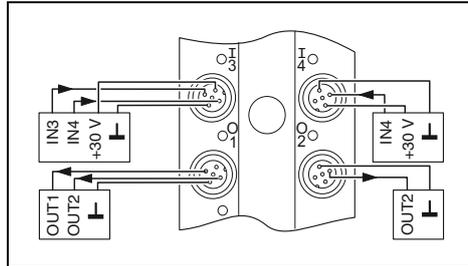
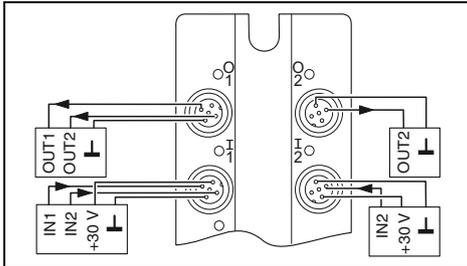
2 digital inputs
and 2 digital outputs



4 digital inputs
and 3 digital outputs



4 digital inputs
and 4 digital outputs



Technical data

Technical data

Technical data

AS-i
Flat-ribbon cable penetration technique
2.1
>= 2.0
S-B.A.2
M12 connector
2-, 3-conductor
-
IEC 61131-2 type 2
M12 connector
2-conductor
-
2 A
4 A
195 g
108 mm
58 mm / 118 mm / 35 mm
IP65/IP67
-25°C ... 70°C
Class A product, see page 772

AS-i
Flat-ribbon cable penetration technique
2.1
>= 2.0
S-7.A.2
M12 connector
2-, 3-conductor
-
IEC 61131-2 type 2
M12 connector
2-conductor
-
2 A
4 A
245 g
108 mm
58 mm / 150 mm / 35 mm
IP65/IP67
-25°C ... 70°C
Class A product, see page 772

AS-i
Flat-ribbon cable penetration technique
3.0
>= 3.0
S-7.A.7
M12 connector
2-, 3-conductor
-
IEC 61131-2 type 2
M12 connector
2-conductor
-
2 A
245 g
108 mm
58 mm / 150 mm / 35 mm
IP65/IP67
-25°C ... 70°C
Class A product, see page 772

Ordering data

Ordering data

Ordering data

Type	Order No.	Pcs. / Pkt.
FLX ASI DIO 2/2 M12-2A	2773432	1

Type	Order No.	Pcs. / Pkt.
FLX ASI DIO 4/3 M12-2A	2773445	1

Type	Order No.	Pcs. / Pkt.
FLX ASI 3.0 DIO 4/4 M12-2A	2773474	1

Accessories

Accessories

Accessories

Accessories	Order No.	Pcs.
PROT-M12	1680539	5
BMKL 64X16 WH	0821807	2
ASI CC ADR	2741338	1
ASI CC ADR CAB CINCH	2741341	1

Accessories	Order No.	Pcs.
PROT-M12	1680539	5
BMKL 11,5 (108X16) WH	0821797	2
ASI CC ADR	2741338	1
ASI CC ADR CAB CINCH	2741341	1

Accessories	Order No.	Pcs.
PROT-M12	1680539	5
BMKL 11,5 (108X16) WH	0821797	2
ASI CC ADR	2741338	1
ASI CC ADR CAB CINCH	2741341	1

D-SUB connector, IP67



D-SUB complete connector for INTERBUS with IP67 protection



D-SUB connector set IP67, consisting of: sleeve housing, panel mounting frame, and accessories, shielded design

ERC

	Technical data
Electrical data	
Rated voltage	63 V
Rated current	1 A
Overvoltage category	II
Material data	
Housing material	PA
Contact material	Copper alloy
Contact surface material	Gold over nickel
Contact carrier material	PBTP
Flammability rating according to UL 94	V0
Mechanical data	
No. of pos.	9
Color	Gray
Degree of pollution	2
Degree of protection	IP67
Connection method	Screw connection
Conductor cross section	0.14 mm ² ... 0.5 mm ²
Connection cross section AWG	26 ... 20
Insertion/withdrawal cycles	≥ 200
Temperature data	
Ambient temperature (operation)	-20°C ... 70°C

ERC

	Technical data
Electrical data	
Rated voltage	-
Rated current	-
Overvoltage category	-
Material data	
Housing material	PA
Contact material	-
Contact surface material	-
Contact carrier material	-
Flammability rating according to UL 94	V0
Mechanical data	
No. of pos.	9
Color	Gray
Degree of pollution	2
Degree of protection	IP67
Connection method	-
Conductor cross section	-
Connection cross section AWG	-
Insertion/withdrawal cycles	≥ 1000
Temperature data	
Ambient temperature (operation)	-40°C ... 80°C

	Ordering data		
Description	Type	Order No.	Pcs. / Pkt.
D-SUB complete connector , for INTERBUS, shell size 1, screw connection, shielded			
Pin	VS-09-IBS-ST	1689271	1
Socket	VS-09-IBS-BU	1689284	1
D-SUB complete connector , for PROFIBUS, shell size 1, pin, shielded			
Screw connection	VS-09-PROFIBUS-SC	1654549	1
Spring-cage connection	VS-09-PROFIBUS-SP	1654345	1
D-SUB complete connector , for CANopen®, shell size 1, socket, screw connection, shielded			
Socket	VS-09-CAN	1689307	1
D-SUB panel mounting frame , for accommodating D-SUB contact inserts			
D-SUB 09			
D-SUB EMC shroud , for the IP67 panel mounting frame, for shield contacting to the housing panel			
D-SUB 09			
D-SUB connector set			
D-SUB 09			

	Ordering data		
Description	Type	Order No.	Pcs. / Pkt.
D-SUB complete connector , for INTERBUS, shell size 1, screw connection, shielded			
Pin			
Socket			
D-SUB complete connector , for PROFIBUS, shell size 1, pin, shielded			
Screw connection			
Spring-cage connection			
D-SUB complete connector , for CANopen®, shell size 1, socket, screw connection, shielded			
Socket			
D-SUB panel mounting frame , for accommodating D-SUB contact inserts			
D-SUB 09	VS-09-A	1688366	5
D-SUB EMC shroud , for the IP67 panel mounting frame, for shield contacting to the housing panel			
D-SUB 09			
D-SUB connector set			
D-SUB 09	VS-09-A-EMV-S	1688463	5
	VS-09-SET-EMV	1689158	1



Screw connection
Fixing: 2.5 mm hole



D-SUB panel mounting frame IP67,
with integrated gender changer

ERC

	Technical data
Electrical data	
Rated voltage	60 V
Rated current	5 A
Overvoltage category	III
Material data	
Housing material	-
Contact material	Copper alloy
Contact surface material	Gold over nickel
Contact carrier material	PBTP
Flammability rating according to UL 94	V0
Mechanical data	
No. of pos.	9
Color	-
Degree of pollution	2
Degree of protection	IP20
Connection method	Screw connection
Conductor cross section	0.14 mm ² ... 0.5 mm ²
Connection cross section AWG	26 ... 20
Insertion/withdrawal cycles	≥ 200
Temperature data	
Ambient temperature (operation)	-20°C ... 80°C

ERC

	Technical data	
Electrical data		
Rated voltage	125 V	125 V
Rated current	5 A	5 A
Overvoltage category	III	III
Material data		
Housing material	PA	PA
Contact material	Copper alloy	Copper alloy
Contact surface material	Hard gold-plated over nickel	Hard gold-plated over nickel
Contact carrier material	Polyester GF	Polyester GF
Flammability rating according to UL 94	V0	V0
Mechanical data		
No. of pos.	9	9
Color	Gray	Gray
Degree of pollution	2	2
Degree of protection	IP67	IP67
Connection method	-	-
Conductor cross section	-	-
Connection cross section AWG	-	-
Insertion/withdrawal cycles	≥ 200	≥ 200
Temperature data		
Ambient temperature (operation)	-40°C ... 80°C	-40°C ... 80°C

	Ordering data		
Description	Type	Order No.	Pcs. / Pkt.
D-SUB contact insert			
Pin	VS-09-ST-DSUB/10-MPT-0,5	1688379	10
Socket	VS-09-BU-DSUB/9-MPT-0,5	1688395	10
D-SUB panel mounting frame, with integrated gender changer, shielded			
D-SUB 09, pin/pin			
D-SUB 09, socket/socket			
D-SUB coupling, with integrated gender changer, shielded			
D-SUB 09, pin/pin			
D-SUB 09, socket/socket			

	Ordering data		
Description	Type	Order No.	Pcs. / Pkt.
D-SUB panel mounting frame, with integrated gender changer, shielded			
D-SUB 09, pin/pin	VS-09-A-GC-ST/ST	1689705	5
D-SUB 09, socket/socket	VS-09-A-GC-BU/BU	1689695	5
D-SUB coupling, with integrated gender changer, shielded			
D-SUB 09, pin/pin	VS-09-KU-ST/ST	1689640	5
D-SUB 09, socket/socket	VS-09-KU-BU/BU	1689637	5

D-SUB-based connectors

Signal contacts



Contacts for standard D-SUB contact carriers



Contacts for D-SUB contact carriers with a high number of positions

	Technical data			Technical data		
	AWG 28 ... 26	AWG 24 ... 20		CUC-DSC-...BAU-S/DSC22		
Electrical data						
Rated voltage	-	-		-		
Rated current	5 A (at 20°C)	5 A (at 20°C)		3 A		
Contact material	Copper alloy	Copper alloy		Copper alloy		
Contact surface material	0.2 µm, gold over nickel	0.2 µm, gold over nickel		0.2 µm, gold over nickel		
Mechanical data						
Connection method	Crimp connection	Crimp connection		Crimp connection		
Conductor cross section	0.08 mm ² ... 0.12 mm ²	0.2 mm ² ... 0.5 mm ²		0.08 mm ² ... 0.2 mm ²		
Connection cross section AWG	28 ... 26	24 ... 20		28 ... 22		
Insertion/withdrawal cycles	≥ 200	≥ 200		≥ 200		
Temperature data						
Ambient temperature (operation)	-55°C ... 130°C	-55°C ... 130°C		-55°C ... 115°C		
	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Turned pin crimp contacts , for D-SUB contact inserts with standard contact density, gold-plated surface						
AWG 28 ... 26	CUC-DSC-C1BAU-S/DSC28	1418784	100			
AWG 24 ... 20	CUC-DSC-C1BAU-S/DSC24	1418786	100			
Turned socket crimp contacts , for D-SUB contact inserts with standard contact density, gold-plated surface						
AWG 28 ... 26	CUC-DSC-J1BAU-S/DSC28	1418787	100			
AWG 24 ... 20	CUC-DSC-J1BAU-S/DSC24	1418788	100			
Turned crimp contacts , for D-SUB contact inserts with high density, gold-plated surface						
AWG 28 ... 22, pin				CUC-DSC-C1BAU-S/DSC22	1418789	100
AWG 28 ... 22, socket				CUC-DSC-J1BAU-S/DSC22	1418790	100
	Accessories			Accessories		
Crimping pliers , for turned contacts, universal cross section setting, up to a maximum of 2.5 mm ² , digital display with 0.01 mm increments, unlockable pressure lock, lateral entry, including positioning tool						
for turned contacts, four-mandrel crimping	CRIMPFOX-TC MP	1212510	1	CRIMPFOX RC 2,5	1205448	1
Insertion/extraction tool , for fitting and removing the D-SUB standard signal contacts						
	VS-IET-DSUB-SIGNAL-STD	1658794	1			
Insertion/extraction tool , for fitting and removing the D-SUB high-density signal contacts						
				VS-IET-DSUB-SIGNAL-HD	1658503	1

Power contacts

with straight solder cups
or angled solder pins

with screw connection

ERC

Technical data	
VS-.../2,6	VS-.../4,6
Electrical data	
Rated voltage	-
Rated current	20 A
Material data	
Contact material	Copper alloy
Contact surface material	Hard gold-plated over nickel
Mechanical data	
Connection method	Solder cup
Conductor cross section	2 mm ² ... 3.5 mm ²
Connection cross section AWG	14 ... 12
Insertion/withdrawal cycles	≥ 500
Temperature data	
Ambient temperature (operation)	-55°C ... 155°C

ERC

Technical data	
VS-...SC-2,6	
Electrical data	
Rated voltage	-
Rated current	20 A
Material data	
Contact material	Copper alloy
Contact surface material	Hard gold-plated over nickel
Mechanical data	
Connection method	Screw connection
Conductor cross section	0.75 mm ² ... 2 mm ²
Connection cross section AWG	18 ... 14
Insertion/withdrawal cycles	≥ 500
Temperature data	
Ambient temperature (operation)	-55°C ... 155°C

Ordering data		
Type	Order No.	Pcs. / Pkt.
Power contact , for D-SUB combination inserts, with straight solder cup, gold-plated surface		
Up to 20 A, pin	VS-ST-LK-3,6/22,4/2,6	1688243
Up to 40 A, pin	VS-ST-LK-3,6/22,4/4,6	1688269
Up to 20 A, socket	VS-BU-LK-3,6/22,8/2,6	1688256
Up to 40 A, socket	VS-BU-LK-3,6/22,8/4,6	1688272
Power contact , for D-SUB combination inserts, with angled solder pins for PCB mounting, gold-plated surface		
Up to 40 A, pin	VS-ST-LH-3,6/18/3,8	1655467
Up to 40 A, socket	VS-BU-LH-3,6/18/3,8	1655454

Ordering data		
Type	Order No.	Pcs. / Pkt.
Power contact , for D-SUB combination inserts, with straight screw connection, gold-plated surface		
Up to 40 A, pin	VS-ST-SC-2,6	1655483
Up to 40 A, socket	VS-BU-SC-2,6	1655470

Accessories		
HC-M4-KOAX-EWZ	1676747	1

Accessories		
HC-M4-KOAX-EWZ	1676747	1

Removal tool

Data connectors and cables

D-SUB-based connectors

Sleeve housings
and contact inserts
with IP20 degree of protection

Signal		
Solder connection		
		
Solder cups		
VS-...-ST-DSUB-EG VS-...-BU-DSUB-EG	VS-...-ST-DSUB-HD-EG VS-...-BU-DSUB-HD-EG	
D-SUB contact insert Fixing: 3 mm bore hole	D-SUB contact insert, high-position Fixing: 3 mm bore hole	

Type	Order No.	Number of positions	Pin	Socket	Number of positions	Pin	Socket			
IP20, solid metal	Screw locking	Straight	CUC-DST-GZNI-S/DSSC9	1419722	9	1688793	1688803	15	1655111	1655108
			CUC-DST-GZNI-S/DSSC15	1419724	15	1688874	1688887	26	1655179	1655166
			CUC-DST-GZNI-S/DSSC25	1419727	25	1689899	1689909	44	1655234	1655221
			CUC-DST-GZNI-S/DSSC25	1419727						
			CUC-DST-GZNI-S/DSSC15	1419724						
			CUC-DST-GZNI-S/DSSC25	1419727						
		Angled	CUC-DST-GZNI-A/DSSC9	1419723	9	1688793	1688803	15	1655111	1655108
			CUC-DST-GZNI-A/DSSC15	1419725	15	1688874	1688887	26	1655179	1655166
			CUC-DST-GZNI-A/DSSC25	1419728	25	1689899	1689909	44	1655234	1655221
			CUC-DST-GZNI-A/DSSC25	1419728						
			CUC-DST-GZNI-A/DSSC15	1419725						
			CUC-DST-GZNI-A/DSSC25	1419728						
	Snap-in locking	Straight	CUC-DST-GZNI-S/DSFL9	1419746	9	1688793	1688803	15	1655111	1655108
			CUC-DST-GZNI-S/DSFL15	1419756	15	1688874	1688887	26	1655179	1655166
			CUC-DST-GZNI-S/DSFL25	1419758	25	1689899	1689909	44	1655234	1655221
			CUC-DST-GZNI-S/DSFL25	1419758						
			CUC-DST-GZNI-S/DSFL15	1419756						
			CUC-DST-GZNI-S/DSFL25	1419758						
		Angled	CUC-DST-GZNI-A/DSFL9	1419754	9	1688793	1688803	15	1655111	1655108
			CUC-DST-GZNI-A/DSFL15	1419757	15	1688874	1688887	26	1655179	1655166
			CUC-DST-GZNI-A/DSFL25	1419759	25	1689899	1689909	44	1655234	1655221
			CUC-DST-GZNI-A/DSFL25	1419759						
			CUC-DST-GZNI-A/DSFL15	1419757						
			CUC-DST-GZNI-A/DSFL25	1419759						
IP20, metal-plated	Screw locking	Straight	CUC-DST-GPME-S/DSSC9	1419705	9	1688793	1688803	15	1655111	1655108
			CUC-DST-GPME-S/DSSC15	1419710	15	1688874	1688887	26	1655179	1655166
			CUC-DST-GPME-S/DSSC25	1419719	25	1689899	1689909	44	1655234	1655221
			CUC-DST-GPME-S/DSSC25	1419719						
			CUC-DST-GPME-S/DSSC15	1419710						
			CUC-DST-GPME-S/DSSC25	1419719						
		Angled	CUC-DST-GPME-A/DSSC9	1419706	9	1688793	1688803	15	1655111	1655108
			CUC-DST-GPME-A/DSSC15	1419718	15	1688874	1688887	26	1655179	1655166
			CUC-DST-GPME-A/DSSC25	1419721	25	1689899	1689909	44	1655234	1655221
			CUC-DST-GPME-A/DSSC25	1419721						
			CUC-DST-GPME-A/DSSC15	1419718						
			CUC-DST-GPME-A/DSSC25	1419721						
	Snap-in locking	Straight	CUC-DST-GPME-S/DSFL9	1419729	9	1688793	1688803	15	1655111	1655108
			CUC-DST-GPME-S/DSFL15	1419731	15	1688874	1688887	26	1655179	1655166
			CUC-DST-GPME-S/DSFL25	1419736	25	1689899	1689909	44	1655234	1655221
			CUC-DST-GPME-S/DSFL25	1419736						
			CUC-DST-GPME-S/DSFL15	1419731						
			CUC-DST-GPME-S/DSFL25	1419736						
		Angled	CUC-DST-GPME-A/DSFL15	1419757	15	1688874	1688887	26	1655179	1655166
			CUC-DST-GPME-A/DSFL25	1419741	25	1689899	1689909	44	1655234	1655221
			CUC-DST-GPME-A/DSFL25	1419741						
			CUC-DST-GPME-A/DSFL15	1419757						
			CUC-DST-GPME-A/DSFL25	1419741						
			CUC-DST-GPME-A/DSFL25	1419741						

Signal						Hybrid			Power							
Crimp connection						Solder connection									Screw connection	
																
Contact carriers for crimp contacts						Solder cups									AWG 28 ... 16	
VS-...-ST-DSUB-CD-... VS-...-BU-DSUB-CD-...			VS-...-ST-DSUB-HD-CD-B VS-...-BU-DSUB-HD-CD-B			VS-...-ST-DSUB-...P-...S VS-...-BU-DSUB-...P-...S			VS-...-ST-DSUB-...P VS-...-BU-DSUB-...P			PSC 1,5/...-F				
D-SUB contact carrier Fixing: 3 mm bore hole			D-SUB contact carrier, high-position Fixing: 3 mm bore hole			D-SUB contact insert Fixing: 3 mm bore hole			D-SUB contact carrier Fixing: 3 mm bore hole			D-SUB contact insert Fixing: 3 mm bore hole				
Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Socket			
9	1688858	1688861	15	1655137	1655124	1PK-4S	1689006	1689019	2PK	1688418	1688421	3	1841909			
15	1688939	1688942	26	1655195	1655182	2PK-5S	1688227	1688230	3PK	1688201	1688214	5	1841912			
25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983					
						4PK-5S	1655386	1655373								
						1PK-10S	1418755	1418759								
						2PK-15S	1418757	1418760								
						1PK-20S	1418758	1418761								
9	1688858	1688861	15	1655137	1655124	1PK-4S	1689006	1689019	2PK	1688418	1688421	3	1841909			
15	1688939	1688942	26	1655195	1655182	2PK-5S	1688227	1688230	3PK	1688201	1688214	5	1841912			
25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983					
						4PK-5S	1655386	1655373								
						1PK-10S	1418755	1418759								
						2PK-15S	1418757	1418760								
						1PK-20S	1418758	1418761								
9	1688858	1688861	15	1655137	1655124	1PK-4S	1689006	1689019	2PK	1688418	1688421	3	1841909			
15	1688939	1688942	26	1655195	1655182	2PK-5S	1688227	1688230	3PK	1688201	1688214	5	1841912			
25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983					
						4PK-5S	1655386	1655373								
						1PK-10S	1418755	1418759								
						2PK-15S	1418757	1418760								
						1PK-20S	1418758	1418761								
9	1688858	1688861	15	1655137	1655124	1PK-4S	1689006	1689019	2PK	1688418	1688421	3	1841909			
15	1688939	1688942	26	1655195	1655182	2PK-5S	1688227	1688230	3PK	1688201	1688214	5	1841912			
25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983					
						4PK-5S	1655386	1655373								
						1PK-10S	1418755	1418759								
						2PK-15S	1418757	1418760								
						1PK-20S	1418758	1418761								
9	1688858	1688861	15	1655137	1655124	1PK-4S	1689006	1689019	2PK	1688418	1688421	3	1841909			
15	1688939	1688942	26	1655195	1655182	2PK-5S	1688227	1688230	3PK	1688201	1688214	5	1841912			
25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983					
						4PK-5S	1655386	1655373								
						1PK-10S	1418755	1418759								
						2PK-15S	1418757	1418760								
						1PK-20S	1418758	1418761								
-	-	-	-	-	-	-	-	-	-	-	-	-	-			
15	1688939	1688942	26	1655195	1655182	2PK-5S	1688227	1688230	3PK	1688201	1688214	5	1841912			
25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983					
						4PK-5S	1655386	1655373								
						1PK-10S	1418755	1418759								
						2PK-15S	1418757	1418760								
						1PK-20S	1418758	1418761								

Data connectors and cables

D-SUB-based connectors

Panel mounting frames, sleeve housings, and contact inserts with IP67 degree of protection

			Signal								
			Screw connection			Solder connection					
											
Housing size 1 ... 3			AWG 26 ... 20			Solder cups					
			VS-...-ST-DSUB/...-MPT-0,5 VS-...-BU-DSUB/...-MPT-0,5			VS-...-ST-DSUB-EG VS-...-BU-DSUB-EG			VS-...-ST-DSUB-HD-EG VS-...-BU-DSUB-HD-EG		
			D-SUB contact insert Fixing: 2.5 mm bore hole			D-SUB contact insert Fixing: 3 mm bore hole			D-SUB contact insert, high-position Fixing: 3 mm bore hole		
Type	Order No.		Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Pin	Socket

	IP67 panel mounting frame											
	VS-09-A	1688366		9	1688379	1688395	9	1688793	1688803	15	1655111	1655108
	VS-15-A	1688036		15	1688078	1688094	15	1688874	1688887	26	1655179	1655166
	VS-25-A	1689750		25	1689789	1689776	25	1689899	1689909	44	1655234	1655221
	VS-25-A	1689750										
	VS-15-A	1688036										
	VS-25-A	1689750										
	VS-25-A	1689750										

	IP67 sleeve housing											
	VS-09-T-2M16	1688353		9	1688379	1688395	9	1688793	1688803	15	1655111	1655108
	VS-15-T-2PG11	1688052		15	1688078	1688094	15	1688874	1688887	26	1655179	1655166
	VS-25-T-2M20	1689792		25	1689789	1689776	25	1689899	1689909	44	1655234	1655221
	VS-25-T-2M20	1689792										
	VS-15-T-2PG11	1688052										
	VS-25-T-2M20	1689792										
	VS-25-T-2M20	1689792										

	VS-09-SET-STD	1689145	Panel mounting frame	9	1688379	1688395	9	1688793	1688803	15	1655111	1655108
			Sleeve housing	9	1688379	1688395	9	1688793	1688803	15	1655111	1655108
	VS-15-SET-STD	1689129	Panel mounting frame	15	1688078	1688094	15	1688874	1688887	26	1655179	1655166
			Sleeve housing	15	1688078	1688094	15	1688874	1688887	26	1655179	1655166
	VS-25-SET-STD	1652198	Panel mounting frame	25	1689789	1689776	25	1689899	1689909	44	1655234	1655221
			Sleeve housing	25	1689789	1689776	25	1689899	1689909	44	1655234	1655221
	VS-25-SET-STD	1652198	Panel mounting frame									
			Sleeve housing									
	VS-15-SET-STD	1689129	Panel mounting frame									
			Sleeve housing									
	VS-25-SET-STD	1652198	Panel mounting frame									
			Sleeve housing									

	VS-09-SET-EMV	1689158	Panel mounting frame	9	1688379	1688395	9	1688793	1688803	15	1655111	1655108
			Sleeve housing	9	1688379	1688395	9	1688793	1688803	15	1655111	1655108
	VS-15-SET-EMV	1689132	Panel mounting frame	15	1688078	1688094	15	1688874	1688887	26	1655179	1655166
			Sleeve housing	15	1688078	1688094	15	1688874	1688887	26	1655179	1655166
	VS-25-SET-EMV	1652208	Panel mounting frame	25	1689789	1689776	25	1689899	1689909	44	1655234	1655221
			Sleeve housing	25	1689789	1689776	25	1689899	1689909	44	1655234	1655221
	VS-25-SET-EMV	1652208	Panel mounting frame									
			Sleeve housing									
	VS-15-SET-EMV	1689132	Panel mounting frame									
			Sleeve housing									
	VS-25-SET-EMV	1652208	Panel mounting frame									
			Sleeve housing									

Note:
Do not use the EMC inner sleeve of the IP67 sleeve housing on the panel mounting side.

Signal						Hybrid			Power							
Solder connection			Crimp connection						Solder connection						Screw connection	
																
Angled solder pins			Contact carriers for crimp contacts						Solder cups						AWG 28 ... 16	
VS-...-ST-DSUB-LH-B VS-...-BU-DSUB-LH-B			VS-...-ST-DSUB-CD-... VS-...-BU-DSUB-CD-...			VS-...-ST-DSUB-HD-CD-B VS-...-BU-DSUB-HD-CD-B			VS-...-ST-DSUB-...P-...S VS-...-BU-DSUB-...P-...S			VS-...-ST-DSUB-...P VS-...-BU-DSUB-...P			PSC 1,5/...-F	
D-SUB contact insert Fixing: 2.5 mm bore hole and solder metal plate			D-SUB contact carrier Fixing: 3 mm bore hole			D-SUB contact carrier, high-position Fixing: 3 mm bore hole			D-SUB contact insert Fixing: 3 mm bore hole			D-SUB contact carrier Fixing: 3 mm bore hole			D-SUB contact insert Fixing: 3 mm bore hole	
Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Socket
9	1654785	1654798	9	1688858	1688861	15	1655137	1655124	1PK-4S	1689006	1689019	2PK	1688418	1688421		
15	1654808	1654811	15	1688939	1688942	26	1655195	1655182	2PK-5S	1688227	1688230	3PK	1688201	1688214		
25	1654824	1654837	25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983		
									4PK-5S	1655386	1655373					
									1PK-10S	1418755	1418759					
									2PK-15S	1418757	1418760					
									1PK-20S	1418758	1418761					
9	1654785	1654798	9	1688858	1688861	15	1655137	1655124	1PK-4S	1689006	1689019	2PK	1688418	1688421	3	1841909
15	1654808	1654811	15	1688939	1688942	26	1655195	1655182	2PK-5S	1688227	1688230	3PK	1688201	1688214	5	1841912
25	1654824	1654837	25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983		
									4PK-5S	1655386	1655373					
									1PK-10S	1418755	1418759					
									1PK-10S	1418755	1418759					
									2PK-15S	1418757	1418760					
									2PK-15S	1418757	1418760					
									1PK-20S	1418758	1418761					
									1PK-20S	1418758	1418761					
9	1654785	1654798	9	1688858	1688861	15	1655137	1655124	1PK - 4S	1689006	1689019	2PK	1688418	1688421		
9	1654785	1654798	9	1688858	1688861	15	1655137	1655124							3	1841909
15	1654808	1654811	15	1688939	1688942	26	1655195	1655182	2PK - 5S	1688227	1688230	3PK	1688201	1688214		
15	1654808	1654811	15	1688939	1688942	26	1655195	1655182							5	1841912
25	1654824	1654837	25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983		
25	1654824	1654837	25	1689954	1689967	44	1655250	1655247								
									4PK - 5S	1655386	1655373					
									4PK - 5S	1655386	1655373					
									1PK-10S	1418755	1418759					
									1PK-10S	1418755	1418759					
									2PK-15S	1418757	1418760					
									2PK-15S	1418757	1418760					
									1PK-20S	1418758	1418761					
									1PK-20S	1418758	1418761					

Data connectors and cables

USB connectors

Assembled cables, IP20/IP67

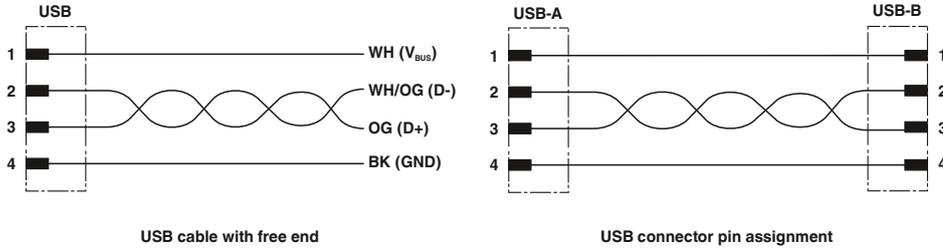
USB type A connector, IP20



USB type A connector, IP67



Free end	Ordering data		Ordering data		Ordering data
		Order No.		Order No.	Order No.
	1 m	1655771	1 m	1655742	
	2 m	1655784	2 m	1655755	
	5 m	1655797	5 m	1655768	
USB type B connector, IP20 	1 m	1654853	2 m	1653896	
	2 m	1653935	5 m	1653906	
	5 m	1653948			
USB type B connector, IP67 	2 m	1653919	2 m	1653870	
	5 m	1653922	5 m	1653883	
M12 Mini USB, SPEEDCON 	1 m	1420168			
	2 m	1420171			
	5 m	1420184			



	Technical data	
	IP20	IP67
Transmission characteristics (category)	USB 2.0	USB 2.0
Cable diameter [mm]	6.7	6.7
Housing material	PA	PA
Handle color	Black	Gray
No. of pos.	4	4
Degree of protection	IP20	IP67
Temperature data		
Cable, fixed installation [°C]	-20 ... 60	-20 ... 60
Cable, flexible installation [°C]	0 ... 50	0 ... 50

Panel feed-throughs, memory sticks, protective covers

Panel feed-throughs are implemented with the IP67 panel mounting frame and USB socket inserts. The USB memory sticks with IP67 protection enable wireless data transmission in harsh industrial environments.



USB panel mounting frame

ERC

Technical data

VS-04-BUA-BUB-F/IP67

Electrical data	
Rated voltage	30 V
Transmission speed	480 Mbps
Material data	
Housing material	PC
Flammability rating according to UL 94	V0
Mechanical data	
No. of pos.	4
Degree of protection	IP67
Insertion/withdrawal cycles	≥ 1000
Temperature data	
Ambient temperature (operation)	-15°C ... 65°C

Ordering data

Description	Cable length	Type	Order No.	Pcs. / Pkt.
Version 6, panel mounting frame with USB coupling:				
Slot V6 with USB-B		CUC-V06-F1PGY-UBB/UBAB	1411905	1
Slot V6 with USB-A		CUC-V06-F1PGY-UBA/UBBB	1411904	1
USB socket insert, 4-pos., USB socket to flat-ribbon cable terminal strip, 2.54 pitch, socket, type A				
		VS-04-BUA-FK-F/IP67	1653854	1
		VS-04-BUB-FK-F/IP67	1653867	1
USB cable, assembled on one side with USB connectors				
Connector type: A, length:0.3 m	0.3 m	VS-04-C-SDA/PH/0,3	1405552	1
Connector type: B, length:0.3 m	0.3 m	VS-04-C-SDB/PH/0,3	1405565	1
Connector type: A on B, length:1.8 m	1.8 m	VS-04-C-SDA/SDB/1,8	1405578	1
Freenet panel mounting frame, Version 6, for round mounting cutout, with seal, without mounting screws				
Military gray RAL 7042		VS-A-F-IP67	1653744	5
USB memory stick, USB 2.0				
IP67		VS-04-MS-IP67	1402489	1
Protective cover for Version 6 panel mounting frame				
Military gray RAL 7042		VS-08-SD-F	1652606	5

Data connectors and cables

Cable range

Symbol key



With UL Style



Suitable for drag chain applications



Resistant to welding sparks



UV-resistant



Extremely flame-retardant



High temperature resistance



Good oil resistance



Good resistance to chemicals



Suitable for torsional stress



Halogen-free



Transmission properties



Suitable for railway applications

INTERBUS cable, type 900



The INTERBUS type 900 cable is designed for highly flexible use in dry and humid rooms and in harsh industrial environments. The remote bus cable is certified according to the requirements of the

INTERBUS Club under No. 117. The cable is halogen-free and flame-retardant according to VDE 0482, Part 265-2-1/IEC 332-1. The wire insulation of the inner conductor is made from polyethylene.

Outer sheath material PVC
Minimum bending radius 7.5 x D
Tested at 20°C ... 25°C

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
900 PVC Green	6-pos.	M12	3 x 2 x 0.25 mm ² 32 x 0.1 mm		Yellow, green, white, brown, pink, gray	PE	-30°C ... 70°C	425 428

PROFIBUS cable, type 910



The PROFIBUS type 910 cable is suitable for drag chain applications and use in harsh industrial environments and is oil resistant.

Outer sheath material PUR
Number of bending cycles 5 million
Minimum bending radius 10 x D
Traverse path 10 m
Acceleration 7 m/s²
Speed 180 m/min.
Tested at 20°C ... 25°C

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
910 PUR Violet	2-pos.	M12	1 x 2 x AWG 24 19 x 0.15 mm		Green, red	PE	-40°C ... 80°C	426 429

DeviceNet™/CANopen® cable, type 920



The DeviceNet™/CANopen® type 920 cable is designed for flexible installation. It is suitable for drag chain applications and use in harsh industrial environments. The cable is also oil resistant.

Outer sheath material	PUR
Number of bending cycles	5 million
Minimum bending radius	10 x D
Traverse path	10 m
Acceleration	7 m/s²
Speed	180 m/min.
Tested at	20°C ... 25°C

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
920 PUR Violet	4-pos.	M12, M8	1 x 2 x AWG 22 19 x 0.15 mm + 1 x 2 x AWG 24 19 x 0.15 mm		Red, black, blue, white	PO, PE	-40°C ... 80°C	427 432 433 434

DeviceNet™/CANopen® cable, type 923



The DeviceNet™/CANopen® type 923 cable is designed for flexible installation. It is suitable for drag chain applications and use in harsh industrial environments. The cable is also oil resistant.

Outer sheath material	PUR
Number of bending cycles	5 million
Minimum bending radius	10 x D
Traverse path	10 m
Acceleration	7 m/s²
Speed	180 m/min.
Tested at	20°C ... 25°C

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
923 PUR Gray	4-pos.	M12, 7/8"	1 x 2 x AWG 22 19 x 0.15 mm + 1 x 2 x AWG 24 19 x 0.15 mm		Red, black, blue, white	PO, PE	-40°C ... 80°C	431

DeviceNet™ cable, type 928



The DeviceNet™/CANopen® type 928 cable is designed for fixed installation. It is suitable for use in harsh industrial environments and is oil resistant.

Outer sheath material	PVC
Minimum bending radius	10 x D

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
928 PVC Gray	4-pos.	7/8"	1 x 2 x AWG 18 19 x 0.26 mm + 1 x 2 x AWG 15 19 x 0.34 mm		Red, black, blue, white	PVC	Fixed: -40°C ... 80°C	See: phoenix contact.net/ products

Data connectors and cables

Cable range

FOUNDATION Fieldbus cable, type 960

FOUNDATION Fieldbus/PROFIBUS PA cable, type 961



The FOUNDATION Fieldbus type 960 cable is designed for fixed installation. It is UV-resistant and flame-retardant according to UL 1685, which means that it is suitable for both indoor and outdoor use.

Cable type 961 is available in a blue version designed specifically for use in the hazardous area.

Outer sheath material PVC

Minimum bending radius 10 x D

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
960 PVC Orange	2-pos.	7/8", M12	2 x AWG 20 7 x 0.3 mm		Blue, orange	PO	-30°C ... 105°C	See: phoenix contact.net/ products
961 PVC Blue	2-pos.	7/8", M12	2 x AWG 20 7 x 0.3 mm		Blue, orange	PO	-30°C ... 105°C	430

CC-Link cable, type 990



The CC-Link type 990 cable is designed for fixed indoor installation. The cable is flame-retardant according to UL 1685.

Outer sheath material PVC

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
990 PVC Red	3-pos.	M12	3 x AWG 22 7 x 0.28 mm		White, blue, yellow	Foam PE	-30°C ... 60°C	See: phoenix contact.net/ products

PROFINET cable, type 93A



The PROFINET type 93A cable is designed for fixed installation. It is flame-retardant and its transmission properties meet CAT5.

Outer sheath material PVC

Minimum bending radius 7.5 x D

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93A PVC Green	4-pos.	M12, RJ45	4 x AWG 22 single-strand		White, yellow, blue, orange	PE	-25°C ... 80°C	396

PROFINET cable, type 93B



The PROFINET type 93B cable is designed for flexible installation and is oil resistant up to a degree. It is suitable for outdoor use, as it is UV-resistant for 1200

seconds according to UL 1581. Its transmission properties meet CAT5.

Outer sheath material PVC

Minimum bending radius 7 x D
Tested at 20°C ... 25°C

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93B PVC Green	4-pos.	M12, RJ45	4 x AWG 22 7 x 0.25 mm		White, yellow, blue, orange	PE	-40°C...70°C	400 396 398

PROFINET cable, type 93C



The PROFINET type 93C cable is designed for use in drag chains and is halogen-free and oil resistant. It is UV-resistant and therefore suitable for outdoor use. Its transmission properties meet CAT5.

Outer sheath material PUR

Number of bending cycles 3 million
Minimum bending radius 7.5 x D
Traverse path 10 m
Acceleration 4 m/s²
Speed 4 m/s
Tested at 20°C ... 25°C

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93C PUR Green	4-pos.	M12, RJ45	4 x AWG 22 7 x 0.25 mm		White, yellow, blue, orange	PE	-40°C ... 70°C	396 398

PROFINET cable, type 93R



The PROFINET type 93R cable is designed for robot applications. The cable is oil resistant up to a degree. It is suitable for outdoor use, as it is UV-resistant for 1200

seconds according to UL 1581. Its transmission properties meet CAT5.

Outer sheath material PUR

Torsion angle ±180°
Torsion cycles 1 million

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93R PUR Green	4-pos.	M12, RJ45	4 x AWG 22 19 x 0.15 mm		White, yellow, blue, orange	PE	-40°C ... 80°C	396 398

Cable range

PROFINET cable, type 937



The PROFINET type 937 cable is designed for railway applications. The cable is oil resistant. It meets the requirements of fire protection standards BS 6853, GM/RT 2130, EN 45545, DIN 5510, NF F16-101,

NFPA 130, UNI CEI 11170 and its transmission properties meet CAT5.

Outer sheath material PE-X

Minimum bending radius 6 x D

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
937 PE-X Black	4-pos.	M12, RJ45	4 x AWG 22 7 x 0.25 mm		White, yellow, blue, orange	PE-X	-40°C ... 90°C	396 398

PROFINET cable, type 93X



This robust PROFINET cable for outdoor use has good oil and fuel resistance. The black outer sheath and the electron beam cross-linked design provide good protection against the influence of UV radiation. The cable meets the requirements of flame

resistance standard ISO 6722-1, which is referred to by the European ECE-R 118 regulation. This means that the cable can also be used in buses and trams.

Outer sheath material PE-X

Minimum bending radius 6 x D

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93X PE-X Black	4-pos.	M12	4 x AWG 22 7 x 0.25 mm Twisted pair		White, yellow, blue, orange	PE-X	Mobile: -40°C ... 90°C Fixed: -50°C ... 90°C	See: phoenix contact.net/ products

EtherCAT® cable, type 93G



The EtherCAT® type 93G cable is designed for flexible installation. The cable is oil resistant up to a degree. It is suitable for use in harsh industrial environments, as it is UV-resistant for 1200 seconds

according to UL 1581. Its transmission properties meet CAT5.

Outer sheath material PVC

Minimum bending radius 7 x D
Tested at 20°C ... 25°C

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93G PVC Green	4-pos.	M12, PP, RJ45	4 x AWG 22 7 x 0.25 mm		White, yellow, blue, orange	PE	-40°C ... 70°C	See: phoenix contact.net/ products

Sercos® cable, type 93K



The Sercos® cable is designed for flexible installation. The cable is oil resistant up to a degree. It is suitable for use in harsh industrial environments, as it is UV-resistant for 1200 seconds according to UL 1581. Its transmission properties meet CAT5.

Outer sheath material PVC

Minimum bending radius 7 x D
Tested at 20°C ... 25°C

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93K PVC Red	4-pos.	M12, PP, RJ45	4 x AWG 22 7 x 0.25 mm		White, yellow, blue, orange	PE	-40°C ... 70°C	See: phoenix contact.net/ products

Ethernet cable, type 93E



The Ethernet type 93E cable is designed for flexible use. The cable is halogen-free and oil resistant. Its transmission properties meet CAT5.

Outer sheath material PUR

Minimum bending radius 5 x D

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93E PUR Blue	4-pos.	M12, RJ45	2 x 2 x AWG 26 7 x 0.25 mm		White/orange-orange, white/green-green	PE	-20°C ... 80°C	397 402

Ethernet cable, type 94A



The Ethernet type 94A cable is designed for fixed installation. Its transmission properties meet CAT5.

Outer sheath material PUR

Minimum bending radius 7 x D
Tested at 20°C ... 2°C

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94A PUR Blue	8-pos.	M12, PP, RJ45	4 x 2 x AWG 24 single-strand Twisted pair		White/blue-blue, white/orange-orange, white/green-green, white/brown-brown	PE	-20°C ... 70°C	397

Cable range

Ethernet cable, type 94B



The Ethernet type 94B cable is designed for flexible installation. The cable is resistant to oil and chemicals and is flame-retardant. Its transmission properties meet CAT5.

Outer sheath material PUR

Minimum bending radius 5 x D

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94B PUR Blue	8-pos.	M12, RJ45	4 x 2 x AWG 26 7 x 0.25 mm		White/blue-blue, white/orange-orange, white/green-green, white/brown-brown	PE	-40°C ... 80°C	397 404

Ethernet cable, type 94C



The Ethernet cable type 94C is designed for universal use in drag chains. The cable is resistant to oil and chemicals and is flame-retardant.

Its transmission properties meet CAT5.

Outer sheath material PUR

Minimum bending radius 5 x D

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94C PUR Blue	8-pos.	M12, RJ45	4 x 2 x AWG 26 19 x 0.10 mm		White-blue, blue, white-orange, orange, white-green, green, white-brown, brown	PP	-20°C ... 80°C	397 404

Ethernet cable, type 94D



The Ethernet cable type 94D is designed for flexible installation. The cable is oil resistant up to a degree. It is suitable for outdoor use, as it is UV-resistant for 1200 seconds according to UL 1581.

Its transmission properties meet CAT5.

Outer sheath material PVC

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94D PVC Black	8-pos.	M12, PP, RJ45	4 x 2 x AWG 26 7 x 0.16 mm Twisted pair		White-blue, blue, white-orange, orange, white-green, green, white-brown, brown	PP	-40°C ... 80°C	397

Ethernet cable, type 94E



The Ethernet cable type 94E is designed for fixed installation. The cable is resistant to oil and chemicals and is flame-retardant. It is also halogen-free and its transmission properties meet CAT6_A.

Outer sheath material FRNC

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94E FRNC Blue	8-pos.	M12, PP, RJ45	4 x 2 x AWG 23 single-strand Twisted pair		White-blue, blue, white-orange, orange, white-green, green, white-brown, brown	PE	-20°C ... 80°C	397

Ethernet cable, type 94F



The Ethernet type 94F cable is designed for flexible installation. The cable is resistant to oil and chemicals and is flame-retardant.

It is also halogen-free and its transmission properties meet CAT6_A.

Outer sheath material PUR

Minimum bending radius 10 x D

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94F PUR Blue	8-pos.	M12, PP, RJ45	4 x 2 x AWG 26 7 x 0.16 mm Twisted pair		White-blue, blue, white-orange, orange, white-green, green, white-brown, brown	PE	-20°C ... 80°C	406

Ethernet cable, type 94S



The 94S Ethernet cable is designed for use in the railway industry. The cable is halogen-free and resistant to fuels and ozone. Thanks to its high flame resistance and low smoke density, the cable meets the requirements of the following standards for safety in rail vehicles: BS 6853, DIN 5510-2,

EN 45545-2, EN 50306-4, NF F16-101, NFPA 130, PN-K-02511, and UIC 564-2. Its transmission properties meet CAT7.

Outer sheath material PE-X

Minimum bending radius 6 x D

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94S PE-X Black	8-pos.	M12	4 x 2 x AWG 26 7 x 0.16 mm Twisted pair		White, blue, white, orange, white, green, white, brown	PE-X	-40°C ... 80°C	408

Data connectors and cables

Cable range

Ethernet hybrid cable, type 94H



The Ethernet hybrid type 94H cable is designed for drag chain applications. It has four wires for data transmission and four wires for power supply. The cable is oil resistant and flame-retardant.

It is also halogen-free and its transmission properties meet CAT5.

Outer sheath material PUR

Number of bending cycles 2 million
Minimum bending radius 10 x D
Traverse path 4.5 m
Acceleration 3 m/s²
Speed 3 m/s

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94H PUR Black	8-pos.	M12	1 x 4 x AWG 26 19 x 0.15 mm 1 x 4 x AWG 20 19 x 0.6 mm		White-orange, orange, white-green, green, white, blue, brown, black	PP	-40°C ... 90°C	409

Ethernet cable, type 94Z



The Ethernet type 94Z cable is designed for flexible installation. The cable is resistant to oil and chemicals and is flame-retardant.

Its transmission properties meet CAT5.

Outer sheath material PUR

Minimum bending radius 51.2 mm

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94Z PUR Blue	8-pos.	RJ45	4 x 2 x AWG 26 7 x 0.16 mm		White-blue, blue, white-orange, orange, white-green, green, white-brown, brown	PE	-20°C ... 80°C	409

VARAN cable, type 970



The VARAN type 970 cable is designed for flexible installation. The cable is resistant to oil and chemicals and is flame-retardant. Its transmission properties meet CAT5.

Outer sheath material Santoprene

Minimum bending radius 7.5 x D
Tested at 20°C ... 25°C

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
970 Santoprene Black	6-pos.	M12, PP, RJ45	1 x 2 x AWG 22 19 x 0.1 mm + 2 x 2 x AWG 26 19 x 0.1 mm		Brown, blue White-orange, orange, white-green, green	PE	-40°C ... 80°C	See: phoenix contact.net/ products



Installation system

QPD installation system

Industrial power distribution does not have to be time-consuming or complicated. The robust IP68/IP69K installation system for capacities up to 690 V/40 A from Phoenix Contact is proof of this.

Thanks to the proven QUICKON IDC fast connection, cables up to 5 x 6.0 mm² can be connected quickly and easily, without the need for stripping or special tools.

The system, which consists of H- and T-distributors, panel feed-throughs, connectors, and cable connectors, offers a wide range of options for power distribution in industrial environments and building installation.

 Your web code: [#0541](#)

1.5 mm² installation system

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2.5 mm² installation system

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6.0 mm² installation system

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Installation system

1.5 mm² installation system

H-distributors, 1.5 mm²

- Can be used as a H-distributor with continuous master cable
- Can be used as a star distributor
- Can be used as a Y-distributor with a test connection
- Touch-proof according to DIN EN 50274
- Also available as gray color versions



with four QUICKON nuts



without QUICKON nuts



	Technical data			Technical data		
	2+PE-pos.	3+PE-pos.	4+PE-pos.	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data						
Degree of protection		IP66 / IP68 / IP69K			IP66 / IP68 / IP69K	
Electrical data						
Rated voltage (III/3)		690 V			690 V	
Rated surge voltage		6 kV			6 kV	
Rated current		17.5 A			17.5 A	
Overvoltage category / Degree of pollution		III / 3			III / 3	
Material data						
Housing material		PA			PA	
Contact material		Cu			Cu	
Flammability rating according to UL 94		V0			V0	
Mechanical data						
Impact category		IK07			IK07	
Color		Black			Black	
Connector data for QUICKON connection						
Wire insulation		PVC/PE/TPE/rubber			PVC/PE/TPE/rubber	
Structure of individual litz wire/ smallest wire diameter		VDE 0295 class 1 to 6/min. 0.15 mm			VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency		max. 10			max. 10	
Conductor cross section [mm ²] solid/stranded		0.5 mm ² ... 1.5 mm ² / 0.5 mm ² ... 1.5 mm ²			0.5 mm ² ... 1.5 mm ² / 0.5 mm ² ... 1.5 mm ²	
Conductor cross section [AWG]		20 ... 16			20 ... 16	
Temperature data						
Ambient temperature (operation)		-40°C ... 100°C			-40°C ... 100°C	
Temperature when conductor connected		-5°C ... 50°C			-5°C ... 50°C	

Description	Ordering data						Ordering data					
	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
H-distributor, with four QUICKON nuts and one sealing bolt, for cable diameters:												
4 mm ... 9 mm	1414719	1	1414715	1								
8 mm ... 13 mm	1414720	1	1414716	1								
5 mm ... 10 mm					1414755	1						
9 mm ... 14 mm					1414756	1						
H-distributor, without QUICKON nuts							1414721	1	1414717	1	1414757	1
QUICKON nut, for connections up to 1.5 mm², for cable diameter:												
4 mm ... 9 mm							1415099	1	1415097	1		
8 mm ... 13 mm							1415100	1	1415098	1		
5 mm ... 10 mm											1415101	1
9 mm ... 14 mm											1415104	1

T-distributors, 1.5 mm²

- Can be used as a T-distributor with continuous master cable
- Touch-proof according to DIN EN 50274
- Also available as gray color versions



with three QUICKON nuts



with two QUICKON nuts



	Technical data		
	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data			
Degree of protection		IP66 / IP68 / IP69K	
Electrical data			
Rated voltage (III/3)		690 V	
Rated surge voltage		6 kV	
Rated current		17.5 A	
Overvoltage category / Degree of pollution		III / 3	
Material data			
Housing material		PA	
Contact material		Cu	
Flammability rating according to UL 94		V0	
Mechanical data			
Impact category		IK07	
Color		Black	
Connector data for QUICKON connection			
Wire insulation		PVC/PE/TPE/rubber	
Structure of individual litz wire/ smallest wire diameter		VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency		max. 10	
Conductor cross section [mm ²] solid/stranded		0.5 mm ² ... 1.5 mm ² / 0.5 mm ² ... 1.5 mm ²	
Conductor cross section [AWG]		20 ... 16	
Temperature data			
Ambient temperature (operation)		-40°C ... 100°C	
Temperature when conductor connected		-5°C ... 50°C	



	Technical data		
	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data			
Degree of protection		IP66 / IP68 / IP69K	
Electrical data			
Rated voltage (III/3)		690 V	
Rated surge voltage		6 kV	
Rated current		17.5 A	
Overvoltage category / Degree of pollution		III / 3	
Material data			
Housing material		PA	
Contact material		Cu	
Flammability rating according to UL 94		V0	
Mechanical data			
Impact category		IK07	
Color		Black	
Connector data for QUICKON connection			
Wire insulation		PVC/PE/TPE/rubber	
Structure of individual litz wire/ smallest wire diameter		VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency		max. 10	
Conductor cross section [mm ²] solid/stranded		0.5 mm ² ... 1.5 mm ² / 0.5 mm ² ... 1.5 mm ²	
Conductor cross section [AWG]		20 ... 16	
Temperature data			
Ambient temperature (operation)		-40°C ... 100°C	
Temperature when conductor connected		-5°C ... 50°C	

Description	Ordering data						
	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	
	2+PE-pos.		3+PE-pos.		4+PE-pos.		
T-distributor , for cable diameter:							
4 mm ... 9 mm	1414712	1	1414708	1			
8 mm ... 13 mm	1414714	1	1414710	1			
5 mm ... 10 mm					1414753	1	
9 mm ... 14 mm					1414754	1	
QUICKON nut , for connections up to 1.5 mm ² , for cable diameter:							
4 mm ... 9 mm							
8 mm ... 13 mm							
5 mm ... 10 mm						1415101	1
9 mm ... 14 mm						1415104	1

Description	Ordering data					
	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
	2+PE-pos.		3+PE-pos.		4+PE-pos.	
T-distributor , for cable diameter:						
4 mm ... 9 mm	1414711	1	1414707	1		
8 mm ... 13 mm	1414713	1	1414709	1		
5 mm ... 10 mm					1414751	1
9 mm ... 14 mm					1414752	1
QUICKON nut , for connections up to 1.5 mm ² , for cable diameter:						
4 mm ... 9 mm	1415099	1	1415097	1		
8 mm ... 13 mm	1415100	1	1415098	1		
5 mm ... 10 mm					1415101	1
9 mm ... 14 mm					1415104	1

Installation system

1.5 mm² installation system

Cable connectors, 0.14 mm² ... 1.5 mm²

- Easy cable extension or cable repairs
- The QUICKON connections feature different position markings and mechanical coding
- Touch-proof according to DIN EN 50274



with two QUICKON nuts



with two QUICKON nuts

ERC

UL ENEC EAC

	Technical data		Technical data					
	4-pos.	4-pos.	4-pos.	3+PE-pos.				
General data								
Degree of protection	IP65 / IP67		IP65 / IP67					
Electrical data								
Rated voltage (III/3)	125 V	250 V	500 V					
Rated surge voltage	2.5 kV	4 kV	6 kV					
Rated current	5 A	9 A	15 A					
Overvoltage category / Degree of pollution	III / 3		III / 3					
Material data								
Housing material	PA		PA					
Contact material	Steel		CuZn					
Contact surface material	Tin-plated		Tin-plated					
Flammability rating according to UL 94	V0		V0					
Impact category	IK06		IK06					
Connector data for QUICKON connection								
Wire insulation	PVC/PE		PVC/PE					
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6 / min. 0.10 mm	VDE 0295 class 1 to 6 / min. 0.15 mm	VDE 0295 class 1 to 6 / min. 0.15 mm					
Connection frequency	10		10					
Conductor cross section [mm ²] solid/stranded	0.14 mm ² ... 0.25 mm ² / 0.14 mm ² ... 0.34 mm ²	0.34 mm ² ... 0.5 mm ² / 0.34 mm ² ... 0.75 mm ²	0.75 mm ² ... 1 mm ² / 0.75 mm ² ... 1.5 mm ²					
Conductor cross section [AWG]	26 ... 22	22 ... 18	18 ... 16					
Temperature data								
Ambient temperature (operation)	-40°C ... 80°C		-40°C ... 80°C					
Temperature when conductor connected	-5°C ... 50°C		-5°C ... 50°C					
	Ordering data		Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	4-pos.		4-pos.		4-pos.		3+PE-pos.	
Cable connector , for connecting round cables, for cable diameter:								
3.5 mm ... 6 mm, 4-pos.	1641879	1						
4.0 mm ... 8 mm, 4-pos.			1642140	1				
6 mm ... 12 mm, 4-pos.					1642153	1		
6 mm ... 12 mm, 3+PE-pos.							1642182	1

Cable connectors, 1.5 mm²

- Easy cable extension or cable repairs
- The QUICKON connections at opposite ends feature different position markings and mechanical coding
- The 1.5 mm² connector can be used here instead of the QUICKON nut
- Also available as gray color versions



with two QUICKON nuts



with one QUICKON nut



	Technical data		
	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data			
Degree of protection		IP66 / IP68 / IP69K	
Electrical data			
Rated voltage (III/3)		690 V	
Rated surge voltage		6 kV	
Rated current		17.5 A	
Overvoltage category / Degree of pollution		III / 3	
Material data			
Housing material		PA	
Contact material		Cu	
Contact surface material		silver-plated	
Flammability rating according to UL 94		V0	
Impact category		IK07	
Color		Black	
Connector data for QUICKON connection			
Wire insulation		PVC/PE/TPE/rubber	
Structure of individual litz wire/ smallest wire diameter		VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency		10	
Conductor cross section [mm ²] solid/stranded		0.5 mm ² ... 1.5 mm ² / 0.5 mm ² ... 1.5 mm ²	
Conductor cross section [AWG]		20 ... 16	
Temperature data			
Ambient temperature (operation)		-40°C ... 100°C	
Temperature when conductor connected		-5°C ... 50°C	



	Technical data		
	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data			
Degree of protection		IP66 / IP68 / IP69K	
Electrical data			
Rated voltage (III/3)		690 V	
Rated surge voltage		6 kV	
Rated current		17.5 A	
Overvoltage category / Degree of pollution		III / 3	
Material data			
Housing material		PA	
Contact material		Cu	
Contact surface material		silver-plated	
Flammability rating according to UL 94		V0	
Impact category		IK07	
Color		Black	
Connector data for QUICKON connection			
Wire insulation		PVC/PE/TPE/rubber	
Structure of individual litz wire/ smallest wire diameter		VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency		10	
Conductor cross section [mm ²] solid/stranded		0.5 mm ² ... 1.5 mm ² / 0.5 mm ² ... 1.5 mm ²	
Conductor cross section [AWG]		20 ... 16	
Temperature data			
Ambient temperature (operation)		-40°C ... 100°C	
Temperature when conductor connected		-5°C ... 50°C	

Description	Ordering data						
	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	
	2+PE-pos.		3+PE-pos.		4+PE-pos.		
Cable connector , for cable diameter:							
4 mm ... 9 mm	1414700	1	1414696	1			
8 mm ... 13 mm	1414702	1	1414698	1			
5 mm ... 10 mm					1414740	1	
9 mm ... 14 mm					1414742	1	
QUICKON nut , for connections up to 1.5 mm ² , for cable diameter:							
4 mm ... 9 mm							
8 mm ... 13 mm							
5 mm ... 10 mm						1415101	1
9 mm ... 14 mm						1415104	1

Description	Ordering data						
	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	
	2+PE-pos.		3+PE-pos.		4+PE-pos.		
Cable connector , for cable diameter:							
4 mm ... 9 mm	1414699	1	1414694	1			
8 mm ... 13 mm	1414701	1	1414697	1			
5 mm ... 10 mm						1414739	1
9 mm ... 14 mm						1414741	1
QUICKON nut , for connections up to 1.5 mm ² , for cable diameter:							
4 mm ... 9 mm	1415099	1	1415097	1			
8 mm ... 13 mm	1415100	1	1415098	1			
5 mm ... 10 mm						1415101	1
9 mm ... 14 mm						1415104	1

Installation system

1.5 mm² installation system

Panel feed-throughs, 1.5 mm²

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Touch-proof according to DIN EN 50274



with litz wires



with manual solder or spade connector connection



Technical data

	3+PE-pos.	4-pos.
General data		
Degree of protection	IP65 / IP67	
Electrical data		
Rated voltage (III/3)	500 V	
Rated surge voltage	6 kV	
Rated current	15 A	
Overvoltage category / Degree of pollution	III / 3	
Material data		
Housing material	PA	
Contact material	CuZn	
Contact surface material	Tin-plated	
Flammability rating according to UL 94	V0	
Impact category	IK07	
Color	black	
Connector data for QUICKON connection		
Wire insulation	PVC/PE	
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency	10	
Conductor cross section [mm ²] solid/stranded	0.75 mm ² ... 1 mm ² / 0.75 mm ² ... 1.5 mm ²	
Conductor cross section [AWG]	18 ... 16	
Temperature data		
Ambient temperature (operation)	-40°C ... 80°C	
Temperature when conductor connected	-5°C ... 50°C	

Technical data

	3-pos.	4-pos.
General data		
Degree of protection	IP65 / IP67	
Electrical data		
Rated voltage (III/3)	500 V	
Rated surge voltage	6 kV	
Rated current	15 A	
Overvoltage category / Degree of pollution	III / 3	
Material data		
Housing material	PA	
Contact material	CuZn	
Contact surface material	Tin-plated	
Flammability rating according to UL 94	V0	
Impact category	IK07	
Color	black	
Connector data for QUICKON connection		
Wire insulation	PVC/PE	
Structure of individual litz wire/ smallest wire diameter	VDE 0295 Cl.2-5, min. wire diameter 0.2 mm	VDE 0295 class 1 to 6/ min. 0.15 mm
Connection frequency	10	
Conductor cross section [mm ²] solid/stranded	0.75 mm ² ... 1 mm ² / 0.75 mm ² ... 1.5 mm ²	
Conductor cross section [AWG]	18 ... 16	
Temperature data		
Ambient temperature (operation)	-25°C ... 80°C	-40°C ... 80°C
Temperature when conductor connected	-5°C ... 50°C	

Ordering data

Description	Cable length	3+PE-pos.		4-pos.	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Panel feed-through , with 1.5 mm ² litz wire, connecting thread: M20 x 1.5	0.1 m 0.5 m	1584787	10	1585045	10
Panel feed-through , with 4.8 mm x 0.8 mm manual solder/spade connection, connection thread: M20 x 1.5, color: black, terminal marking: L1, N, PE					
Panel feed-through , with 4.8 mm x 0.8 mm manual solder/slip-on connection, connecting thread: M20 x 1.5, color: black					

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
1641594	10		
1641659	10	1643000	10

Panel feed-throughs, 1.5 mm², with litz wires

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Touch-proof according to DIN EN 50274
- Also available as gray color versions



with QUICKON nut



without QUICKON nut



	Technical data		
	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data			
Degree of protection		IP66 / IP68 / IP69K	
Electrical data			
Rated voltage (III/3)		690 V	
Rated surge voltage		6 kV	
Rated current		17.5 A	
Overvoltage category / Degree of pollution		III / 3	
Material data			
Housing material		PA	
Contact material		Cu	
Flammability rating according to UL 94		V0	
Mechanical data			
Impact category		IK07	
Color		black	
Connector data for QUICKON connection			
Wire insulation		PVC/PE/TPE/rubber	
Structure of individual litz wire/ smallest wire diameter		VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency		max. 10	
Conductor cross section [mm ²] solid/stranded		0.5 mm ² ... 1.5 mm ² / 0.5 mm ² ... 1.5 mm ²	
Conductor cross section [AWG]		20 ... 16	
Temperature data			
Ambient temperature (operation)		-40°C ... 100°C	
Temperature when conductor connected		-5°C ... 50°C	



	Technical data		
	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data			
Degree of protection		IP66 / IP68 / IP69K	
Electrical data			
Rated voltage (III/3)		690 V	
Rated surge voltage		6 kV	
Rated current		17.5 A	
Overvoltage category / Degree of pollution		III / 3	
Material data			
Housing material		PA	
Contact material		Cu	
Flammability rating according to UL 94		V0	
Mechanical data			
Impact category		IK07	
Color		black	
Connector data for QUICKON connection			
Wire insulation		PVC/PE/TPE/rubber	
Structure of individual litz wire/ smallest wire diameter		VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency		max. 10	
Conductor cross section [mm ²] solid/stranded		0.5 mm ² ... 1.5 mm ² / 0.5 mm ² ... 1.5 mm ²	
Conductor cross section [AWG]		20 ... 16	
Temperature data			
Ambient temperature (operation)		-40°C ... 100°C	
Temperature when conductor connected		-5°C ... 50°C	

Description	Cable length	Ordering data					
		2+PE-pos.		3+PE-pos.		4+PE-pos.	
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.

Description	Cable length	Ordering data					
		2+PE-pos.		3+PE-pos.		4+PE-pos.	
		Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.

Panel feed-through, with M20 x 1.5 mounting flange, with QUICKON nut, for cable diameter:

4 mm ... 9 mm	0.5 m	1414684	1	1414675	1
4 mm ... 9 mm	1 m	1414685	1	1414676	1
8 mm ... 13 mm	0.5 m	1414687	1	1414678	1
8 mm ... 13 mm	1 m	1414688	1	1414679	1

Panel feed-through, with M25 x 1.5 mounting flange, with QUICKON nut, for cable diameter:

5 mm ... 10 mm	0.5 m			1414730	1
5 mm ... 10 mm	1 m			1414731	1
9 mm ... 14 mm	0.5 m			1414733	1
9 mm ... 14 mm	1 m			1414734	1

Panel feed-through, with M20 x 1.5 mounting flange, without QUICKON nut

	0.5 m			1414690	1	1414681	1
	1 m			1414691	1	1414682	1

Panel feed-through, with M25 x 1.5 mounting flange, without QUICKON nut

	0.5 m					1414736	1
	1 m					1414737	1

QUICKON nut, for connections up to 1.5 mm², for cable diameter:

4 mm ... 9 mm		1415099	1	1415097	1		
8 mm ... 13 mm		1415100	1	1415098	1		
5 mm ... 10 mm						1415101	1
9 mm ... 14 mm						1415104	1

Installation system

1.5 mm² installation system

Panel feed-throughs, 1.5 mm², with manual solder or spade connector connection

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Also available as gray color versions
- Touch-proof according to DIN EN 50274



with QUICKON nut



without QUICKON nut



	Technical data			Technical data		
	2+PE-pos.	3+PE-pos.	4+PE-pos.	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data						
Degree of protection		IP66 / IP68 / IP69K			IP66 / IP68 / IP69K	
Electrical data						
Rated voltage (III/3)		690 V			690 V	
Rated surge voltage		6 kV			6 kV	
Rated current		17.5 A			17.5 A	
Overtoltage category / Degree of pollution		III / 3			III / 3	
Material data						
Housing material		PA			PA	
Contact material		Cu			Cu	
Flammability rating according to UL 94		V0			V0	
Mechanical data						
Impact category		IK07			IK07	
Color		black			black	
Connector data for QUICKON connection						
Wire insulation		PVC/PE/TPE/rubber			PVC/PE/TPE/rubber	
Structure of individual litz wire/ smallest wire diameter		VDE 0295 class 1 to 6/min. 0.15 mm			VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency		max. 10			max. 10	
Conductor cross section [mm ²] solid/stranded		0.5 mm ² ... 1.5 mm ² / 0.5 mm ² ... 1.5 mm ²			0.5 mm ² ... 1.5 mm ² / 0.5 mm ² ... 1.5 mm ²	
Conductor cross section [AWG]		20 ... 16			20 ... 16	
Temperature data						
Ambient temperature (operation)		-40°C ... 100°C			-40°C ... 100°C	
Temperature when conductor connected		-5°C ... 50°C			-5°C ... 50°C	

Description	Ordering data			Ordering data			
	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	
Panel feed-through , with M20 x 1.5 mounting flange, with QUICKON nut, for cable diameter:							
4 mm ... 9 mm	1414686	1	1414677	1			
8 mm ... 13 mm	1414689	1	1414680	1			
Panel feed-through , with M25 x 1.5 mounting flange, with QUICKON nut, for cable diameter:							
5 mm ... 10 mm			1414732	1			
9 mm ... 14 mm			1414735	1			
Panel feed-through , with M20 x 1.5 mounting flange, without QUICKON nut							
					1414692	1	
					1414683	1	
Panel feed-through , with M25 x 1.5 mounting flange, without QUICKON nut							
						1414738	1
QUICKON nut , for connections up to 1.5 mm ² , for cable diameter:							
4 mm ... 9 mm	1415099	1	1415097	1			
8 mm ... 13 mm	1415100	1	1415098	1			
5 mm ... 10 mm						1415101	1
9 mm ... 14 mm						1415104	1

Connectors, 1.5 mm²

- With capacitive PE contact
- Compatible with QUICKON connection
- Can be coded using the two red coding profiles to prevent mismatching of similar connectors
- Touch-proof according to DIN EN 50274
- Also available as gray color versions
- With SPEEDCON fast locking system



with gray screw locking



Technical data			
	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data			
Degree of protection		IP66 / IP68 / IP69K	
Electrical data			
Rated voltage (III/3)		690 V	
Rated surge voltage		6 kV	
Rated current		17.5 A	
Overvoltage category / Degree of pollution		III / 3	
Material data			
Housing material		PA	
Contact material		Cu	
Contact surface material		silver-plated	
Flammability rating according to UL 94		V0	
Impact category		IK07	
Color		black	
Connector data for QUICKON connection			
Wire insulation		PVC/PE/TPE/rubber	
Structure of individual litz wire/ smallest wire diameter		VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency		10	
Conductor cross section [mm ²] solid/stranded		0.5 mm ² ... 1.5 mm ² / 0.5 mm ² ... 1.5 mm ²	
Conductor cross section [AWG]		20 ... 16	
Temperature data			
Ambient temperature (operation)		-40°C ... 100°C	
Temperature when conductor connected		-5°C ... 50°C	

Ordering data						
Description	2+PE-pos.		3+PE-pos.		4+PE-pos.	
	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
Connectors , for cable diameters:						
4 mm ... 9 mm	1414705	1	1414703	1		
8 mm ... 13 mm	1414706	1	1414704	1		
5 mm ... 10 mm					1414749	1
9 mm ... 14 mm					1414750	1

Installation system

1.5 mm² installation system

Accessories

- Plastic labels ③ can be stuck to the middle of the H-distributor
- Red sealing plugs ④ can be easily stuck into the QUICKON nuts and create a seal when screwed tight
- Protective caps with retaining cords ⑤ for closing open QUICKON domes which are going to have a connector (for example) fitted at a later date
- Locking nuts ⑥ for fixing the panel feed-throughs to thin panels that are unable to accommodate a proprietary thread
- Insulating sleeve ⑦ for 4.8 mm slip-on connections
- Transparent protective caps ⑧ for attaching to the open QUICKON dome
- Transparent protective caps ⑨ at front for attaching to the connector
- Slotted socket wrenches ⑩ enable you to tighten the QUICKON nuts easily and securely
- Red coding profiles ⑪ for preventing QPD connector mix-ups. Simply insert them into the QUICKON dome and connector on the front side. They are marked with an arrow and their symmetrical form enables them to be mounted in four different positions
- Aluminum shielding tape ⑬ prevents the splicing of the braided shield and enables a clean shield connection



		Ordering data		
Description	Type	Order No.	Pcs./Pkt.	
Plastic label ③ For plotting and engraving Can be printed using thermal transfer printer	GPE 13X 9 WH EMLP (13X9)R	0806932 0819453	10 1	
Closing cap , for closing unused bore holes in multiple seals and cable glands ④ Ø 10 mm Ø 14 mm	SEALING PLUG 10X16 RD SEALING PLUG 14X22 RD	1400284 1400270	10 10	
Protective cap , captive, IP68 ⑤ Color: gray Color: gray	QPD QSK BK 3/4X1,5 FS QPD QSK BK 5X1,5 FS	1414722 1414728	1 1	
Counter nut , (plastic), to lock the contact carrier from the inside of the device ⑥ M20 / SW26 / color: green M25 / SW32 / color: black	Q-MU M20 Q-MU M25	1640702 1640715	25 25	
Insulating sleeve , ⑦ as shock protection for 4.8 mm slip-on sleeves; first slide over the conductor For 4.8 mm slip-on sleeves	PT/FS 4,8	1670497	25	
Protective cap , transparent plastic, for QUICKON connection, IP54 ⑧	QPD QSK 3/4X1,5 QPD QSK 5X1,5	1414723 1414758	10 10	
Protective cap , transparent plastic, for QUICKON connection, IP50 ⑨	QPD PSK 3/4X1,5 QPD PSK 5X1,5	1414724 1414759	10 10	
Slotted socket wrench for QUICKON nuts and panel feed-throughs, for wrench size: ⑩ 15 mm 19 mm 22 mm	QSS 15 QSS 19 QSS 22	1641992 1670895 1670206	1 1 1	
Coding profile , for insertion into the connector and QUICKON dome ⑪	CP-QPD 3/4X1,5 CP-QPD 5X1,5	1414729 1414760	10 10	
Shielding tape , for shielded QPD versions ⑬	ALU-SB	1404531	100	

H-distributors, 2.5 mm²

- Can be used as a H-distributor with continuous master cable
- Can be used as a star distributor
- Can be used as a Y-distributor with a test connection
- Touch-proof according to DIN EN 50274
- Also available as gray color versions



with four QUICKON nuts



without QUICKON nut



	Technical data	
	3+PE-pos.	4+PE-pos.
General data		
Degree of protection	IP66 / IP68 / IP69K	
Electrical data		
Rated voltage (III/3)	690 V	
Rated surge voltage	6 kV	
Rated current	20 A	
Overvoltage category / Degree of pollution	III / 3	
Material data		
Housing material	PA	
Contact material	Cu	
Flammability rating according to UL 94	V0	
Mechanical data		
Impact category	IK07	
Color	black	
Connector data for QUICKON connection		
Wire insulation	PVC/PE/TPE/rubber	
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency	max. 10	
Conductor cross section [mm ²] solid/stranded	1 mm ² ... 2.5 mm ² / 1 mm ² ... 2.5 mm ²	
Conductor cross section [AWG]	16 ... 14	
Temperature data		
Ambient temperature (operation)	-40°C ... 100°C	
Temperature when conductor connected	-5°C ... 50°C	



	Technical data	
	3+PE-pos.	4+PE-pos.
General data		
Degree of protection	IP66 / IP68 / IP69K	
Electrical data		
Rated voltage (III/3)	690 V	
Rated surge voltage	6 kV	
Rated current	20 A	
Overvoltage category / Degree of pollution	III / 3	
Material data		
Housing material	PA	
Contact material	Cu	
Flammability rating according to UL 94	V0	
Mechanical data		
Impact category	IK07	
Color	black	
Connector data for QUICKON connection		
Wire insulation	PVC/PE/TPE/rubber	
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency	max. 10	
Conductor cross section [mm ²] solid/stranded	1 mm ² ... 2.5 mm ² / 1 mm ² ... 2.5 mm ²	
Conductor cross section [AWG]	16 ... 14	
Temperature data		
Ambient temperature (operation)	-40°C ... 100°C	
Temperature when conductor connected	-5°C ... 50°C	

Description	Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		4+PE-pos.	
H-distributor, with four QUICKON nuts and one sealing bolt, for cable diameters:				
6 mm ... 10 mm	1582145	1		
9 mm ... 14 mm	1582148	1		
6 mm ... 11 mm			1406368	1
9 mm ... 16 mm			1406369	1
H-distributor, without QUICKON nuts				
QUICKON nut, for connections up to 2.5 mm², for cable diameters:				
6 mm ... 10 mm				
9 mm ... 14 mm				
6 mm ... 11 mm				
9 mm ... 16 mm				

Description	Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		4+PE-pos.	
H-distributor, with four QUICKON nuts and one sealing bolt, for cable diameters:				
6 mm ... 10 mm				
9 mm ... 14 mm				
6 mm ... 11 mm				
9 mm ... 16 mm				
H-distributor, without QUICKON nuts				
QUICKON nut, for connections up to 2.5 mm², for cable diameters:				
6 mm ... 10 mm	1582226	1		
9 mm ... 14 mm	1582229	1		
6 mm ... 11 mm			1459663	1
9 mm ... 16 mm			1459647	1

Installation system

2.5 mm² installation system

T-distributors, 2.5 mm²

- Can be used as a T-distributor with continuous master cable
- Touch-proof according to DIN EN 50274
- Also available as gray color versions



with three QUICKON nuts



with two QUICKON nuts



Technical data

4+PE-pos.

General data	
Degree of protection	IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	20 A
Overvoltage category / Degree of pollution	III / 3
Material data	
Housing material	PA
Contact material	Cu
Flammability rating according to UL 94	V0
Mechanical data	
Impact category	IK07
Color	black
Connector data for QUICKON connection	
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10
Conductor cross section [mm ²] solid/stranded	1 mm ² ... 2.5 mm ² / 1 mm ² ... 2.5 mm ²
Conductor cross section [AWG]	16 ... 14
Temperature data	
Ambient temperature (operation)	-40°C ... 80°C
Temperature when conductor connected	-5°C ... 50°C

Technical data

4+PE-pos.

General data	
Degree of protection	IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	20 A
Overvoltage category / Degree of pollution	III / 3
Material data	
Housing material	PA
Contact material	Cu
Flammability rating according to UL 94	V0
Mechanical data	
Impact category	IK07
Color	black
Connector data for QUICKON connection	
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10
Conductor cross section [mm ²] solid/stranded	1 mm ² ... 2.5 mm ² / 1 mm ² ... 2.5 mm ²
Conductor cross section [AWG]	16 ... 14
Temperature data	
Ambient temperature (operation)	-40°C ... 80°C
Temperature when conductor connected	-5°C ... 50°C

Ordering data

Description	
T-distributor , for cable diameter:	
6 mm ... 11 mm	
9 mm ... 16 mm	
QUICKON nut , for connections up to 2.5 mm ² , for cable diameter:	
6 mm ... 11 mm	
9 mm ... 16 mm	

Type	Order No.	Pcs. / Pkt.
QPD T 4PE 3X6-11 BK	1405401	1
QPD T 4PE 3X9-16 BK	1405402	1

Ordering data

Type	Order No.	Pcs. / Pkt.
QPD T 4PE 2X6-11 BK	1405403	1
QPD T 4PE 2X9-16 BK	1405404	1
QPD N 4PE2,5 6-11 BK	1459663	1
QPD N 4PE2,5 9-16 BK	1459647	1

Cable connectors, 2.5 mm²

- Easy cable extension or cable repairs
- The QUICKON connections at opposite ends feature different position markings and mechanical coding
- The 2.5 mm² connector can be used here instead of the QUICKON nut
- Also available as gray color versions



with two QUICKON nuts



with one QUICKON nut



	Technical data	
	3+PE-pos.	4+PE-pos.
General data		
Degree of protection	IP66 / IP68 / IP69K	
Electrical data		
Rated voltage (III/3)	690 V	
Rated surge voltage	6 kV	
Rated current	20 A	
Overvoltage category / Degree of pollution	III / 3	
Material data		
Housing material	PA	
Contact material	Cu	
Contact surface material	silver-plated	
Flammability rating according to UL 94	V0	
Impact category	IK07	
Color	black	
Connector data for QUICKON connection		
Wire insulation	PVC/PE/TPE/rubber	
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency	10	
Conductor cross section [mm ²] solid/stranded	1 mm ² ... 2.5 mm ² / 1 mm ² ... 2.5 mm ²	
Conductor cross section [AWG]	16 ... 14	
Temperature data		
Ambient temperature (operation)	-40°C ... 100°C	
Temperature when conductor connected	-5°C ... 50°C	



	Technical data	
	3+PE-pos.	4+PE-pos.
General data		
Degree of protection	IP66 / IP68 / IP69K	
Electrical data		
Rated voltage (III/3)	690 V	
Rated surge voltage	6 kV	
Rated current	20 A	
Overvoltage category / Degree of pollution	III / 3	
Material data		
Housing material	PA	
Contact material	Cu	
Contact surface material	silver-plated	
Flammability rating according to UL 94	V0	
Impact category	IK07	
Color	black	
Connector data for QUICKON connection		
Wire insulation	PVC/PE/TPE/rubber	
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency	10	
Conductor cross section [mm ²] solid/stranded	1 mm ² ... 2.5 mm ² / 1 mm ² ... 2.5 mm ²	
Conductor cross section [AWG]	16 ... 14	
Temperature data		
Ambient temperature (operation)	-40°C ... 100°C	
Temperature when conductor connected	-5°C ... 50°C	

Description	Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		4+PE-pos.	
Cable connector , for cable diameter:				
6 mm ... 10 mm	1582211	1		
9 mm ... 14 mm	1582214	1		
6 mm ... 11 mm			1403838	1
9 mm ... 16 mm			1403836	1
QUICKON nut , for connections up to 2.5 mm ² , for cable diameter:				
6 mm ... 10 mm				
9 mm ... 14 mm				
6 mm ... 11 mm				
9 mm ... 16 mm				

Description	Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		4+PE-pos.	
Cable connector , for cable diameter:				
6 mm ... 10 mm	1582220	1		
9 mm ... 14 mm	1582223	1		
6 mm ... 11 mm			1403834	1
9 mm ... 16 mm			1403831	1
QUICKON nut , for connections up to 2.5 mm ² , for cable diameter:				
6 mm ... 10 mm	1582226	1		
9 mm ... 14 mm	1582229	1		
6 mm ... 11 mm			1459663	1
9 mm ... 16 mm			1459647	1

Installation system

2.5 mm² installation system

Panel feed-throughs, 2.5 mm², with litz wires

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Touch-proof according to DIN EN 50274
- Also available as gray color versions



with QUICKON nut



without QUICKON nut



Technical data	
General data	
Degree of protection	IP66 / IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	20 A
Overvoltage category / Degree of pollution	III / 3
Material data	
Housing material	PA
Contact material	Cu
Flammability rating according to UL 94	V0
Mechanical data	
Impact category	IK07
Color	black
Connector data for QUICKON connection	
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10
Conductor cross section [mm ²] solid/stranded	1 mm ² ... 2.5 mm ² / 1 mm ² ... 2.5 mm ²
Conductor cross section [AWG]	16 ... 14
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C

Technical data		Technical data	
	3+PE-pos.		4+PE-pos.
Degree of protection	IP66 / IP68 / IP69K	Degree of protection	IP66 / IP68 / IP69K
Rated voltage (III/3)	690 V	Rated voltage (III/3)	690 V
Rated surge voltage	6 kV	Rated surge voltage	6 kV
Rated current	20 A	Rated current	20 A
Overvoltage category / Degree of pollution	III / 3	Overvoltage category / Degree of pollution	III / 3
Housing material	PA	Housing material	PA
Contact material	Cu	Contact material	Cu
Flammability rating according to UL 94	V0	Flammability rating according to UL 94	V0
Impact category	IK07	Impact category	IK07
Color	black	Color	black
Wire insulation	PVC/PE/TPE/rubber	Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm	Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10	Connection frequency	max. 10
Conductor cross section [mm ²] solid/stranded	1 mm ² ... 2.5 mm ² / 1 mm ² ... 2.5 mm ²	Conductor cross section [mm ²] solid/stranded	1 mm ² ... 2.5 mm ² / 1 mm ² ... 2.5 mm ²
Conductor cross section [AWG]	16 ... 14	Conductor cross section [AWG]	16 ... 14
Ambient temperature (operation)	-40°C ... 100°C	Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C	Temperature when conductor connected	-5°C ... 50°C

Ordering data		Ordering data	
	3+PE-pos.		4+PE-pos.
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.

Description	Cable length
-------------	--------------

Panel feed-through, I_N=15 A, with M20 x 1.5 mounting flange, with QUICKON nut, for cable diameters:

6 mm ... 11 mm	0.5 m
6 mm ... 11 mm	1 m
9 mm ... 16 mm	0.5 m
9 mm ... 16 mm	1 m

Panel feed-through, with M25 x 1.5 mounting flange, with QUICKON nut, for cable diameters:

6 mm ... 10 mm	0.5 m
6 mm ... 10 mm	1 m
9 mm ... 14 mm	0.5 m
9 mm ... 14 mm	1 m
6 mm ... 11 mm	0.5 m
6 mm ... 11 mm	1 m
9 mm ... 16 mm	0.5 m
9 mm ... 16 mm	1 m

Panel feed-through, with M20 x 1.5 mounting flange, without QUICKON nut

0.5 m
1 m

Panel feed-through, with M25 x 1.5 mounting flange, without QUICKON nut

0.5 m
1 m

QUICKON nut, for connections up to 2.5 mm², for cable diameters:

6 mm ... 10 mm
9 mm ... 14 mm
6 mm ... 11 mm
9 mm ... 16 mm

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.

Panel feed-throughs, 2.5 mm², with manual solder or spade connector connection

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Also available as gray color versions



with QUICKON nut



without QUICKON nut



	Technical data		Technical data	
	3+PE-pos.	4+PE-pos.	3+PE-pos.	4+PE-pos.
General data	IP66 / IP68 / IP69K		IP66 / IP68 / IP69K	
Degree of protection	IP66 / IP68 / IP69K		IP66 / IP68 / IP69K	
Electrical data				
Rated voltage (III/3)	690 V		690 V	
Rated surge voltage	6 kV		6 kV	
Rated current	20 A	15 A	20 A	15 A
Overvoltage category / Degree of pollution	III / 3		III / 3	
Material data				
Housing material	PA		PA	
Contact material	Cu		Cu	
Flammability rating according to UL 94	V0		V0	
Mechanical data				
Impact category	IK07		IK07	
Color	black		black	
Connector data for QUICKON connection				
Wire insulation	PVC/PE/TPE/rubber		PVC/PE/TPE/rubber	
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm		VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency	max. 10		max. 10	
Conductor cross section [mm ²] solid/stranded	1 mm ² ... 2.5 mm ² / 1 mm ² ... 2.5 mm ²		1 mm ² ... 2.5 mm ² / 1 mm ² ... 2.5 mm ²	
Conductor cross section [AWG]	16 ... 14		16 ... 14	
Temperature data				
Ambient temperature (operation)	-40°C ... 100°C		-40°C ... 100°C	
Temperature when conductor connected	-5°C ... 50°C		-5°C ... 50°C	
	Ordering data		Ordering data	
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		4+PE-pos.	
Panel feed-through , I _N =15 A, with M20 x 1.5 mounting flange, with QUICKON nut, for cable diameters:				
6 mm ... 11 mm			1403729	1
9 mm ... 16 mm			1403735	1
Panel feed-through , with M25 x 1.5 mounting flange, with QUICKON nut, for cable diameters:				
6 mm ... 10 mm	1582166	1		
9 mm ... 14 mm	1582178	1		
6 mm ... 11 mm			1582559	1
9 mm ... 16 mm			1582563	1
Panel feed-through , with mounting flange, without QUICKON nut, connecting thread:				
M20, I _N =15 A				1403741 1
Panel feed-through , with M25 x 1.5 mounting flange, without QUICKON nut				
M25, I _N =20 A			1582196	1
QUICKON nut , for connections up to 2.5 mm ² , for cable diameters:				1582567 1
6 mm ... 10 mm			1582226	1
9 mm ... 14 mm			1582229	1
6 mm ... 11 mm				1459663 1
9 mm ... 16 mm				1459647 1

Installation system

2.5 mm² installation system

Panel feed-throughs, 2.5 mm², with Push-in connection

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- For internal Push-in connection, solid conductors are simply stripped and inserted in the connection
- Touch-proof according to DIN EN 50274
- Also available as gray color versions



with QUICKON nut



without QUICKON nut



Technical data	
3+PE-pos.	4+PE-pos.
Degree of protection IP66 / IP68 / IP69K	
Electrical data	
Rated voltage (III/3) 690 V	
Rated surge voltage 6 kV	
Rated current 20 A	
Overvoltage category / Degree of pollution III / 3	
Material data	
Housing material PA	
Contact material Cu	
Flammability rating according to UL 94 V0	
Mechanical data	
Impact category IK07	
Color black	
Connector data for QUICKON connection	
Wire insulation PVC/PE/Rubber/TPE	
Structure of individual litz wire/ smallest wire diameter VDE 0295 class 1 to 6/ min. 0.15 mm max. 10	
Connection frequency max. 10	
Conductor cross section [mm ²] solid/stranded 1 mm ² ... 2.5 mm ² / 1 mm ² ... 2.5 mm ²	
Conductor cross section [AWG] 16 ... 14	
Temperature data	
Ambient temperature (operation) -40°C ... 100°C	
Temperature when conductor connected -5°C ... 50°C	



Technical data	
3+PE-pos.	
Degree of protection IP66 / IP68 / IP69K	
Electrical data	
Rated voltage (III/3) 690 V	
Rated surge voltage 6 kV	
Rated current 20 A	
Overvoltage category / Degree of pollution III / 3	
Material data	
Housing material PA	
Contact material Cu	
Flammability rating according to UL 94 V0	
Mechanical data	
Impact category IK07	
Color black	
Connector data for QUICKON connection	
Wire insulation PVC/PE/Rubber/TPE	
Structure of individual litz wire/ smallest wire diameter VDE 0295 class 1 to 6/ min. 0.15 mm max. 10	
Connection frequency max. 10	
Conductor cross section [mm ²] solid/stranded 1 mm ² ... 2.5 mm ² / 1 mm ² ... 2.5 mm ²	
Conductor cross section [AWG] 16 ... 14	
Temperature data	
Ambient temperature (operation) -40°C ... 100°C	
Temperature when conductor connected -5°C ... 50°C	

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		4+PE-pos.	
Panel feed-through , with M25 x 1.5 mounting flange, with QUICKON nut, for cable diameters:				
6 mm ... 10 mm	1582169	1		
9 mm ... 14 mm	1582181	1		
6 mm ... 11 mm			1411432	1
9 mm ... 16 mm			1411433	1
Panel feed-through , with M25 x 1.5 mounting flange, without QUICKON nut				
QUICKON nut , for connections up to 2.5 mm ² , for cable diameters:				
6 mm ... 10 mm				
9 mm ... 14 mm				

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
1582193	1		
1582226	1		
1582229	1		

Connectors, 2.5 mm²

- With capacitive PE contact
- Compatible with QUICKON connection
- Can be coded using the two red coding profiles to prevent mismatching of similar connectors
- Touch-proof according to DIN EN 50274
- Also available as gray color versions
- With SPEEDCON fast locking system



with gray screw locking



Technical data

4+PE-pos.

General data	
Degree of protection	IP66 / IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	20 A
Overvoltage category / Degree of pollution	III / 3
Material data	
Housing material	PA
Contact material	Cu
Contact surface material	silver-plated
Flammability rating according to UL 94	V0
Impact category	IK07
Color	black
Connector data for QUICKON connection	
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	10
Conductor cross section [mm ²] solid/stranded	1 mm ² ... 2.5 mm ² / 1 mm ² ... 2.5 mm ²
Conductor cross section [AWG]	16 ... 14
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Connectors , for cable diameters:			
6 mm ... 11 mm	QPD P 4PE2,5 6-11 BK	1403784	1
9 mm ... 16 mm	QPD P 4PE2,5 9-16 BK	1403782	1

Installation system

2.5 mm² installation system

Accessories

- Mounting clip ① for easily fixing the H-distributor in place without the need for tools
- DIN rail mounting can be achieved using two DIN rail adapters ②
- Plastic labels ③ can be stuck to the middle of the H-distributor
- Red sealing plugs ④ can be easily stuck into the QUICKON nuts and create a seal when screwed tight
- Protective caps with retaining cords ⑤ for closing open QUICKON domes which are going to have a connector (for example) fitted at a later date
- Locking nuts ⑥ for fixing the panel feed-throughs to thin panels that are unable to accommodate a proprietary thread
- Insulating sleeve ⑦ for 4.8 mm slip-on connections
- Transparent protective caps ⑧ for attaching to the open QUICKON dome
- Transparent protective caps ⑨ at front for attaching to the connector
- Slotted socket wrenches ⑩ enable you to tighten the QUICKON nuts easily and securely
- Red coding profiles ⑪ for preventing QPD connector mix-ups. Simply insert them into the QUICKON dome and connector on the front side. They are marked with an arrow and their symmetrical form enables them to be mounted in four different positions
- AS-Interface seals ⑫ for connecting 1 or 2 AS-Interface cables
- Aluminum shielding tape ⑬ prevents the splicing of the braided shield and enables a clean shield connection



Description		Ordering data		
Type	Order No.	Pcs./Pkt.		
Assembly clip , for H-distributor Color: black	①	QPD CLIP 2,5 BK	1582235	10
DIN rail adapter For M5 screws	②	USA 10/4,6	1202713	10
Plastic label For plotting and engraving Can be printed using thermal transfer printer	③	GPE 13X 9 WH EMLP (13X9)R	0806932 0819453	10 1
Closing cap , for closing unused bore holes in multiple seals and cable glands Ø 10 mm Ø 14 mm	④	SEALING PLUG 10X16 RD SEALING PLUG 14X22 RD	1400284 1400270	10 10
Protective cap , captive, IP68 Color: green Color: black Color: gray Color: black	⑤	QPD QSK 2,5 FS QPD QSK BK 2,5 FS QPD QSK GY 5X2,5 FS QPD QSK BK 5X2,5 FS	1582488 1582645 1404526 1404525	1 1 1 1
Counter nut , (plastic), to lock the contact carrier from the inside of the device M16 / SW22 / color: green M20 / SW26 / color: green M25 / SW32 / color: black Pg21 / SW36 / color: black	⑥	Q-MU M16 Q-MU M20 Q-MU M25 Q-MU PG 21 BK	1640692 1640702 1640715 1582655	25 25 25 50
Insulating sleeve , as shock protection for 4.8 mm slip-on sleeves; first slide over the conductor For 4.8 mm slip-on sleeves	⑦	PT/FS 4,8	1670497	25
Protective cap , transparent plastic, for QUICKON connection, IP54	⑧	QPD QSK 2,5 QPD QSK 5X2,5 QPD QSK 5X6,0	1582150 1404528 1411403	10 10 10
Protective cap , transparent plastic, for QUICKON connection, IP50 Connector	⑨	QPD PSK 2,5 QPD PSK 5X2,5 QPD PSK 5X6,0	1582151 1404529 1411404	10 10 10
Slotted socket wrench for QUICKON nuts and panel feed-throughs, for wrench size: 15 mm 19 mm 22 mm 24 mm 27 mm	⑩	QSS 15 QSS 19 QSS 22 QSS 24 QSS 27	1641992 1670895 1670206 1670219 1670646	1 1 1 1 1
Coding profile , for insertion into the connector and QUICKON dome	⑪	CP-QPD CP-QPD 5X2,5	1582459 1404530	10 10
Seal for 4-pos. versions , NBR, black, for IP65/IP67 degree of protection	⑫	KV-DI-PG16-1XASI KV-DI-PG16-2XASI	1582462 1582464	10 10
Shielding tape , for shielded QPD versions	⑬	ALU-SB	1404531	100

H-distributors, 6.0 mm²

- Can be used as a H-distributor with continuous master cable
- Can be used as a star distributor
- Can be used as a Y-distributor with a test connection
- Touch-proof according to DIN EN 50274
- Also available as gray color versions



with four QUICKON nuts



without QUICKON nut



Technical data

4+PE-pos.

General data	
Degree of protection	IP66 / IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	40 A
Overvoltage category / Degree of pollution	III / 3
Material data	
Housing material	PA
Contact material	Cu
Flammability rating according to UL 94	V0
Mechanical data	
Impact category	IK07
Color	black
Connector data for QUICKON connection	
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10
Conductor cross section [mm ²] solid/stranded	2.5 mm ² ... 6 mm ² / 2.5 mm ² ... 6 mm ²
Conductor cross section [AWG]	14 ... 10
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C



Technical data

4+PE-pos.

General data	
Degree of protection	IP66 / IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	40 A
Overvoltage category / Degree of pollution	III / 3
Material data	
Housing material	PA
Contact material	Cu
Flammability rating according to UL 94	V0
Mechanical data	
Impact category	IK07
Color	black
Connector data for QUICKON connection	
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10
Conductor cross section [mm ²] solid/stranded	2.5 mm ² ... 6 mm ² / 2.5 mm ² ... 6 mm ²
Conductor cross section [AWG]	14 ... 10
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C

Ordering data

Description	
H-distributor, with four QUICKON nuts and one sealing bolt, for cable diameters: 9 mm ... 14 mm 12 mm ... 20 mm	
H-distributor, without QUICKON nuts	
QUICKON nut, for connections up to 6.0 mm², for cable diameter: 9 mm ... 14 mm 12 mm ... 20 mm	

Type	Order No.	Pcs. / Pkt.
QPD H 4PE6,0 4X9-14 BK	1411422	1
QPD H 4PE6,0 4X12-20 BK	1411425	1

Ordering data

Type	Order No.	Pcs. / Pkt.
QPD H 4PE6,0 BK	1411426	1
QPD N 4PE6,0 9-14 BK	1410409	1
QPD N 4PE6,0 12-20 BK	1410406	1

Installation system

6.0 mm² installation system

T-distributors, 6.0 mm²

- Can be used as a T-distributor with continuous master cable
- Touch-proof according to DIN EN 50274
- Also available as gray color versions



with three QUICKON nuts



with two QUICKON nuts



Technical data

4+PE-pos.

General data	
Degree of protection	IP66 / IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	40 A
Overvoltage category / Degree of pollution	III / 3
Material data	
Housing material	PA
Contact material	Cu
Flammability rating according to UL 94	V0
Mechanical data	
Impact category	IK07
Color	black
Connector data for QUICKON connection	
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10
Conductor cross section [mm ²] solid/stranded	2.5 mm ² ... 6 mm ² / 2.5 mm ² ... 6 mm ²
Conductor cross section [AWG]	14 ... 10
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C



Technical data

4+PE-pos.

General data	
Degree of protection	IP66 / IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	40 A
Overvoltage category / Degree of pollution	III / 3
Material data	
Housing material	PA
Contact material	Cu
Flammability rating according to UL 94	V0
Mechanical data	
Impact category	IK07
Color	black
Connector data for QUICKON connection	
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10
Conductor cross section [mm ²] solid/stranded	2.5 mm ² ... 6 mm ² / 2.5 mm ² ... 6 mm ²
Conductor cross section [AWG]	14 ... 10
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C

Ordering data

Description
T-distributor, with three QUICKON nuts, for cable diameter:
9 mm ... 14 mm
12 mm ... 20 mm
T-distributor, with two QUICKON nuts, for cable diameter:
9 mm ... 14 mm
12 mm ... 20 mm
QUICKON nut, for connections up to 6.0 mm², for cable diameter:
9 mm ... 14 mm
12 mm ... 20 mm

Type	Order No.	Pcs. / Pkt.
QPD T 4PE6,0 3X9-14 BK	1411414	1
QPD T 4PE6,0 3X12-20 BK	1411415	1

Ordering data

Type	Order No.	Pcs. / Pkt.
QPD T 4PE6,0 2X9-14 BK	1411416	1
QPD T 4PE6,0 2X12-20 BK	1411417	1
QPD N 4PE6,0 9-14 BK	1410409	1
QPD N 4PE6,0 12-20 BK	1410406	1

Cable connectors, 6.0 mm²

- Easy cable extension or cable repairs
- The QUICKON connections at opposite ends feature different position markings and mechanical coding
- The 6.0 mm² connector can be used here instead of the QUICKON nut
- Also available as gray color versions



with two QUICKON nuts



with one QUICKON nut



Technical data	
4+PE-pos.	
General data	
Degree of protection	IP66 / IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	40 A
Overvoltage category / Degree of pollution	III / 3
Material data	
Housing material	PA
Contact material	Cu
Flammability rating according to UL 94	V0
Mechanical data	
Impact category	IK07
Color	black
Connector data for QUICKON connection	
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10
Conductor cross section [mm ²] solid/stranded	2.5 mm ² ... 6 mm ² / 2.5 mm ² ... 6 mm ²
Conductor cross section [AWG]	10 ... 14
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C



Technical data	
4+PE-pos.	
General data	
Degree of protection	IP66 / IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	40 A
Overvoltage category / Degree of pollution	III / 3
Material data	
Housing material	PA
Contact material	Cu
Flammability rating according to UL 94	V0
Mechanical data	
Impact category	IK07
Color	black
Connector data for QUICKON connection	
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10
Conductor cross section [mm ²] solid/stranded	2.5 mm ² ... 6 mm ² / 2.5 mm ² ... 6 mm ²
Conductor cross section [AWG]	10 ... 14
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C

Ordering data			
Description	Type	Order No.	Pcs. / Pkt.
Cable connector, with two QUICKON nuts, for cable diameters:			
9 mm ... 14 mm	QPD C 4PE6,0 2X9-14 BK	1410410	1
12 mm ... 20 mm	QPD C 4PE6,0 2X12-20 BK	1410412	1
Cable connector, with one QUICKON nut, for cable diameters:			
9 mm ... 14 mm			
12 mm ... 20 mm			
QUICKON nut, for connections up to 6.0 mm², for cable diameter:			
9 mm ... 14 mm			
12 mm ... 20 mm			

Ordering data			
Description	Type	Order No.	Pcs. / Pkt.
Cable connector, with one QUICKON nut, for cable diameters:			
9 mm ... 14 mm	QPD C 4PE6,0 1X9-14 BK	1410415	1
12 mm ... 20 mm	QPD C 4PE6,0 1X12-20 BK	1410416	1
QUICKON nut, for connections up to 6.0 mm², for cable diameter:			
9 mm ... 14 mm	QPD N 4PE6,0 9-14 BK	1410409	1
12 mm ... 20 mm	QPD N 4PE6,0 12-20 BK	1410406	1

Installation system

6.0 mm² installation system

Panel feed-throughs, 6.0 mm²

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Touch-proof according to DIN EN 50274
- Also available as gray color versions



with one QUICKON nut



without QUICKON nut



Technical data

4+PE-pos.

General data	
Degree of protection	IP66 / IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	40 A
Overvoltage category / Degree of pollution	III / 3
Material data	
Housing material	PA
Contact material	Cu
Flammability rating according to UL 94	V0
Mechanical data	
Impact category	IK07
Color	black
Connector data for QUICKON connection	
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10
Conductor cross section [mm ²] solid/stranded	2.5 mm ² ... 6 mm ² / 2.5 mm ² ... 6 mm ²
Conductor cross section [AWG]	14 ... 10
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C



Technical data

4+PE-pos.

General data	
Degree of protection	IP66 / IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	40 A
Overvoltage category / Degree of pollution	III / 3
Material data	
Housing material	PA
Contact material	Cu
Flammability rating according to UL 94	V0
Mechanical data	
Impact category	IK07
Color	black
Connector data for QUICKON connection	
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10
Conductor cross section [mm ²] solid/stranded	2.5 mm ² ... 6 mm ² / 2.5 mm ² ... 6 mm ²
Conductor cross section [AWG]	14 ... 10
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C

Ordering data

Description	Cable length
Panel feed-through , with M25 x 1.5 mounting flange, with one QUICKON nut, for cable diameter:	
9 mm ... 14 mm	0.5 m
9 mm ... 14 mm	1 m
12 mm ... 20 mm	0.5 m
12 mm ... 20 mm	1 m
Panel feed-through , with M25 x 1.5 mounting flange, without QUICKON nut	
	0.5 m
	1 m
QUICKON nut , for connections up to 6.0 mm ² , for cable diameter:	
9 mm ... 14 mm	
12 mm ... 20 mm	

Type	Order No.	Pcs. / Pkt.
QPD W 4PE6,0 9-14 M25 0,5 BK	1410392	1
QPD W 4PE6,0 9-14 M25 1,0 BK	1410393	1
QPD W 4PE6,0 12-20 M25 0,5 BK	1410394	1
QPD W 4PE6,0 12-20 M25 1,0 BK	1410395	1

Ordering data

Type	Order No.	Pcs. / Pkt.
QPD W 4PE6,0 M25 0,5 BK	1410396	1
QPD W 4PE6,0 M25 1,0 BK	1410397	1
QPD N 4PE6,0 9-14 BK	1410409	1
QPD N 4PE6,0 12-20 BK	1410406	1

Connectors, 6.0 mm²

- With capacitive PE contact
- Compatible with QUICKON connection
- Can be coded using the two red coding profiles to prevent mismatching of similar connectors
- Touch-proof according to DIN EN 50274
- Also available as gray color versions
- With SPEEDCON fast locking system



with gray screw locking



Technical data

4+PE-pos.

General data	
Degree of protection	IP66 / IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	40 A
Overvoltage category / Degree of pollution	III / 3
Material data	
Housing material	PA
Contact material	Cu
Contact surface material	silver-plated
Flammability rating according to UL 94	V0
Impact category	IK07
Color	black
Connector data for QUICKON connection	
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	10
Conductor cross section [mm ²] solid/stranded	2.5 mm ² ... 6 mm ² / 2.5 mm ² ... 6 mm ²
Conductor cross section [AWG]	14 ... 10
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Connectors , for cable diameters:			
9 mm ... 14 mm	QPD P 4PE6,0 9-14 BK	1410386	1
12 mm ... 20 mm	QPD P 4PE6,0 12-20 BK	1410387	1

Installation system

6.0 mm² installation system

Accessories

- Plastic labels ③ can be stuck to the middle of the H-distributor
- Red sealing plugs ④ can be easily stuck into the QUICKON nuts and create a seal when screwed tight
- Protective caps with retaining cords ⑤ for closing open QUICKON domes which are going to have a connector (for example) fitted at a later date
- Locking nuts ⑥ for fixing the panel feed-throughs to thin panels that are unable to accommodate a proprietary thread
- Insulating sleeve ⑦ for 4.8 mm slip-on connections
- Transparent protective caps ⑧ for attaching to the open QUICKON dome
- Transparent protective caps ⑨ at front for attaching to the connector
- Aluminum shielding tape ⑬ prevents the splicing of the braided shield and enables a clean shield connection



Description	Ordering data		
	Type	Order No.	Pcs./Pkt.
Plastic label ③ For plotting and engraving Can be printed using thermal transfer printer	GPE 13X 9 WH EMLP (13X9)R	0806932 0819453	10 1
Closing cap , for closing unused bore holes in multiple seals and cable glands ④ Ø 10 mm Ø 14 mm	SEALING PLUG 10X16 RD SEALING PLUG 14X22 RD	1400284 1400270	10 10
Protective cap , captive, IP68 ⑤	QPD QSK GY 5X6,0 FS QPD QSK BK 5X6,0 FS	1411401 1411400	1 1
Counter nut , (plastic), to lock the contact carrier from the inside of the device ⑥ M25 / SW32 / color: black	Q-MU M25	1640715	25
Insulating sleeve , ⑦ as shock protection for 4.8 mm slip-on sleeves; first slide over the conductor For 4.8 mm slip-on sleeves	PT/FS 4,8	1670497	25
Protective cap , transparent plastic, for QUICKON connection, IP54 ⑧	QPD QSK 5X6,0	1411403	10
Protective cap , transparent plastic, for QUICKON connection, IP50 ⑨	QPD PSK 5X6,0	1411404	10
Coding profile , for insertion into the connector and QUICKON dome ⑪	CP-QPD 5X6,0	1411402	10
Shielding tape , for shielded QPD versions ⑬	ALU-SB	1404531	100

Panel feed-throughs, 2.5 mm² for intrinsically safe circuits

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Touch-proof according to DIN EN 50274



with litz wires



with manual solder or spade connector connection

Notes:
Intended for applications in intrinsically safe circuits according to EN 60079-11 and EN 60079-14.



Technical data	
4+PE-pos.	
Degree of protection	IP66 / IP68 / IP69K
Rated voltage	60 V
Rated surge voltage	6 kV
Overtoltage category / Degree of pollution	III / 3
Housing material	PA
Contact material	Cu
Flammability rating according to UL 94	V0
Impact category	IK07
Color	black
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10
Conductor cross section [mm ²] solid/stranded	1 mm ² ... 2.5 mm ² / 1 mm ² ... 2.5 mm ²
Conductor cross section [AWG]	16 ... 14
Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C



Technical data	
4+PE-pos.	
Degree of protection	IP66 / IP68 / IP69K
Rated voltage	60 V
Rated surge voltage	6 kV
Overtoltage category / Degree of pollution	III / 3
Housing material	PA
Contact material	Cu
Flammability rating according to UL 94	V0
Impact category	IK07
Color	black
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10
Conductor cross section [mm ²] solid/stranded	1 mm ² ... 2.5 mm ² / 1 mm ² ... 2.5 mm ²
Conductor cross section [AWG]	16 ... 14
Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C

Ordering data				
Description	Cable length	Type	Order No.	Pcs. / Pkt.
Panel feed-through, with M20 x 1.5 mounting flange, with QUICKON nut, for cable diameter:				
6 mm ... 11 mm	0.5 m	QPD W 4PE2,5 6-11 M20 0,5 EX	1411393	1
6 mm ... 11 mm	1 m	QPD W 4PE2,5 6-11 M20 1,0 EX	1411394	1
9 mm ... 16 mm	0.5 m	QPD W 4PE2,5 9-16 M20 0,5 EX	1411397	1
9 mm ... 16 mm	1 m	QPD W 4PE2,5 9-16 M20 1,0 EX	1411398	1
Panel feed-through, with M25 x 1.5 mounting flange, with QUICKON nut, for cable diameter:				
6 mm ... 11 mm	0.5 m	QPD W 4PE2,5 6-11 M25 0,5 EX	1411387	1
6 mm ... 11 mm	1 m	QPD W 4PE2,5 6-11 M25 1,0 EX	1411388	1
9 mm ... 16 mm	0.5 m	QPD W 4PE2,5 9-16 M25 0,5 EX	1411390	1
9 mm ... 16 mm	1 m	QPD W 4PE2,5 9-16 M25 1,0 EX	1411391	1

Ordering data				
Description	Cable length	Type	Order No.	Pcs. / Pkt.
Panel feed-through, with M20 x 1.5 mounting flange, with QUICKON nut, for cable diameter:				
6 mm ... 11 mm	0.5 m	QPD W 4PE2,5 6-11 M20 FC EX	1411395	1
6 mm ... 11 mm	1 m	QPD W 4PE2,5 6-11 M20 FC EX	1411396	1
9 mm ... 16 mm	0.5 m	QPD W 4PE2,5 9-16 M20 FC EX	1411399	1
9 mm ... 16 mm	1 m	QPD W 4PE2,5 9-16 M20 FC EX	1411400	1
Panel feed-through, with M25 x 1.5 mounting flange, with QUICKON nut, for cable diameter:				
6 mm ... 11 mm	0.5 m	QPD W 4PE2,5 6-11 M25 FC EX	1411389	1
6 mm ... 11 mm	1 m	QPD W 4PE2,5 6-11 M25 FC EX	1411390	1
9 mm ... 16 mm	0.5 m	QPD W 4PE2,5 9-16 M25 FC EX	1411392	1
9 mm ... 16 mm	1 m	QPD W 4PE2,5 9-16 M25 FC EX	1411393	1

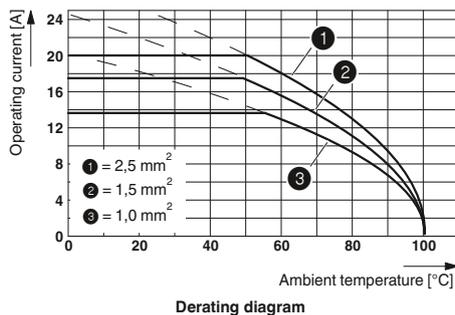
Special solution for motor connection



- Particularly suitable for connecting drives of up to 15 kW using wires with ring cable lugs
- Direct connection, without the need to open the motor terminal box

Pin assignment

- Pos. 1 BK (black)
- Pos. 2 BN (brown)
- Pos. 3 GY (gray)
- Pos. \perp GNYE (green-yellow)



Panel feed-throughs with and without QUICKON nut



Technical data

General data	
Degree of pollution	3
Degree of protection	IP66 / IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	20 A
Overvoltage category	III
Material data	
Housing material	PA
Contact material	Cu
Contact surface material	silver-plated
Contact carrier material	PA
Flammability rating according to UL 94	V0
Mechanical data	
Wrench size, union nut	22 mm
Tightening torque, union nut	5 Nm
Tightening torque, contact carrier	-
Impact category	IK07
Connector data for QUICKON connection	
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	10
Conductor cross section [mm ²] solid/stranded	1 mm ² ... 2.5 mm ² / 1 mm ² ... 2.5 mm ²
Conductor cross section [AWG]	16 ... 14
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C

Ordering data

Description	Type	Order No.	Pcs./ Pkt.
Panel feed-through, 3+PE-pos., with QUICKON nut, with four welded-on 1.5 mm² cable wires, with ring cable lugs at the end, for cable diameters:			
6 mm ... 10 mm	QPDW3PE1,5 6-10 M25 0,1 BKKTH	1582475	1
9 mm ... 14 mm	QPDW3PE1,5 9-14 M25 0,1 BKKTH	1582476	1
Panel feed-through, 3+PE-pos., without QUICKON nut, with four welded-on 1.5 mm² cable wires, with ring cable lugs at the end			
	QPD W 3PE1,5 M25 0,1 BK K TH	1577273	1

Assembled cables, 2.5 mm²

- Connecting cable between two QUICKKON connections
- User-friendly connection, even on devices that are difficult to access
- Touch-proof according to DIN EN 50274
- Other versions available on request
- With SPEEDCON fast locking system



4+PE-pos.

ERC Ⓜ

Technical data

General data	
Degree of protection	IP66 / IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	20 A
Overvoltage category / Degree of pollution	III / 3
Material data	
Housing material	PA
Contact material	Cu
Flammability rating according to UL 94	V0
Mechanical data	
Impact category	IK07
Color	black
Connector data for QUICKKON connection	
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10
Conductor cross section [mm ²] solid/stranded	1 mm ² ... 2.5 mm ² / 1 mm ² ... 2.5 mm ²
Conductor cross section [AWG]	16 ... 14
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C

Ordering data

Description	Cable length	Type	Order No.	Pcs. / Pkt.
Assembled cable	1 m	QPD 5P/ 1,0-PVC/5P 5X2,5 BK	1408720	1
	3 m	QPD 5P/ 3,0-PVC/5P 5X2,5 BK	1408721	1
	5 m	QPD 5P/ 5,0-PVC/5P 5X2,5 BK	1408722	1
	10 m	QPD 5P/10,0-PVC/5P 5X2,5 BK	1408723	1



Heavy-duty connectors

The right connector for every application

Heavy-duty connectors from the HEAVYCON complete series protect your interfaces and ensure the reliable transmission of power, data, and signals, even under the harshest conditions. They are resistant to dirt, water, vibrations, and high mechanical strain and remain sealed up to IP69K protection. Due to conductive surfaces and seals, all HEAVYCON metal housings are “EMC-ready”.

You can always create the right plug-in connection for your requirements with housings from our series types and matching contact inserts which can be combined.

Compatible insertion, flexible combination

All housing series fit on standard panel cutouts. ADVANCE housings can be mounted directly onto the wall using the panel mounting flange. STANDARD and EVO housings are mounting- and plug-in-compatible with aluminum housings from well-known manufacturers. This allows all components to be individually combined and flexibly modified, extended or exchanged. Our fixed-position and modular contact inserts naturally fit into all housing series.

The right connection technology for every application

We offer contact inserts with a wide range of connection technologies. You'll find the right contact insert for every connector housing with intuitive Push-in connection technology.

HEAVYCON product range overview

HEAVYCON system cross-reference list	498
Contact inserts and housings	
Series D7	
Contact inserts	500
Housing	508
Series D	
Contact inserts	512
Housing	518
Series B	
Contact inserts	528
Housing	586
Connector sets	636
EVO double sleeve housing	640
ADVANCE outdoor sleeve housing	642
Sleeve housing without bore hole	646
Compact series	
Contact inserts	648
Housing	650
Accessories	652
DUPLICON stackable power distribution	672

 Your web code: [#0002](#)



STANDARD connectors

The robust metal housings of the connectors are resistant to dirt, water, vibration, and high mechanical loads. STANDARD housings have a single or double locking latch. Various supporting base elements such as panel mounting bases, box mounting bases or coupling housings are available as required.



EVO connectors

The EVO connectors are characterized by the patented EVO-Lock system. It allows the cable outlet direction to be freely selected during assembly. It reduces the amount of housing variants required by up to 75%. The EVO housings are plug-in-compatible with aluminum housings from well-known manufacturers. They fit on standard panel cutouts.



ADVANCE connectors

By eliminating the typical panel mounting base, you save on assembly and material costs. The ADVANCE housings with screw locking are suitable for the most stringent requirements, such as particularly aggressive atmospheres and sensitive interfaces.



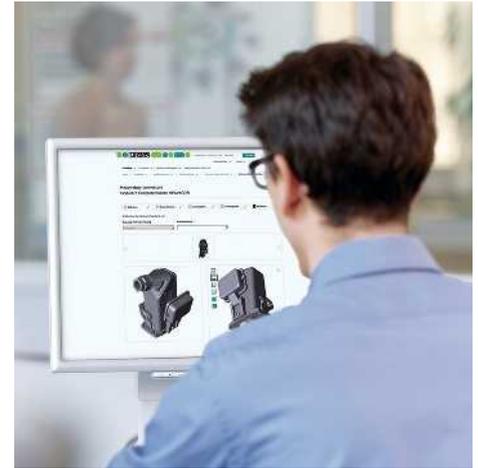
Contact inserts with a fixed number of positions

The fixed-position inserts are available in a variety of performance classes and with a range of connection technologies. Fast connection technologies, such as Push-in or QUICKON (IDC) connection, enable cable connection within seconds.



Modular contact inserts

Combine the appropriate modules for your application from our wide range of products: HEAVYCON modular includes over 50 contact inserts for signal, power, and data transmission and for pneumatic applications. The innovative module carrier frame with sturdy catch springs enables quick mounting.



Online product configurator

Use our online configurator to quickly and easily configure your connectors. A 3D preview and drag & drop simplify the selection process. The product list can be exported, e-mailed or ordered directly.

i Your web code: #0003



For the harshest conditions

HEAVYCON housings are reliably leak-tight up to IP69K. They are tested according to numerous national and international standards. Thanks to the special powder coating and UV-resistant seals, the ADVANCE outdoor housings are ideal for use under extreme outdoor conditions.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.

#0002

Search



Heavy-duty connectors

HEAVYCON product range overview



HEAVYCON HPR is intended for use in traffic and transportation technology. The sleeve housing, panel mounting base, and box mounting base meet the increased requirements of the railway industry and are characterized by their high vibration resistance. The conductive housing surface provides all-round protection in electromagnetic interference fields. They therefore guarantee the reliable transmission of data, signals, and power, e.g., at carriage transitions. Thanks to their IP68/IP69K degree of protection, the HPR housings can also be used safely on the outside vehicle body. Matching B series contact inserts and the square A series extend the range.



Square B series

The HEAVYCON HPR housings in the B series can be securely locked using the robust screw locking mechanism. They are resistant to vibrations and shocks according to IEC 61373/EN 50155.



Compact D7 series

HEAVYCON D7 housings enable signal and power transmission in an extremely compact design. The new D7 size HPR housings are optimized for railway applications.



Vibration-proof crimp connection

Robust and vibration-proof contact inserts with crimp connection ensure the reliable transmission of signal and power circuits to rail vehicles. You can connect the wire/crimp contact quickly and easily using crimping pliers or a crimping machine.



User-friendly Push-in connection

Contact inserts with Push-in connection technology ensure quick and easy conductor connection: simply insert the conductor directly into the connection without tools, and the gas-tight, vibration- and shock-proof connection is complete.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.

#0520

Search



Heavy-duty connectors

HEAVYCON system cross-reference list – contact inserts and housing

The system cross-reference list illustrates which contact insert matches which housing type.

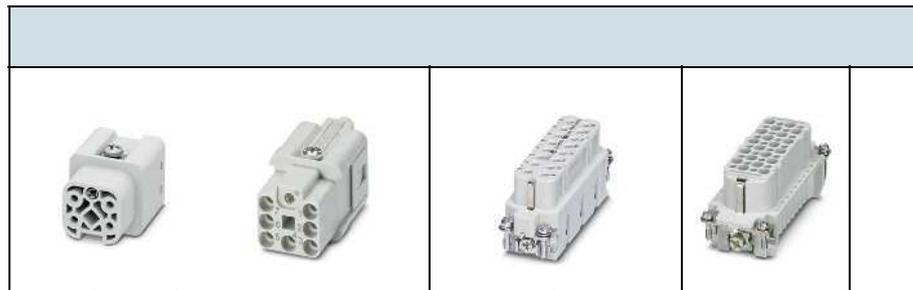
The top rows describe the contact insert according to the number of positions, voltage, current, and connection method.

The markings in the columns denote the corresponding housing size.



Configure complete HEAVYCON connectors easily and quickly with our configurator:

i Your web code: #0003



Series	A		D		Q						A			D			D			
Number of positions	3	4	7	8	2	3	4	5	7	12	10	16	2 x 16	15	25	2 x 25	40	64	2 x 40	2 x 64
Housing size	D7		D7		D7						D15	D25	D50	D15	D25	D50	B16	B24	B32	B48
Rated voltage [V]	230/400		250	50	400	400	830	230/400	400		250			250			250			
Rated current [A]	24		10		40	40	40	24	10		20			10			10			
Connection method																				
UT = Screw	UT										UT									
CT = Crimp			CT		CT						CT			CT			CT			
PT = Push-in	PT										PT									
Z = Spring-cage																				
Q = IDC/QUICKON	Q																			
L = Fiber optics											L			L			L			
A = Axial screw					A															
P = Pneumatics																				

Series	A		D		Q						A			D			D			
Number of positions	3	4	7	8	2	3	4	5	7	12	10	16	2 x 16	15	25	2 x 25	40	64	2 x 40	2 x 64
Page	500	500	502	502	506	506	506	504	502	502	512	514	514	516	516	516	528	528	528	528
From 508	•	•	•	•	•	•	•	•	•	•										
From 518											•			•						
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From 586																				
From 592																				
From 606																	•			
From 620																		•		
From 634																			•	
From 635																				•

HEAVYCON housing

D7, D15 to D50, and EVO D housing

D7

D15

D25

D50

STANDARD, EVO, and ADVANCE housing

B6

B10

B16

B24

B32

B48

Heavy-duty connectors

HEAVYCON D7 – contact inserts

A3, A4 series

230 V / 400 V, 10 A ... 24 A

Connection technology:

- Push-in connection
- Screw connection
- Insulation displacement connection

To determine the corresponding housing, see the system cross-reference list on page 498.

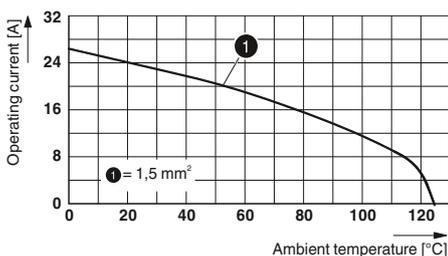
Notes:
For accessories, see from page 652
Contact inserts already contain an IP67 sealing screw
Only operate connectors when there is no load/the power is switched off
¹⁾ For solid conductors and stranded wires with wire end protection

new

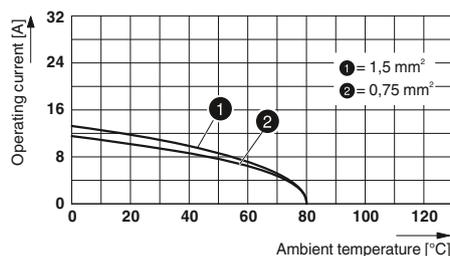


Type	Technical data					
	① HC-A 3-I-PT...	② HC-A03-I-UT...	③ HC-A3-...Q1,5-TFL-G-PA Sleeve housing	④ HC-A3-...Q1,5-KML-G-PA Coupling housing	⑤ HC-A 4-I-PT...	⑥ HC-A04-I-UT...
Approvals	-	CE ENEC UL	UL as ENEC	UL as ENEC	-	CE ENEC UL
IEC data						
Rated current, contacts (at 40°C)	[A] 10	24	10	10	10	24
Overvoltage category	III	III	III	III	III	III
Degree of pollution	3	3	3	3	3	3
Rated voltage (III/3) contacts	[V] 230	230 / 400	230 / 400	230 / 400	230	230 / 400
Rated surge voltage, contacts	[kV] 4	4	4	4	4	4
Connection cross section	[mm²] 0.14 ... 1.5	0.5 ... 2.5 ¹⁾	0.75 ... 1.5	0.75 ... 1.5	0.14 ... 1.5	0.5 ... 2.5 ¹⁾
UL data						
Rated voltage	[V] -	600	600	600	-	600
Rated current	[A] -	24	10	10	-	24
Connection cross section	AWG -	14	18-16	18-16	-	14
CSA / cUL data						
Rated voltage	[V] -	600	600	600	-	600
Rated current	[A] -	18	10	10	-	18
Connection cross section	AWG -	14	18-16	18-16	-	14
Material data						
Contact carrier material	PC	PC	PA / PC	PA / PC	PC	PC
Inflammability class according to UL 94	V0	V0	V0	V0	V0	V0
Contact material	-	Copper alloy	Copper alloy	Copper alloy	-	Copper alloy
Contact surface material	Ag	Ag	Ag	Ag	Ag	Ag
Ambient conditions						
Ambient temperature range	[°C] -40 ... 125	-40 ... 125	-25 ... 80	-25 ... 80	-40 ... 125	-40 ... 125
General data						
Connection technology	Push-in connection	Screw connection	QUICKON connection	QUICKON connection	Push-in connection	Screw connection
Stripping length	[mm] -	5	-	-	-	5
No. of pos.	3	3	3	3	4	4
Contact numbering	1 - 3	1 - 3	1 - 3	1 - 3	1 - 4	1 - 4
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	≥ 500	≥ 500	≥ 500

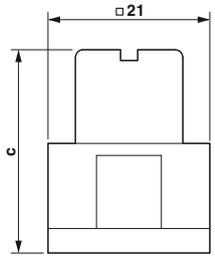
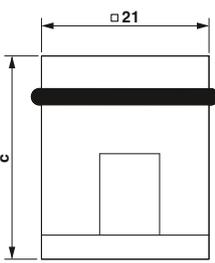
Derating curves



HC-A03-I-UT... / HC-A04-I-UT...



HC-A 3...Q1,5...

Description	Pos.	Number	Size	Type	Ordering data		Pcs. / Pkt.	Dimensions (in mm)																																																																	
					Socket	Pin																																																																			
Push-in connection 	3	1 - 3	D7	① HC-A 3-I-PT...	1585265	1585252	10	 Dimensional drawing: socket																																																																	
Screw connection 	3	1 - 3	D7	② HC-A03-I-UT...	1585223	1585210	1																																																																		
Insulation displacement connection 	3	1 - 3	D7	Sleeve housing ③ HC-A3-...Q1,5-TFL-G-PA	1641510	1641581	1	 Dimensional drawing: pin																																																																	
Insulation displacement connection 	3	1 - 3	D7	Coupling housing ④ HC-A3-...Q1,5-KML-G-PA	1641617	1641604	1	<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td></td> <td></td> <td>30</td> <td></td> </tr> <tr> <td>① Pin</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>② Socket</td> <td></td> <td></td> <td>28</td> <td></td> </tr> <tr> <td>② Pin</td> <td></td> <td></td> <td>28.5</td> <td></td> </tr> <tr> <td>③ Socket</td> <td></td> <td></td> <td>66</td> <td></td> </tr> <tr> <td>③ Pin</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>④ Socket</td> <td></td> <td></td> <td>62.8</td> <td></td> </tr> <tr> <td>④ Pin</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>⑤ Socket</td> <td></td> <td></td> <td>33.5</td> <td></td> </tr> <tr> <td>⑤ Pin</td> <td></td> <td></td> <td>34</td> <td></td> </tr> <tr> <td>⑥ Socket</td> <td></td> <td></td> <td>30</td> <td></td> </tr> <tr> <td>⑥ Pin</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		a	b	c	d	① Socket			30		① Pin					② Socket			28		② Pin			28.5		③ Socket			66		③ Pin					④ Socket			62.8		④ Pin					⑤ Socket			33.5		⑤ Pin			34		⑥ Socket			30		⑥ Pin				
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Push-in connection 	4	1 - 4	D7	⑤ HC-A 4-I-PT...	1585281	1585278	10																																																																		
Screw connection 	4	1 - 4	D7	⑥ HC-A04-I-UT...	1585249	1585236	1																																																																		

Accessories



Coding profile
From page 656



Replacement sealing screw
From page 665

Heavy-duty connectors

HEAVYCON D7 – contact inserts

D7, D8, Q7, Q12 series

50 V ... 400 V, 10 A

Connection technology:

– Crimp connection CK 1,6

To determine the corresponding housing, see the system cross-reference list on page 498.

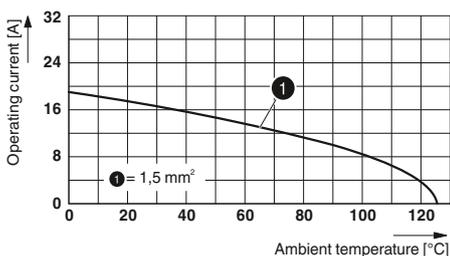
Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
1) For voltages > 42 V, only use with plastic housing

new

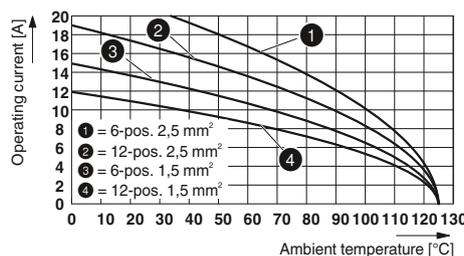


Type	Technical data			
	① HC-D 7-I-CT...	② HC-D 8-I-CT... Without PE	③ HC-Q07-I-CT...	④ HC-Q12-I-CT...
Approvals	UL ENEC IEC	UL ENEC IEC	UL ENEC IEC	UL ENEC IEC
IEC data				
Rated current, contacts (at 40°C)	10 [A]	10	10	10
Overvoltage category	III	III	III	III
Degree of pollution	3	3	3	3
Rated voltage (III/3) contacts	250 ¹⁾ [V]	50	400	400
Rated surge voltage, contacts	4 [kV]	0.8	6	6
Connection cross section	0.14 ... 2.5 [mm ²]	0.14 ... 2.5	0.14 ... 2.5	0.14 ... 2.5
UL data				
Rated voltage	600 [V]	600	600	600
Rated current	12 [A]	12	17.5	15
Connection cross section	14 AWG	14	14	14
CSA / cUL data				
Rated voltage	600 [V]	600	600	600
Rated current	10 [A]	10	13.5	12
Connection cross section	14 AWG	14	14	14
Material data				
Contact carrier material	PC	PC	PC	PC
Inflammability class according to UL 94	V0	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)
Temperature data				
Ambient temperature range	-40 ... 125 [°C]	-40 ... 125	-40 ... 125	-40 ... 125
General data				
Connection technology	Crimp connection	Crimp connection	Crimp connection	Crimp connection
Stripping length	8 [mm]	8	8	8
No. of pos.	7	8	7	12
Contact numbering	1 - 7	1 - 8	1 - 7	1 - 12
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	≥ 500

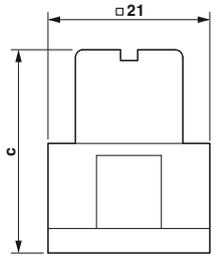
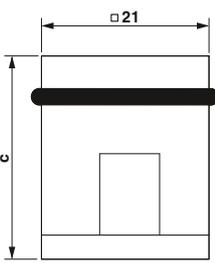
Derating curves



HC-D 7-I-CT...



HC-Q12-I-CT...

Description	Pos.	Number	Size	Ordering data			Pcs./ Pkt.	Dimensions (in mm)																																													
				Type	Socket	Pin																																															
Crimp connection CK 1,6 	7	1 - 7	D7	① HC-D 7-I-CT...	1584347	1584334	1	 Dimensional drawing: socket																																													
Crimp connection CK 1,6 	8	1 - 8	D7	Without PE ② HC-D 8-I-CT...	1584363	1584350	1																																														
Crimp connection CK 1,6 	7	1 - 7	D7	③ HC-Q07-I-CT...	1418623	1418624	1	 Dimensional drawing: pin																																													
Crimp connection CK 1,6 	12	1 - 12	D7	④ HC-Q12-I-CT...	1418625	1418626	1																																														
Turned crimp contacts CK 1,6 Silver-plated 								<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td></td> <td></td> <td>32</td> <td></td> </tr> <tr> <td>① Pin</td> <td></td> <td></td> <td></td> <td>32</td> </tr> <tr> <td>② Socket</td> <td></td> <td></td> <td>32</td> <td></td> </tr> <tr> <td>② Pin</td> <td></td> <td></td> <td></td> <td>32</td> </tr> <tr> <td>③ Socket</td> <td></td> <td></td> <td>40.1</td> <td></td> </tr> <tr> <td>③ Pin</td> <td></td> <td></td> <td>39.5</td> <td></td> </tr> <tr> <td>④ Socket</td> <td></td> <td></td> <td>43.1</td> <td></td> </tr> <tr> <td>④ Pin</td> <td></td> <td></td> <td>40.8</td> <td></td> </tr> </tbody> </table>		a	b	c	d	① Socket			32		① Pin				32	② Socket			32		② Pin				32	③ Socket			40.1		③ Pin			39.5		④ Socket			43.1		④ Pin			40.8	
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④ Socket			43.1																																																		
④ Pin			40.8																																																		
				④ HC-Q12-I-CT...	1418625	1418626	1																																														
				CK1,6-ED-0,37... AG	1663394	1663336	100																																														
				CK1,6-ED-0,50... AG	1663404	1663349	100																																														
				CK1,6-ED-0,75... AG	1663417	1663352	100																																														
				CK1,6-ED-1,00... AG	1663420	1663365	100																																														
				CK1,6-ED-1,50... AG	1663433	1663378	100																																														
				CK1,6-ED-2,50... AG	1663446	1663381	100																																														
Turned crimp contacts CK 1,6 Gold-plated 																																																					
				CK1,6-ED-0,37... AU	1674969	1674901	100																																														
				CK1,6-ED-0,50... AU	1674480	1672453	100																																														
				CK1,6-ED-0,75... AU	1672440	1674914	100																																														
				CK1,6-ED-1,00... AU	1674943	1674888	100																																														
				CK1,6-ED-1,50... AU	1674930	1674875	100																																														
				CK1,6-ED-2,50... AU	1674985	1674927	100																																														

Accessories



Crimping tools
From page 670



Dummy sockets
phoenixcontact.net/products



Replacement sealing screw
From page 665

Heavy-duty connectors

HEAVYCON D7 – contact inserts

Q5 series

230 V / 400 V, 24 A

Connection technology:

– Crimp connection CK 2,5

To determine the corresponding housing, see the system cross-reference list on page 498.

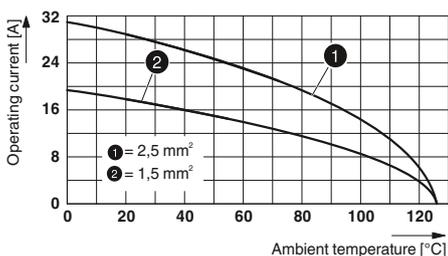
Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off

new

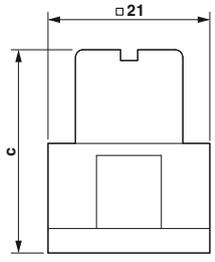
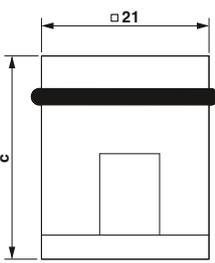


		Technical data			
Type		① HC-Q05-I-CT...			
Approvals		EAC			
IEC data					
Rated current, contacts (at 40°C)	[A]	24			
Overtoltage category		III			
Degree of pollution		3			
Rated voltage (III/3) contacts	[V]	230 / 400			
Rated surge voltage, contacts	[kV]	4			
Connection cross section	[mm ²]	0.5 ... 2.5			
UL data					
Rated voltage	[V]	600			
Rated current	[A]	24			
Connection cross section	AWG	14			
CSA / cUL data					
Rated voltage	[V]	-			
Rated current	[A]	-			
Connection cross section	AWG	-			
Material data					
Contact carrier material		PA			
Inflammability class according to UL 94		V0			
Contact material		Copper alloy			
Contact surface material		Ag (alternatively Au)			
Temperature data					
Ambient temperature range	[°C]	-40 ... 125			
General data					
Connection technology		Crimp connection			
Hexagonal socket	[mm]	-			
Stripping length	[mm]	7.5			
No. of pos.		5			
Contact numbering		1 - 5			
Insertion/withdrawal cycles		≥ 500			

Derating curves



HC-Q05-I-CT...

Description	Pos.	Number	Size	Ordering data			Pcs. / Pkt.	Dimensions (in mm)															
				Type	Order No. Socket	Order No. Pin																	
Crimp connection CK 2,5 	5	1 - 5	D7	① HC-Q05-I-CT...	1406537	1406538	1	 <p>Dimensional drawing: socket</p>  <p>Dimensional drawing: pin</p>															
								<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td></td> <td></td> <td>40.1</td> <td></td> </tr> <tr> <td>① Pin</td> <td></td> <td></td> <td>39.5</td> <td></td> </tr> </tbody> </table>		a	b	c	d	① Socket			40.1		① Pin			39.5	
	a	b	c	d																			
① Socket			40.1																				
① Pin			39.5																				
Turned crimp contacts CK 2,5 Silver-plated			Cross section mm ² / AWG																				
			0.5 / 20	CK2,5-ED-0,50... AG	1663640	1663572	100																
			0.75 / 18	CK2,5-ED-0,75... AG	1663653	1663585	100																
			0.75 - 1 / 18	CK2,5-ED-1,00... AG	1663666	1663598	100																
			1.5 / 16	CK2,5-ED-1,50... AG	1663679	1663608	100																
			2.5 / 14	CK2,5-ED-2,50... AG	1663682	1663611	100																
			3 / 12	CK2,5-ED-3,00... AG	1663695	1663624	100																
Turned crimp contacts CK 2,5 Gold-plated			Cross section mm ² / AWG																				
			0.5 / 20	CK2,5-ED-0,50... AU	1674859	1674804	100																
			0.75 - 1 / 18	CK2,5-ED-1,00... AU	1674833	1674781	100																
			1.5 / 16	CK2,5-ED-1,50... AU	1674820	1674778	100																
			2.5 / 14	CK2,5-ED-2,50... AU	1674862	1674817	100																

Accessories



Crimping tools
From page 670



Dummy sockets
From page 657

Heavy-duty connectors

HEAVYCON D7 – contact inserts

Q2, Q3, Q4 series

400 V, 40 A

Connection technology:

- Axial screw connection
- Crimp connection CK 4,0

To determine the corresponding housing, see the system cross-reference list on page 498.

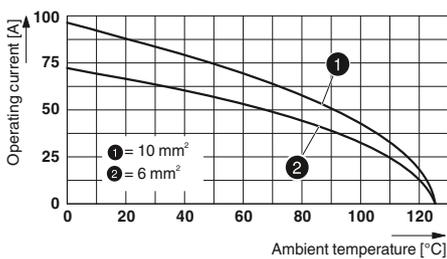
Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off

new

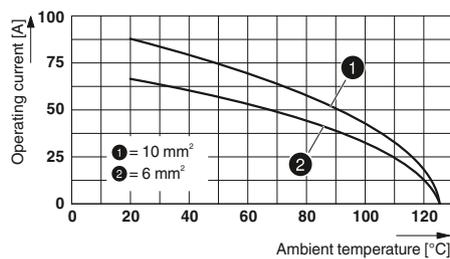


Type	Technical data			
	① HC-HS 2-D7-E...S	② HC-Q02-I-CT...	③ HC-Q03-I-CT...	④ HC-Q04-I-CT...
Approvals		-	-	-
IEC data				
Rated current, contacts (at 40°C)	[A] 40	40	40	40
Overvoltage category	III	III	III	III
Degree of pollution	3	3	3	3
Rated voltage (III/3) contacts	[V] 400	400	400	400
Rated surge voltage, contacts	[kV] 6	6	6	6
Connection cross section	[mm²] 4 ... 10	1.5 ... 6	1.5 ... 6	1.5 ... 6
UL data				
Rated voltage	[V] 400	-	-	-
Rated current	[A] 28	-	-	-
Connection cross section	AWG 12	-	-	-
CSA / cUL data				
Rated voltage	[V] 400	-	-	-
Rated current	[A] 26	-	-	-
Connection cross section	AWG 12	-	-	-
Material data				
Contact carrier material	PC	PC	PC	PC
Inflammability class according to UL 94	V0	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Ag	Ag	Ag	Ag
Temperature data				
Ambient temperature range	[°C] -40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data				
Connection technology	Axial screw connection	Crimp connection	Crimp connection	Crimp connection
Hexagonal socket	[mm] 2	2	2	2
Stripping length	[mm] 8	9	9	9
No. of pos.	2	2	3	4
Contact numbering	1 - 2	1 - 2	1 - 2	1 - 2
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	≥ 500

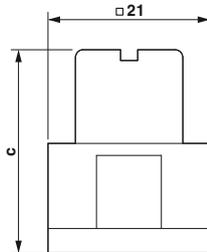
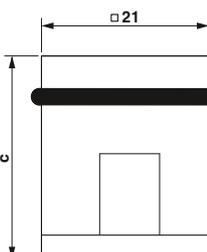
Derating curves



HC-HS 2-D7-E...S



HC-Q...-I-CT...

				Ordering data			Dimensions (in mm)																																																				
Description	Pos.	Number	Size	Type	Order No.		Pcs. / Pkt.																																																				
					Socket	Pin																																																					
Axial screw connection											 <p>Dimensional drawing: socket</p>																																																
	2	1 - 2	D7	① HC-HS 2-D7-E...S	1586264	1586277	10																																																				
Crimp connection CK 4,0											 <p>Dimensional drawing: pin</p>																																																
	2	1 - 2	D7	② HC-Q02-I-CT...	1419895	1419893	2																																																				
Crimp connection CK 4,0											<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td></td> <td></td> <td>34.8</td> <td></td> </tr> <tr> <td>① Pin</td> <td></td> <td></td> <td>40</td> <td></td> </tr> <tr> <td>② Socket</td> <td></td> <td></td> <td>34.8</td> <td></td> </tr> <tr> <td>② Pin</td> <td></td> <td></td> <td>40</td> <td></td> </tr> <tr> <td>③ Socket</td> <td></td> <td></td> <td>34.8</td> <td></td> </tr> <tr> <td>③ Pin</td> <td></td> <td></td> <td>40</td> <td></td> </tr> <tr> <td>④ Socket</td> <td></td> <td></td> <td>34.8</td> <td></td> </tr> <tr> <td>④ Pin</td> <td></td> <td></td> <td>40</td> <td></td> </tr> </tbody> </table>					a	b	c	d	① Socket			34.8		① Pin			40		② Socket			34.8		② Pin			40		③ Socket			34.8		③ Pin			40		④ Socket			34.8		④ Pin			40	
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Crimp connection CK 4,0											<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>④ Socket</td> <td></td> <td></td> <td>34.8</td> <td></td> </tr> <tr> <td>④ Pin</td> <td></td> <td></td> <td>40</td> <td></td> </tr> </tbody> </table>					a	b	c	d	④ Socket			34.8		④ Pin			40																															
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④ Socket			34.8																																																								
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	4	1 - 2	D7	④ HC-Q04-I-CT...	1419899	1419898	2																																																				
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		1.5 / 16		CK4,0-ED-1,50... AG		1663271 1663239		25																																																			
		2.5 / 14		CK4,0-ED-2,50... AG		1663284 1663242		25																																																			
		4 / 12		CK4,0-ED-4,00... AG		1663297 1663255		25																																																			
		6 / 10		CK4,0-ED-6,00... AG		1663307 1663268		25																																																			
		10 / 8		CK4,0-ED-10,00... AG		1586183 1586198		25																																																			

Accessories



Crimping tools
From page 670



HC-HS 2... coding profile
From page 656



Coding profile
From page 656

Heavy-duty connectors

HEAVYCON D7 – housing

Size D7, plastic, sleeve housing for single locking latch

new

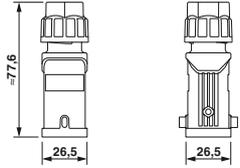
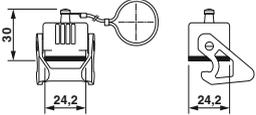
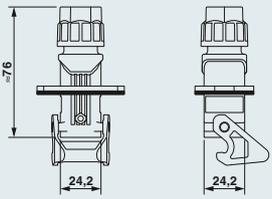
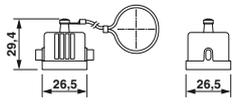


Technical data

General data

Housing material	PA
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Clamping area	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 77.6 mm 	4 mm ... 10 mm 10 mm ... 16 mm	HC-STA-D07-HHFS-1TGM20-PL-BK	1419255	1	
		HC-STA-D07-HHFS-1TGM25-PL-BK	1419256	1	
Sleeve housing Height: 54.5 mm 	4 mm ... 10 mm 10 mm ... 16 mm	HC-STA-D07-HHFS-1SGM20-PL-BK	1419257	1	
		HC-STA-D07-HHFS-1SGM25-PL-BK	1419258	1	
Protective cover, for sleeve housing Height: 30 mm 		Socket HC-STA-D07-HCLWS-PLR-BK	1419274	1	
		Pin HC-STA-D07-HCLWS-PL-BK	1419275	1	
Coupling housing, with single locking latch Height: 76 mm 	4 mm ... 10 mm	HC-STA-D07-CHPWS-1TGM20-PL-BK	1419269	1	
Protective cover, for coupling housing Height: 29.4 mm 		Socket HC-STA-D07-BCLFS-PLR-BK	1419270	1	
		Pin HC-STA-D07-BCLFS-PL-BK	1419271	1	

Accessories



Replacement sealing screw
From page 665



Replacement latch
From page 663

new

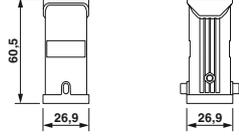
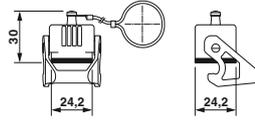
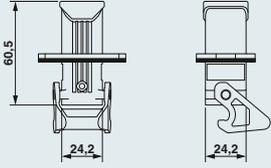
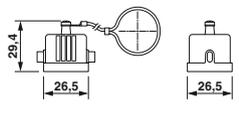
Size D7, metal, sleeve housing for single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 60.5 mm 	1x M20 1x M20 1x Pg11	HC-STA-D07-HHFS-1TTM20-EL-AL	1419229	1	
		HC-STA-D07-HHFS-1TTM25-EL-AL	1419231	1	
		HC-STA-D07-HHFS-1TTP11-EL-AL	1419232	1	
Sleeve housing Height: 52.8 mm 	1x M20 1x M20 1x Pg11	HC-STA-D07-HHFS-1STM20-EL-AL	1419235	1	
		HC-STA-D07-HHFS-1STM25-EL-AL	1419236	1	
		HC-STA-D07-HHFS-1STP11-EL-AL	1419237	1	
Protective cover, for sleeve housing Height: 30 mm 		Socket HC-STA-D07-HCLWS-PLR-BK	1419274	1	
		Pin HC-STA-D07-HCLWS-PL-BK	1419275	1	
Coupling housing, with single locking latch Height: 60.5 mm 1x M20 		HC-STA-D07-CHPWS-1TGM20-EL-AL	1419242	1	
Protective cover, for coupling housing Height: 29.4 mm 		Socket HC-STA-D07-BCLFS-PLR-BK	1419270	1	
		Pin HC-STA-D07-BCLFS-PL-BK	1419271	1	

Accessories



Cable glands
From page 694



Replacement sealing screw
From page 665



Replacement latch
From page 663

Heavy-duty connectors

HEAVYCON D7 – housing

Size D7, plastic,
supporting base element
with single locking latch

new

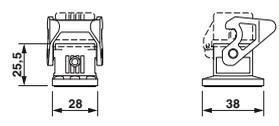
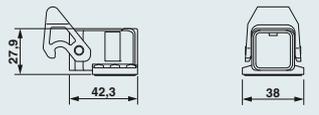
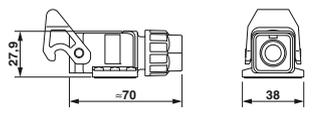
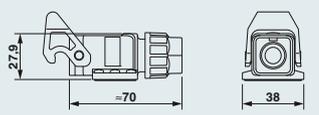
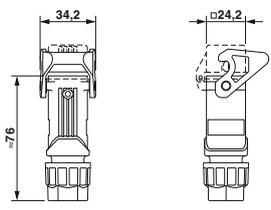
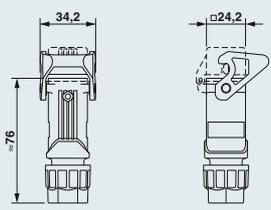
General data

Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
Ambient temperature (operation)	-40°C ... 125°C

Technical data



Ordering data

Description	Clamping area	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base Height: 25.5 mm 		Without cover HC-STA-D07-BWS-PL-BK With cover, socket HC-STA-D07-BWSCF-PL-BK With cover, pin HC-STA-D07-BWSCM-PL-BK	1419265 1419277 1419278	1 1 1	
Panel mounting base Height: 27.9 mm 		Angled version HC-STA-D07-BAWS-PL-BK	1419266	1	
Box mounting base Height: 27.9 mm 	4 mm ... 10 mm	Open base HC-STA-D07-SHOWS-1SGM20-PL-BK	1419267	1	
Box mounting base Height: 28 mm 	4 mm ... 10 mm	Enclosed base HC-STA-D07-SHCWS-1SGM20-PL-BK	1419268	1	
Coupling housing Height: 76 mm 	4 mm ... 10 mm 10 mm ... 16 mm	Without cover HC-STA-D07-CHWS-1TGM20-PL-BK HC-STA-D07-CHWS-1TGM25-PL-BK	1419259 1419260	1 1	
Coupling housing Height: 76 mm 	4 mm ... 10 mm 10 mm ... 16 mm 4 mm ... 10 mm 10 mm ... 16 mm	With cover, socket HC-STA-D07-CHWSCF-1TGM20-PL-BK HC-STA-D07-CHWSCF-1TGM25-PL-BK With cover, pin HC-STA-D07-CHWSCM-1TGM20-PL-BK HC-STA-D07-CHWSCM-1TGM25-PL-BK	1419261 1419262 1419263 1419264	1 1 1 1	

Accessories



Protective cover
From page 652



Replacement sealing screw
From page 665



Replacement seals
From page 662



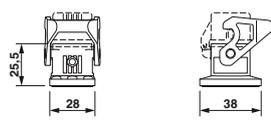
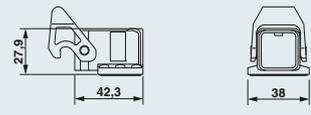
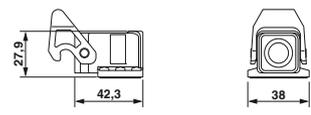
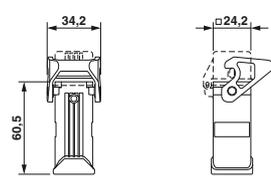
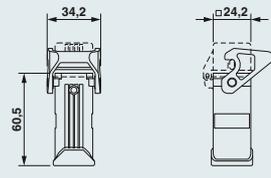
Replacement latch
From page 663

Size D7, metal, supporting base element with single locking latch



General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66 / IP67
Ambient temperature (operation)	-40°C ... 125°C

Technical data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66 / IP67
Ambient temperature (operation)	-40°C ... 125°C

Description		Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base Height: 25.5 mm 			Without cover HC-STA-D07-BWS-EL-AL	1419249	1	
			With cover, socket HC-STA-D07-BWSCM-EL-AL	1419250	1	
			With cover, pin HC-STA-D07-BWSCF-EL-AL	1419251	1	
Panel mounting base Height: 28.5 mm 			Angled version HC-STA-D07-BAWS-EL-AL	1419252	1	
Box mounting base Height: 27.9 mm 	1x M20		Open base HC-STA-D07-SHOWS-1STM20-EL-AL	1419253	1	
		1x Pg11	HC-STA-D07-SHOWS-1STP11-EL-AL	1419233	1	
Box mounting base Height: 27.9 mm 	1x M20		Enclosed base HC-STA-D07-SHCWS-1STM20-EL-AL	1419234	1	
		1x Pg11	HC-STA-D07-SHCWS-1STP11-EL-AL	1419241	1	
Coupling housing Height: 60.5 mm 	1x M20		Without cover HC-STA-D07-CHWS-1TTM20-EL-AL	1419238	1	
	1x M25		HC-STA-D07-CHWS-1TTM25-EL-AL	1419239	1	
		1x Pg11	HC-STA-D07-CHWS-1TTP11-EL-AL	1419240	1	
Coupling housing Height: 60.5 mm 	1x M20		With cover, socket HC-STA-D07-CHWSCF-1TTM20-EL-AL	1419243	1	
	1x M25		HC-STA-D07-CHWSCF-1TTM25-EL-AL	1419244	1	
		1x Pg11	HC-STA-D07-CHWSCF-1TTP11-EL-AL	1419245	1	
	1x M20		With cover, pin HC-STA-D07-CHWSCM-1TTM20-EL-AL	1419246	1	
	1x M25		HC-STA-D07-CHWSCM-1TTM25-EL-AL	1419247	1	
		1x Pg11	HC-STA-D07-CHWSCM-1TTP11-EL-AL	1419248	1	

Accessories



Protective cover
From page 652



Cable glands
From page 694



Replacement seals
From page 662



Replacement latch
From page 663

Heavy-duty connectors

HEAVYCON D – contact inserts

A10 series

250 V, 16 A ... 20 A

Connection technology:

- Push-in connection
- Screw connection
- Crimp connection

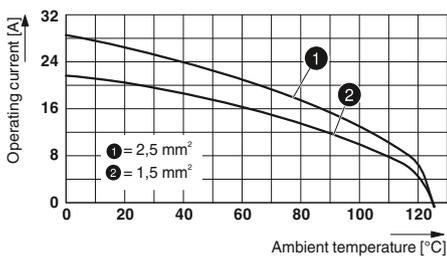
To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off

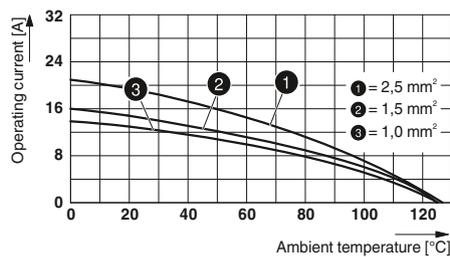


Type	Technical data		
	① HC-A 10-I-PT...	② HC-A 10-I-UT...	③ HC-A 10-E...C
Approvals	ERC (BL)	CE ENEC (BL)	CE VDE ENEC
IEC data			
Rated current, contacts (at 40°C)	[A] 20	20	16
Overtoltage category	III	III	III
Degree of pollution	3	3	3
Rated voltage (III/3) contacts	[V] 250	250	250
Rated surge voltage, contacts	[kV] 4	4	4
Connection cross section	[mm²] 0.14 ... 2.5	0.5 ... 2.5	0.5 ... 4
UL data			
Rated voltage	[V] -	600	600
Rated current	[A] -	19	-
Connection cross section	AWG -	14	-
CSA / cUL data			
Rated voltage	[V] -	600	600
Rated current	[A] -	15	10
Connection cross section	AWG -	14	20-13
Material data			
Contact carrier material	PC	PC	PA
Inflammability class according to UL 94	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Ag	Ag	Ag (alternatively Au)
Temperature data			
Ambient temperature range	[°C] -40 ... 125	-40 ... 125	-40 ... 125
General data			
Connection technology	Push-in connection	Screw connection	Crimp connection
Stripping length	[mm] 8	7	8
No. of pos.	10	10	10
Contact numbering	1 - 10	1 - 10	1 - 10
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500

Derating curves

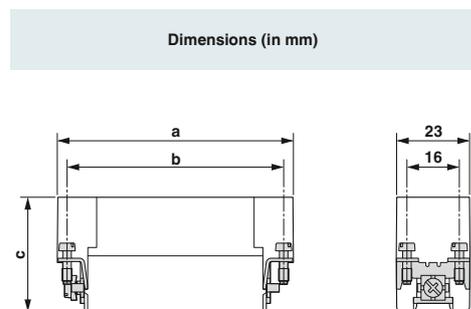


HC-A 10-I-UT...

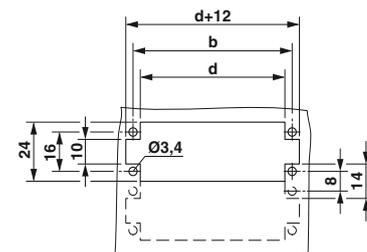


HC-A 10-E...C

Description	Pos.	Number	Size	Ordering data				
				Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.	
Push-in connection 	10	1 - 10	D15	① HC-A 10-I-PT...	1585362	1585359	1	
Screw connection 	10	1 - 10	D15	② HC-A 10-I-UT...	1585304	1585294	1	
Crimp connection CK 2,5 	10	1 - 10	D15	③ HC-A 10-E...C	1676983	1676996	10	
Turned crimp contacts CK 2,5 Silver-plated				Cross section mm² / AWG 0.5 / 20 CK2,5-ED-0,50... AG 0.75 / 18 CK2,5-ED-0,75... AG 0.75 - 1 / 18 CK2,5-ED-1,00... AG 1.5 / 16 CK2,5-ED-1,50... AG 2.5 / 14 CK2,5-ED-2,50... AG 4 / 12 CK2,5-ED-4,00... AG		1663640 1663653 1663666 1663679 1663682 1663705	1663572 1663585 1663598 1663608 1663611 1663637	100 100 100 100 100 100
Turned crimp contacts CK 2,5 Gold-plated				Cross section mm² / AWG 0.5 / 20 CK2,5-ED-0,50... AU 0.75 - 1 / 18 CK2,5-ED-1,00... AU 1.5 / 16 CK2,5-ED-1,50... AU 2.5 / 14 CK2,5-ED-2,50... AU 4 / 12 CK2,5-ED-4,00... AU		1674859 1674833 1674820 1674862 1674846	1674804 1674781 1674778 1674817 1674794	100 100 100 100 100



Dimensional drawing



Panel cutout

	a	b	c	d
① Socket	55.5	49.5	34.1	43.5
① Pin				
② Socket	55.5	49.5	31.5	43.5
② Pin			34.1	
③ Socket	56.5	49.5	30	43.5
③ Pin			33	

Accessories



Crimping tools
From page 670



Coding profiles
From page 656



Coding elements
From page 657



Replacement PE screws
From page 664

Heavy-duty connectors

HEAVYCON D – contact inserts

A16 series

250 V, 16 A ... 20 A

Connection technology:

- Push-in connection
- Screw connection
- Crimp connection

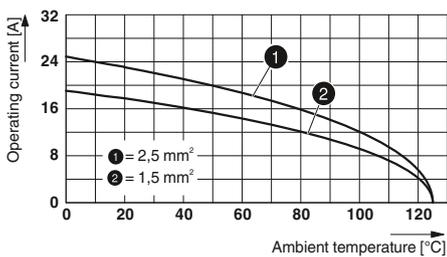
To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off

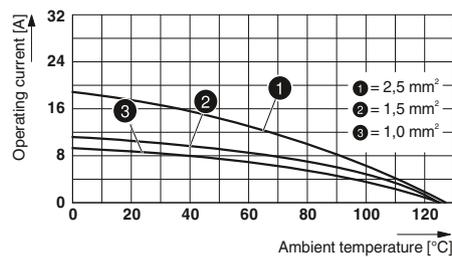


Type	Technical data		
	① ② HC-A 16-I-PT...	③ ④ HC-A 16-I-UT...	⑤ ⑥ HC-A 16-E...C
Approvals	ERC (BL)	UL ENEC (BL)	UL ENEC
IEC data			
Rated current, contacts (at 40°C)	[A] 20	20	16
Overtoltage category	III	III	III
Degree of pollution	3	3	3
Rated voltage (III/3) contacts	[V] 250	250	250
Rated surge voltage, contacts	[kV] 4	4	4
Connection cross section	[mm²] 0.14 ... 2.5	0.5 ... 2.5	0.5 ... 4
UL data			
Rated voltage	[V] -	600	600
Rated current	[A] -	19	-
Connection cross section	AWG -	14	-
CSA / cUL data			
Rated voltage	[V] -	600	600
Rated current	[A] -	15	10
Connection cross section	AWG -	14	20-13
Material data			
Contact carrier material	PC	PC	PA
Inflammability class according to UL 94	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Ag	Ag	Ag (alternatively Au)
Temperature data			
Ambient temperature range	[°C] -40 ... 125	-40 ... 125	-40 ... 125
General data			
Connection technology	Push-in connection	Screw connection	Crimp connection
Stripping length	[mm] 8	7	8
No. of pos.	16	16	16
Contact numbering	1 - 16	1 - 16	1 - 16
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500

Derating curves

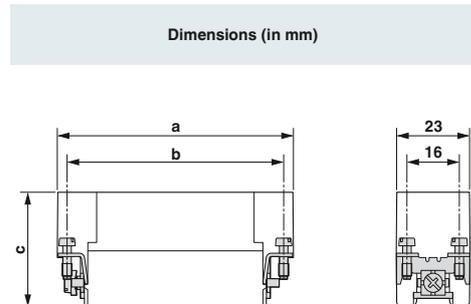


HC-A 16-I-UT...

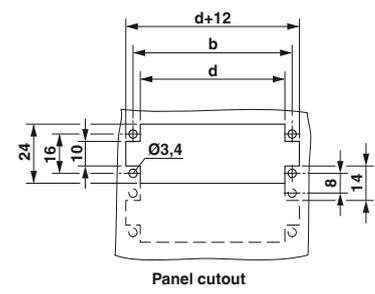


HC-A 16-E...C

Description	Pos.	Number	Size	Type	Order No.		Pcs. / Pkt.
					Socket	Pin	
Push-in connection							
	16	1 - 16	D25	① HC-A 16-I-PT-...	1585388	1585375	1
	16	17 - 32	D25	② HC-A 16-I-PT-...-32	1585401	1585391	1
Screw connection							
	16	1 - 16	D25 / D50	③ HC-A 16-I-UT-...	1585320	1585317	1
	16	17 - 32	D25 / D50	④ HC-A 16-I-UT-...-32	1585346	1585333	1
Crimp connection CK 2,5							
	16	1 - 16	D25 / D50	⑤ HC-A 16-E...C	1677018	1677034	10
	16	17 - 32	D25 / D50	⑥ HC-A 16-E...C-32	1677050	1677076	10
Turned crimp contacts CK 2,5 Silver-plated							
			Cross section mm² / AWG				
			0.5 / 20	CK2,5-ED-0,50... AG	1663640	1663572	100
			0.75 / 18	CK2,5-ED-0,75... AG	1663653	1663585	100
			0.75 - 1 / 18	CK2,5-ED-1,00... AG	1663666	1663598	100
			1.5 / 16	CK2,5-ED-1,50... AG	1663679	1663608	100
			2.5 / 14	CK2,5-ED-2,50... AG	1663682	1663611	100
			4 / 12	CK2,5-ED-4,00... AG	1663705	1663637	100
Turned crimp contacts CK 2,5 Gold-plated							
			Cross section mm² / AWG				
			0.5 / 20	CK2,5-ED-0,50... AU	1674859	1674804	100
			0.75 - 1 / 18	CK2,5-ED-1,00... AU	1674833	1674781	100
			1.5 / 16	CK2,5-ED-1,50... AU	1674820	1674778	100
			2.5 / 14	CK2,5-ED-2,50... AU	1674862	1674817	100
			4 / 12	CK2,5-ED-4,00... AU	1674846	1674794	100



Dimensional drawing



Panel cutout

	a	b	c	d
① Socket			31.5	
① Pin	72	66	34.1	60
② Socket			31.5	
② Pin	72	66	34.1	60
③ Socket			31.5	
③ Pin	72	66	34.1	60
④ Socket			31.5	
④ Pin	72	66	34.1	60
⑤ Socket			31.7	
⑤ Pin	72	66	31.8	60
⑥ Socket			31.7	
⑥ Pin	72	66	31.8	60

Accessories

			
Crimping tools From page 670	Coding profiles From page 656	Coding elements From page 657	Replacement PE screws From page 664

Heavy-duty connectors

HEAVYCON D – contact inserts

D15, D25 series

250 V, 10 A

Connection technology:

– Crimp connection

Guide pins and sockets are mandatory for HC-D... and HC-DD series contact inserts; see page 657.

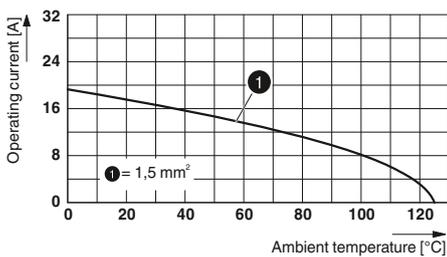
To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off

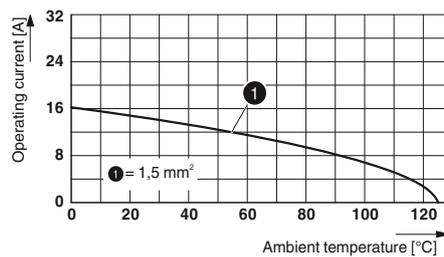


Type	Technical data		
	① HC-D 15-I-CT...	② ③ HC-D 25-I-CT...	④ HC-D 25-I-CT...-Z
Approvals	CE ENEC RL	CE ENEC RL	CE ENEC RL
IEC data			
Rated current, contacts (at 40°C)	10	10	10
Overvoltage category	III	III	III
Degree of pollution	3	3	3
Rated voltage (III/3) contacts	250	250	250
Rated surge voltage, contacts	4	4	4
Connection cross section	0.14 ... 2.5	0.14 ... 2.5	0.14 ... 2.5
UL data			
Rated voltage	600	600	600
Rated current	10	10	10
Connection cross section	14	14	14
CSA / cUL data			
Rated voltage	600	600	600
Rated current	8	8	8
Connection cross section	14	14	14
Material data			
Contact carrier material	PC	PC	PA
Inflammability class according to UL 94	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)
Temperature data			
Ambient temperature range	-40 ... 125	-40 ... 125	-40 ... 125
General data			
Connection technology	Crimp connection	Crimp connection	Crimp connection
Stripping length	8	8	8
No. of pos.	15	25	25
Contact numbering	-	-	-
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500

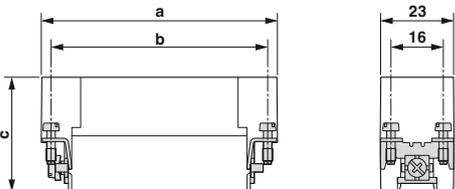
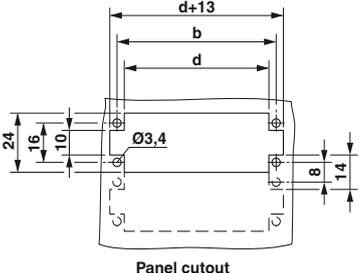
Derating curves



HC-D 15-I-CT....



HC-D 25-I-CT...

				Ordering data																																																				
Description	Pos.	Number	Size	Type	Order No.		Pcs. / Pkt.	Dimensions (in mm)																																																
					Socket	Pin		Dimensional drawing																																																
Crimp connection CK 1,6 	15		D15	① HC-D 15-I-CT-...	1584389	1584376	1																																																	
Crimp connection CK 1,6 	25		D25 / D50	② HC-D 25-I-CT-...	1584402	1584392	1	 <p>Panel cutout</p>																																																
	25		D25 / D50	③ HC-D 25-I-CT-...	1584402	1584392	1																																																	
Crimp connection CK 1,6 	25		D25 / D50	④ HC-D 25-I-CT-...-Z	1411481	1411478	1																																																	
								<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td></td> <td></td> <td>33.5</td> <td></td> </tr> <tr> <td>① Pin</td> <td>55.4</td> <td>49.5</td> <td>34.2</td> <td>43.5</td> </tr> <tr> <td>② Socket</td> <td></td> <td></td> <td>33.5</td> <td></td> </tr> <tr> <td>② Pin</td> <td>72</td> <td>66</td> <td>34.2</td> <td>60</td> </tr> <tr> <td>③ Socket</td> <td></td> <td></td> <td>33.5</td> <td></td> </tr> <tr> <td>③ Pin</td> <td>72</td> <td>66</td> <td>34.2</td> <td>60</td> </tr> <tr> <td>④ Socket</td> <td></td> <td></td> <td>33.5</td> <td></td> </tr> <tr> <td>④ Pin</td> <td>72</td> <td>66</td> <td>34.2</td> <td>60</td> </tr> </tbody> </table>					a	b	c	d	① Socket			33.5		① Pin	55.4	49.5	34.2	43.5	② Socket			33.5		② Pin	72	66	34.2	60	③ Socket			33.5		③ Pin	72	66	34.2	60	④ Socket			33.5		④ Pin	72	66	34.2	60
	a	b	c	d																																																				
① Socket			33.5																																																					
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④ Pin	72	66	34.2	60																																																				
Turned crimp contacts CK 1,6 Silver-plated 			Cross section mm ² / AWG 0.14 - 0.37 / 26 - 22 0.5 / 20 0.75 / 18 0.75 - 1 / 18 1.5 / 16 2.5 / 14	CK1,6-ED-0,37... AG CK1,6-ED-0,50... AG CK1,6-ED-0,75... AG CK1,6-ED-1,00... AG CK1,6-ED-1,50... AG CK1,6-ED-2,50... AG	1663394 1663404 1663417 1663420 1663433 1663446	1663336 1663349 1663352 1663365 1663378 1663381	100 100 100 100 100 100																																																	
Turned crimp contacts CK 1,6 Gold-plated 			Cross section mm ² / AWG 0.14 - 0.37 / 24 - 22 0.5 / 20 0.75 / 18 0.75 - 1 / 18 1.5 / 16 2.5 / 14	CK1,6-ED-0,37... AU CK1,6-ED-0,50... AU CK1,6-ED-0,75... AU CK1,6-ED-1,00... AU CK1,6-ED-1,50... AU CK1,6-ED-2,50... AU	1674969 1674480 1672440 1674943 1674930 1674985	1674901 1672453 1674914 1674888 1674875 1674927	100 100 100 100 100 100																																																	

Accessories



Crimping tools
From page 670



Guide elements
From page 657



Replacement PE screws
From page 664

Heavy-duty connectors

HEAVYCON D – housing

Size D15, plastic, EVO sleeve housing for single locking latch



General data

Housing material	PA
Locking latch material	-
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Technical data

Ordering data

Description

Thread

Type

Order No.

Pcs. / Pkt.

Dimensions

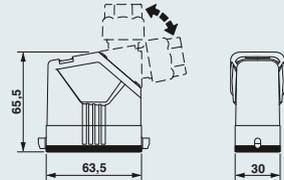
Sleeve housing Height: 65.5 mm



HC-EVO-D15-HHFS-PL-BK

1411340

1



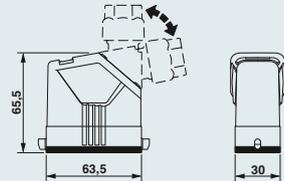
Sleeve housing Height: 65.5 mm



HC-EVO-D15-HHFS-PL-BK

1411340

1



Cable gland

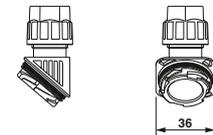
Clamping area
7 mm ... 13 mm
9 mm ... 17 mm



HC-D-G-M20-PLRBK
HC-D-G-M25-PLRBK

1411350
1411351

1
1



Connector set



Without cover, screw connection
HC-EVO-A10UT-BWS-HH-M20-PLRBK
With cover, screw connection
HC-EVO-A10UT-BWSC-HH-M20-PLRBK

1411356

1

1411357

1

Notes:

Marking label: US-EMP (20X9) Order No. 0829439

Accessories



EVO unlocking
From page 661



Thread adapter
From page 658

new

Size D15, metal, STANDARD sleeve housing for single locking latch

General data

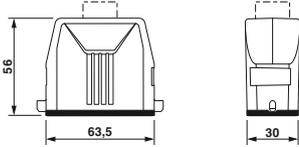
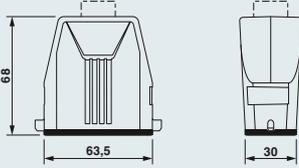
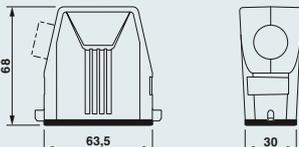
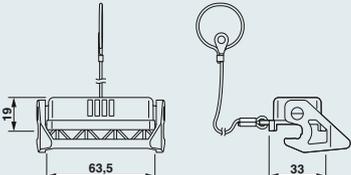
Housing material
Locking latch material
Sealing material
IP degree of protection (when plugged in)
NEMA degree of protection (when plugged in)
Ambient temperature (operation)

Technical data

Die-cast aluminum, salt water resistant
-
NBR
IP66 / IP67
4 / 4X / 12
-40°C ... 125°C



Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 56 mm 		HC-STA-D15-HLFS-1TTM20-ELC-AL	1424350	1	
		HC-STA-D15-HLFS-1TTP13-ELC-AL	1424352	1	
Sleeve housing Height: 68 mm 		HC-STA-D15-HHFS-1TTM25-ELC-AL	1424351	1	
		HC-STA-D15-HHFS-1TTP16-ELC-AL	1424353	1	
		HC-STA-D15-HHFS-1TTP21-ELC-AL	1424358	1	
Sleeve housing Height: 56 mm 		HC-STA-D15-HLFS-1STM20-ELC-AL	1424345	1	
		HC-STA-D15-HLFS-1STP16-ELC-AL	1424347	1	
Sleeve housing Height: 68 mm 		HC-STA-D15-HHFS-1STM25-ELC-AL	1424346	1	
		HC-STA-D15-HHFS-1STP16-ELC-AL	1424348	1	
		HC-STA-D15-HHFS-1STP21-ELC-AL	1424349	1	
Protective cover 		HC-STA-D15-HCLWS-PL-BK	1424375	1	

Notes:

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 694



Cover plates
From page 666



D-SUB adapter plates
From page 667

Heavy-duty connectors

HEAVYCON D – housing

Size D15, plastic, EVO supporting base element with single locking latch

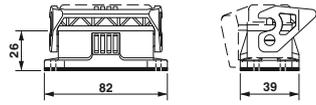
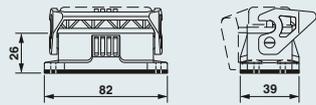
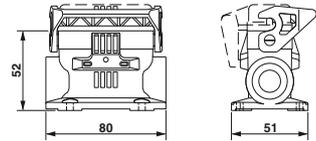
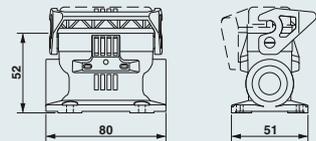
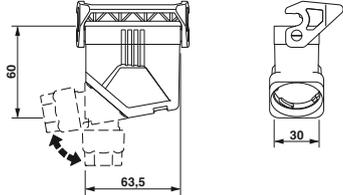
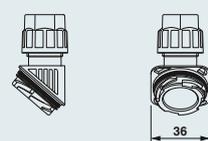
General data

Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Technical data



Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base Height: 26 mm 		Without cover HC-EVO-D15-BWS-PLR-BK	1411336	1	
Panel mounting base Height: 26 mm 		With cover HC-EVO-D15-BWSC-PLR-BK	1411337	1	
Box mounting base¹⁾ Height: 52 mm 	2x M20 2x M25	Without cover HC-EVO-D15-SLWS-2SSM20-PLR-BK HC-EVO-D15-SLWS-2SSM25-PLR-BK	1421463 1411341	1 1	
Box mounting base¹⁾ Height: 52 mm 	2x M20 2x M25	With cover HC-EVO-D15-SLWSC-2SSM20-PLR-BK HC-EVO-D15-SLWSC-2SSM25-PLR-BK	1421465 1411343	1 1	
Coupling housing Height: 60 mm 		HC-EVO-D15-CHWS-PL-BK	1411338	1	
Cable gland 	Clamping area 7 mm ... 13 mm 9 mm ... 17 mm	HC-D-G-M20-PLRBK HC-D-G-M25-PLRBK	1411350 1411351	1 1	

Notes:

¹⁾ One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 658



Replacement protective cover
From page 653



Replacement latch
From page 663

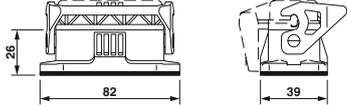
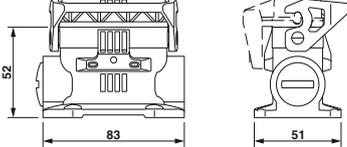
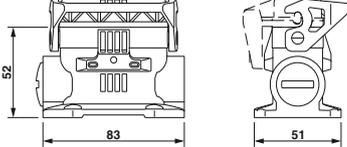
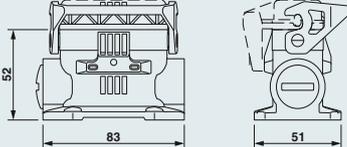
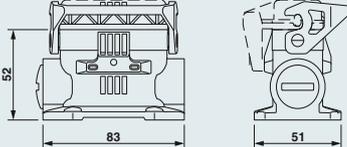
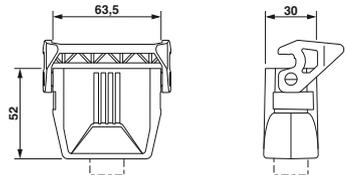
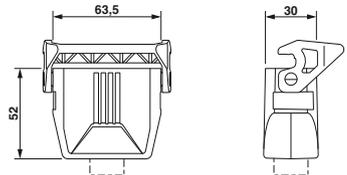
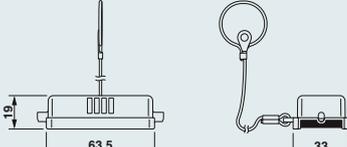
Size D15, metal, STANDARD supporting base element with single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base Height: 26 mm 		Without cover HC-STA-D15-BWS-EL-AL	1424362	1	
Panel mounting base Height: 26 mm 		With cover HC-STA-D15-BWSC-EL-AL	1424363	1	
Box mounting base Height: 52 mm 		Without cover HC-STA-D15-SLWS-2SSM20-EL-AL HC-STA-D15-SLWS-2SSM25-EL-AL	1424364 1424365	1 1	
Box mounting base Height: 52 mm 		Without cover HC-STA-D15-SLWS-2SSP16-EL-AL HC-STA-D15-SLWS-2SSP21-EL-AL	1424366 1424367	1 1	
Box mounting base Height: 52 mm 		With cover HC-STA-D15-SLWSC-2SSM20-EL-AL HC-STA-D15-SLWSC-2SSM25-EL-AL	1424369 1424371	1 1	
Box mounting base Height: 52 mm 		With cover HC-STA-D15-SLWSC-2SSP16-EL-AL HC-STA-D15-SLWSC-2SSP21-EL-AL	1424372 1424373	1 1	
Coupling housing Height: 52 mm 		HC-STA-D15-CLWS-1TTM20-EL-AL HC-STA-D15-CHWS-1TTM25-EL-AL	1424359 1424361	1 1	
Coupling housing Height: 52 mm 		HC-STA-D15-CHWS-1TTP16-EL-AL	1424360	1	
Protective cover 		HC-STA-D15-BCSFS-PLR-BK	1424374	1	

Accessories



Cable glands
From page 694



Replacement latch
From page 663



Replacement seals
From page 662



D-SUB adapter plates
From page 667

Heavy-duty connectors

HEAVYCON D – housing

Size D25, plastic, EVO sleeve housing for single locking latch



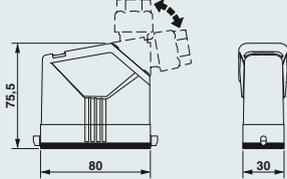
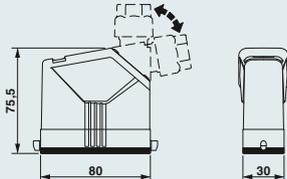
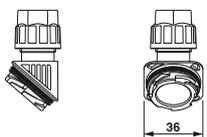
General data

Housing material	PA
Locking latch material	-
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Technical data

Housing material	PA
Locking latch material	-
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 75.5 mm 		HC-EVO-D25-HHFS-PL-BK	1411347	1	
Sleeve housing Height: 75.5 mm 		HC-EVO-D25-HHFS-PL-BK	1411347	1	
Cable gland 	Clamping area 7 mm ... 13 mm 9 mm ... 17 mm	HC-D-G-M20-PLRBK HC-D-G-M25-PLRBK	1411350 1411351	1 1	
Connector set 		Without cover, screw connection HC-EVO-A16UT-BWS-HH-M25-PLRBK With cover, screw connection HC-EVO-A16UT-BWSC-HH-M25-PLRBK	1411358 1411359	1 1	

Notes:

Marking label: US-EMP (20X9) Order No. 0829439

Accessories



EVO unlocking
From page 661



Thread adapter
From page 658

new

Size D25, metal, STANDARD sleeve housing for single locking latch

General data

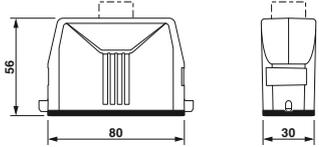
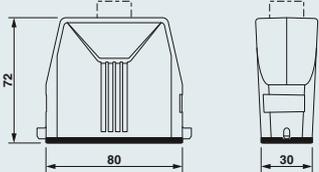
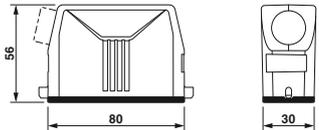
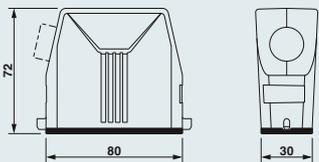
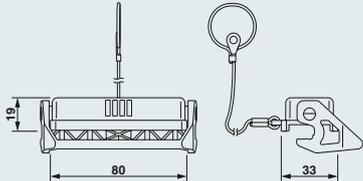
Housing material
Locking latch material
Sealing material
IP degree of protection (when plugged in)
NEMA degree of protection (when plugged in)
Ambient temperature (operation)

Technical data

Die-cast aluminum, salt water resistant
-
NBR
IP66 / IP67
4 / 4X / 12
-40°C ... 125°C



Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 56 mm 		HC-STA-D25-HLFS-1TTM20-ELC-AL	1424381	1	
		HC-STA-D25-HLFS-1TTP16-ELC-AL	1424383	1	
Sleeve housing Height: 72 mm 		HC-STA-D25-HHFS-1TTM25-ELC-AL	1424382	1	
		HC-STA-D25-HHFS-1TTP16-ELC-AL	1424384	1	
		HC-STA-D25-HHFS-1TTP21-ELC-AL	1424385	1	
Sleeve housing Height: 56 mm 		HC-STA-D25-HLFS-1STM20-ELC-AL	1424376	1	
		HC-STA-D25-HLFS-1STP16-ELC-AL	1424378	1	
Sleeve housing Height: 72 mm 		HC-STA-D25-HHFS-1STM25-ELC-AL	1424377	1	
		HC-STA-D25-HHFS-1STP16-ELC-AL	1424379	1	
		HC-STA-D25-HHFS-1STP21-ELC-AL	1424380	1	
Protective cover 		HC-STA-D25-HCLWS-PL-BK	1424400	1	

Notes:

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 694



Cover plates
From page 666



D-SUB adapter plates
From page 667

Heavy-duty connectors

HEAVYCON D – housing

Size D25, plastic, EVO supporting base element with single locking latch

General data

Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Technical data



Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base Height: 26 mm		Without cover HC-EVO-D25-BWS-PLR-BK	1411344	1	
Panel mounting base Height: 26 mm		With cover HC-EVO-D25-BWSC-PLR-BK	1411345	1	
Box mounting base ¹⁾ Height: 57 mm	2x M20 2x M25	Without cover HC-EVO-D25-SLWS-2SSM20-PLR-BK HC-EVO-D25-SLWS-2SSM25-PLR-BK	1421466 1411348	1 1	
Box mounting base ¹⁾ Height: 57 mm	2x M20 2x M25	With cover HC-EVO-D25-SLWSC-2SSM20-PLR-BK HC-EVO-D25-SLWSC-2SSM25-PLR-BK	1421467 1411349	1 1	
Coupling housing Height: 70 mm		HC-EVO-D25-CHWS-PLR-BK	1411346	1	
Cable gland	Clamping area 7 mm ... 13 mm 9 mm ... 17 mm	HC-D-G-M20-PLRBK HC-D-G-M25-PLRBK	1411350 1411351	1 1	

Notes:

¹⁾ One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 658



Replacement protective cover
From page 653



Replacement latch
From page 663

new

Size D25, metal, STANDARD supporting base element with single locking latch

General data

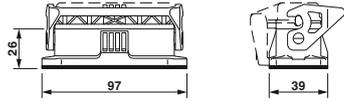
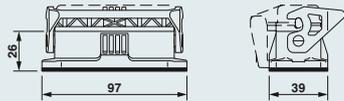
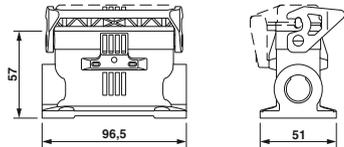
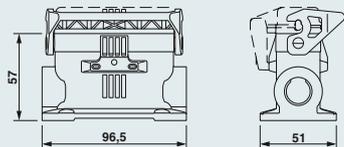
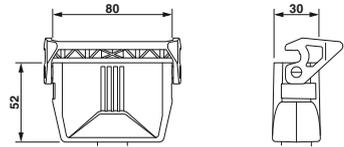
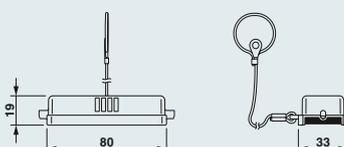
Housing material
Locking latch material
Sealing material
IP degree of protection (when plugged in)
NEMA degree of protection (when plugged in)
Ambient temperature (operation)

Technical data

Die-cast aluminum, salt water resistant
PA
NBR, conductive
IP66 / IP67
4 / 4X / 12
-40°C ... 125°C



Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base Height: 26 mm 		Without cover HC-STA-D25-BWS-EL-AL	1424391	1	
Panel mounting base Height: 26 mm 		With cover HC-STA-D25-BWSC-EL-AL	1424390	1	
Box mounting base Height: 57 mm 		Without cover HC-STA-D25-SLWS-2SSM20-EL-AL HC-STA-D25-SLWS-2SSM25-EL-AL Without cover HC-STA-D25-SLWS-2SSP16-EL-AL HC-STA-D25-SLWS-2SSP21-EL-AL	1424392 1424393 1424394 1424395	1 1 1 1	
Box mounting base Height: 57 mm 		With cover HC-STA-D25-SLWSC-2SSM20-EL-AL HC-STA-D25-SLWSC-2SSM25-EL-AL With cover HC-STA-D25-SLWSC-2SSP16-EL-AL HC-STA-D25-SLWSC-2SSP21-EL-AL	1424396 1424397 1424398 1424399	1 1 1 1	
Coupling housing Height: 52 mm 		HC-STA-D25-CLWS-1TTM20-EL-AL HC-STA-D25-CHWS-1TTM25-EL-AL HC-STA-D25-CLWS-1TTP16-EL-AL HC-STA-D25-CHWS-1TTP16-EL-AL	1424386 1424387 1424388 1424389	1 1 1 1	
Protective cover 		HC-STA-D25-BCSFS-PLR-BK	1424401	1	

Accessories



Cable glands
From page 694



Replacement latch
From page 663



Replacement seals
From page 662



D-SUB adapter plates
From page 667

Heavy-duty connectors

HEAVYCON D – housing

Size D50, metal, STANDARD sleeve housing for double locking latch

new



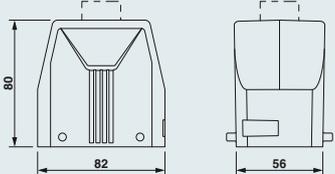
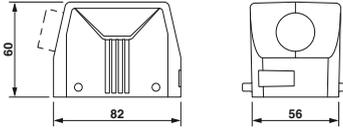
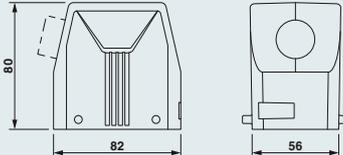
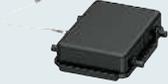
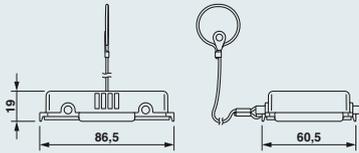
General data

Housing material
Locking latch material
Sealing material
IP degree of protection (when plugged in)
NEMA degree of protection (when plugged in)
Ambient temperature (operation)

Technical data

Die-cast aluminum, salt water resistant
-
-
IP66 / IP67
4 / 4X / 12
-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 80 mm 		HC-STA-D50-HHFD-1TTM25-EL-AL	1424408	1	
		HC-STA-D50-HHFD-1TTM32-EL-AL	1424409	1	
		HC-STA-D50-HHFD-1TTP21-EL-AL	1424410	1	
		HC-STA-D50-HHFD-1TTP29-EL-AL	1424411	1	
Sleeve housing Height: 60 mm 		HC-STA-D50-HLFD-1STM25-EL-AL	1424402	1	
		HC-STA-D50-HLFD-1STP21-EL-AL	1424405	1	
Sleeve housing Height: 80 mm 		HC-STA-D50-HHFD-1STM25-EL-AL	1424403	1	
		HC-STA-D50-HHFD-1STM32-EL-AL	1424404	1	
		HC-STA-D50-HHFD-1STP21-EL-AL	1424406	1	
		HC-STA-D50-HHFD-1STP29-EL-AL	1424407	1	
Protective cover, plastic 		HC-STA-D50-BCSFD-PL-BK	1424417	1	

Notes:

Marking label: US-EMLP-HA (20X9), Order No. [0830989](#)

Accessories



Cable glands
From page 694



Replacement seals
From page 662

new

Size D50, metal, STANDARD supporting base element with double locking latch

General data

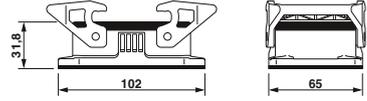
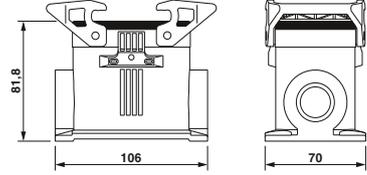
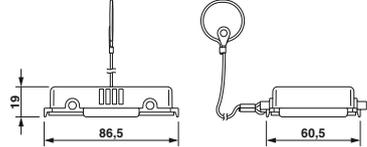
Housing material
Locking latch material
Sealing material
IP degree of protection (when plugged in)
NEMA degree of protection (when plugged in)
Ambient temperature (operation)

Technical data

Die-cast aluminum, salt water resistant
PA
NBR, conductive
IP66 / IP67
4 / 4X / 12
-40°C ... 125°C



Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base Height: 32 mm 		Without cover HC-STA-D50-BWD-ELC-AL	1424412	1	
Box mounting base Height: 82 mm 		Without cover HC-STA-D50-SHWD-2SSM25-ELC-AL HC-STA-D50-SHWD-2SSM32-ELC-AL Without cover HC-STA-D50-SHWD-2SSP21-ELC-AL HC-STA-D50-SHWD-2SSP29-ELC-AL	1424413 1424414 1424415 1424416	1 1 1 1	
Protective cover, plastic 		HC-STA-D50-BCSFD-PL-BK	1424417	1	

Accessories



Cable glands
From page 694

Heavy-duty connectors

HEAVYCON B – contact inserts

D40, D64 series

250 V, 10 A

Connection technology:

– Crimp connection

Guide pins and sockets are mandatory for HC-D... and HC-DD series contact inserts; see page 657.

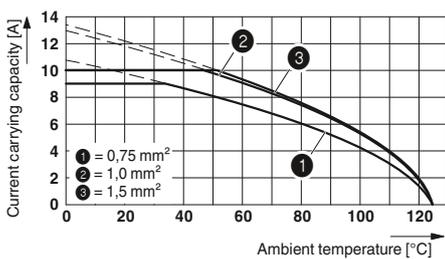
To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off

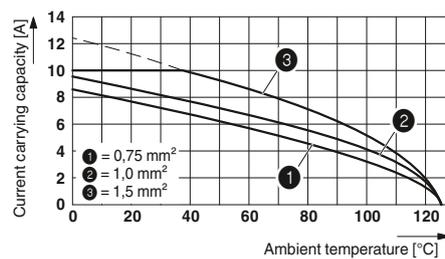


Type	Technical data			
	① HC-D 40-I-CT...		② HC-D 64-I-CT...	
Approvals	UL ENEC RL		UL ENEC RL	
IEC data				
Rated current, contacts (at 40°C)	[A]	10	10	
Overvoltage category		III	III	
Degree of pollution		3	3	
Rated voltage (III/3) contacts	[V]	250	250	
Rated surge voltage, contacts	[kV]	4	4	
Connection cross section	[mm ²]	0.14 ... 2.5	0.14 ... 2.5	
UL data				
Rated voltage	[V]	600	600	
Rated current	[A]	10	10	
Connection cross section	AWG	14	14	
CSA / cUL data				
Rated voltage	[V]	600	600	
Rated current	[A]	7	7	
Connection cross section	AWG	14	14	
Material data				
Contact carrier material		PC	PC	
Inflammability class according to UL 94		V0	V0	
Contact material		Copper alloy	Copper alloy	
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)	
Temperature data				
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	
General data				
Connection technology		Crimp connection	Crimp connection	
Stripping length	[mm]	8	8	
No. of pos.		40	64	
Contact numbering		-	-	
Insertion/withdrawal cycles		≥ 500	≥ 500	

Derating curves

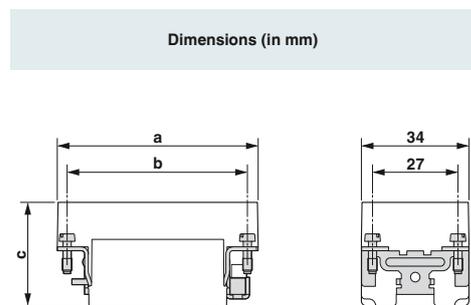


HC-D 40-I-CT...

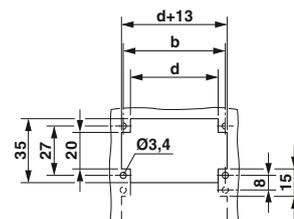


HC-D 64-I-CT...

Description	Pos.	Number	Size	Ordering data		Pcs. / Pkt.	
				Type	Order No.		
				Socket	Pin		
Crimp connection							
	40	B16 / B32		① HC-D 40-I-CT...	1584428	1584415	1
Crimp connection							
	64	B24 / B48		② HC-D 64-I-CT...	1584444	1584431	1
Turned crimp contacts CK 1,6 Silver-plated							
			Cross section mm² / AWG				
			0.14 - 0.37 / 26 - 22	CK1,6-ED-0,37... AG	1663394	1663336	100
			0.5 / 20	CK1,6-ED-0,50... AG	1663404	1663349	100
			0.75 / 18	CK1,6-ED-0,75... AG	1663417	1663352	100
			0.75 - 1 / 18	CK1,6-ED-1,00... AG	1663420	1663365	100
			1.5 / 16	CK1,6-ED-1,50... AG	1663433	1663378	100
			2.5 / 14	CK1,6-ED-2,50... AG	1663446	1663381	100
Turned crimp contacts CK 1,6 Gold-plated							
			Cross section mm² / AWG				
			0.14 - 0.37 / 24 - 22	CK1,6-ED-0,37... AU	1674969	1674901	100
			0.5 / 20	CK1,6-ED-0,50... AU	1674480	1672453	100
			0.75 / 18	CK1,6-ED-0,75... AU	1672440	1674914	100
			0.75 - 1 / 18	CK1,6-ED-1,00... AU	1674943	1674888	100
			1.5 / 16	CK1,6-ED-1,50... AU	1674930	1674875	100



Dimensional drawing



Panel cutout

	a	b	c	d
① Socket			34.2	
① Pin	83.5	77.5	32.8	72
② Socket			34.2	
② Pin	110.5	104.5	32.8	98

Accessories



Crimping tools
From page 670



Guide elements
From page 657



Replacement PE screws
From page 664



Thermal crimp contacts
From page 668

Heavy-duty connectors

HEAVYCON B – contact inserts

D40, D64 series terminal adapters

250 V, 10 A

Connection technology:

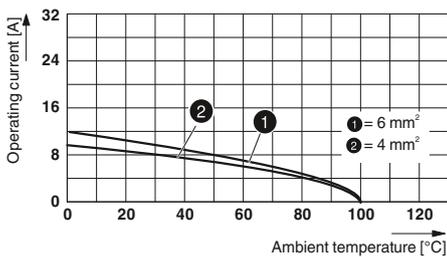
- Push-in connection
- Screw connection

Notes:
For accessories, see from page 652
Not for HC-EVO panel mounting bases
Only operate connectors when there is no load/the power is switched off

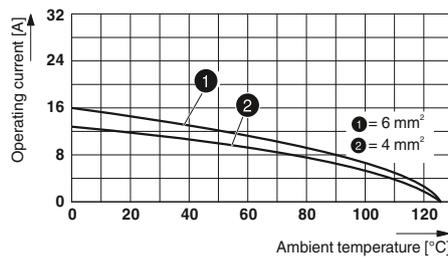


Type	Technical data			
	① ② HC-D 40-A-TWIN-PEL-...	③ ④ HC-D 40-A-UT-PEL-...	⑤ ⑥ HC-D 64-A-TWIN-PEL-...	⑦ ⑧ HC-D 64-A-UT-PEL-...
Approvals				
IEC data				
Rated current, contacts (at 40°C)	[A] 10	10	10	10
Overvoltage category	III	III	III	III
Degree of pollution	3	3	3	3
Rated voltage (III/3) contacts	[V] 250	250	250	250
Rated surge voltage, contacts	[kV] 6	4	6	4
Connection cross section	[mm²] 0.5 ... 2.5	0.5 ... 2.5	0.5 ... 2.5	0.2 ... 2.5
UL data				
Rated voltage	[V] 600	600	600	600
Rated current	[A] 7	7	7	7
Connection cross section	AWG 14	14	14	14
CSA / cUL data				
Rated voltage	[V] 600	600	600	600
Rated current	[A] 7	7	7	7
Connection cross section	AWG 14	14	14	14
Material data				
Contact carrier material	PA	PA	PA	PA
Inflammability class according to UL 94	V0	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Ag	Ag	Ag	Ag
Temperature data				
Ambient temperature range	[°C] -40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data				
Connection technology	Push-in connection	Screw connection	Push-in connection	Screw connection
Stripping length	[mm] 10	10	10	10
No. of pos.	40	40	64	64
Contact numbering	-	-	-	-
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	≥ 500

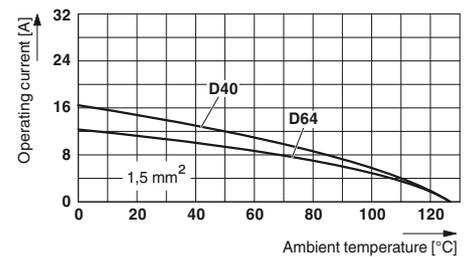
Derating curves



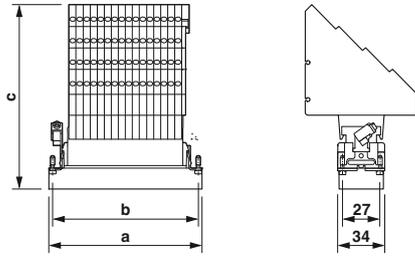
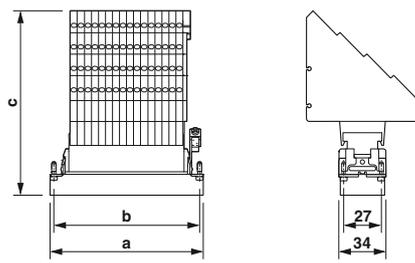
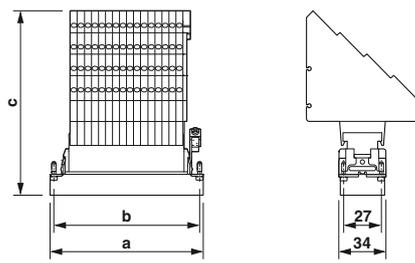
HC-D 40-A-TWIN-PEL-...

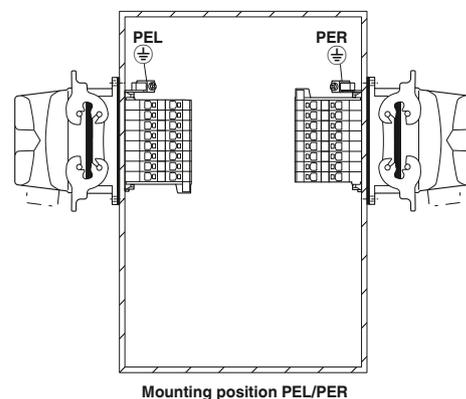


HC-D 64-A-TWIN-PEL-...



HC-D 40-A-UT-PEL-... / HC-D 64-A-UT-PEL-...

Description	Pos.	Number	Size	Type	Ordering data		Pcs. / Pkt.	Dimensions (in mm)																																																																																					
					Socket	Pin																																																																																							
Push-in connection 	40		B16	PE left ① HC-D 40-A-TWIN-PEL...	1580147	1580150	4		PEL																																																																																				
	40		B16	PE right ② HC-D 40-A-TWIN-PER...	1580163	1580176	4																																																																																						
Screw connection 	40		B16	PE left ③ HC-D 40-A-UT-PEL...	1584253	1584240	1		PEL																																																																																				
	40		B16	PE right ④ HC-D 40-A-UT-PER...	1584279	1584266	1																																																																																						
Push-in connection 	64		B24	PE left ⑤ HC-D 64-A-TWIN-PEL...	1580189	1580192	4		PER																																																																																				
	64		B24	PE right ⑥ HC-D 64-A-TWIN-PER...	1580202	1580215	4																																																																																						
Screw connection 	64		B24	PE left ⑦ HC-D 64-A-UT-PEL...	1584295	1584282	1	<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td>83</td> <td>77.5</td> <td>141.1</td> <td></td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>139.3</td> <td></td> </tr> <tr> <td>② Socket</td> <td>83</td> <td>77.5</td> <td>141.1</td> <td></td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>139.3</td> <td></td> </tr> <tr> <td>③ Socket</td> <td>83</td> <td>77.5</td> <td>129.9</td> <td></td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>129.9</td> <td></td> </tr> <tr> <td>④ Socket</td> <td>83</td> <td>77.5</td> <td>129.9</td> <td></td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>129.9</td> <td></td> </tr> <tr> <td>⑤ Socket</td> <td>110</td> <td>104</td> <td>141.1</td> <td></td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>139.3</td> <td></td> </tr> <tr> <td>⑥ Socket</td> <td>110</td> <td>104</td> <td>141.1</td> <td></td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>139.3</td> <td></td> </tr> <tr> <td>⑦ Socket</td> <td>110</td> <td>104</td> <td>132.6</td> <td></td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>132.6</td> <td></td> </tr> <tr> <td>⑧ Socket</td> <td>110</td> <td>104</td> <td>132.6</td> <td></td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>132.6</td> <td></td> </tr> </tbody> </table>		a	b	c	d	① Socket	83	77.5	141.1		Pin			139.3		② Socket	83	77.5	141.1		Pin			139.3		③ Socket	83	77.5	129.9		Pin			129.9		④ Socket	83	77.5	129.9		Pin			129.9		⑤ Socket	110	104	141.1		Pin			139.3		⑥ Socket	110	104	141.1		Pin			139.3		⑦ Socket	110	104	132.6		Pin			132.6		⑧ Socket	110	104	132.6		Pin			132.6	
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Pin			132.6																																																																																										
	64		B24	PE right ⑧ HC-D 64-A-UT-PER...	1584321	1584318	1																																																																																						
Foot element 				HC-KA-FE	1775240		10																																																																																						
Locking screw barrel 				HC-VSH	1660083		10																																																																																						



Mounting position PEL/PER

Heavy-duty connectors

HEAVYCON B – contact inserts

DD24, DD42, DD72, DD108 series

250 V, 10 A

Connection technology:

– Crimp connection

Guide pins and sockets are mandatory for HC-D... and HC-DD series contact inserts; see page 657.

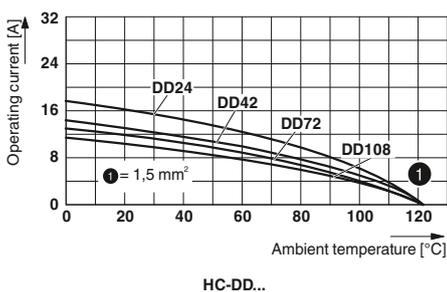
To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



Type	Technical data			
	① HC-DD24-I-CT...	② HC-DD42-I-CT...	③④ HC-DD72-I-CT...	⑤⑥ HC-DD108-I-CT...
Approvals	UL, CSA, ENEC, CE			
IEC data				
Rated current, contacts (at 40°C)	10 [A]	10	10	10
Overvoltage category	III	III	III	III
Degree of pollution	3	3	3	3
Rated voltage (III/3) contacts	250 [V]	250	250	250
Rated surge voltage, contacts	4 [kV]	4	4	4
Connection cross section	0.14 ... 2.5 [mm²]	0.14 ... 2.5	0.14 ... 2.5	0.14 ... 2.5
UL data				
Rated voltage	250 [V]	250	250	250
Rated current	10 [A]	10	10	10
Connection cross section	14 AWG	14	14	14
CSA / cUL data				
Rated voltage	250 [V]	250	250	250
Rated current	7 [A]	7	7	7
Connection cross section	26-14 AWG	26-14	26-14	26-14
Material data				
Contact carrier material	PC	PC	PC	PC
Inflammability class according to UL 94	V0	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)
Temperature data				
Ambient temperature range	-40 ... 125 [°C]	-40 ... 125	-40 ... 125	-40 ... 125
General data				
Connection technology	Crimp connection	Crimp connection	Crimp connection	Crimp connection
Stripping length	8 [mm]	8	8	8
No. of pos.	24	42	72	108
Contact numbering	1 - 24	1 - 42	1 - 72	1 - 108
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	≥ 500

Derating curves



				Ordering data			Dimensions (in mm)																																																																					
Description	Pos.	Number	Size	Type	Order No.		Pcs. / Pkt.																																																																					
					Socket	Pin																																																																						
Crimp connection 	24	1 - 24	B6	① HC-DD24-I-CT...	1584046	1584033	1	<p>Dimensional drawing</p> <p>Panel cutout</p> <table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td>50.5</td> <td>44</td> <td>34.5</td> <td>36</td> </tr> <tr> <td>① Pin</td> <td></td> <td></td> <td>32.5</td> <td></td> </tr> <tr> <td>② Socket</td> <td>64</td> <td>57</td> <td>34.5</td> <td>49</td> </tr> <tr> <td>② Pin</td> <td></td> <td></td> <td>32.5</td> <td></td> </tr> <tr> <td>③ Socket</td> <td>84</td> <td>77.5</td> <td>34.5</td> <td>72</td> </tr> <tr> <td>③ Pin</td> <td></td> <td></td> <td>32.5</td> <td></td> </tr> <tr> <td>④ Socket</td> <td>84</td> <td>77.5</td> <td>34.5</td> <td>72</td> </tr> <tr> <td>④ Pin</td> <td></td> <td></td> <td>32.5</td> <td></td> </tr> <tr> <td>⑤ Socket</td> <td>111</td> <td>104</td> <td>34.5</td> <td>98</td> </tr> <tr> <td>⑤ Pin</td> <td></td> <td></td> <td>32.5</td> <td></td> </tr> <tr> <td>⑥ Socket</td> <td>111</td> <td>104</td> <td>34.5</td> <td>98</td> </tr> <tr> <td>⑥ Pin</td> <td></td> <td></td> <td>32.5</td> <td></td> </tr> </tbody> </table>					a	b	c	d	① Socket	50.5	44	34.5	36	① Pin			32.5		② Socket	64	57	34.5	49	② Pin			32.5		③ Socket	84	77.5	34.5	72	③ Pin			32.5		④ Socket	84	77.5	34.5	72	④ Pin			32.5		⑤ Socket	111	104	34.5	98	⑤ Pin			32.5		⑥ Socket	111	104	34.5	98	⑥ Pin			32.5	
	a	b	c	d																																																																								
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⑥ Socket	111	104	34.5	98																																																																								
⑥ Pin			32.5																																																																									
Crimp connection 	42	1 - 42	B10	② HC-DD42-I-CT...	1584062	1584059	1																																																																					
Crimp connection 	72	1 - 72	B16 / B32	③ HC-DD72-I-CT...	1584091	1584075	1																																																																					
Crimp connection 	72	73 - 144	B16 / B32	④ HC-DD72-I-CT...-144	1584101	1584088	1																																																																					
Crimp connection 	108	1 - 108	B24 / B48	⑤ HC-DD108-I-CT...	1584130	1584114	1																																																																					
Crimp connection 	108	109-216	B24 / B48	⑥ HC-DD108-I-CT...-216	1584143	1584127	1																																																																					
Turned crimp contacts CK 1,6 Silver-plated 			Cross section mm ² / AWG																																																																									
			0.14 - 0.37 / 26 - 22	CK1,6-ED-0,37... AG	1663394	1663336	100																																																																					
			0.5 / 20	CK1,6-ED-0,50... AG	1663404	1663349	100																																																																					
			0.75 / 18	CK1,6-ED-0,75... AG	1663417	1663352	100																																																																					
			0.75 - 1 / 18	CK1,6-ED-1,00... AG	1663420	1663365	100																																																																					
			1.5 / 16	CK1,6-ED-1,50... AG	1663433	1663378	100																																																																					

Accessories



Crimping tools
From page 670



Guide elements
From page 657



Crimp contacts, gold-plated
phoenixcontact.net/products



Replacement PE screws
From page 664

Heavy-duty connectors

HEAVYCON B – contact inserts

B6 series

500 V, 10 A ... 24 A

Connection technology:

- Push-in connection
- Push-in double connection
- Screw connection
- Insulation displacement connection
- Crimp connection

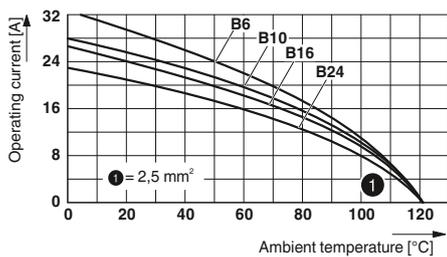
To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off

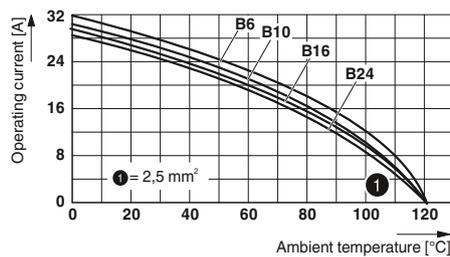


Type	Technical data				
	① HC-B 6-I-PT...	② HC-B 6-I-TPT...	③ HC-B 6-I-UT...	④ HC-B 6-E...Q-2,5	⑤ HC-B 6-I-CT...
Approvals	CE ENEC UL	-	CE ENEC UL	CE UL vs ENEC	CE UL vs ENEC
IEC data					
Rated current, contacts (at 40°C)	[A] 16	10	24	16	16
Overvoltage category	III	III	III	III	III
Degree of pollution	3	3	3	3	3
Rated voltage (III/3) contacts	[V] 500	500	500	500	500
Rated surge voltage, contacts	[kV] 6	6	6	6	6
Connection cross section	[mm²] 0.14 ... 2.5	0.14 ... 1.5	0.5 ... 2.5	0.34 ... 2.5	0.5 ... 4
UL data					
Rated voltage	[V] 600	-	600	600	600
Rated current	[A] 13	-	16	10	13
Connection cross section	AWG 14	-	14	14	22-14
CSA / cUL data					
Rated voltage	[V] 600	-	600	600	600
Rated current	[A] 13	-	13	10	20
Connection cross section	AWG 14	-	22-14	16	20-12
Material data					
Contact carrier material	PA	PC	PC	PA	PA
Inflammability class according to UL 94	V0	V0	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Ag/Sn (tarnish protection)	Ag	Ag	Ag	Ag (alternatively Au)
Ambient conditions					
Ambient temperature range	[°C] -40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection technology	Push-in connection	Push-in connection	Screw connection	QUICKON connection	Crimp connection
Stripping length	[mm] 8 ... 10	8	8	-	7.5
No. of pos.	6	6	6	6	6
Contact numbering	1 - 6	1 - 6	1 - 6	1 - 6	1 - 6
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	≥ 500	≥ 500

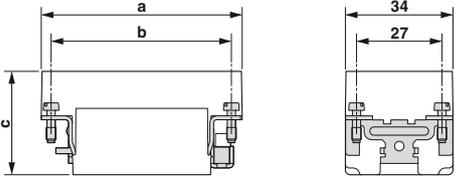
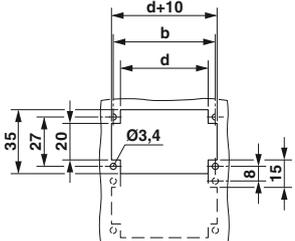
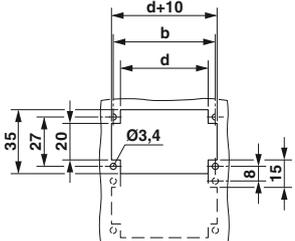
Derating curves



HC-B 6-I-UT...



HC-B 6-I-CT...

				Ordering data																																																														
Description	Pos.	Number	Size	Type	Order No.		Pcs. / Pkt.	Dimensions (in mm)																																																										
					Socket	Pin		Dimensional drawing																																																										
Push-in connection 	6	1 - 6	B6	① HC-B 6-I-PT...	1407727	1407728	1																																																											
Push-in double connection 	6	1 - 6	B6	② HC-B 6-I-TPT...	1423016	1423015	1																																																											
Screw connection 	6	1 - 6	B6	③ HC-B 6-I-UT...	1648128	1648115	1																																																											
Insulation displacement connection 	6	1 - 6	B6	④ HC-B 6-E...Q-2,5	1605556	1605611	10	<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td>50.5</td> <td>44</td> <td>37</td> <td>36</td> </tr> <tr> <td>① Pin</td> <td>50.5</td> <td>44</td> <td>34.4</td> <td>36</td> </tr> <tr> <td>② Socket</td> <td>50.5</td> <td>44</td> <td>32</td> <td>36</td> </tr> <tr> <td>② Pin</td> <td>50.5</td> <td>44</td> <td>32</td> <td>36</td> </tr> <tr> <td>③ Socket</td> <td>50.5</td> <td>44</td> <td>34.6</td> <td>36</td> </tr> <tr> <td>③ Pin</td> <td>50.5</td> <td>44</td> <td>32</td> <td>36</td> </tr> <tr> <td>④ Socket</td> <td>51</td> <td>44</td> <td>37</td> <td>36</td> </tr> <tr> <td>④ Pin</td> <td>51.5</td> <td>44</td> <td>35</td> <td>36</td> </tr> <tr> <td>⑤ Socket</td> <td>50.5</td> <td>44</td> <td>34.6</td> <td>36</td> </tr> <tr> <td>⑤ Pin</td> <td>50.5</td> <td>44</td> <td>32</td> <td>36</td> </tr> </tbody> </table>					a	b	c	d	① Socket	50.5	44	37	36	① Pin	50.5	44	34.4	36	② Socket	50.5	44	32	36	② Pin	50.5	44	32	36	③ Socket	50.5	44	34.6	36	③ Pin	50.5	44	32	36	④ Socket	51	44	37	36	④ Pin	51.5	44	35	36	⑤ Socket	50.5	44	34.6	36	⑤ Pin	50.5	44	32	36
	a	b	c	d																																																														
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Crimp connection 	6	1 - 6	B6	⑤ HC-B 6-I-CT...	1648160	1648157	1																																																											
Turned crimp contacts CK 2,5 Silver-plated 			Cross section mm ² / AWG 0.5 / 20 0.75 / 18 0.75 - 1 / 18 1.5 / 16 2.5 / 14 4 / 12	CK2,5-ED-0,50... AG CK2,5-ED-0,75... AG CK2,5-ED-1,00... AG CK2,5-ED-1,50... AG CK2,5-ED-2,50... AG CK2,5-ED-4,00... AG	1663640 1663653 1663666 1663679 1663682 1663705	1663572 1663585 1663598 1663608 1663611 1663637	100 100 100 100 100 100																																																											

Accessories



Crimping tools
From page 670



Coding elements
From page 656



Crimp contacts, gold-plated
phoenixcontact.net/products



Replacement PE screws
From page 664

Heavy-duty connectors

HEAVYCON B – contact inserts

B10 series

500 V, 10 A ... 24 A

Connection technology:

- Push-in connection
- Push-in double connection
- Screw connection
- Insulation displacement connection
- Crimp connection

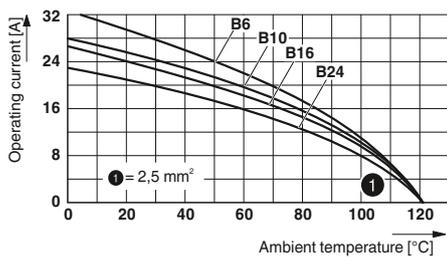
To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off

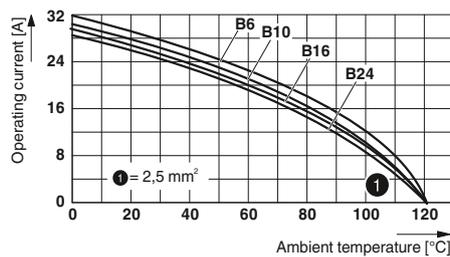


Type	Technical data				
	① HC-B 10-I-PT...	② HC-B 10-I-TPT...	③ HC-B 10-I-UT...	④ HC-B 10-E...Q-2,5	⑤ HC-B 10-I-CT...
Approvals	CE ENEC UL	-	CE ENEC UL	CE ENEC ENEC UL	CE ENEC ENEC
IEC data					
Rated current, contacts (at 40°C)	[A] 16	10	24	16	16
Overvoltage category	III	III	III	III	III
Degree of pollution	3	3	3	3	3
Rated voltage (III/3) contacts	[V] 500	500	500	500	500
Rated surge voltage, contacts	[kV] 6	6	6	6	6
Connection cross section	[mm²] 0.14 ... 2.5	0.14 ... 1.5	0.5 ... 2.5	0.34 ... 2.5	0.5 ... 4
UL data					
Rated voltage	[V] 600	-	600	600	600
Rated current	[A] 13	-	16	10	13
Connection cross section	AWG 14	-	14	14	22-14
CSA / cUL data					
Rated voltage	[V] 600	-	600	600	600
Rated current	[A] 10	-	13	10	20
Connection cross section	AWG 14	-	22-14	16	20-12
Material data					
Contact carrier material	PA	PC	PC	PA	PA
Inflammability class according to UL 94	V0	V0	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Ag/Sn (tarnish protection)	Ag	Ag	Ag	Ag (alternatively Au)
Ambient conditions					
Ambient temperature range	[°C] -40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection technology	Push-in connection	Push-in connection	Screw connection	QUICKON connection	Crimp connection
Stripping length	[mm] 8 ... 10	8	8	-	7.5
No. of pos.	10	10	10	10	10
Contact numbering	1 - 10	1 - 10	1 - 10	1 - 10	1 - 10
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	≥ 500	≥ 500

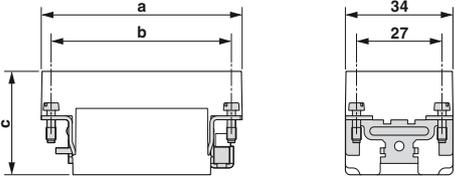
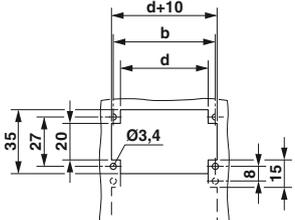
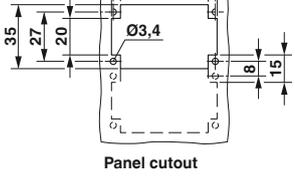
Derating curves



HC-B 10-I-UT...



HC-B 10-I-CT...

				Ordering data																																																														
Description	Pos.	Number	Size	Type	Order No.		Pcs. / Pkt.	Dimensions (in mm)																																																										
					Socket	Pin		Dimensional drawing																																																										
Push-in connection 	10	1 - 10	B10	① HC-B 10-I-PT...	1407729	1407730	1																																																											
Push-in double connection 	10	1 - 10	B10	② HC-B 10-I-TPT...	1423018	1423017	1																																																											
Screw connection 	10	1 - 10	B10	③ HC-B 10-I-UT...	1648186	1648173	1																																																											
Insulation displacement connection 	10	1 - 10	B10	④ HC-B 10-E...Q-2,5	1605569	1605624	10	<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td>64</td> <td>57</td> <td>37</td> <td>49</td> </tr> <tr> <td>① Pin</td> <td></td> <td></td> <td>34.4</td> <td></td> </tr> <tr> <td>② Socket</td> <td>64</td> <td>57</td> <td>32</td> <td>49</td> </tr> <tr> <td>② Pin</td> <td></td> <td></td> <td>32</td> <td></td> </tr> <tr> <td>③ Socket</td> <td>64</td> <td>57</td> <td>34.6</td> <td>49</td> </tr> <tr> <td>③ Pin</td> <td></td> <td></td> <td>32</td> <td></td> </tr> <tr> <td>④ Socket</td> <td>64</td> <td>57</td> <td>37</td> <td>49</td> </tr> <tr> <td>④ Pin</td> <td></td> <td></td> <td>35</td> <td></td> </tr> <tr> <td>⑤ Socket</td> <td>64</td> <td>57</td> <td>34.6</td> <td>49</td> </tr> <tr> <td>⑤ Pin</td> <td></td> <td></td> <td>32</td> <td></td> </tr> </tbody> </table>					a	b	c	d	① Socket	64	57	37	49	① Pin			34.4		② Socket	64	57	32	49	② Pin			32		③ Socket	64	57	34.6	49	③ Pin			32		④ Socket	64	57	37	49	④ Pin			35		⑤ Socket	64	57	34.6	49	⑤ Pin			32	
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Crimp connection 	10	1 - 10	B10	⑤ HC-B 10-I-CT...	1648225	1648212	1																																																											
Turned crimp contacts CK 2,5 Silver-plated			Cross section mm ² / AWG 0.5 / 20 0.75 / 18 0.75 - 1 / 18 1.5 / 16 2.5 / 14 4 / 12	CK2,5-ED-0,50... AG CK2,5-ED-0,75... AG CK2,5-ED-1,00... AG CK2,5-ED-1,50... AG CK2,5-ED-2,50... AG CK2,5-ED-4,00... AG	1663640 1663653 1663666 1663679 1663682 1663705	1663572 1663585 1663598 1663608 1663611 1663637	100 100 100 100 100 100																																																											

Accessories



Crimping tools
From page 670



Coding elements
From page 656



Crimp contacts, gold-plated
phoenixcontact.net/products



Replacement PE screws
From page 664

Heavy-duty connectors

HEAVYCON B – contact inserts

B16 series

500 V, 10 A ... 20 A

Connection technology:

- Push-in connection
- Push-in double connection
- Screw connection
- Insulation displacement connection
- Crimp connection

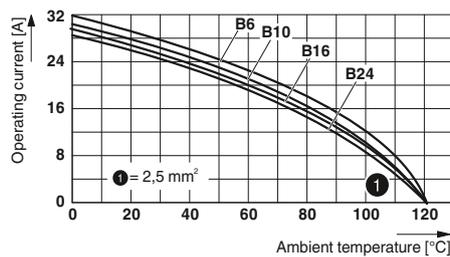
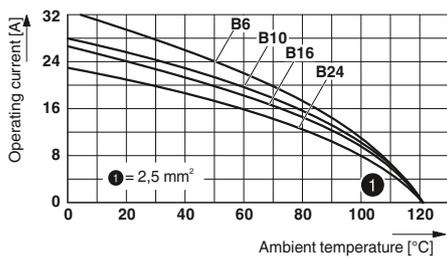
To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



Type	Technical data				
	① ② HC-B 16-I-PT...	③ ④ HC-B 16-I-TPT...	⑤ ⑥ HC-B 16-I-UT...	⑦ ⑧ HC-B 16-E...Q-2,5	⑨ ⑩ HC-B 16-I-CT...
Approvals	CE ENEC UL	-	CE ENEC UL	CE UL VDE ENEC	CE UL VDE ENEC
IEC data					
Rated current, contacts (at 40°C)	[A] 16	10	20	16	16
Overvoltage category	III	III	III	III	III
Degree of pollution	3	3	3	3	3
Rated voltage (III/3) contacts	[V] 500	500	500	500	500
Rated surge voltage, contacts	[kV] 6	6	6	6	6
Connection cross section	[mm²] 0.14 ... 2.5	0.14 ... 1.5	0.5 ... 2.5	0.34 ... 2.5	0.5 ... 4
UL data					
Rated voltage	[V] 600	-	600	600	600
Rated current	[A] 13	-	16	10	13
Connection cross section	AWG 14	-	14	14	22-14
CSA / cUL data					
Rated voltage	[V] 600	-	600	600	600
Rated current	[A] 10	-	13	10	20
Connection cross section	AWG 14	-	22-14	16	20-12
Material data					
Contact carrier material	PA	PC	PC	PA	PA
Inflammability class according to UL 94	V0	V0	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Ag/Sn (tamish protection)	Ag	Ag	Ag	Ag (alternatively Au)
Ambient conditions					
Ambient temperature range	[°C] -40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection technology	Push-in connection	Push-in connection	Screw connection	QUICKON connection	Crimp connection
Stripping length	[mm] 8 ... 10	8	8	-	7.5
No. of pos.	16	16	16	16	16
Contact numbering	1 - 16	1 - 16	1 - 16	1 - 16	1 - 16
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	≥ 500	≥ 500

Derating curves



				Ordering data																																																																																																																			
Description	Pos.	Number	Size	Type	Order No.		Pcs. / Pkt.	Dimensions (in mm)																																																																																																															
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Push-in connection																																																																																																																							
	16	1 - 16	B16 / B32	① HC-B 16-I-PT-...	1407731	1407732	1																																																																																																																
	16	17 - 32	B16 / B32	② HC-B 16-I-PT-...-32	1407733	1407734	1																																																																																																																
Push-in double connection											<p>Panel cutout</p>																																																																																																												
	16	1 - 16	B16	③ HC-B 16-I-TPT-...	1423020	1423019	1																																																																																																																
	16	17 - 32	B16 / B32	④ HC-B 16-I-TPT-...-32	1423826	1423825	1																																																																																																																
Screw connection											<p>Panel cutout</p>																																																																																																												
	16	1 - 16	B16 / B32	⑤ HC-B 16-I-UT-...	1648241	1648238	1																																																																																																																
	16	17 - 32	B16 / B32	⑥ HC-B 16-I-UT-...-32	1584884	1584871	1																																																																																																																
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	16	1 - 16	B16 / B32	⑦ HC-B 16-E...Q-2,5	1605572	1605637	10																																																																																																																
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⑩ Pin			32																																																																																																																				
	16	1 - 16	B16 / B32	⑨ HC-B 16-I-CT-...	1648283	1648270	1																																																																																																																
	16	17 - 32	B16 / B32	⑩ HC-B 16-I-CT-...-32	1584923	1584910	1																																																																																																																
Turned crimp contacts CK 2,5 Silver-plated											<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>⑨ Socket</td> <td>84</td> <td>77.5</td> <td>34.6</td> <td>72</td> </tr> <tr> <td>⑨ Pin</td> <td></td> <td></td> <td>32</td> <td></td> </tr> <tr> <td>⑩ Socket</td> <td>84</td> <td>77.5</td> <td>34.6</td> <td>72</td> </tr> <tr> <td>⑩ Pin</td> <td></td> <td></td> <td>32</td> <td></td> </tr> </tbody> </table>					a	b	c	d	⑨ Socket	84	77.5	34.6	72	⑨ Pin			32		⑩ Socket	84	77.5	34.6	72	⑩ Pin			32																																																																																	
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⑩ Pin			32																																																																																																																				
			Cross section mm ² / AWG	CK2,5-ED-0,50... AG	1663640	1663572	100																																																																																																																
		0.5 / 20		CK2,5-ED-0,75... AG	1663653	1663585	100																																																																																																																
		0.75 / 18		CK2,5-ED-1,00... AG	1663666	1663598	100																																																																																																																
		1.5 / 16		CK2,5-ED-1,50... AG	1663679	1663608	100																																																																																																																
		2.5 / 14		CK2,5-ED-2,50... AG	1663682	1663611	100																																																																																																																
		4 / 12		CK2,5-ED-4,00... AG	1663705	1663637	100																																																																																																																

Accessories



Crimping tools
From page 670



Coding elements
From page 656



Crimp contacts, gold-plated
phoenixcontact.net/products



Replacement PE screws
From page 664

Heavy-duty connectors

HEAVYCON B – contact inserts

B24 series

500 V, 10 A ... 20 A

Connection technology:

- Push-in connection
- Push-in double connection
- Screw connection
- Insulation displacement connection
- Crimp connection

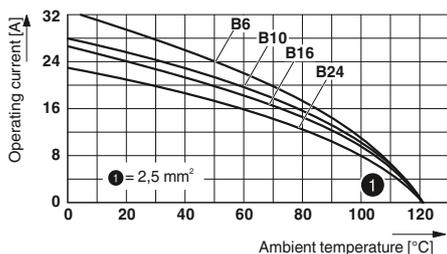
To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off

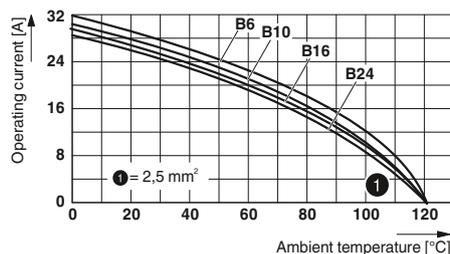


Type	Technical data				
	① ② HC-B 24-I-PT-...	③ ④ HC-B 24-I-TPT-...	⑤ ⑥ HC-B 24-I-UT-...	⑦ ⑧ HC-B 24-E...Q-2,5	⑨ ⑩ HC-B 24-I-CT-...
Approvals	UL ENEC IEC	-	UL ENEC IEC	UL ENEC IEC	UL ENEC IEC
IEC data					
Rated current, contacts (at 40°C)	[A] 16	10	20	16	16
Overvoltage category	III	III	III	III	III
Degree of pollution	3	3	3	3	3
Rated voltage (III/3) contacts	[V] 500	500	500	500	500
Rated surge voltage, contacts	[kV] 6	6	6	6	6
Connection cross section	[mm²] 0.14 ... 2.5	0.14 ... 1.5	0.5 ... 2.5	0.34 ... 2.5	0.5 ... 4
UL data					
Rated voltage	[V] 600	-	600	600	600
Rated current	[A] 13	-	16	10	13
Connection cross section	AWG 14	-	14	14	22-14
CSA / cUL data					
Rated voltage	[V] 600	-	600	600	600
Rated current	[A] 10	-	13	10	20
Connection cross section	AWG 14	-	22-14	16	20-12
Material data					
Contact carrier material	PA	PC	PC	PA	PA
Inflammability class according to UL 94	V0	V0	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Ag/Sn (tamish protection)	Ag	Ag	Ag	Ag (alternatively Au)
Ambient conditions					
Ambient temperature range	[°C] -40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection technology	Push-in connection	Push-in connection	Screw connection	QUICKON connection	Crimp connection
Stripping length	[mm] 8 ... 10	8	8	-	7.5
No. of pos.	24	24	24	24	24
Contact numbering	1 - 24	1 - 24	1 - 24	1 - 24	1 - 24
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	≥ 500	≥ 500

Derating curves



HC-B 24-I-UT-...



HC-B 24-I-CT-...

				Ordering data																																																																																																																			
Description	Pos.	Number	Size	Type	Order No.		Pcs. / Pkt.	Dimensions (in mm)																																																																																																															
					Socket	Pin		a	b	c	d																																																																																																												
Push-in connection																																																																																																																							
	24	1 - 24	B24 / B48	① HC-B 24-I-PT...	1407735	1407736	1																																																																																																																
	24	25 - 48	B24 / B48	② HC-B 24-I-PT...-48	1407737	1407738	1																																																																																																																
Push-in double connection											<p>Panel cutout</p>																																																																																																												
	24	1 - 24	B24	③ HC-B 24-I-TPT...	1423022	1423021	1																																																																																																																
	24	25 - 48	B24 / B48	④ HC-B 24-I-TPT...-48	1423828	1423827	1																																																																																																																
Screw connection											<p>Panel cutout</p>																																																																																																												
	24	1 - 24	B24 / B48	⑤ HC-B 24-I-UT...	1648306	1648296	1																																																																																																																
	24	25 - 48	B24 / B48	⑥ HC-B 24-I-UT...-48	1584949	1584936	1																																																																																																																
Insulation displacement connection											<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td>111</td> <td>104</td> <td>37</td> <td>98</td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>34.4</td> <td></td> </tr> <tr> <td>② Socket</td> <td>111</td> <td>104</td> <td>37</td> <td>98</td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>34.4</td> <td></td> </tr> <tr> <td>③ Socket</td> <td>111</td> <td>104</td> <td>34.6</td> <td>98</td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>34.6</td> <td></td> </tr> <tr> <td>④ Socket</td> <td>111</td> <td>104</td> <td>34.6</td> <td>98</td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>32</td> <td></td> </tr> <tr> <td>⑤ Socket</td> <td>111</td> <td>104</td> <td>34.6</td> <td>98</td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>32</td> <td></td> </tr> <tr> <td>⑥ Socket</td> <td>111</td> <td>104</td> <td>34.6</td> <td>98</td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>32</td> <td></td> </tr> <tr> <td>⑦ Socket</td> <td>111</td> <td>104</td> <td>37</td> <td>98</td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>35</td> <td></td> </tr> <tr> <td>⑧ Socket</td> <td>111</td> <td>104</td> <td>37</td> <td>98</td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>35</td> <td></td> </tr> <tr> <td>⑨ Socket</td> <td>111</td> <td>104</td> <td>34.6</td> <td>98</td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>32</td> <td></td> </tr> <tr> <td>⑩ Socket</td> <td>111</td> <td>104</td> <td>34.6</td> <td>98</td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>32</td> <td></td> </tr> </tbody> </table>					a	b	c	d	① Socket	111	104	37	98	Pin			34.4		② Socket	111	104	37	98	Pin			34.4		③ Socket	111	104	34.6	98	Pin			34.6		④ Socket	111	104	34.6	98	Pin			32		⑤ Socket	111	104	34.6	98	Pin			32		⑥ Socket	111	104	34.6	98	Pin			32		⑦ Socket	111	104	37	98	Pin			35		⑧ Socket	111	104	37	98	Pin			35		⑨ Socket	111	104	34.6	98	Pin			32		⑩ Socket	111	104	34.6	98	Pin			32	
	a	b	c	d																																																																																																																			
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⑩ Socket	111	104	34.6	98																																																																																																																			
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	24	1 - 24	B24 / B48	⑦ HC-B 24-E...Q-2,5	1605585	1605640	10																																																																																																																
	24	1 - 24	B24 / B48	⑧ HC-B 24-E...Q-2,5-48	1605608	1605666	10																																																																																																																
Crimp connection											<p>Panel cutout</p>																																																																																																												
	24	1 - 24	B24 / B48	⑨ HC-B 24-I-CT...	1648348	1648335	1																																																																																																																
	24	25 - 48	B24 / B48	⑩ HC-B 24-I-CT...-48	1584981	1584978	1																																																																																																																
Turned crimp contacts CK 2,5 Silver-plated											<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>⑨ Socket</td> <td>111</td> <td>104</td> <td>34.6</td> <td>98</td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>32</td> <td></td> </tr> <tr> <td>⑩ Socket</td> <td>111</td> <td>104</td> <td>34.6</td> <td>98</td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td>32</td> <td></td> </tr> </tbody> </table>					a	b	c	d	⑨ Socket	111	104	34.6	98	Pin			32		⑩ Socket	111	104	34.6	98	Pin			32																																																																																	
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	Cross section		mm ² / AWG 0.5 / 20 0.75 / 18 0.75 - 1 / 16 1.5 / 16 2.5 / 14 4 / 12	CK2,5-ED-0,50... AG	1663640	1663572	100																																																																																																																
		CK2,5-ED-0,75... AG		1663653	1663585	100																																																																																																																	
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		CK2,5-ED-4,00... AG		1663705	1663637	100																																																																																																																	

Accessories



Crimping tools
From page 670



Coding elements
From page 656



Crimp contacts, gold-plated
phoenixcontact.net/products



Replacement PE screws
From page 664

Heavy-duty connectors

HEAVYCON B – contact inserts

B6, B10, B16, B24 series terminal adapters

500 V, 16 A

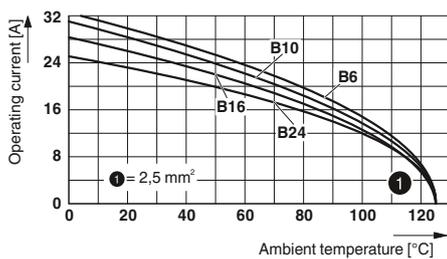
Connection technology:
– Push-in connection

Notes:
For accessories, see from page 652
Only operate connectors when there is no load/the power is switched off



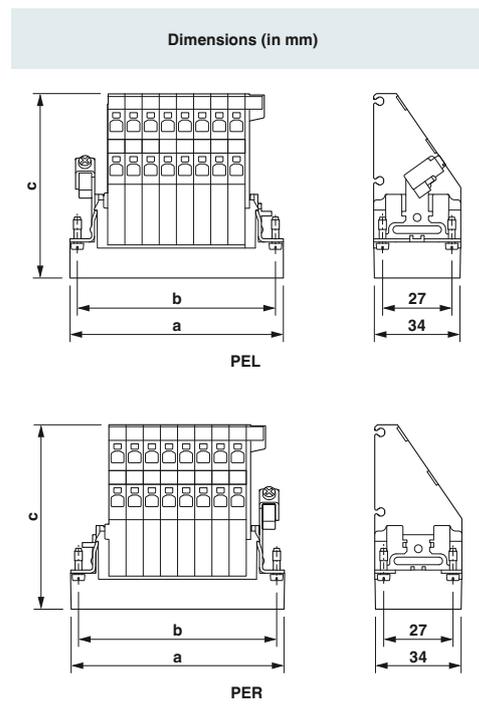
Type	Technical data			
	① ② HC-B 6-A-DT-PEL-...	③ ④ HC-B 10-A-DT-PEL-...	⑤ ⑥ HC-B 16-A-DT-PEL-...	⑦ ⑧ HC-B 24-A-DT-PEL-...
Approvals				
IEC data				
Rated current, contacts (at 40°C)	16 [A]	16	16	16
Overvoltage category	III	III	III	III
Degree of pollution	3	3	3	3
Rated voltage (III/3) contacts	500 [V]	500	500	500
Rated surge voltage, contacts	6 [kV]	6	6	6
Connection cross section	0.5 ... 2.5 [mm²]	0.5 ... 2.5	0.5 ... 2.5	0.5 ... 2.5
UL data				
Rated voltage	600 [V]	600	600	600
Rated current	13 [A]	13	13	13
Connection cross section	22-14 AWG	22-14	22-14	22-14
CSA / cUL data				
Rated voltage	600 [V]	600	600	600
Rated current	13 [A]	13	13	13
Connection cross section	22-14 AWG	22-14	22-14	22-14
Material data				
Contact carrier material	PA	PA	PA	PA
Inflammability class according to UL 94	V0	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Ag	Ag	Ag	Ag
Temperature data				
Ambient temperature range	-40 ... 125 [°C]	-40 ... 125	-40 ... 125	-40 ... 125
General data				
Connection technology	Push-in connection	Push-in connection	Push-in connection	Push-in connection
Stripping length	10 [mm]	10	10	10
No. of pos.	6	10	16	24
Contact numbering	1 - 6	1 - 10	1 - 16	1 - 24
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	≥ 500

Derating curves



HC-B ...-A-DT-PER-...

Description	Pos.	Number	Size	Type	Ordering data		Pcs. / Pkt.
					Socket	Pin	
Push-in connection 	6	1 - 6	B6	PE left ① HC-B 6-A-DT-PEL-...	1648351	1648364	5
	6	1 - 6	B6	PE right ② HC-B 6-A-DT-PER-...	1648377	1648380	5
Push-in connection 	10	1 - 10	B10	PE left ③ HC-B 10-A-DT-PEL-...	1648393	1648403	5
	10	1 - 10	B10	PE right ④ HC-B 10-A-DT-PER-...	1648416	1648429	5
Push-in connection 	16	1 - 16	B16	PE left ⑤ HC-B 16-A-DT-PEL-...	1648432	1648445	5
	16	1 - 16	B16	PE right ⑥ HC-B 16-A-DT-PER-...	1648458	1648461	5
Push-in connection 	24	1 - 24	B24	PE left ⑦ HC-B 24-A-DT-PEL-...	1648474	1648487	5
	24	1 - 24	B24	PE right ⑧ HC-B 24-A-DT-PER-...	1648490	1648500	5
Foot element 				HC-KA-FE	1775240		10
Locking screw barrel 				HC-VSH	1660083		10

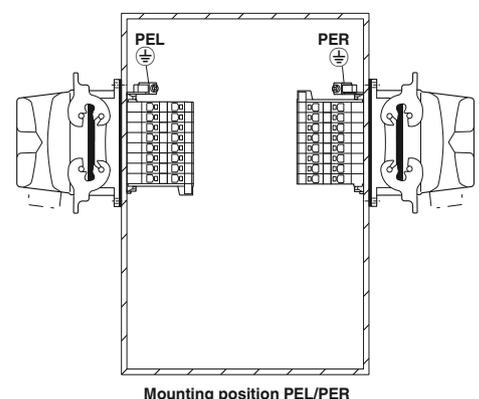


	a	b	c	d
① Socket			72.1	
Pin	50.5	44	70.5	
② Socket			72.1	
Pin	50.5	44	70.5	
③ Socket			72.1	
Pin	64	57	70.5	
④ Socket			72.1	
Pin	64	57	70.5	
⑤ Socket			72.1	
Pin	84	77.5	70.5	
⑥ Socket			72.1	
Pin	84	77.5	70.5	
⑦ Socket			72.1	
Pin	111	104	70.5	
⑧ Socket			72.1	
Pin	111	104	70.5	

Accessories



Coding elements
From page 656



Heavy-duty connectors

HEAVYCON B – contact inserts

B6, B10, B16, B24 series terminal adapters

500 V, 16 A

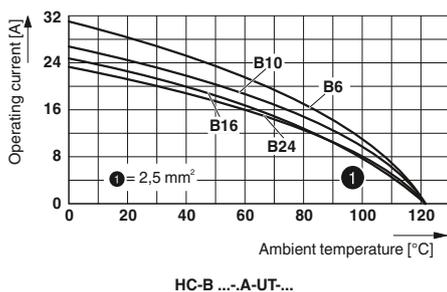
Connection technology:
– Screw connection

Notes:
For accessories, see from page 652
Only operate connectors when there is no load/the power is switched off

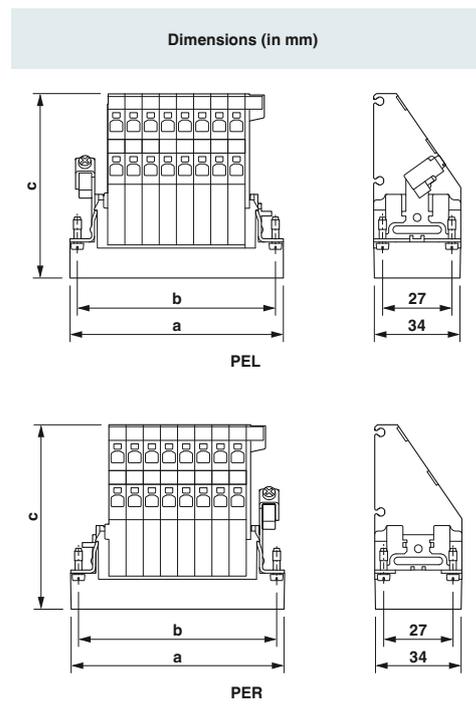


Type	Technical data			
	① ② HC-B 6-A-UT-PEL-...	③ ④ HC-B 10-A-UT-PEL-...	⑤ ⑥ HC-B 16-A-UT-PEL-...	⑦ ⑧ HC-B 24-A-UT-PEL-...
Approvals				
IEC data				
Rated current, contacts (at 40°C)	[A] 16	16	16	16
Overvoltage category	III	III	III	III
Degree of pollution	3	3	3	3
Rated voltage (III/3) contacts	[V] 500	500	500	500
Rated surge voltage, contacts	[kV] 6	6	6	6
Connection cross section	[mm²] 0.5 ... 2.5	0.5 ... 2.5	0.5 ... 2.5	0.5 ... 2.5
UL data				
Rated voltage	[V] 600	600	600	600
Rated current	[A] 13	13	13	13
Connection cross section	AWG 22-14	22-14	22-14	22-14
CSA / cUL data				
Rated voltage	[V] 600	600	600	600
Rated current	[A] 13	13	13	13
Connection cross section	AWG 22-14	22-14	22-14	22-14
Material data				
Contact carrier material	PA	PA	PA	PA
Inflammability class according to UL 94	V0	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Ag	Ag	Ag	Ag
Temperature data				
Ambient temperature range	[°C] -40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data				
Connection technology	Screw connection	Screw connection	Screw connection	Screw connection
Stripping length	[mm] 12	12	12	12
No. of pos.	6	10	16	24
Contact numbering	1 - 6	1 - 10	1 - 16	1 - 24
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	≥ 500

Derating curves



Description	Pos.	Number	Size	Type	Ordering data		Pcs. / Pkt.
					Socket	Pin	
Screw connection 	6	1 - 6	B6	PE left ① HC-B 6-A-UT-PEL-...	1648018	1648024	5
	6	1 - 6	B6	PE right ② HC-B 6-A-UT-PER-...	1648066	1648072	5
Screw connection 	10	1 - 10	B10	PE left ③ HC-B 10-A-UT-PEL-...	1648030	1648036	5
	10	1 - 10	B10	PE right ④ HC-B 10-A-UT-PER-...	1648078	1648084	5
Screw connection 	16	1 - 16	B16	PE left ⑤ HC-B 16-A-UT-PEL-...	1648042	1648048	5
	16	1 - 16	B16	PE right ⑥ HC-B 16-A-UT-PER-...	1648090	1648096	5
Screw connection 	24	1 - 24	B24	PE left ⑦ HC-B 24-A-UT-PEL-...	1648054	1648060	5
	24	1 - 24	B24	PE right ⑧ HC-B 24-A-UT-PER-...	1648102	1648108	5
Foot element 				HC-KA-FE	1775240		10
Locking screw barrel 				HC-VSH	1660083		10

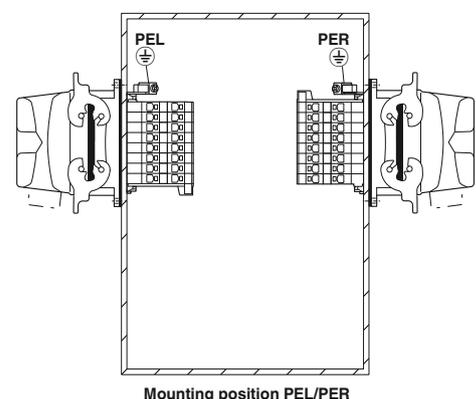


	a	b	c	d
① Socket	51	44	74.2	
Pin	51	44	71.6	
② Socket	51	44	74.2	
Pin	51	44	71.6	
③ Socket	64	57	74.2	
Pin	64	57	71.6	
④ Socket	64	57	74.2	
Pin	64	57	71.6	
⑤ Socket	84.5	77.5	74.2	
Pin	84.5	77.5	71.6	
⑥ Socket	84.5	77.5	74.2	
Pin	84.5	77.5	71.6	
⑦ Socket	111	104	74.2	
Pin	111	104	71.6	
⑧ Socket	111	104	74.2	
Pin	111	104	71.6	

Accessories



Coding elements
From page 656



Heavy-duty connectors

HEAVYCON B – contact inserts

BB10, BB18, BB32, BB46 series

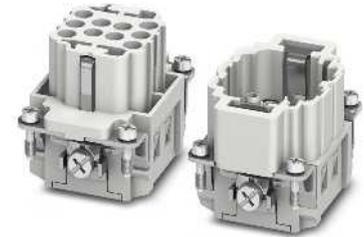
500 V, 16 A

Connection technology:

– Crimp connection

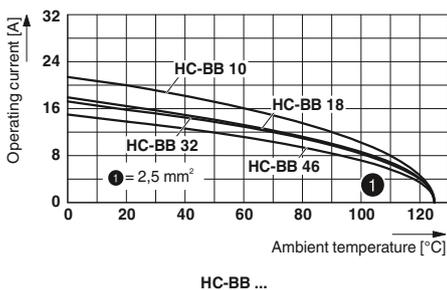
To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



Type	Technical data			
	① HC-BB 10-I-CT-...	② HC-BB 18-I-CT-...	③ ④ HC-BB 32-I-CT-...	⑤ ⑥ HC-BB 46-I-CT-...
Approvals	① ② ③ ④ ⑤ ⑥	① ② ③ ④ ⑤ ⑥	① ② ③ ④ ⑤ ⑥	① ② ③ ④ ⑤ ⑥
IEC data				
Rated current, contacts (at 40°C)	[A] 16	16	16	16
Overvoltage category	III	III	III	III
Degree of pollution	3	3	3	3
Rated voltage (III/3) contacts	[V] 500	500	500	500
Rated surge voltage, contacts	[kV] 6	6	6	6
Connection cross section	[mm²] 0.5 ... 4	0.5 ... 4	0.5 ... 4	0.5 ... 4
UL data				
Rated voltage	[V] 600	600	600	600
Rated current	[A] 20	20	16	16
Connection cross section	AWG 12	12	12	12
CSA / cUL data				
Rated voltage	[V] 600	600	600	600
Rated current	[A] 18	16	13.5	13.5
Connection cross section	AWG 12	12	12	12
Material data				
Contact carrier material	PC	PC	PC	PC
Inflammability class according to UL 94	V0	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)
Temperature data				
Ambient temperature range	[°C] -40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data				
Connection technology	Crimp connection	Crimp connection	Crimp connection	Crimp connection
Stripping length	[mm] 7.5	7.5	7.5	7.5
No. of pos.	10	18	32	46
Contact numbering	1 - 10	1 - 18	1 - 32	1 - 46
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	≥ 500

Derating curves



				Ordering data			Dimensions (in mm)				
Description	Pos.	Number	Size	Type	Order No.		Pcs. / Pkt.				
					Socket	Pin					
Crimp connection											
	10	1 - 10	B6	① HC-BB 10-I-CT...	1584703	1584774	1				
Crimp connection											
	18	1 - 18	B10	② HC-BB 18-I-CT...	1584729	1584716	1				
Crimp connection											
	32	1 - 32	B16 / B32	③ HC-BB 32-I-CT...	1584745	1584732	1				
	32	33 - 64	B16 / B32	④ HC-BB 32-I-CT... 33-64	1406543	1406544	1				
Crimp connection											
	46	1 - 46	B24 / B48	⑤ HC-BB 46-I-CT...	1584758	1584761	1				
	46	47 - 92	B24 / B48	⑥ HC-BB 46-I-CT... 47-92	1406545	1406546	1				
Turned crimp contacts CK 2,5 Silver-plated			Cross section mm ² / AWG								
			0.5 / 20	CK2,5-ED-0,50... AG	1663640	1663572	100				
			0.75 / 18	CK2,5-ED-0,75... AG	1663653	1663585	100				
			0.75 - 1 / 18	CK2,5-ED-1,00... AG	1663666	1663598	100				
			1.5 / 16	CK2,5-ED-1,50... AG	1663679	1663608	100				
			2.5 / 14	CK2,5-ED-2,50... AG	1663682	1663611	100				
			4 / 12	CK2,5-ED-4,00... AG	1663705	1663637	100				
Turned crimp contacts CK 2,5 Gold-plated			Cross section mm ² / AWG								
			0.5 / 20	CK2,5-ED-0,50... AU	1674859	1674804	100				
			0.75 - 1 / 18	CK2,5-ED-1,00... AU	1674833	1674781	100				
			1.5 / 16	CK2,5-ED-1,50... AU	1674820	1674778	100				
			2.5 / 14	CK2,5-ED-2,50... AU	1674862	1674817	100				
			4 / 12	CK2,5-ED-4,00... AU	1674846	1674794	100				

Accessories



Crimping tools
From page 670



Coding profiles
From page 656



Replacement PE screws
From page 664

Heavy-duty connectors

HEAVYCON B – contact inserts

BBB40, BBB64 series

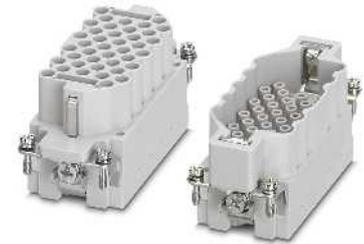
500 V, 16 A

Connection technology:

– Crimp connection

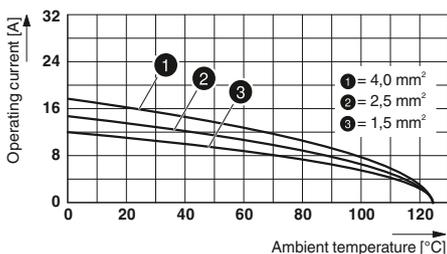
To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



Type	Technical data		
	① HC-BBB 40-E...C	② HC-BBB 64-E...C	
Approvals			
IEC data			
Rated current, contacts (at 40°C)	[A] 16	16	
Overvoltage category	III	III	
Degree of pollution	3	3	
Rated voltage (III/3) contacts	[V] 500	500	
Rated surge voltage, contacts	[kV] 6	6	
Connection cross section	[mm²] 0.5 ... 4	0.5 ... 4	
UL data			
Rated voltage	[V] 500	500	
Rated current	[A] -	-	
Connection cross section	AWG 12	12	
CSA / cUL data			
Rated voltage	[V] 500	500	
Rated current	[A] -	-	
Connection cross section	AWG 12	12	
Material data			
Contact carrier material	PC	PC	
Inflammability class according to UL 94	V0	V0	
Contact material	Copper alloy	Copper alloy	
Contact surface material	Ag (alternatively Au)	Ag (alternatively Au)	
Temperature data			
Ambient temperature range	[°C] -40 ... 125	-40 ... 125	
General data			
Connection technology	Crimp connection	Crimp connection	
Stripping length	[mm] 7.5	7.5	
No. of pos.	40	64	
Contact numbering	1 - 40	1 - 64	
Insertion/withdrawal cycles	≥ 500	≥ 500	

Derating curves



HC-BBB ...

				Ordering data			Dimensions (in mm)																													
Description	Pos.	Number	Size	Type	Order No.		Pcs. / Pkt.																													
					Socket	Pin																														
Crimp connection 	40	1 - 40	B16 / B32	① HC-BBB 40-E...C	1409930	1409921	1	<p>Dimensional drawing</p> <p>Panel cutout</p>																												
Crimp connection 	64	1 - 64	B24 / B48	② HC-BBB 64-E...C	1409914	1409901	1																													
								<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td>84</td> <td>77.5</td> <td>37</td> <td>68.5</td> </tr> <tr> <td>① Pin</td> <td>84.5</td> <td></td> <td>34.4</td> <td></td> </tr> <tr> <td>② Socket</td> <td>111</td> <td>104</td> <td>39</td> <td>95</td> </tr> <tr> <td>② Pin</td> <td></td> <td></td> <td>36.4</td> <td></td> </tr> </tbody> </table>					a	b	c	d	① Socket	84	77.5	37	68.5	① Pin	84.5		34.4		② Socket	111	104	39	95	② Pin			36.4	
	a	b	c	d																																
① Socket	84	77.5	37	68.5																																
① Pin	84.5		34.4																																	
② Socket	111	104	39	95																																
② Pin			36.4																																	
Turned crimp contacts CK 2,5 Silver-plated 			Cross section mm ² / AWG 0.5 / 20 0.75 / 18 0.75 - 1 / 18 1.5 / 16 2.5 / 14 4 / 12	CK2,5-ED-0,50... AG CK2,5-ED-0,75... AG CK2,5-ED-1,00... AG CK2,5-ED-1,50... AG CK2,5-ED-2,50... AG CK2,5-ED-4,00... AG	1663640 1663653 1663666 1663679 1663682 1663705	1663572 1663585 1663598 1663608 1663611 1663637	100 100 100 100 100 100																													
Turned crimp contacts CK 2,5 Gold-plated 			Cross section mm ² / AWG 0.5 / 20 0.75 - 1 / 18 1.5 / 16 2.5 / 14 4 / 12	CK2,5-ED-0,50... AU CK2,5-ED-1,00... AU CK2,5-ED-1,50... AU CK2,5-ED-2,50... AU CK2,5-ED-4,00... AU	1674859 1674833 1674820 1674862 1674846	1674804 1674781 1674778 1674817 1674794	100 100 100 100 100																													

Accessories



Crimping tools
From page 670



Coding elements
From page 657



Replacement PE screws
From page 664

Heavy-duty connectors

HEAVYCON B – contact inserts

HV03, HV06, HV10 series

High-voltage applications

Push-in connection

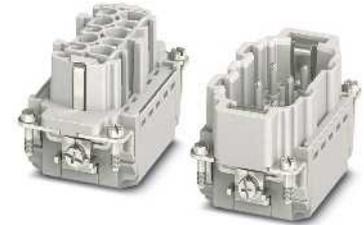
800 V, 16 A

Connection technology:

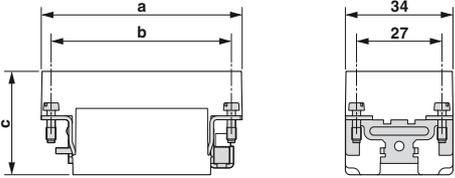
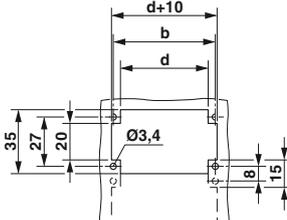
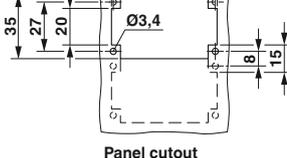
- Push-in connection
- With 2 lagging switch contacts
- For all size B housing

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Only operate connectors when there is no load/the power is switched off



Type	Technical data		
	① HC-HV03-I-PT...	② HC-HV06-I-PT...	③ HC-HV10-I-PT...
Approvals	UL ENEC VDE	UL ENEC VDE	UL ENEC VDE
IEC data			
Rated current, contacts (at 40°C)	[A] 16	16	16
Overvoltage category	III	III	III
Degree of pollution	3	3	3
Rated voltage (III/3) contacts	[V] 800	800	800
Rated surge voltage, contacts	[kV] 8	8	8
Connection cross section	[mm²] 0.14 ... 2.5	0.14 ... 2.5	0.14 ... 2.5
UL data			
Rated voltage	[V] 800	800	800
Rated current	[A] 13	13	13
Connection cross section	AWG 14	14	14
CSA / cUL data			
Rated voltage	[V] 800	800	800
Rated current	[A] 13	13	13
Connection cross section	AWG 14	14	14
Material data			
Contact carrier material	PA	PA	PA
Inflammability class according to UL 94	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy
Contact surface material	-	-	-
Temperature data			
Ambient temperature range	[°C] -40 ... 125	-40 ... 125	-40 ... 125
General data			
Connection technology	Push-in connection	Push-in connection	Push-in connection
Stripping length	[mm] 8 ... 10	8 ... 10	8 ... 10
No. of pos.	3	6	10
Contact numbering	-	-	-
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500

Description	Pos.	Number	Size	Ordering data			Pcs. / Pkt.	Dimensions (in mm)																																			
				Type	Socket	Pin																																					
Push-in connection 	3 / 2		B10	① HC-HV03-I-PT...	1407743	1407739	1																																				
Push-in connection 	6 / 2		B16 / B32	② HC-HV06-I-PT...	1407744	1407740	1	Dimensional drawing 																																			
Push-in connection 	10 / 2		B24 / B48	③ HC-HV10-I-PT...	1407745	1407741	1	Panel cutout 																																			
								<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td></td> <td></td> <td>34.6</td> <td></td> </tr> <tr> <td>① Pin</td> <td>64</td> <td>57</td> <td>32</td> <td>49</td> </tr> <tr> <td>② Socket</td> <td></td> <td></td> <td>34.6</td> <td></td> </tr> <tr> <td>② Pin</td> <td>84</td> <td>77.5</td> <td>32</td> <td>72</td> </tr> <tr> <td>③ Socket</td> <td></td> <td></td> <td>34.6</td> <td></td> </tr> <tr> <td>③ Pin</td> <td>111</td> <td>104</td> <td>32</td> <td>98</td> </tr> </tbody> </table>		a	b	c	d	① Socket			34.6		① Pin	64	57	32	49	② Socket			34.6		② Pin	84	77.5	32	72	③ Socket			34.6		③ Pin	111	104	32	98
	a	b	c	d																																							
① Socket			34.6																																								
① Pin	64	57	32	49																																							
② Socket			34.6																																								
② Pin	84	77.5	32	72																																							
③ Socket			34.6																																								
③ Pin	111	104	32	98																																							

Accessories



Coding elements
From page 657



Replacement PE screws
From page 664

Heavy-duty connectors

HEAVYCON B – contact inserts

HV03, HV06, HV10 series

High-voltage applications

Crimp connection

830 V, 25 A

Connection technology:

- Crimp connection
- With 2 lagging switch contacts
- For all size B housing

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



Type	Technical data		
	① HC-HV03-I-CT...	② HC-HV06-I-CT...	③ HC-HV10-I-CT...
Approvals	ERC	ERC	ERC
IEC data			
Rated current, contacts (at 40°C)	[A] 25	25	25
Overtoltage category	III	III	III
Degree of pollution	3	3	3
Rated voltage (III/3) contacts	[V] 830	830	830
Rated surge voltage, contacts	[kV] 8	8	8
Connection cross section	[mm²] 0.5 ... 4	0.5 ... 4	0.5 ... 4
UL data			
Rated voltage	[V] 600	600	600
Rated current	[A] 16	16	16
Connection cross section	AWG 12	12	12
CSA / cUL data			
Rated voltage	[V] -	-	-
Rated current	[A] -	-	-
Connection cross section	AWG -	-	-
Material data			
Contact carrier material	PA	PA	PA
Inflammability class according to UL 94	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)
Temperature data			
Ambient temperature range	[°C] -40 ... 125	-40 ... 125	-40 ... 125
General data			
Connection technology	Crimp connection	Crimp connection	Crimp connection
Stripping length	[mm] 7.5	7.5	7.5
No. of pos.	3	6	10
Contact numbering	-	-	-
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500

				Ordering data			Dimensions (in mm)																																							
Description	Pos.	Number	Size	Type	Order No.		Pcs./ Pkt.																																							
					Socket	Pin																																								
Crimp connection 	3 / 2		B10	① HC-HV03-I-CT...	1405261	1405260	1	<p>Dimensional drawing</p> <p>Panel cutout</p>																																						
Crimp connection 	6 / 2		B16 / B32	② HC-HV06-I-CT...	1405263	1405262	1																																							
Crimp connection 	10 / 2		B24 / B48	③ HC-HV10-I-CT...	1405265	1405264	1																																							
Turned crimp contacts CK 2,5 Silver-plated 			Cross section mm ² / AWG 0.5 / 20 0.75 / 18 0.75 - 1 / 18 1.5 / 16 2.5 / 14 4 / 12	CK2,5-ED-0,50... AG CK2,5-ED-0,75... AG CK2,5-ED-1,00... AG CK2,5-ED-1,50... AG CK2,5-ED-2,50... AG CK2,5-ED-4,00... AG	1663640 1663653 1663666 1663679 1663682 1663705	1663572 1663585 1663598 1663608 1663611 1663637	100 100 100 100 100 100	<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td></td> <td></td> <td>34.6</td> <td></td> </tr> <tr> <td>① Pin</td> <td>64</td> <td>57</td> <td>32</td> <td>49</td> </tr> <tr> <td>② Socket</td> <td></td> <td></td> <td>34.6</td> <td></td> </tr> <tr> <td>② Pin</td> <td>84</td> <td>77.5</td> <td>32</td> <td>72</td> </tr> <tr> <td>③ Socket</td> <td></td> <td></td> <td>34.6</td> <td></td> </tr> <tr> <td>③ Pin</td> <td>111</td> <td>104</td> <td>32</td> <td>98</td> </tr> </tbody> </table>					a	b	c	d	① Socket			34.6		① Pin	64	57	32	49	② Socket			34.6		② Pin	84	77.5	32	72	③ Socket			34.6		③ Pin	111	104	32	98
	a	b	c	d																																										
① Socket			34.6																																											
① Pin	64	57	32	49																																										
② Socket			34.6																																											
② Pin	84	77.5	32	72																																										
③ Socket			34.6																																											
③ Pin	111	104	32	98																																										
Turned crimp contacts CK 2,5 Gold-plated 			Cross section mm ² / AWG 0.5 / 20 0.75 - 1 / 18 1.5 / 16 2.5 / 14 4 / 12	CK2,5-ED-0,50... AU CK2,5-ED-1,00... AU CK2,5-ED-1,50... AU CK2,5-ED-2,50... AU CK2,5-ED-4,00... AU	1674859 1674833 1674820 1674862 1674846	1674804 1674781 1674778 1674817 1674794	100 100 100 100 100																																							
Turned switch contacts CK 2,5 Pin, silver-plated 			Cross section mm ² / AWG 1 / 18 1.5 / 16 2.5 / 14	CK2,5-ED-1,00ST-S AG CK2,5-ED-1,50ST-S AG CK2,5-ED-2,50ST-S AG		1663857 1663860 1663873																																								

Accessories



Crimping tools
From page 670



Coding elements
From page 657



Replacement PE screws
From page 664

Heavy-duty connectors

HEAVYCON B – contact inserts

HS series

High-current applications

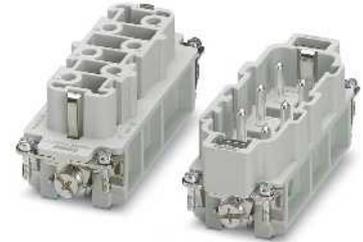
400 V / 690 V, 41 A
1000 V, 80 A

Connection technology:

– Screw connection

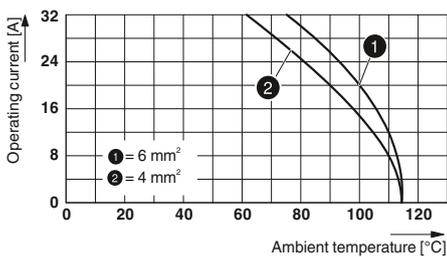
To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
¹⁾ For solid conductors and stranded wires with wire end protection

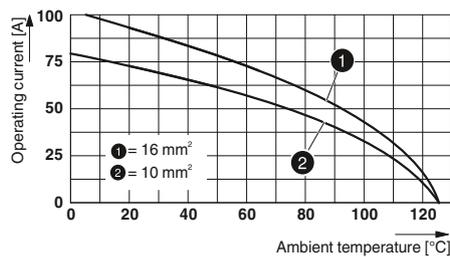


Type	Technical data	
	① ② HC-HS06-I-UT...	③ HC-K 6/0-E...S
Approvals	UL ENEC RL	UL ENEC RL
IEC data		
Rated current, contacts (at 40°C)	[A] 41	80
Overvoltage category	III	III
Degree of pollution	3	3
Rated voltage (III/3) contacts	[V] 400 / 690	1000
Rated surge voltage, contacts	[kV] 6	8
Connection cross section	[mm ²] 0.5 ... 6	6 ... 16
UL data		
Rated voltage	[V] 600	600
Rated current	[A] 35	80
Connection cross section	AWG 10	6
CSA / cUL data		
Rated voltage	[V] 600	600
Rated current	[A] 32	60
Connection cross section	AWG 10	10-6
Material data		
Contact carrier material	PC	PA
Inflammability class according to UL 94	V0	V0
Contact material	Copper alloy	Copper alloy
Contact surface material	Ag	-
Temperature data		
Ambient temperature range	[°C] -40 ... 125	-40 ... 125
General data		
Connection technology	Screw connection	Screw connection
Stripping length	[mm] 10	15
No. of pos.	6	6
Contact numbering	1 - 6	1-6
Insertion/withdrawal cycles	≥ 500	≥ 500

Derating curves



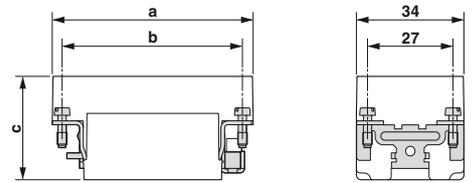
HC-HS06-I-UT...



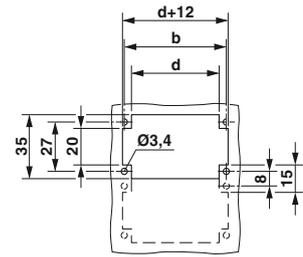
HC-K 6/0-E...S

Description	Pos.	Number	Size	Type	Ordering data		Pcs. / Pkt.
					Socket	Pin	
Screw connection							
	6	1 - 6	B16 / B32	① HC-HS06-I-UT...	1406530	1406531	1
	6	7 - 12	B16 / B32	② HC-HS06-I-UT... 7-12	1406533	1406534	1
Screw connection¹⁾							
	6	1-6	B16 / B32	③ HC-K 6/0-E...S	1580537	1580538	10

Dimensions (in mm)



Dimensional drawing



Panel cutout

	a	b	c	d
① Socket	84.5	77.5	34	72
① Pin				
② Socket	84.5	77.5	34	72
② Pin				
③ Socket	84	77.4	49.7	72
③ Pin			46.3	

Accessories



Coding profiles
From page 656



Replacement PE screws
From page 664

Heavy-duty connectors

HEAVYCON B – contact inserts

K series

Combination applications for power and signal

400 V ... 830 V, 40 A ... 80 A

Connection technology:

- Power and control contacts
- Screw connection

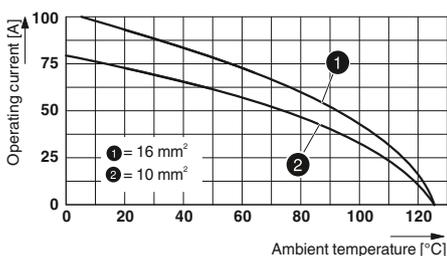
To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Only operate connectors when there is no load/the power is switched off
1) For solid conductors and stranded wires with wire end protection

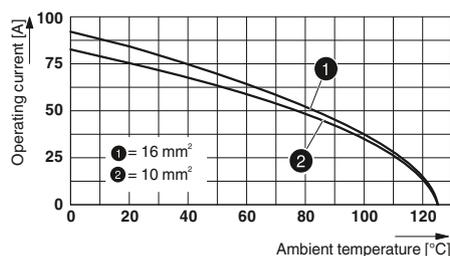


Type	Technical data					
	① HC-K 4/0-E...S		② HC-K 4/8-E...S		③ HC-K 6/12-E...S	
	Power contacts	Control contacts	Power contacts	Control contacts	Power contacts	Control contacts
Approvals						
IEC data						
Rated current [A]	80	-	80	16	40	10
Overvoltage category		III		III		III
Degree of pollution		3		3		3
Rated voltage (III/3) contacts [V]	830	-	400	400	690	230 / 400
Rated surge voltage, contacts [kV]	8	-	6	6	8	4
Connection cross section [mm²]	1.5 ... 16	-	1.5 ... 16	0.5 ... 2.5	2.5 ... 8	0.2 ... 2.5
UL data						
Rated voltage [V]	600	-	600	-	600	-
Rated current [A]	63	-	-	-	-	-
Connection cross section AWG	4	-	-	-	-	-
CSA / cUL data						
Rated voltage [V]	600	-	600	-	600	-
Rated current [A]	80	-	80	-	40	-
Connection cross section AWG	5	-	16-4	-	13-7	-
Material data						
Contact carrier material	PC		PA		PC	
Inflammability class according to UL 94	V0		V0		V0	
Contact material	Cu alloy		Copper alloy		Cu alloy	
Contact surface material	Ag	-	Ag	Ag	Ag	Ag
Temperature data						
Ambient temperature range [°C]	-40 ... 125		-40 ... 125		-40 ... 125	
General data						
Connection technology	Screw connection		Screw connection	Screw connection	Axial screw connection	Screw connection
Hexagonal socket [mm]	-	-	-	-	2	-
Stripping length [mm]	-	-	14	7	8	10
No. of pos.	4	-	4	8	6	12
Contact numbering	1-4	-	1-4	1-8	1-6	1-12
Insertion/withdrawal cycles	≥ 500		≥ 500		≥ 500	

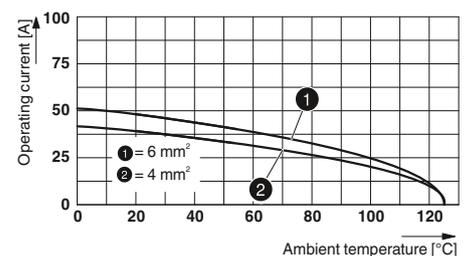
Derating curves



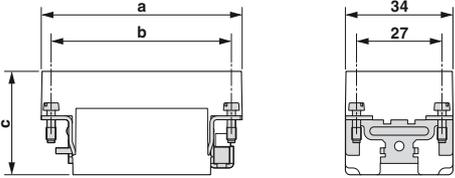
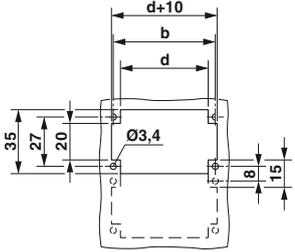
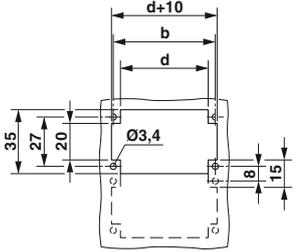
HC-K 4/0-E...S



HC-K 4/8-E...S



HC-K 6/12-E...S

				Ordering data			Dimensions (in mm)																																							
Description	Pos.	Number	Size	Type	Order No.		Pcs. / Pkt.																																							
					Socket	Pin																																								
Screw connection ¹⁾ 	4	1-4	B16 / B32	① HC-K 4/0-E...S	1679427	1679414	1																																							
Screw connection ¹⁾ 	4 / 8	1-4	B24 / B48	② HC-K 4/8-E...S	1679320	1679333	1	Dimensional drawing 																																						
Axial screw connection 	6 / 12	1-6	B16 / B32	③ HC-K 6/12-E...S	1636363	1636350	1	Panel cutout 																																						
								<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td></td> <td></td> <td>44.2</td> <td></td> </tr> <tr> <td>① Pin</td> <td>84.5</td> <td>77.5</td> <td>42</td> <td>72</td> </tr> <tr> <td>② Socket</td> <td></td> <td></td> <td>44.2</td> <td></td> </tr> <tr> <td>② Pin</td> <td>111</td> <td>104</td> <td>42</td> <td>98</td> </tr> <tr> <td>③ Socket</td> <td>84.1</td> <td>77.5</td> <td>47</td> <td></td> </tr> <tr> <td>③ Pin</td> <td>84.5</td> <td></td> <td>47.2</td> <td>68.5</td> </tr> </tbody> </table>					a	b	c	d	① Socket			44.2		① Pin	84.5	77.5	42	72	② Socket			44.2		② Pin	111	104	42	98	③ Socket	84.1	77.5	47		③ Pin	84.5		47.2	68.5
	a	b	c	d																																										
① Socket			44.2																																											
① Pin	84.5	77.5	42	72																																										
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② Pin	111	104	42	98																																										
③ Socket	84.1	77.5	47																																											
③ Pin	84.5		47.2	68.5																																										

Accessories



Coding elements
From page 657



Replacement PE screws
From page 664

Heavy-duty connectors

HEAVYCON B – contact inserts

K series

Combination applications for power and signal

230 V / 400 V ... 690 V, 16 A ... 40 A

Connection technology:

- Power and control contacts
- Crimp connection

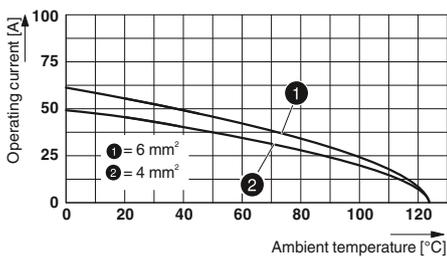
To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off

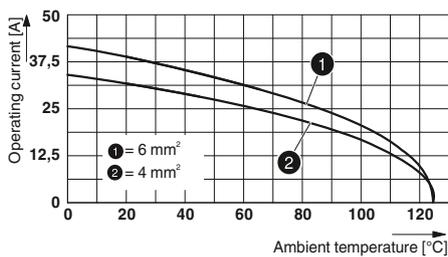


Type	Technical data					
	① HC-K 6/36-E...C		② HC-K12/ 2-E...C		③ HC-K 8/24-E...C	
	Power contacts	Control contacts	Power contacts	Control contacts	Power contacts	Control contacts
Approvals						
IEC data						
Rated current [A]	40	10	40	10	16	10
Overvoltage category	III		III		III	
Degree of pollution	3		3		3	
Rated voltage (III/3) contacts [V]	690	160	690	250	230 / 400	160
Rated surge voltage, contacts [kV]	8	2.5	8	4	4	2.5
Connection cross section [mm²]	1.5 ... 6	0.14 ... 2.5	1.5 ... 6	0.14 ... 2.5	0.5 ... 4	0.14 ... 2.5
UL data						
Rated voltage [V]	600	-	600	-	600	-
Rated current [A]	-	-	-	-	-	-
Connection cross section AWG	-	-	-	-	-	-
CSA / cUL data						
Rated voltage [V]	600	-	600	-	600	-
Rated current [A]	40	-	40	-	16	-
Connection cross section AWG	13-9	-	13-8	-	20-12	-
Material data						
Contact carrier material	PC		PC		PA	
Inflammability class according to UL 94	V0		V0		V0	
Contact material	Cu alloy		Cu alloy		Cu alloy	
Contact surface material	Ag	Ag (alternatively Au)	Ag	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)
Temperature data						
Ambient temperature range [°C]	-40 ... 125		-40 ... 125		-40 ... 125	
General data						
Connection technology	Crimp connection	Crimp connection	Crimp connection	Crimp connection	Crimp connection	Crimp connection
Stripping length [mm]	9	8	9	8	7.5	8
No. of pos.	6	36	12	2	8	24
Contact numbering	1-6	1-36	1-12	1-2	1-8	1-24
Insertion/withdrawal cycles	≥ 500		≥ 500		≥ 500	

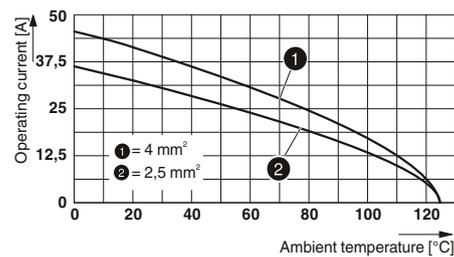
Derating curves



HC-K 6/36 E...C

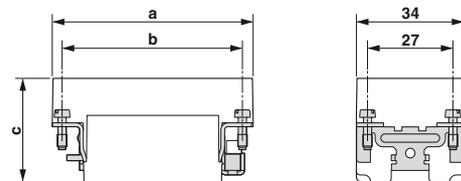


HC-K 12/2 E...C

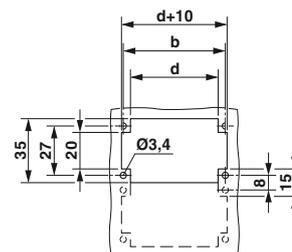


HC-K 8/24 E...C

				Ordering data							
Description	Pos.	Number	Size	Type	Order No.		Pcs./Pkt.	Dimensions (in mm)			
					Socket	Pin					
Crimp connection CK 4,0/CK 1,6											
	6 / 36	1-6	B16 / B32	① HC-K 6/36-E...C	1663389	1663376	1				
Crimp connection CK 4,0/CK 1,6											
	12 / 2	1-12	B16 / B32	② HC-K12/ 2-E...C	1663347	1663334	1				
Crimp connection CK 2,5/CK 1,6											
	8 / 24	1-8	B10	③ HC-K 8/24-E...C	1663321	1663318	1				
Turned crimp contacts CK 1,6 Silver-plated											
			Cross section mm ² / AWG	CK1,6-ED-0,37... AG	1663394	1663336	100				
			0.14 - 0.37 / 26 - 22	CK1,6-ED-0,50... AG	1663404	1663349	100				
			0.5 / 20	CK1,6-ED-0,75... AG	1663417	1663352	100				
			0.75 / 18	CK1,6-ED-1,00... AG	1663420	1663365	100				
			0.75 - 1 / 18	CK1,6-ED-1,50... AG	1663433	1663378	100				
			1.5 / 16	CK1,6-ED-2,50... AG	1663446	1663381	100				
			2.5 / 14								
Turned crimp contacts CK 2,5 Silver-plated											
			Cross section mm ² / AWG	CK2,5-ED-0,50... AG	1663640	1663572	100				
			0.5 / 20	CK2,5-ED-0,75... AG	1663653	1663585	100				
			0.75 / 18	CK2,5-ED-1,00... AG	1663666	1663598	100				
			0.75 - 1 / 18	CK2,5-ED-1,50... AG	1663679	1663608	100				
			1.5 / 16	CK2,5-ED-2,50... AG	1663682	1663611	100				
			2.5 / 14	CK2,5-ED-4,00... AG	1663705	1663637	100				
			4 / 12								
Turned crimp contacts CK 4,0 Silver-plated											
			Cross section mm ² / AWG	CK4,0-ED-1,50... AG	1663271	1663239	25				
			1.5 / 16	CK4,0-ED-2,50... AG	1663284	1663242	25				
			2.5 / 14	CK4,0-ED-4,00... AG	1663297	1663255	25				
			4 / 12	CK4,0-ED-6,00... AG	1663307	1663268	25				
			6 / 10	CK4,0-ED-10,00... AG	1586183	1586198	25				
			10 / 8								



Dimensional drawing



Panel cutout

	a	b	c	d
① Socket	84.5	77.5	41.5	68.5
① Pin			39	
② Socket	84.5	77.5	41.5	72
② Pin			39.6	
③ Socket	64	57	38	49
③ Pin			36	

Accessories



Crimping tools
From page 670



Coding elements
From page 657



Crimp contacts, gold-plated
phoenixcontact.net/products



Replacement PE screws
From page 664

Heavy-duty connectors

HEAVYCON B – contact inserts



HEAVYCON modular offers space and cost savings by combining several connectors into one. The modular inserts fit in size HC-B housings (HC-EVO, HC-STA, HC-ADV, etc.). Pin and socket modules can be freely combined and are polarized to prevent mismatching.

Lower and uppercase letters on the module carrier frames (A, B, .../a, b, ...) enable assignment on the cable and mounting side. The module carrier frames are available for 2 to 6 single modules. A double module requires the space of two single modules.

You can find further information on contact inserts and contacts on our website:

i Your web code: #0516



TYPE	HC-M-01-AT...-40	HC-M-01-AT...-40-PE	HC-M-02-AT...-35	HC-M-02-AT...-16
Description	200 A axial connection module	200 A axial connection module	100 A axial connection module	70 A axial connection module
Number of positions	1	1	2	2
Rated current [A]	200	200	100	70
Rated voltage [V]	1000	PE	1000	1000
Connection cross section	25 ... 70 mm ²	25 ... 70 mm ²	10 ... 35 mm ²	6 ... 25 mm ²
Connection technology	Axial screw	Axial screw	Axial screw	Axial screw
Number of module slots	2	2	2	1
Page	562	562	562	562



TYPE	HC-M-02-AT...-10	HC-M-02-CT...	HC-M-03-CT...	HC-M-04-CT...
Description	40 A axial connection module	Crimp connection module	Crimp connection module	Crimp connection module
Number of positions	2	2	3	4
Rated current [A]	40	40	40	40
Rated voltage [V]	1000	1000	690	830
Connection cross section	2.5 ... 10 mm ²	1.5 ... 10 mm ²	1.5 ... 10 mm ²	1.5 ... 6 mm ²
Connection technology	Axial screw	Crimp connection CK 4,0	Crimp connection CK 4,0	Crimp connection CK 4,0
Number of module slots	1	1	1	1
Page	562	564	564	564



TYPE	HC-M-03/04-CT...	HC-M-05-PT...	HC-M-05L-TPT...	HC-M-02-CT...-HV-16
Description	Crimp connection module	Push-in connection module	Push-in connection module	Crimp connection module
Number of positions	3 power contacts	5	5	2
Rated current [A]	40 / 10	16	10	16
Rated voltage [V]	830 / 830	400	230 / 400	2900 / 5000
Connection cross section	1.5 ... 6 mm ² / 0.14 ... 2.5 mm ²	0.14 ... 2.5 mm ²	0.14 ... 2.5 mm ²	0.5 ... 4 mm ²
Connection technology	Crimp connection CK 4,0/CK 1,6	Push-in connection	Push-in connection	Crimp connection CK 2,5
Number of module slots	1	1	1	2
Page	564	566	566	568



TYPE	HC-M-06P-CT...	HC-M-06-CT...	HC-M-08-CT...	HC-M-20-CT...
Description	Crimp connection module	Crimp connection module	Crimp connection module	Crimp connection module
Number of positions	6	6	8	20
Rated current [A]	16	16	16	16
Rated voltage [V]	830	500	400	690
Connection cross section	0.5 ... 4 mm ²			
Connection technology	Crimp connection CK 2,5			
Number of module slots	1	1	1	2
Page	568	568	568	568



TYPE	HC-M-12-CT...	HC-M-17-CT...	HC-M-02-EMC... / HC-M-EMV...	HC-M-25-CT...
Description	Crimp connection module	Crimp connection module	EMC bus module	Crimp connection module
Number of positions	12	17	4	25
Rated current [A]	10	10	10	4
Rated voltage [V]	250	160	50	50
Connection cross section	0.14 ... 2.5 mm ²	0.14 ... 2.5 mm ²	0.14 ... 2.5 mm ²	0.08 ... 0.5 mm ²
Connection technology	Crimp connection CK 1,6	Crimp connection CK 1,6	Crimp connection CK 1,6	Crimp connection VS 1,0
Number of module slots	1	1	2	1
Page	570	570	572	574



TYPE	HC-M-08-GBIT-CT...	HC-M-DSUB 09-UT...	HC-M-04-KT...	HC-M-RJ45-08-GC...
Description	Crimp connection module	Crimp connection module	Coaxial module	RJ45 gender changer
Number of positions	8	9	4	8
Rated current [A]	5	1	1.5	-
Rated voltage [V]	50	50	50	-
Connection cross section	0.08 ... 0.5 mm ²	0.08 ... 0.5 mm ²	-	-
Connection technology	Crimp connection VS 1,0	Crimp connection VS 1,0	Solder and crimp connection	-
Number of module slots	1	1	1	1
Page	574	574	576	578



TYPE	HC-M-RJ45...	HC-M-04-SCFC...	HC-M-04-LCFC...	HC-M-...-PN-M...
Description	RJ45 pin insert/RJ adapter	FO modules	FO modules	Pneumatic module
Number of positions	8	4	4	2 / 3
Rated current [A]	-	-	-	-
Rated voltage [V]	-	-	-	-
Connection cross section	-	-	-	-
Connection technology	-	FO SC	FO LC	-
Number of module slots	1	1	1	1
Page	578	580	580	582

Heavy-duty connectors

HEAVYCON B – contact inserts

Modular contact inserts

1000 V, 40 A ... 200 A

Connection technology:
– Axial screw connection

To determine the corresponding housing, see the system cross-reference list on page 498.

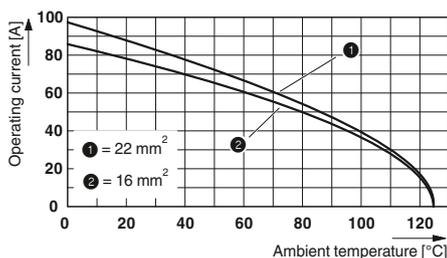
Notes:
For accessories, see from page 652
Only operate connectors when there is no load/the power is switched off
1) For a housing height of ≥ 72 mm only

new



Type	Technical data				
	① HC-M-01-AT...-40	② HC-M-01-AT...-40-PE	③ HC-M-02-AT...-35	④ HC-M-02-AT...-16	⑤ HC-M-02-AT...-10
Approvals		ERC		ERC	
IEC data					
Rated current, contacts (at 40°C)	[A] 200	200	100	70	40
Overvoltage category	III	-	III	III	III
Degree of pollution	3	-	3	3	3
Rated voltage (III/3) contacts	[V] 1000	-	1000	1000	1000
Rated surge voltage, contacts	[kV] 8	-	8	8	8
Connection cross section	[mm ²] 25 ... 70	25 ... 70	10 ... 35	6 ... 25	2.5 ... 10
UL data					
Rated voltage	[V] 600	-	600	-	600
Rated current	[A] 146	-	127	-	55
Connection cross section	AWG 2	-	2	-	8
CSA / cUL data					
Rated voltage	[V] 600	-	600	-	600
Rated current	[A] 116	-	100	-	45
Connection cross section	AWG 00	-	2	-	8
Material data					
Contact carrier material	PC	PC	PC	PC	PC
Inflammability class according to UL 94	V0	V0	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Ag	Ag	Ag	Ag	Ag
Ambient conditions					
Ambient temperature range	[°C] -40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection technology	Axial screw connection	Axial screw connection	Axial screw connection	Axial screw connection	Axial screw connection
Hexagonal socket	[mm] 5	5	4	2.5	2
Stripping length	[mm] 16	16	13	11	5
No. of pos.	1	1	2	2	2
Contact numbering	-	-	1 - 2	1 - 2	1 - 2
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	≥ 500	≥ 500

Derating curves



HC-M-02-AT...-16

Description	Pos.	Number	Slots	Ordering data			Pcs. / Pkt.	Dimensions (in mm)																																																							
				Type	Socket	Pin																																																									
Axial screw connection ¹⁾	1		2	① HC-M-01-AT....-40	1417379	1417381	2																																																								
																																																															
Axial screw connection ¹⁾	1		2	② HC-M-01-AT....-40-PE	1417380	1417382	2	1 module slot																																																							
																																																															
Axial screw connection ¹⁾	2	1 - 2	2	③ HC-M-02-AT....-35	1417390	1417392	2	2 module slots																																																							
																																																															
Axial screw connection ¹⁾	2	1 - 2	1	④ HC-M-02-AT....-16	1417296	1417297	2	<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td></td> <td></td> <td>60</td> <td></td> </tr> <tr> <td>① Pin</td> <td>29.4</td> <td></td> <td>54.5</td> <td></td> </tr> <tr> <td>② Socket</td> <td>29.4</td> <td></td> <td>54.3</td> <td></td> </tr> <tr> <td>② Pin</td> <td>29.3</td> <td></td> <td>54.6</td> <td></td> </tr> <tr> <td>③ Socket</td> <td>29.4</td> <td></td> <td>50.3</td> <td></td> </tr> <tr> <td>③ Pin</td> <td>29.4</td> <td></td> <td>49</td> <td></td> </tr> <tr> <td>④ Socket</td> <td>14.6</td> <td></td> <td>46.5</td> <td></td> </tr> <tr> <td>④ Pin</td> <td>14.6</td> <td></td> <td>45</td> <td></td> </tr> <tr> <td>⑤ Socket</td> <td>14.6</td> <td></td> <td>33.5</td> <td></td> </tr> <tr> <td>⑤ Pin</td> <td>14.6</td> <td></td> <td>34.7</td> <td></td> </tr> </tbody> </table>		a	b	c	d	① Socket			60		① Pin	29.4		54.5		② Socket	29.4		54.3		② Pin	29.3		54.6		③ Socket	29.4		50.3		③ Pin	29.4		49		④ Socket	14.6		46.5		④ Pin	14.6		45		⑤ Socket	14.6		33.5		⑤ Pin	14.6		34.7	
	a	b	c	d																																																											
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④ Socket	14.6		46.5																																																												
④ Pin	14.6		45																																																												
⑤ Socket	14.6		33.5																																																												
⑤ Pin	14.6		34.7																																																												
																																																															
Axial screw connection ¹⁾	2	1 - 2	1	⑤ HC-M-02-AT....-10	1417387	1417389	2																																																								
																																																															
Cable lug PE extension to 16 mm ²				HC-M-MHR-PE16	1636981		50																																																								
																																																															

Accessories



Module carrier frame
From page 584



Dummy module
From page 584

Heavy-duty connectors

HEAVYCON B – contact inserts

Modular contact inserts

690 V ... 1000 V, 40 A

Connection technology:

– Crimp connection CK 4,0

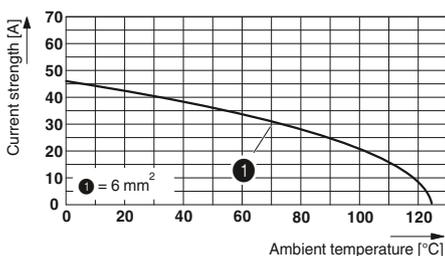
To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off

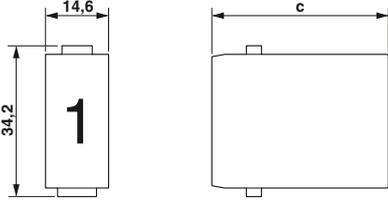
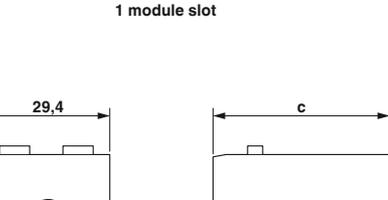
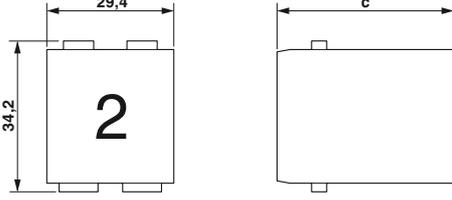


Type	Technical data			
	① HC-M-02-CT...	② HC-M-03-CT...	③ HC-M-04-CT...	④ HC-M-03/04-CT...
Approvals				
IEC data				
Rated current, contacts (at 40°C)	[A] 40	40	40	40
Overtoltage category	III	III	III	III
Degree of pollution	3	3	3	3
Rated voltage (III/3) contacts	[V] 1000	690	830	830
Rated surge voltage, contacts	[kV] 8	6	8	8
Connection cross section	[mm²] 1.5 ... 10	1.5 ... 10	1.5 ... 6	1.5 ... 6
UL data				
Rated voltage	[V] 600	600	600	600
Rated current	[A] 42	42	37	40
Connection cross section	AWG 10	10	10	10
CSA / cUL data				
Rated voltage	[V] 600	600	830	600
Rated current	[A] 34	33	30	33
Connection cross section	AWG 10	10	10	10
Material data				
Contact carrier material	PC	PC	PC	PC
Inflammability class according to UL 94	V0	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Ag	Ag	Ag	-
Temperature data				
Ambient temperature range	[°C] -40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data				
Connection technology	Crimp connection	Crimp connection	Crimp connection	Crimp connection
Stripping length	[mm] 9	9	9	9
No. of pos.	2	3	4	-
Contact numbering	1 - 2	1 - 3	1 - 4	1 - 3
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	≥ 500

Derating curves



HC-M-02-CT...

Description	Pos.	Number	Slots	Ordering data			Pcs. / Pkt.	Dimensions (in mm)																																																	
				Type	Socket	Pin																																																			
Crimp connection CK 4,0 	2	1 - 2	1	① HC-M-02-CT...	1414361	1414360	5																																																		
Crimp connection CK 4,0 	3	1 - 3	1	② HC-M-03-CT...	1414359	1414358	5																																																		
Crimp connection CK 4,0 	4	1 - 4	1	③ HC-M-04-CT...	1414363	1414362	5																																																		
Crimp connection CK 4,0/CK 1,6 	3 / 4	1 - 3	1	④ HC-M-03/04-CT...	1414365	1414364	5	<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td></td> <td></td> <td>42.4</td> <td></td> </tr> <tr> <td>① Pin</td> <td>14.6</td> <td></td> <td>43.7</td> <td></td> </tr> <tr> <td>② Socket</td> <td></td> <td></td> <td>44.7</td> <td></td> </tr> <tr> <td>② Pin</td> <td>14.6</td> <td></td> <td>43.1</td> <td></td> </tr> <tr> <td>③ Socket</td> <td></td> <td></td> <td>40.9</td> <td></td> </tr> <tr> <td>③ Pin</td> <td>14.6</td> <td></td> <td>44.6</td> <td></td> </tr> <tr> <td>④ Socket</td> <td></td> <td></td> <td>39.1</td> <td></td> </tr> <tr> <td>④ Pin</td> <td>14.6</td> <td></td> <td>44.3</td> <td></td> </tr> </tbody> </table>						a	b	c	d	① Socket			42.4		① Pin	14.6		43.7		② Socket			44.7		② Pin	14.6		43.1		③ Socket			40.9		③ Pin	14.6		44.6		④ Socket			39.1		④ Pin	14.6		44.3	
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Turned crimp contacts CK 1,6 Silver-plated 								<table border="1"> <thead> <tr> <th></th> <th>Cross section mm² / AWG</th> <th>Order No. Socket</th> <th>Order No. Pin</th> <th>Pcs.</th> </tr> </thead> <tbody> <tr> <td>CK1,6-ED-0,37... AG</td> <td>0.14 - 0.37 / 26 - 22</td> <td>1663394</td> <td>1663336</td> <td>100</td> </tr> <tr> <td>CK1,6-ED-0,50... AG</td> <td>0.5 / 20</td> <td>1663404</td> <td>1663349</td> <td>100</td> </tr> <tr> <td>CK1,6-ED-0,75... AG</td> <td>0.75 / 18</td> <td>1663417</td> <td>1663352</td> <td>100</td> </tr> <tr> <td>CK1,6-ED-1,00... AG</td> <td>0.75 - 1 / 18</td> <td>1663420</td> <td>1663365</td> <td>100</td> </tr> <tr> <td>CK1,6-ED-1,50... AG</td> <td>1.5 / 16</td> <td>1663433</td> <td>1663378</td> <td>100</td> </tr> <tr> <td>CK1,6-ED-2,50... AG</td> <td>2.5 / 14</td> <td>1663446</td> <td>1663381</td> <td>100</td> </tr> </tbody> </table>						Cross section mm ² / AWG	Order No. Socket	Order No. Pin	Pcs.	CK1,6-ED-0,37... AG	0.14 - 0.37 / 26 - 22	1663394	1663336	100	CK1,6-ED-0,50... AG	0.5 / 20	1663404	1663349	100	CK1,6-ED-0,75... AG	0.75 / 18	1663417	1663352	100	CK1,6-ED-1,00... AG	0.75 - 1 / 18	1663420	1663365	100	CK1,6-ED-1,50... AG	1.5 / 16	1663433	1663378	100	CK1,6-ED-2,50... AG	2.5 / 14	1663446	1663381	100										
	Cross section mm ² / AWG	Order No. Socket	Order No. Pin	Pcs.																																																					
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	Cross section mm ² / AWG	Order No. Socket	Order No. Pin	Pcs.																																																					
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Accessories



Module carrier frame
From page 584



Crimping tools
From page 670



Crimp contacts, gold-plated
phoenixcontact.net/products



Dummy module
From page 584

Heavy-duty connectors

HEAVYCON B – contact inserts

Modular contact inserts

230 V ... 400 V, 10 A ... 16 A

Connection technology:

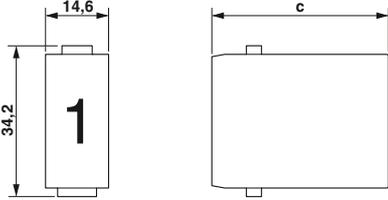
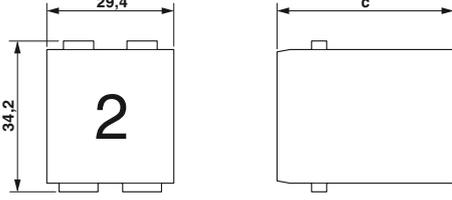
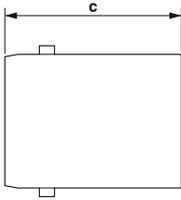
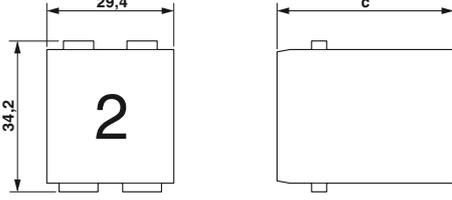
- Push-in connection
- Push-in double connection

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products



Type	Technical data			
	① HC-M-05-PT...	② HC-M-05L-TPT...		
Approvals	① ENEC VDE	② ENEC		
IEC data				
Rated current, contacts (at 40°C)	[A] 16	10		
Overvoltage category	III	III		
Degree of pollution	3	3		
Rated voltage (III/3) contacts	[V] 400	230 / 400		
Rated surge voltage, contacts	[kV] 6	4		
Connection cross section	[mm²] 0.14 ... 2.5	0.14 ... 1.5		
UL data				
Rated voltage	[V] 600	-		
Rated current	[A] 19	-		
Connection cross section	AWG 14	-		
CSA / cUL data				
Rated voltage	[V] 600	-		
Rated current	[A] 15	-		
Connection cross section	AWG 14	-		
Material data				
Contact carrier material	PC	PC		
Inflammability class according to UL 94	V0	V0		
Contact material	Copper alloy	Copper alloy		
Contact surface material	Ag	Ag		
Temperature data				
Ambient temperature range	[°C] -40 ... 125	-40 ... 125		
General data				
Connection technology	Push-in connection	Push-in connection		
Hexagonal socket	[mm] -	-		
Stripping length	[mm] 8	8		
No. of pos.	5	5		
Contact numbering	1 - 5	1 - 5		
Insertion/withdrawal cycles	≥ 500	≥ 500		

Description	Pos.	Number	Slots	Ordering data			Pcs. / Pkt.	Dimensions (in mm)																									
				Type	Socket	Pin																											
Push-in connection 	5	1 - 5	1	① HC-M-05-PT...	1417373	1417372	5																										
Push-in double connection 	5	1 - 5	1	② HC-M-05L-TPT...	1423962	1423961	1																										
								1 module slot 																									
								2 module slots 																									
								<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td></td> <td></td> <td>34</td> <td></td> </tr> <tr> <td>① Pin</td> <td>14.6</td> <td></td> <td>35.5</td> <td></td> </tr> <tr> <td>② Socket</td> <td></td> <td></td> <td>38</td> <td></td> </tr> <tr> <td>② Pin</td> <td>14.6</td> <td></td> <td>36</td> <td></td> </tr> </tbody> </table>		a	b	c	d	① Socket			34		① Pin	14.6		35.5		② Socket			38		② Pin	14.6		36	
	a	b	c	d																													
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② Pin	14.6		36																														

Accessories



Module carrier frame
From page 584



Dummy module
From page 584

Heavy-duty connectors

HEAVYCON B – contact inserts

Modular contact inserts

400 V ... 830 V, 16 A

Connection technology:

– Crimp connection CK 2,5

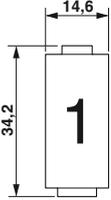
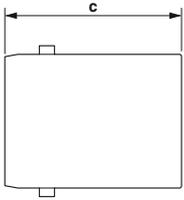
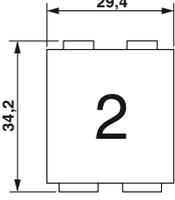
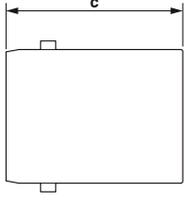
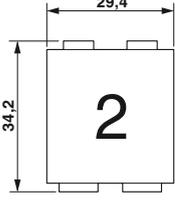
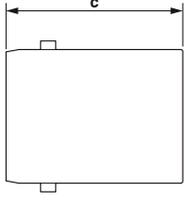
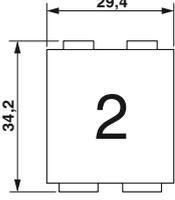
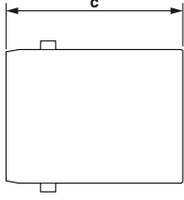
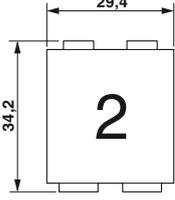
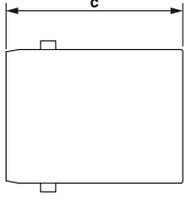
To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
1) For a housing height of ≥ 72 mm only

new



Type	Technical data				
	① HC-M-02-CT...-HV-16	② HC-M-06P-CT...	③ HC-M-06-CT...	④ HC-M-08-CT...	⑤ HC-M-20-CT...
Approvals					
IEC data					
Rated current, contacts (at 40°C)	[A] 16	16	16	16	16
Overvoltage category	III	III	III	III	III
Degree of pollution	3	3	3	3	3
Rated voltage (III/3) contacts	[V] 2900 / 5000	830	500	400	690
Rated surge voltage, contacts	[kV] 15	8	6	6	6
Connection cross section	[mm ²] 0.5 ... 4	0.5 ... 4	0.5 ... 4	0.5 ... 4	0.5 ... 4
UL data					
Rated voltage	[V] 600	830	500	400	500
Rated current	[A] 28	24	24	20	17.5
Connection cross section	AWG 12	12	12	12	12
CSA / cUL data					
Rated voltage	[V] 600	830	500	400	500
Rated current	[A] 24	18	18	16	14
Connection cross section	AWG 12	12	12	12	12
Material data					
Contact carrier material	PC / PTFE	PC	PC	PC	PC
Inflammability class according to UL 94	V0	V0	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)
Ambient conditions					
Ambient temperature range	[°C] -40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection technology	Crimp connection	Crimp connection	Crimp connection	Crimp connection	Crimp connection
Stripping length	[mm] 9.5	7.5	7.5	7.5	7.5
No. of pos.	2	6	6	8	20
Contact numbering	I, II	1 - 6	1 - 6	1 - 8	1 - 20
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	≥ 500	≥ 500

Description	Pos.	Number	Slots	Type	Ordering data		Pcs. / Pkt.	Dimensions (in mm)	
					Socket	Pin			
Crimp connection CK 2,5' 	2	I, II	2	① HC-M-02-CT...-HV-16	1417407	1417408	1	 	1 module slot
Crimp connection CK 2,5 	6	1 - 6	1	② HC-M-06P-CT...	1414369	1414368	5	 	2 module slots
Crimp connection CK 2,5 	6	1 - 6	1	③ HC-M-06-CT...	1414367	1414366	5	 	2 module slots
Crimp connection CK 2,5 	8	1 - 8	1	④ HC-M-08-CT...	1414371	1414370	5	 	2 module slots
Crimp connection CK 2,5 	20	1 - 20	2	⑤ HC-M-20-CT...	1414373	1414372	2	 	2 module slots
Turned crimp contacts CK 2,5 Silver-plated 									
			Cross section mm² / AWG 0.5 / 20 0.75 / 18 0.75 - 1 / 18 1.5 / 16 2.5 / 14 4 / 12	CK2,5-ED-0,50... AG CK2,5-ED-0,75... AG CK2,5-ED-1,00... AG CK2,5-ED-1,50... AG CK2,5-ED-2,50... AG CK2,5-ED-4,00... AG	1663640 1663653 1663666 1663679 1663682 1663705	1663572 1663585 1663598 1663608 1663611 1663637	100 100 100 100 100 100		

	a	b	c	d
① Socket	29.3		33.9	
① Pin				
② Socket	14.6		37.4	
② Pin			39.2	
③ Socket	14.6		35.8	
③ Pin			34	
④ Socket	14.6		35.8	
④ Pin			34.5	
⑤ Socket	29.4		39.95	
⑤ Pin			37.6	

Accessories



Module carrier frame
From page 584



Crimping tools
From page 670



Crimp contacts, gold-plated
phoenixcontact.net/products



Dummy module
From page 584

Heavy-duty connectors

HEAVYCON B – contact inserts

Modular contact inserts

160 V ... 250 V, 10 A

Connection technology:

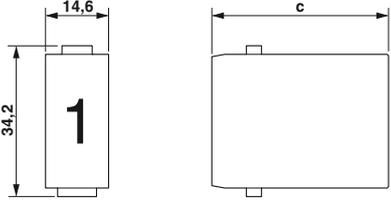
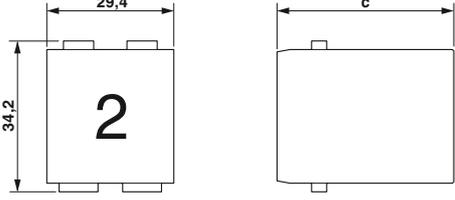
– Crimp connection CK 1,6

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



Type	Technical data			
	① HC-M-12-CT...	② HC-M-17-CT...		
Approvals				
IEC data				
Rated current, contacts (at 40°C)	[A] 10	10		
Overvoltage category	III	III		
Degree of pollution	3	3		
Rated voltage (III/3) contacts	[V] 250	160		
Rated surge voltage, contacts	[kV] 4	2.5		
Connection cross section	[mm²] 0.14 ... 2.5	0.14 ... 2.5		
UL data				
Rated voltage	[V] 250	160		
Rated current	[A] 16	14		
Connection cross section	AWG 14	14		
CSA / cUL data				
Rated voltage	[V] 250	160		
Rated current	[A] 12	10		
Connection cross section	AWG 14	14		
Material data				
Contact carrier material	PC	PC		
Inflammability class according to UL 94	V0	V0		
Contact material	Copper alloy	Copper alloy		
Contact surface material	Ag (alternatively Au)	Ag (alternatively Au)		
Temperature data				
Ambient temperature range	[°C] -40 ... 125	-40 ... 125		
General data				
Connection technology	Crimp connection	Crimp connection		
Stripping length	[mm] 8	8		
No. of pos.	12	17		
Contact numbering	1 - 12	1 - 17		
Insertion/withdrawal cycles	≥ 500	≥ 500		

Description	Pos.	Number	Slots	Ordering data			Pcs. / Pkt.	Dimensions (in mm)																									
				Type	Socket	Pin																											
Crimp connection CK 1,6 	12	1 - 12	1	① HC-M-12-CT...	1414355	1414354	5	 1 module slot																									
Crimp connection CK 1,6 	17	1 - 17	1	② HC-M-17-CT...	1414357	1414356	5		 2 module slots																								
								<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td>14.6</td> <td></td> <td>34</td> <td></td> </tr> <tr> <td>① Pin</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>② Socket</td> <td>14.6</td> <td></td> <td>34</td> <td></td> </tr> <tr> <td>② Pin</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		a	b	c	d	① Socket	14.6		34		① Pin					② Socket	14.6		34		② Pin				
	a	b	c	d																													
① Socket	14.6		34																														
① Pin																																	
② Socket	14.6		34																														
② Pin																																	
Turned crimp contacts CK 1,6 Silver-plated 	Cross section mm ² / AWG																																
	0.14 - 0.37 / 26 - 22		CK1,6-ED-0,37... AG	1663394	1663336	100																											
	0.5 / 20		CK1,6-ED-0,50... AG	1663404	1663349	100																											
	0.75 / 18		CK1,6-ED-0,75... AG	1663417	1663352	100																											
	0.75 - 1 / 18		CK1,6-ED-1,00... AG	1663420	1663365	100																											
	1.5 / 16		CK1,6-ED-1,50... AG	1663433	1663378	100																											
	2.5 / 14		CK1,6-ED-2,50... AG	1663446	1663381	100																											
Turned crimp contacts CK 1,6 Gold-plated 	Cross section mm ² / AWG																																
	0.14 - 0.37 / 24 - 22		CK1,6-ED-0,37... AU	1674969	1674901	100																											
	0.5 / 20		CK1,6-ED-0,50... AU	1674480	1672453	100																											
	0.75 / 18		CK1,6-ED-0,75... AU	1672440	1674914	100																											
	0.75 - 1 / 18		CK1,6-ED-1,00... AU	1674943	1674888	100																											
	1.5 / 16		CK1,6-ED-1,50... AU	1674930	1674875	100																											
	2.5 / 14		CK1,6-ED-2,50... AU	1674985	1674927	100																											

Accessories



Module carrier frame
From page 584



Crimping tools
From page 670



Dummy module
From page 584

Heavy-duty connectors

HEAVYCON B – contact inserts

Modular contact inserts

50 V, 10 A

Connection technology:

– Crimp connection CK 1,6

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
¹⁾ For a housing height of ≥ 72 mm only

new



Type	Technical data			
	① HC-M-02-EMC-...	② HC-M-EMV-.../3-9,5		
Approvals	ERC	UL vs ERC		
IEC data				
Rated current, contacts (at 40°C)	[A]	10	10	
Overtoltage category		III	III	
Degree of pollution		3	3	
Rated voltage (III/3) contacts	[V]	50	50	
Rated surge voltage, contacts	[kV]	0.8	0.8	
Connection cross section	[mm ²]	-	0.14 ... 2.5	
UL data				
Rated voltage	[V]	-	42	
Rated current	[A]	-	10	
Connection cross section	AWG	-	16	
CSA / cUL data				
Rated voltage	[V]	-	42	
Rated current	[A]	-	9	
Connection cross section	AWG	-	16	
Material data				
Contact carrier material		PC	PC	
Inflammability class according to UL 94		V0	V0	
Contact material		-	Copper alloy	
Contact surface material		-	Ag (alternatively Au)	
Temperature data				
Ambient temperature range	[°C]	-40 ... 125	-40 ... 85	
General data				
Connection technology		-	Crimp connection	
Stripping length	[mm]	-	8	
No. of pos.		-	4	
Contact numbering		-	1-4	
Insertion/withdrawal cycles		≥ 500	≥ 500	

Heavy-duty connectors

HEAVYCON B – contact inserts

Modular contact inserts

50 V, 1 ... 5 A

Connection technology:

- Crimp connection VS 1,0
- Screw connection

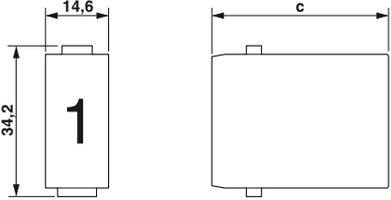
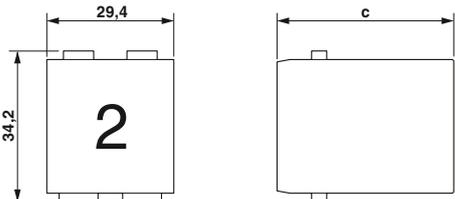
Guide pins and sockets are mandatory for the HC-M-25-CT... and HC-M-DSUB 09-... modules; see page 657.

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



Type	Technical data			
	① HC-M-25-CT...	② HC-M-08-GBIT-CT...	③ HC-M-DSUB 09-UT-... 2-pos.	④ HC-M-DSUB 09-CT...
Approvals	ERC	ERC	ERC	ERC
IEC data				
Rated current, contacts (at 40°C)	[A] 4	5	1	1
Overvoltage category	III	III	III	III
Degree of pollution	3	3	3	3
Rated voltage (III/3) contacts	[V] 50	50	50	50
Rated surge voltage, contacts	[kV] 0.8	0.8	0.8	0.8
Connection cross section	[mm²] 0.08 ... 0.5	0.08 ... 0.5	0.08 ... 0.5	0.08 ... 0.5
UL data				
Rated voltage	[V] -	-	-	-
Rated current	[A] -	-	-	-
Connection cross section	AWG -	-	-	-
CSA / cUL data				
Rated voltage	[V] -	-	-	-
Rated current	[A] -	-	-	-
Connection cross section	AWG -	-	-	-
Material data				
Contact carrier material	PC	PC	PC	PC
Inflammability class according to UL 94	V0	V0	V0	V0
Contact material	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Au	Ag	Ag	Ag
Temperature data				
Ambient temperature range	[°C] -40 ... 125	-40 ... 85	-40 ... 125	-40 ... 125
General data				
Connection technology	Crimp connection	Crimp connection	Screw connection	Crimp connection
Stripping length	[mm] 4.2	4.2	4.2	4.2
No. of pos.	25	8	9	9
Contact numbering	1 - 25	1-8	A,B	1-9
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	≥ 500

Description	Pos.	Number	Slots	Ordering data			Pcs. / Pkt.	Dimensions (in mm)																																													
				Type	Socket	Pin																																															
Crimp connection VS 1,0 	25	1 - 25	1	① HC-M-25-CT...	1414375	1414374	5	 <p>1 module slot</p>																																													
Ethernet connector, crimp connection VS 1,0 	8	1-8	1	② HC-M-08-GBIT-CT...	1417303	1417302	1																																														
D-SUB 09 module, screw connection 	9	A,B	1	2-pos. ③ HC-M-DSUB 09-UT...	1417307	1423723	1	 <p>2 module slots</p>																																													
D-SUB 09 module, crimp connection VS 1,0 	9	1-9	1	④ HC-M-DSUB 09-CT...	1417308	1417309	2																																														
Turned crimp contacts VS 1,0 Gold-plated 								<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td></td> <td></td> <td>30.65</td> <td></td> </tr> <tr> <td>① Pin</td> <td>14.6</td> <td></td> <td>34</td> <td></td> </tr> <tr> <td>② Socket</td> <td></td> <td></td> <td>40.3</td> <td></td> </tr> <tr> <td>② Pin</td> <td>13.9</td> <td></td> <td>41.4</td> <td></td> </tr> <tr> <td>③ Socket</td> <td></td> <td></td> <td>35.7</td> <td></td> </tr> <tr> <td>③ Pin</td> <td>14.6</td> <td></td> <td></td> <td></td> </tr> <tr> <td>④ Socket</td> <td></td> <td></td> <td>35.2</td> <td></td> </tr> <tr> <td>④ Pin</td> <td>14.6</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		a	b	c	d	① Socket			30.65		① Pin	14.6		34		② Socket			40.3		② Pin	13.9		41.4		③ Socket			35.7		③ Pin	14.6				④ Socket			35.2		④ Pin	14.6			
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④ Pin	14.6																																																				
		Cross section mm ² / AWG																																																			
		0.08 - 0.12 / 28 - 26	CUC-DSC...1BAU-S/DSC28	1418787	1418784	100																																															
		0.08 - 0.2 / 28 - 22	CUC-DSC...1BAU-S/DSC22	1418790	1418789	100																																															
		0.2 - 0.5 / 24 - 20	CUC-DSC...1BAU-S/DSC24	1418788	1418786	100																																															

Accessories



Module carrier frame
From page 584



Crimping tools
From page 670



Guide elements
From page 657



Dummy module
From page 584

Heavy-duty connectors

HEAVYCON B – contact inserts

Modular contact inserts, Coaxial modules

50 V, 1.5 A

Connection technology:
– Coaxial contacts

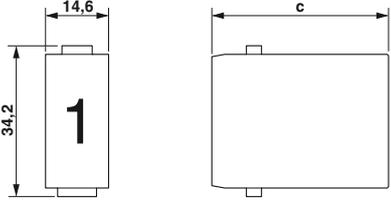
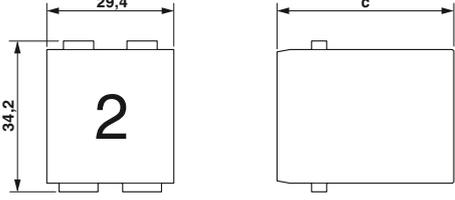
Guide pins and sockets are mandatory
for modules in the HC-M-04-KT... series;
see page 657.

To determine the corresponding
housing, see the system cross-reference
list on page 498.

Notes:
For accessories, see from page 652
Only operate connectors when there is no load/the power is switched off



Type	Technical data			
	① HC-M-04-KT...			
Approvals	EAC			
IEC data				
Rated current, contacts (at 40°C)	[A]	1.5		
Overvoltage category		III		
Degree of pollution		3		
Rated voltage (III/3) contacts	[V]	50		
Rated surge voltage, contacts	[kV]	0.8		
Connection cross section	[mm²]	-		
UL data				
Rated voltage	[V]	-		
Rated current	[A]	-		
Connection cross section	AWG	-		
CSA / cUL data				
Rated voltage	[V]	-		
Rated current	[A]	-		
Connection cross section	AWG	-		
Material data				
Contact carrier material		PC		
Inflammability class according to UL 94		V0		
Contact material		Copper alloy		
Contact surface material		AU		
Temperature data				
Ambient temperature range	[°C]	-40 ... 125		
General data				
Connection technology		Soldering and crimp connection		
Stripping length	[mm]	-		
No. of pos.		4		
Contact numbering		1 - 4		
Insulation resistance	[GΩ]	≥ 10		
Contact resistance	[mΩ]	-		
Insertion/withdrawal cycles		≥ 500		

Description	Pos.	Number	Slots	Ordering data			Pcs. / Pkt.	Dimensions (in mm)																
				Type	Socket	Pin																		
 <p>Coaxial module</p>	4	1 - 4	1	① HC-M-04-KT...	1417370	1417371	5	 <p>1 module slot</p>																
 <p>Coaxial contacts, 50 Ω</p>				HC-M-04-...-KOAX-50	1676815	1676802	10																	
 <p>Coaxial contacts, 75 Ω</p>				HC-M-04-...-KOAX-75	1686245	1686258	10	 <p>2 module slots</p>																
								<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td></td> <td></td> <td>32.6</td> <td></td> </tr> <tr> <td>Pin</td> <td>14.6</td> <td></td> <td>31.5</td> <td></td> </tr> </tbody> </table>			a	b	c	d	① Socket			32.6		Pin	14.6		31.5	
	a	b	c	d																				
① Socket			32.6																					
Pin	14.6		31.5																					

Accessories



Module carrier frame
From page 584



Crimping tools
From page 671



Guide elements
From page 657



Dummy module
From page 584

Heavy-duty connectors

HEAVYCON B – contact inserts

Modular contact inserts, RJ45 modules

Connection technology:
– RJ45 and RJI

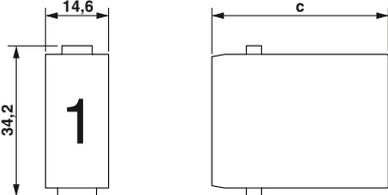
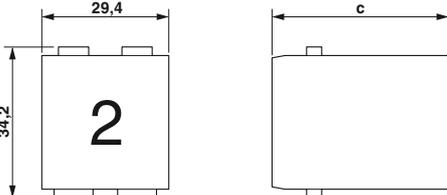
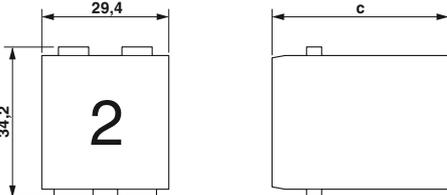
To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Only operate connectors when there is no load/the power is switched off

new



Type	Technical data			
	① HC-M-RJ45-08-GC-... RJ45, 10 Gbps	② HC-M-RJ45-08-... RJ45, CAT6A, 10 Gbps	③ HC-M-RJ45-AD-PC-... for RJ45 patch cable	④ HC-M-RJI-AD-PC-... for RJ industrial inserts
Approvals	ERC	ERC	ERC	ERC
IEC data				
Rated current, contacts (at 40°C)	[A]	-	-	-
Overvoltage category	III	III	III	III
Degree of pollution	3	3	3	3
Rated voltage (III/3) contacts	[V]	-	-	-
Rated surge voltage, contacts	[kV]	-	-	-
Connection cross section	[mm²]	-	-	-
UL data				
Rated voltage	[V]	-	-	-
Rated current	[A]	-	-	-
Connection cross section	AWG	-	-	-
CSA / cUL data				
Rated voltage	[V]	-	-	-
Rated current	[A]	-	-	-
Connection cross section	AWG	-	-	-
Material data				
Contact carrier material	-	PC	-	-
Inflammability class according to UL 94	V0	V0	V0	V0
Contact material	-	Phosphor bronze	-	-
Contact surface material	-	Gold	-	-
Temperature data				
Ambient temperature range	[°C]	-40 ... 70	-25 ... 60	-25 ... 60
General data				
Connection technology	-	-	-	-
Stripping length	[mm]	-	-	-
No. of pos.	8	8	-	8
Contact numbering	-	-	-	-
Insulation resistance	[GΩ]	-	-	-
Contact resistance	[mΩ]	-	-	-
Insertion/withdrawal cycles	-	-	-	-

Description	Pos.	Number	Slots	Ordering data		Pcs. / Pkt.	Dimensions (in mm)																										
				Type	Order No.																												
				Socket	Pin																												
RJ45 gender changer 	8		1	RJ45, 10 Gbps ① HC-M-RJ45-08-GC-...	1419886		1																										
RJ45 pin insert 	8		1	RJ45, CAT6 _A , 10 Gbps ② HC-M-RJ45-08-...	1419887		1																										
RJ45 adapter 			1	for RJ45 patch cable ③ HC-M-RJ45-AD-PC-...	1419885		1																										
RJ45 adapter 	8			for RJ industrial inserts ④ HC-M-RJI-AD-PC-...	1419888		1	<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td></td> <td></td> <td>36.7</td> <td></td> </tr> <tr> <td>② Pin</td> <td></td> <td></td> <td>41</td> <td></td> </tr> <tr> <td>③ Socket</td> <td></td> <td></td> <td>50.7</td> <td></td> </tr> <tr> <td>④ Pin</td> <td></td> <td></td> <td>54.5</td> <td></td> </tr> </tbody> </table>		a	b	c	d	① Socket			36.7		② Pin			41		③ Socket			50.7		④ Pin			54.5	
	a	b	c	d																													
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② Pin			41																														
③ Socket			50.7																														
④ Pin			54.5																														

Accessories



Module carrier frame
From page 584



RJ45 patch cable
From page 391



Dummy module
From page 584

Heavy-duty connectors

HEAVYCON B – contact inserts

Modular contact inserts, FO modules

Connection technology:

– Fiber optics

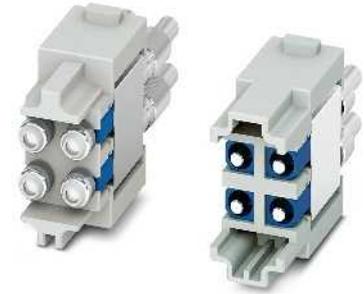
– For GI fiber 50/125 μm or 62.5/125 μm

Guide pins and sockets are mandatory for the HC-M-04-SCFC-... and HC-M-04-LCFC-... modules; see page 657.

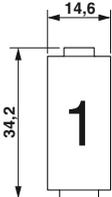
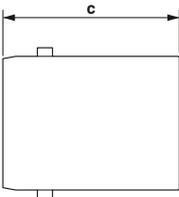
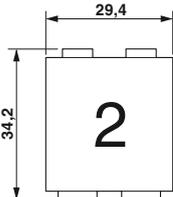
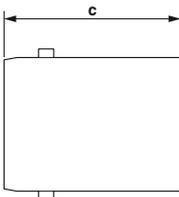
To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652

new



Type	Technical data			
	① HC-M-04-SCFC-...	② HC-M-04-LCFC-...		
Approvals	ERC	ERC		
IEC data				
Rated current, contacts (at 40°C)	[A]	-	-	
Overtoltage category		III	III	
Degree of pollution		3	3	
Rated voltage (III/3) contacts	[V]	-	-	
Rated surge voltage, contacts	[kV]	-	-	
Connection cross section	[mm ²]	-	-	
UL data				
Rated voltage	[V]	-	-	
Rated current	[A]	-	-	
Connection cross section	AWG	-	-	
CSA / cUL data				
Rated voltage	[V]	-	-	
Rated current	[A]	-	-	
Connection cross section	AWG	-	-	
Material data				
Contact carrier material		-	-	
Inflammability class according to UL 94		V0	V0	
Contact material		-	-	
Contact surface material		-	-	
Temperature data				
Ambient temperature range	[°C]	-40 ... 70	-10 ... 70	
General data				
Connection technology		-	-	
Stripping length	[mm]	-	-	
No. of pos.		4	4	
Contact numbering		-	-	
Insulation resistance	[G Ω]	-	-	
Contact resistance	[m Ω]	-	-	
Insertion/withdrawal cycles		-	-	

Description	Pos.	Number	Slots	Ordering data			Pcs. / Pkt.	Dimensions (in mm)																										
				Type	Socket	Pin																												
FO SC 	4			① HC-M-04-SCFC-...	1419890	1419889	1	 	1 module slot																									
FO LC 	4			② HC-M-04-LCFC-...	1419892	1419891	1	 	2 module slots																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>① Pin</td> <td></td> <td></td> <td>34</td> <td></td> </tr> <tr> <td>② Socket</td> <td>14.6</td> <td></td> <td>33.3</td> <td></td> </tr> <tr> <td>② Pin</td> <td></td> <td></td> <td>28.7</td> <td></td> </tr> </tbody> </table>											a	b	c	d	① Socket					① Pin			34		② Socket	14.6		33.3		② Pin			28.7	
	a	b	c	d																														
① Socket																																		
① Pin			34																															
② Socket	14.6		33.3																															
② Pin			28.7																															

Accessories



Module carrier frame
From page 584



Guide elements
From page 657



Dummy module
From page 584

Heavy-duty connectors

HEAVYCON B – contact inserts

Modular contact inserts, pneumatic modules

Connection technology:

- Pneumatic contact with valve
- Pneumatic contact without valve

To determine the corresponding housing, see the system cross-reference list on page 498.

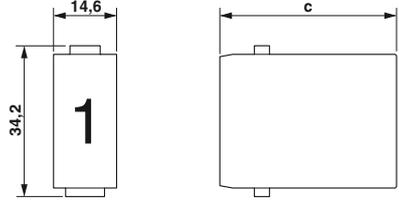
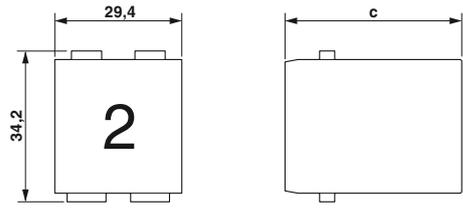
Notes:

For accessories, see from page 652

new



Type	Technical data					
	① HC-M-02-PN-M-...	② HC-M-PN2-6,00-...-V With valve	③ HC-M-PN2-6,00-... Without valve	④ HC-M-03-PN-M-...	⑤ ⑥ ⑦ HC-M-PN3-1,60-BU-V With valve	⑧ ⑨ ⑩ HC-M-PN3-1,60-... Without valve
Approvals	ERC	ERC	ERC	ERC	ERC	ERC
Material data for pneumatic module						
Contact carrier material	PC	-	-	PC	-	-
Inflammability class according to UL 94	V0	-	-	V0	-	-
Module slots	1	-	-	1	-	-
Material data for pneumatic contact						
Contact material	-	Delrin acetal	Delrin acetal	-	Delrin acetal	Delrin acetal
Seal material (contact)	-	Buna-N	Buna-N	-	Buna-N	Buna-N
Valve material (contact)	-	Polypropylene	Polypropylene	-	Polypropylene	Polypropylene
Mechanical data						
No. of pos.	2	-	-	3	-	-
Contact numbering	1 - 2	-	-	1 - 3	-	-
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	≥ 500	≥ 500	≥ 500
Internal diameter of pressure hose connection	6 mm	6 mm	6 mm	1.6 mm	1.6 mm	1.6 mm
Operating pressure	-	8.00 bar	8.00 bar	-	8.00 bar	8.00 bar
Ambient conditions						
Ambient temperature range	°C -40 ... 80	-40 ... 125	-40 ... 125	-40 ... 80	-40 ... 125	-40 ... 125

Description	Pos.	Number	Slots	Ordering data			Pcs. / Pkt.	Dimensions (in mm)																								
				Type	Socket	Pin																										
PN2 pneumatic module 	2	1 - 2	1	① HC-M-02-PN-M...	1417434	1417434	5	 <p>1 module slot</p>																								
PN2 pneumatic contact 				With valve ② HC-M-PN2-6,00-...-V	1676776		10																									
PN2 pneumatic contact 				Without valve ③ HC-M-PN2-6,00-...	1676763	1676750	10	 <p>2 module slots</p>																								
PN3 pneumatic module 	3	1 - 3	1	④ HC-M-03-PN-M...	1417433	1417433	5																									
PN3 pneumatic contact 				With valve ⑤ HC-M-PN3-1,60-BU-V	1663543		10	<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td>14.6</td> <td></td> <td>27.2</td> <td></td> </tr> <tr> <td>④ Socket</td> <td>14.6</td> <td></td> <td>27.2</td> <td></td> </tr> <tr> <td>Pin</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>						a	b	c	d	① Socket	14.6		27.2		④ Socket	14.6		27.2		Pin				
	a	b	c	d																												
① Socket	14.6		27.2																													
④ Socket	14.6		27.2																													
Pin																																
				With valve ⑥ HC-M-PN3-3,00-BU-V	1663556		10																									
				With valve ⑦ HC-M-PN3-4,00-BU-V	1663569		10																									
PN3 pneumatic contact 				Without valve ⑧ HC-M-PN3-1,60-...	1663514	1663488	10																									
				Without valve ⑨ HC-M-PN3-3,00-...	1663527	1663491	10																									
				Without valve ⑩ HC-M-PN3-4,00-...	1663530	1663501	10																									

Accessories



Module carrier frame
From page 584



Dummy module
From page 584

Heavy-duty connectors

HEAVYCON B – contact inserts

Modular contact inserts, module carrier frames

new

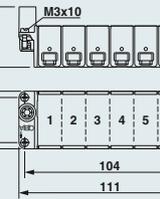
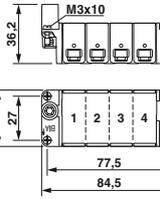
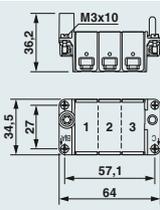
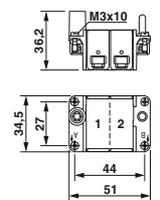
General data		Technical data
Hinged retaining frame material		Die-cast zinc alloy
Connection cross section		4 mm ² ... 6 mm ² (for PE conductor – power side)
Connection cross section		1 mm ² ... 2.5 mm ² (for PE conductor – control side)
Connection cross section	AWG	12 ... 10 (for PE conductor – power side)
Connection cross section	AWG	18 ... 14 (for PE conductor – control side)
Insertion/withdrawal cycles		≥ 500
Ambient temperature (operation)		-40°C ... 125°C



Ordering data

Description	Size	Type	Order No.	Pcs. / Pkt.
Module carrier frame ¹⁾ 	B6	For sleeve housing (A, B, C, etc.) HC-M-B06-MF-H	1417403	1
	B6	For panel mounting base (a, b, c, etc.) HC-M-B06-MF-B	1417398	1
Module carrier frame ¹⁾ 	B10	For sleeve housing (A, B, C, etc.) HC-M-B10-MF-H	1417404	1
	B10	For panel mounting base (a, b, c, etc.) HC-M-B10-MF-B	1417399	1
Module carrier frame ¹⁾ 	B16	For sleeve housing (A, B, C, etc.) HC-M-B16-MF-H	1417405	1
	B16	For panel mounting base (a, b, c, etc.) HC-M-B16-MF-B	1417400	1
Module carrier frame ¹⁾ 	B24	For sleeve housing (A, B, C, etc.) HC-M-B24-MF-H	1417406	1
	B24	For panel mounting base (a, b, c, etc.) HC-M-B24-MF-B	1417402	1
Dummy module 		For unused slots HC-M-00	1414353	5
Guide pin and guide socket 		Guide pin HC-CST-MOD	1636127	10
		Guide socket HC-CBU-MOD	1636130	10

Dimensions



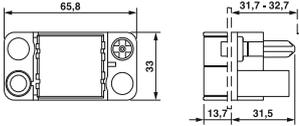
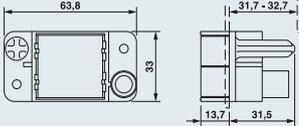
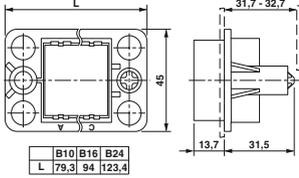
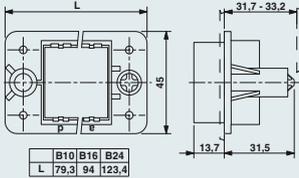
Notes:
For assembly instructions, see phoenixcontact.net/products
1) For solid conductors and stranded wires with wire end protection

Accessories

Modular contact inserts, docking frames

General data	Technical data
Material	PC
Inflammability class according to UL 94	V0
Insertion/withdrawal cycles	≥ 500
Ambient temperature (operation)	-40°C ... 125°C



Description		Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Docking frame		B6	floating (A, B, C, etc.) HC-B 06-ANDOCK-MOD-T	1422076	2	
Docking frame		B6	fixed (a, b, c, etc.) HC-B 06-ANDOCK-MOD-A	1422075	2	
Docking frame		B10 B16 B24	floating (A, B, C, etc.) HC-B 10-ANDOCK-MOD-T HC-B 16-ANDOCK-MOD-T HC-B 24-ANDOCK-MOD-T	1422078 1587454 1587470	2 2 2	
Docking frame		B10 B16 B24	fixed (a, b, c, etc.) HC-B 10-ANDOCK-MOD-A HC-B 16-ANDOCK-MOD-A HC-B 24-ANDOCK-MOD-A	1422077 1587467 1587483	2 2 2	
Washer, floating			for M4 cylinder head screws HC-MOD-ANDOCK-USCH	1587496	20	

Notes:
Use of docking frames, e.g., in the back panel of control cabinet racks.
A metal mounting panel must be grounded separately, as the plastic frame does not have a PE connection.
Docking frames ensure correct contacting of pin and socket modules

Accessories



Dummy module
From page 584

Heavy-duty connectors

HEAVYCON B – housing

Size B6, plastic, ADVANCE PL sleeve housing with cable gland

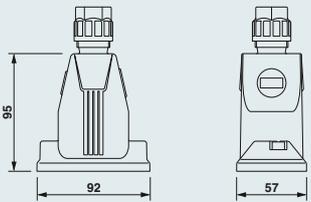
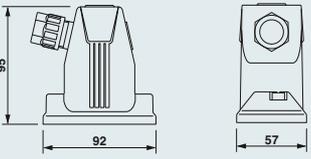
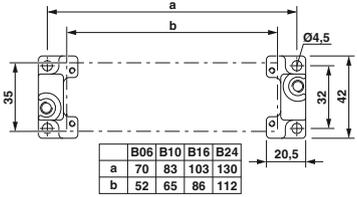
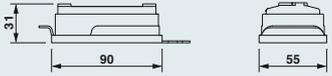
General data

Housing material	PA
Lock material	Stainless steel
Sealing material	NBR
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 100°C

Technical data



Ordering data

Description	Clamping area	Type	Order No.	Pcs. / Pkt.	Dimensions															
Sleeve housing¹⁾ Height: 93.7 mm 	8 mm ... 13 mm 9 mm ... 17 mm	Cable outlet: top HC-ADV-B06-HHWH-1TGM20-PL HC-ADV-B06-HHWH-1TGM25-PL	1404222 1404225	1 1																
Sleeve housing¹⁾ Height: 93.7 mm 	8 mm ... 13 mm 9 mm ... 17 mm	Cable outlet: lateral HC-ADV-B06-HHWH-1SGM20-PL HC-ADV-B06-HHWH-1SGM25-PL	1404224 1404226	1 1																
Panel mounting flange 		2 pcs. per housing HC-B-AF Set with 2 panel mounting flanges HC-B-AF-SET	1686533 1604638	20 1	 <table border="1" data-bbox="1209 1537 1359 1591"> <thead> <tr> <th></th> <th>B06</th> <th>B10</th> <th>B16</th> <th>B24</th> </tr> </thead> <tbody> <tr> <td>a</td> <td>70</td> <td>83</td> <td>103</td> <td>130</td> </tr> <tr> <td>b</td> <td>52</td> <td>65</td> <td>86</td> <td>112</td> </tr> </tbody> </table>		B06	B10	B16	B24	a	70	83	103	130	b	52	65	86	112
	B06	B10	B16	B24																
a	70	83	103	130																
b	52	65	86	112																
Protective cover 		for sleeve side, IP50 HC-B 6-TMS-SD-IP50 for panel mounting side, IP66 HC-B 6-TMS-SD-IP66	1690736 1411494	10 10																

Notes:

Marking label: US-EMP (20X9) Order No. [0829439](#)

¹⁾ Screw locking with M6 Allen screws

Accessories



Allen key
see Catalog 3



Replacement seals
From page 662

Size B6, metal, ADVANCE sleeve housing



General data		Technical data	
Housing material		Die-cast aluminum, salt water resistant	
Lock material		Stainless steel	
Sealing material		NBR, conductive	
IP degree of protection (when plugged in)		IP66 / IP68 / IP69K	
NEMA degree of protection (when plugged in)		4 / 4X / 12	
Ambient temperature (operation)		-40°C ... 125°C	

Description		Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing ¹⁾ Height: 74 mm		1x M20	Cable outlet: top HC-ADV-B06-HLWH-1TTM20-EMC-AL	1413362	1	
		1x M25	HC-ADV-B06-HLWH-1TTM25-EMC-AL	1413364	1	
Sleeve housing ¹⁾ Height: 93.7 mm		1x M25	Cable outlet: top HC-ADV-B06-HHWH-1TTM25-EMC-AL	1413374	1	
		1x M32	HC-ADV-B06-HHWH-1TTM32-EMC-AL	1413376	1	
Sleeve housing ¹⁾ Height: 74 mm		1x M20	Cable outlet: lateral HC-ADV-B06-HLWH-1STM20-EMC-AL	1413363	1	
		1x M25	HC-ADV-B06-HLWH-1STM25-EMC-AL	1413365	1	
Sleeve housing ¹⁾ Height: 93.7 mm		1x M25	Cable outlet: lateral HC-ADV-B06-HHWH-1STM25-EMC-AL	1413375	1	
		1x M32	HC-ADV-B06-HHWH-1STM32-EMC-AL	1413377	1	
Panel mounting flange			2 pcs. per housing HC-B-AF	1686533	20	
			Set with 2 panel mounting flanges HC-B-AF-SET	1604638	1	
Protective cover			for sleeve side, IP50 HC-B 6-TMS-SD-IP50	1690736	10	
			for panel mounting side, IP66 HC-B 6-TMS-SD-IP66	1411494	10	

Notes:
In order to achieve optimum shielding results, the mounting surface must be conductive
Marking label: US-EMLP-HA (20X9), Order No. 0830989
¹⁾ Screw locking with M6 Allen screws

Accessories



Cable glands
From page 694



Allen key
see Catalog 3



Replacement seals
From page 662

Heavy-duty connectors

HEAVYCON B – housing

**Size B6, plastic,
EVO housing,
single locking latch**

General data

Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Technical data



Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 60.5 mm		HC-EVO-B06-HLFS-PLBK	1407619	1	
Sleeve housing Height: 87.5 mm		HC-EVO-B06-HHFS-PLBK	1407620	1	
Panel mounting base Height: 30.5 mm		Without cover HC-EVO-B06-BWS-PLRBK	1407621	1	
		With cover HC-EVO-B06-BWSC-PLRBK	1407622	1	
Box mounting base ¹⁾ Height: 74 mm	2x M20	Without cover HC-EVO-B06-SHWS-2SSM20-PLRBK	1421322	1	
	2x M25	HC-EVO-B06-SHWS-2SSM25-PLRBK	1421229	1	
	2x M32	HC-EVO-B06-SHWS-2SSM32-PLRBK	1407623	1	
		With cover HC-EVO-B06-SHWSC-2SSM20-PLRBK	1421329	1	
		HC-EVO-B06-SHWSC-2SSM25-PLRBK	1421244	1	
		HC-EVO-B06-SHWSC-2SSM32-PLRBK	1407624	1	
Coupling housing Height: 90 mm		HC-EVO-B06-CHWS-PLRBK	1407625	1	
Cable gland	Clamping area 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	HC-B-G-M20-PLRBK	1407669	1	
		HC-B-G-M25-PLRBK	1407670	1	
		HC-B-G-M32-PLRBK	1407671	1	
		HC-B-G-M40-PLRBK	1407672	1	

Notes:

For further accessories, see from page 658

Marking label: US-EMP (20X9) Order No. [0829439](#)

¹⁾ One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



Connector set
From page 636

Size B6, metal, EVO housing, single locking latch



General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Technical data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Description		Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 60.5 mm			HC-EVO-B06-HLFS-EL-AL	1411448	1	
Sleeve housing Height: 80 mm			HC-EVO-B06-HHFS-EL-AL	1411447	1	
Panel mounting base Height: 30.5 mm			Without cover HC-STA-B06-BWS-ELC-AL	1411318	1	
			With cover HC-STA-B06-BWSC-ELC-AL	1411319	1	
Box mounting base ¹⁾ Height: 54.6 mm		2x M20 2x M25 2x Pg16	Without cover HC-STA-B06-SLWS-2SSM20-ELC-AL HC-STA-B06-SLWS-2SSM25-ELC-AL HC-STA-B06-SLWS-2SSP16-ELC-AL	1412821 1412822 1412823	1 1 1	
		2x M20 2x M25 2x Pg16	With cover HC-STA-B06-SLWSC-2SSM20-ELC-AL HC-STA-B06-SLWSC-2SSM25-ELC-AL HC-STA-B06-SLWSC-2SSP16-ELC-AL	1412825 1412826 1412827	1 1 1	
Cable gland		Clamping area 9 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	HC-B-G-M20-EC-AL HC-B-G-M25-EC-AL HC-B-G-M32-EC-AL HC-B-G-M40-EC-AL	1411439 1411446 1411440 1411441	1 1 1 1	

Notes:	
For further accessories, see from page 658	
Marking label: US-EMLP-HA (20X9), Order No. 0830989	
¹⁾ Supplied with a plastic sealing cap	

Accessories

Thread adapter From page 661	EMC cable gland From page 660	Replacement seals From page 662	Connector set From page 637

Heavy-duty connectors

HEAVYCON B – housing

Size B6, metal, sleeve housing for single locking latch

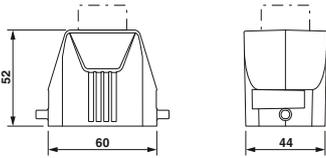
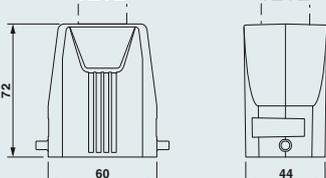
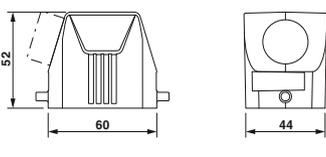
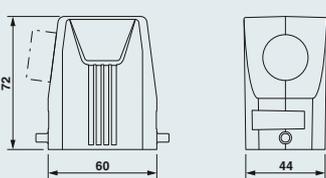


General data

Housing material
Locking latch material
Sealing material
IP degree of protection (when plugged in)
NEMA degree of protection (when plugged in)
Ambient temperature (operation)

Technical data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	-
Sealing material	-
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 52 mm 	1x M20 1x M25	Cable outlet: top HC-STA-B06-HLFS-1TTM20-EL-AL	1412574	1	
		HC-STA-B06-HLFS-1TTM25-EL-AL	1412575	1	
	1x Pg13.5 1x Pg16	HC-STA-B06-HLFS-1TTP13-EL-AL	1412576	1	
		HC-STA-B06-HLFS-1TTP16-EL-AL	1412577	1	
Sleeve housing Height: 72 mm 	1x M25 1x M32	Cable outlet: top HC-STA-B06-HHFS-1TTM25-EL-AL	1412566	1	
		HC-STA-B06-HHFS-1TTM32-EL-AL	1412567	1	
	1x Pg21 1x Pg29	HC-STA-B06-HHFS-1TTP21-EL-AL	1412568	1	
		HC-STA-B06-HHFS-1TTP29-EL-AL	1412569	1	
Sleeve housing Height: 52 mm 	1x M20 1x M25	Cable outlet: lateral HC-STA-B06-HLFS-1STM20-EL-AL	1412570	1	
		HC-STA-B06-HLFS-1STM25-EL-AL	1412571	1	
	1x Pg13.5 1x Pg16	HC-STA-B06-HLFS-1STP13-EL-AL	1412572	1	
		HC-STA-B06-HLFS-1STP16-EL-AL	1412573	1	
Sleeve housing Height: 72 mm 	1x M25 1x M32	Cable outlet: lateral HC-STA-B06-HHFS-1STM25-EL-AL	1412562	1	
		HC-STA-B06-HHFS-1STM32-EL-AL	1412563	1	
	1x Pg21 1x Pg29	HC-STA-B06-HHFS-1STP21-EL-AL	1412564	1	
		HC-STA-B06-HHFS-1STP29-EL-AL	1412565	1	

Notes:
For further accessories, see from page 658
Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories

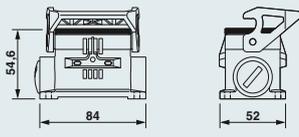
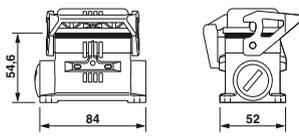
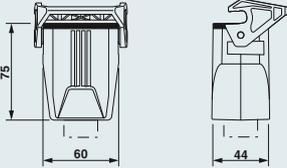
 Cable glands From page 694	 Protective cover From page 654	 Cover plates From page 666	 Connector set From page 638
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Size B6, metal, supporting base element with single locking latch



General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Technical data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Description		Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base Height: 30.5 mm 			Without cover	1411318	1	
			With cover	1411319	1	
Box mounting base¹⁾ Height: 54.6 mm 	2x M20 2x M25	2x Pg16	Without cover			
			HC-STA-B06-SLWS-2SSM20-ELC-AL	1412821	1	
			HC-STA-B06-SLWS-2SSM25-ELC-AL	1412822	1	
Box mounting base¹⁾ Height: 54.6 mm 	2x M20 2x M25	2x Pg16	With cover			
			HC-STA-B06-SLWSC-2SSM20-ELC-AL	1412825	1	
			HC-STA-B06-SLWSC-2SSM25-ELC-AL	1412826	1	
Coupling housing Height: 73 mm 	1x M20 1x M25 1x M32	1x Pg13.5 1x Pg21 1x Pg29	Cable outlet: top			
			HC-STA-B06-CHWS-1TTM20-ELC-AL	1412555	1	
			HC-STA-B06-CHWS-1TTM25-ELC-AL	1412556	1	
			HC-STA-B06-CHWS-1TTM32-ELC-AL	1412557	1	
			HC-STA-B06-CHWS-1TTP13-ELC-AL	1412558	1	
HC-STA-B06-CHWS-1TTP21-ELC-AL	1412559	1				
HC-STA-B06-CHWS-1TTP29-ELC-AL	1412560	1				

Notes:
For further accessories, see from page 658
¹⁾ Supplied with a plastic sealing cap

Accessories

			
Cable glands From page 694	Replacement seals From page 662	Replacement protective cover From page 653	Replacement latch From page 663

Heavy-duty connectors

HEAVYCON B – housing

Size B10, plastic, ADVANCE PL sleeve housing with cable gland

General data

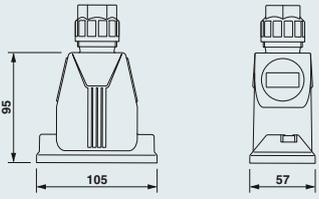
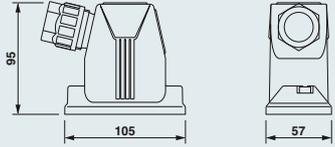
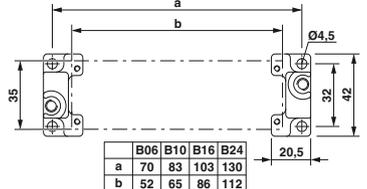
Housing material	PA
Lock material	Stainless steel
Sealing material	NBR
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 100°C

Technical data

PA
Stainless steel
NBR
IP66 / IP67
12
-40°C ... 100°C



Ordering data

Description	Clamping area	Type	Order No.	Pcs. / Pkt.	Dimensions															
Sleeve housing¹⁾ Height: 95 mm 	9 mm ... 17 mm 11 mm ... 21 mm	Cable outlet: top HC-ADV-B10-HHWH-1TGM25-PL HC-ADV-B10-HHWH-1TGM32-PL	1404227 1404229	1 1																
Sleeve housing¹⁾ Height: 95 mm 	9 mm ... 17 mm 11 mm ... 21 mm	Cable outlet: lateral HC-ADV-B10-HHWH-1SGM25-PL HC-ADV-B10-HHWH-1SGM32-PL	1404228 1404230	1 1																
Panel mounting flange 		2 pcs. per housing HC-B-AF Set with 2 panel mounting flanges HC-B-AF-SET	1686533 1604638	20 1	 <table border="1" data-bbox="1204 1533 1356 1585"> <thead> <tr> <th></th> <th>B06</th> <th>B10</th> <th>B16</th> <th>B24</th> </tr> </thead> <tbody> <tr> <td>a</td> <td>70</td> <td>83</td> <td>103</td> <td>130</td> </tr> <tr> <td>b</td> <td>52</td> <td>65</td> <td>86</td> <td>112</td> </tr> </tbody> </table>		B06	B10	B16	B24	a	70	83	103	130	b	52	65	86	112
	B06	B10	B16	B24																
a	70	83	103	130																
b	52	65	86	112																
Protective cover 		for sleeve side, IP50 HC-B 10-TMS-SD-IP50 for panel mounting side, IP66 HC-B 10-TMS-SD-IP66	1690749 1411504	10 10																

Notes:

Marking label: US-EMP (20X9) Order No. [0829439](#)

¹⁾ Screw locking with M6 Allen screws

Accessories



Allen key
see Catalog 3



Replacement seals
From page 662

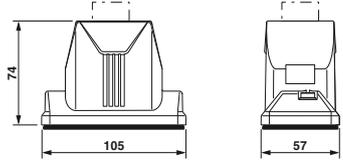
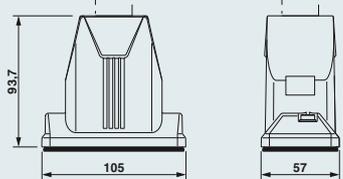
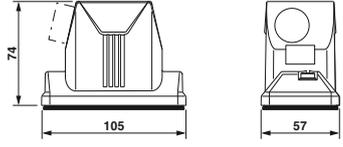
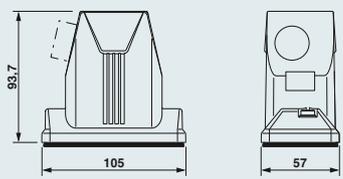
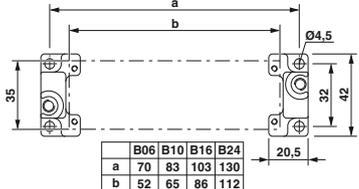
Size B10, metal, ADVANCE sleeve housing



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Lock material	Stainless steel
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP68 / IP69K
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions															
Sleeve housing¹⁾ Height: 74 mm 	1x M20 1x M25	Cable outlet: top HC-ADV-B10-HLWH-1TTM20-EMC-AL	1413388	1																
		HC-ADV-B10-HLWH-1TTM25-EMC-AL	1413390	1																
Sleeve housing¹⁾ Height: 93.7 mm 	1x M25 1x M32	Cable outlet: top HC-ADV-B10-HHWH-1TTM25-EMC-AL	1413400	1																
		HC-ADV-B10-HHWH-1TTM32-EMC-AL	1413402	1																
Sleeve housing¹⁾ Height: 74 mm 	1x M20 1x M25	Cable outlet: lateral HC-ADV-B10-HLWH-1STM20-EMC-AL	1413389	1																
		HC-ADV-B10-HLWH-1STM25-EMC-AL	1413391	1																
Sleeve housing¹⁾ Height: 93.7 mm 	1x M25 1x M32	Cable outlet: lateral HC-ADV-B10-HHWH-1STM25-EMC-AL	1413401	1																
		HC-ADV-B10-HHWH-1STM32-EMC-AL	1413403	1																
Panel mounting flange 		2 pcs. per housing HC-B-AF Set with 2 panel mounting flanges HC-B-AF-SET	1686533	20	 <table border="1" data-bbox="1189 1533 1348 1585"> <tr> <td></td> <td>B06</td> <td>B10</td> <td>B16</td> <td>B24</td> </tr> <tr> <td>a</td> <td>70</td> <td>83</td> <td>103</td> <td>130</td> </tr> <tr> <td>b</td> <td>52</td> <td>65</td> <td>86</td> <td>112</td> </tr> </table>		B06	B10	B16	B24	a	70	83	103	130	b	52	65	86	112
		B06	B10	B16		B24														
a	70	83	103	130																
b	52	65	86	112																
			1604638	1																
Protective cover 		for sleeve side, IP50 HC-B 10-TMS-SD-IP50	1690749	10																
		for panel mounting side, IP66 HC-B 10-TMS-SD-IP66	1411504	10																

Notes:

In order to achieve optimum shielding results, the mounting surface must be conductive

Marking label: US-EMLP-HA (20X9), Order No. 0830989

¹⁾ Screw locking with M6 Allen screws

Accessories



Screw connections
From page 694



Allen key
see Catalog 3



Replacement seals
From page 662

Heavy-duty connectors

HEAVYCON B – housing

Size B10, plastic, EVO housing, single locking latch

General data

Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Technical data



Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 60.5 mm		HC-EVO-B10-HLFS-PLBK	1407626	1	
Sleeve housing Height: 87.5 mm		HC-EVO-B10-HHFS-PLBK	1407627	1	
Panel mounting base Height: 30.5 mm		Without cover HC-EVO-B10-BWS-PLRBK	1407632	1	
		With cover HC-EVO-B10-BWSC-PLRBK	1407633	1	
Box mounting base ¹⁾ Height: 74 mm	2x M20	Without cover HC-EVO-B10-SHWS-2SSM20-PLRBK	1421354	1	
	2x M25	HC-EVO-B10-SHWS-2SSM25-PLRBK	1421277	1	
	2x M32	HC-EVO-B10-SHWS-2SSM32-PLRBK	1407636	1	
	2x M20	With cover HC-EVO-B10-SHWSC-2SSM20-PLRBK	1421355	1	
	2x M25	HC-EVO-B10-SHWSC-2SSM25-PLRBK	1421301	1	
2x M32	HC-EVO-B10-SHWSC-2SSM32-PLRBK	1407637	1		
Coupling housing Height: 90 mm		HC-EVO-B10-CHWS-PLRBK	1407640	1	
Cable gland	Clamping area 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	HC-B-G-M20-PLRBK	1407669	1	
		HC-B-G-M25-PLRBK	1407670	1	
		HC-B-G-M32-PLRBK	1407671	1	
		HC-B-G-M40-PLRBK	1407672	1	

Notes:

For further accessories, see from page 658

Marking label: US-EMP (20X9) Order No. 0829439

¹⁾ One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



Connector set
From page 636

Size B10, metal, EVO housing, single locking latch



General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Technical data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Description		Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 64 mm			HC-EVO-B10-HLFS-EL-AL	1411456	1	
Sleeve housing Height: 80 mm			HC-EVO-B10-HHFS-EL-AL	1411453	1	
Panel mounting base Height: 30.5 mm			Without cover HC-STA-B10-BWS-ELC-AL	1411320	1	
			With cover HC-STA-B10-BWSC-ELC-AL	1411321	1	
Box mounting base ¹⁾ Height: 54.6 mm		2x M20 2x M25 2x Pg16	Without cover HC-STA-B10-SLWS-2SSM20-ELC-AL	1412839	1	
			HC-STA-B10-SLWS-2SSM25-ELC-AL	1412840	1	
			HC-STA-B10-SLWS-2SSP16-ELC-AL	1412842	1	
			With cover HC-STA-B10-SLWSC-2SSM20-ELC-AL	1412844	1	
			HC-STA-B10-SLWSC-2SSM25-ELC-AL	1412845	1	
			HC-STA-B10-SLWSC-2SSP16-ELC-AL	1412846	1	
Cable gland		Clamping area 9 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	HC-B-G-M20-EC-AL	1411439	1	
			HC-B-G-M25-EC-AL	1411446	1	
			HC-B-G-M32-EC-AL	1411440	1	
			HC-B-G-M40-EC-AL	1411441	1	

Notes:
For further accessories, see from page 658
Marking label: US-EMLP-HA (20X9), Order No. 0830989
¹⁾ Supplied with a plastic sealing cap

Accessories

Thread adapter From page 661	EMC cable gland From page 660	Replacement seals From page 662	Connector set From page 637

Heavy-duty connectors

HEAVYCON B – housing

Size B10, metal, sleeve housing for single locking latch

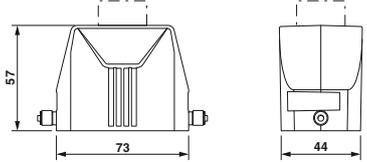
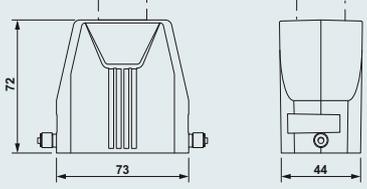
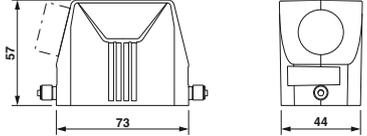
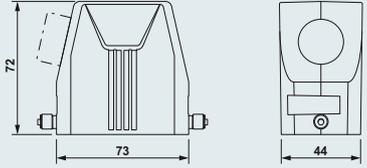


General data

Housing material	Die-cast aluminum, salt water resistant
Locking latch material	-
Sealing material	-
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Technical data

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 57 mm 	1x M20 1x M25	Cable outlet: top HC-STA-B10-HLFS-1TTM20-EL-AL	1412629	1	
		HC-STA-B10-HLFS-1TTM25-EL-AL	1412630	1	
	1x Pg16 1x Pg21	HC-STA-B10-HLFS-1TTP16-EL-AL	1412631	1	
		HC-STA-B10-HLFS-1TTP21-EL-AL	1412632	1	
Sleeve housing Height: 72 mm 	1x M25 1x M32	Cable outlet: top HC-STA-B10-HHFS-1TTM25-EL-AL	1412604	1	
		HC-STA-B10-HHFS-1TTM32-EL-AL	1412605	1	
	1x Pg21 1x Pg29	HC-STA-B10-HHFS-1TTP21-EL-AL	1412606	1	
		HC-STA-B10-HHFS-1TTP29-EL-AL	1412607	1	
Sleeve housing Height: 57 mm 	1x M20 1x M25	Cable outlet: lateral HC-STA-B10-HLFS-1STM20-EL-AL	1412624	1	
		HC-STA-B10-HLFS-1STM25-EL-AL	1412625	1	
	1x Pg16 1x Pg21	HC-STA-B10-HLFS-1STP16-EL-AL	1412627	1	
		HC-STA-B10-HLFS-1STP21-EL-AL	1412628	1	
Sleeve housing Height: 72 mm 	1x M25 1x M32	Cable outlet: lateral HC-STA-B10-HHFS-1STM25-EL-AL	1412600	1	
		HC-STA-B10-HHFS-1STM32-EL-AL	1412601	1	
	1x Pg21 1x Pg29	HC-STA-B10-HHFS-1STP21-EL-AL	1412602	1	
		HC-STA-B10-HHFS-1STP29-EL-AL	1412603	1	

Notes:

For further accessories, see from page 658
 Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 694



Protective cover
From page 654



Cover plates
From page 666



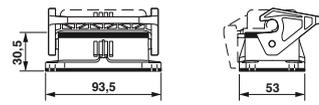
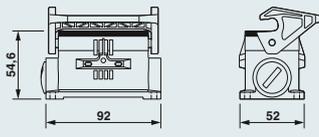
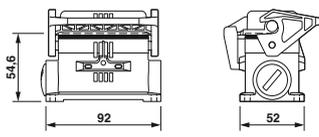
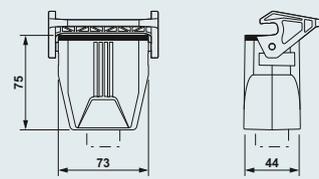
Connector set
From page 638

Size B10, metal, supporting base element with single locking latch



General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Technical data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Description		Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base Height: 30.5 mm 			Without cover HC-STA-B10-BWS-ELC-AL	1411320	1	
			With cover HC-STA-B10-BWSC-ELC-AL	1411321	1	
Box mounting base¹⁾ Height: 54.6 mm 	2x M20 2x M25	2x Pg16	Without cover HC-STA-B10-SLWS-2SSM20-ELC-AL	1412839	1	
			HC-STA-B10-SLWS-2SSM25-ELC-AL	1412840	1	
			HC-STA-B10-SLWS-2SSP16-ELC-AL	1412842	1	
Box mounting base¹⁾ Height: 54.6 mm 	2x M20 2x M25	2x Pg16	With cover HC-STA-B10-SLWSC-2SSM20-ELC-AL	1412844	1	
			HC-STA-B10-SLWSC-2SSM25-ELC-AL	1412845	1	
			HC-STA-B10-SLWSC-2SSP16-ELC-AL	1412846	1	
Coupling housing Height: 73 mm 	1x M20 1x M25 1x M32	1x Pg16 1x Pg21 1x Pg29	Cable outlet: top HC-STA-B10-CHWS-1TTM20-ELC-AL	1412584	1	
			HC-STA-B10-CHWS-1TTM25-ELC-AL	1412585	1	
			HC-STA-B10-CHWS-1TTM32-ELC-AL	1412586	1	
			HC-STA-B10-CHWS-1TTP16-ELC-AL	1412587	1	
			HC-STA-B10-CHWS-1TTP21-ELC-AL	1412588	1	
			HC-STA-B10-CHWS-1TTP29-ELC-AL	1412589	1	

Notes:
For further accessories, see from page 658
¹⁾ Supplied with a plastic sealing cap

Accessories

			
Cable glands From page 694	Replacement seals From page 662	Replacement protective cover From page 653	Replacement latch From page 663

Heavy-duty connectors

HEAVYCON B – housing

Size B10, plastic, EVO housing, double locking latch



General data

Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Technical data

Ordering data

Description	Thread
-------------	--------

Sleeve housing
Height: 60.5 mm



Sleeve housing
Height: 87.5 mm



Panel mounting base
Height: 30.5 mm



Box mounting base¹⁾
Height: 74 mm



Coupling housing
Height: 90 mm



Cable gland



Clamping area

7 mm ... 13 mm
9 mm ... 17 mm
11 mm ... 21 mm
19 mm ... 28 mm

Type	Order No.	Pcs. / Pkt.
------	-----------	-------------

HC-EVO-B10-HLFD-PLBK

1407628

1

HC-EVO-B10-HHFD-PLBK

1407629

1

Without cover
HC-EVO-B10-BWD-PLRBK

1407634

1

Without cover
HC-EVO-B10-SHWD-2SSM20-PLRBK
HC-EVO-B10-SHWD-2SSM25-PLRBK
HC-EVO-B10-SHWD-2SSM32-PLRBK

1421356

1421304

1407638

1

1

1

HC-EVO-B10-CHWD-PLRBK

1407641

1

HC-B-G-M20-PLRBK
HC-B-G-M25-PLRBK
HC-B-G-M32-PLRBK
HC-B-G-M40-PLRBK

1407669

1407670

1407671

1407672

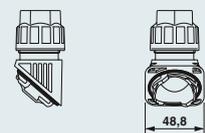
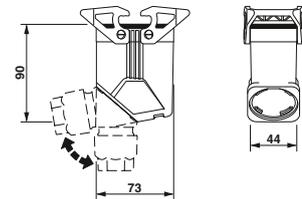
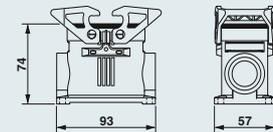
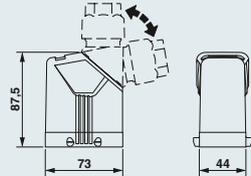
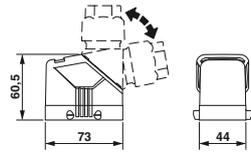
1

1

1

1

Dimensions



Notes:

For further accessories, see from page 658

Marking label: US-EMP (20X9) Order No. [0829439](#)

For coupling housings, visit phoenixcontact.net/products

¹⁾ One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



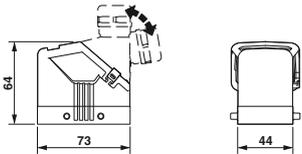
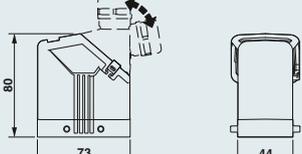
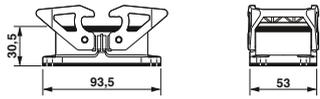
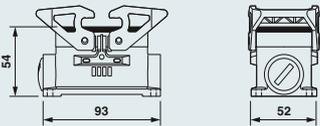
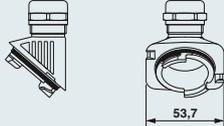
Connector set
From page 636

Size B10, metal, EVO housing, double locking latch



General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Technical data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Description		Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 64 mm 			HC-EVO-B10-HLFD-EL-AL	1411455	1	
Sleeve housing Height: 80 mm 			HC-EVO-B10-HHFD-EL-AL	1411451	1	
Panel mounting base Height: 30.5 mm 			Without cover HC-STA-B10-BWD-ELC-AL	1411322	1	
Box mounting base¹⁾ Height: 54 mm 		2x M20 2x M25 2x Pg16	Without cover HC-STA-B10-SLWD-2SSM20-ELC-AL HC-STA-B10-SLWD-2SSM25-ELC-AL HC-STA-B10-SLWD-2SSP16-ELC-AL	1412835 1412836 1412837	1 1 1	
Cable gland 		Clamping area 9 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	HC-B-G-M20-EC-AL HC-B-G-M25-EC-AL HC-B-G-M32-EC-AL HC-B-G-M40-EC-AL	1411439 1411446 1411440 1411441	1 1 1 1	

Notes:
For further accessories, see from page 658
Marking label: US-EMLP-HA (20X9), Order No. 0830989
¹⁾ Supplied with a plastic sealing cap

Accessories

 Thread adapter From page 661	 EMC cable gland From page 660	 Replacement seals From page 662	 Connector set From page 637
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Heavy-duty connectors

HEAVYCON B – housing

Size B10, metal, sleeve housing for double locking latch

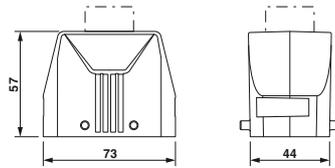
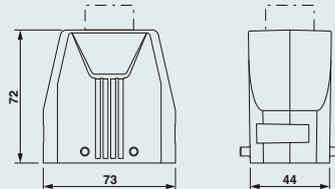
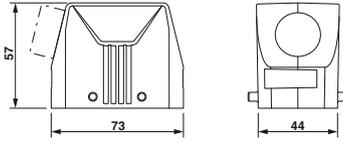
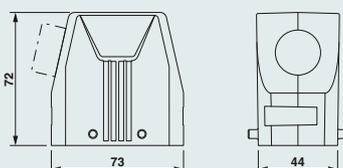


General data

Housing material
Locking latch material
Sealing material
IP degree of protection (when plugged in)
NEMA degree of protection (when plugged in)
Ambient temperature (operation)

Technical data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	-
Sealing material	-
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 57 mm 	1x M20 1x M25	Cable outlet: top HC-STA-B10-HLFD-1TTM20-EL-AL	1412620	1	
		HC-STA-B10-HLFD-1TTM25-EL-AL	1412621	1	
	1x Pg16 1x Pg21	HC-STA-B10-HLFD-1TTP16-EL-AL	1412622	1	
		HC-STA-B10-HLFD-1TTP21-EL-AL	1412623	1	
Sleeve housing Height: 72 mm 	1x M25 1x M32	Cable outlet: top HC-STA-B10-HHFD-1TTM25-EL-AL	1412596	1	
		HC-STA-B10-HHFD-1TTM32-EL-AL	1412597	1	
	1x Pg21 1x Pg29	HC-STA-B10-HHFD-1TTP21-EL-AL	1412598	1	
		HC-STA-B10-HHFD-1TTP29-EL-AL	1412599	1	
Sleeve housing Height: 57 mm 	1x M20 1x M25	Cable outlet: lateral HC-STA-B10-HLFD-1STM20-EL-AL	1412616	1	
		HC-STA-B10-HLFD-1STM25-EL-AL	1412617	1	
	1x Pg16 1x Pg21	HC-STA-B10-HLFD-1STP16-EL-AL	1412618	1	
		HC-STA-B10-HLFD-1STP21-EL-AL	1412619	1	
Sleeve housing Height: 72 mm 	1x M25 1x M32	Cable outlet: lateral HC-STA-B10-HHFD-1STM25-EL-AL	1412592	1	
		HC-STA-B10-HHFD-1STM32-EL-AL	1412593	1	
	1x Pg21 1x Pg29	HC-STA-B10-HHFD-1STP21-EL-AL	1412594	1	
		HC-STA-B10-HHFD-1STP29-EL-AL	1412595	1	

Notes:
For further accessories, see from page 658
Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories

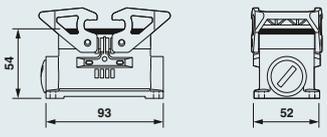
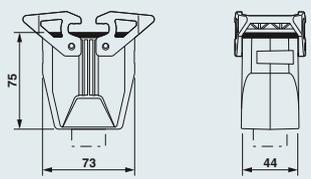
 Cable glands From page 694	 Protective cover From page 654	 Cover plates From page 666	 Connector set From page 638
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Size B10, metal, supporting base element with double locking latch



General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Technical data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Description		Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base Height: 30.5 mm 			Without cover HC-STA-B10-BWD-ELC-AL	1411322	1	
Box mounting base¹⁾ Height: 54 mm 		2x M20 2x M25 2x Pg16	Without cover HC-STA-B10-SLWD-2SSM20-ELC-AL HC-STA-B10-SLWD-2SSM25-ELC-AL HC-STA-B10-SLWD-2SSP16-ELC-AL	1412835 1412836 1412837	1 1 1	
Coupling housing Height: 73 mm 		1x M20 1x M25 1x M32 1x Pg16 1x Pg21 1x Pg29	Cable outlet: top HC-STA-B10-CHWD-1TTM20-ELC-AL HC-STA-B10-CHWD-1TTM25-ELC-AL HC-STA-B10-CHWD-1TTM32-ELC-AL HC-STA-B10-CHWD-1TTP16-ELC-AL HC-STA-B10-CHWD-1TTP21-ELC-AL HC-STA-B10-CHWD-1TTP29-ELC-AL	1412578 1412579 1412580 1412581 1412582 1412583	1 1 1 1 1 1	

Notes:
For further accessories, see from page 658
¹⁾ Supplied with a plastic sealing cap

Accessories

 Cable glands From page 694	 Replacement seals From page 662	 Replacement protective cover From page 653	 Replacement latch From page 663
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Heavy-duty connectors

HEAVYCON B – housing

Size B10, plastic, EVO housing, double locking latch

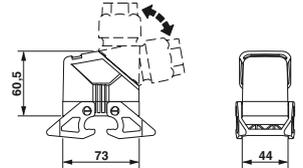
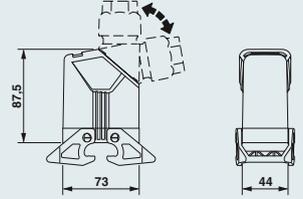
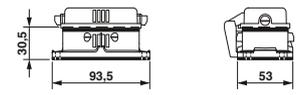
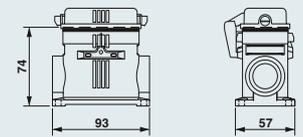
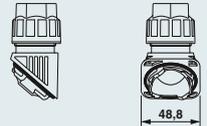


General data

Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Technical data

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 60.5 mm 		HC-EVO-B10-HLWD-PLBK	1407630	1	
Sleeve housing Height: 87.5 mm 		HC-EVO-B10-HHWD-PLBK	1407631	1	
Panel mounting base Height: 30.5 mm 		With cover HC-EVO-B10-BFDC-PLRBK	1407635	1	
Box mounting base¹⁾ Height: 74 mm 	2x M20 2x M25 2x M32	With cover HC-EVO-B10-SHFDC-2SSM20-PLRBK HC-EVO-B10-SHFDC-2SSM25-PLRBK HC-EVO-B10-SHFDC-2SSM32-PLRBK	1421362 1421320 1407639	1 1 1	
Cable gland 	Clamping area 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	HC-B-G-M20-PLRBK HC-B-G-M25-PLRBK HC-B-G-M32-PLRBK HC-B-G-M40-PLRBK	1407669 1407670 1407671 1407672	1 1 1 1	

Notes:

For further accessories, see from page 658

Marking label: US-EMP (20X9) Order No. 0829439

¹⁾ One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



Replacement latch
From page 663

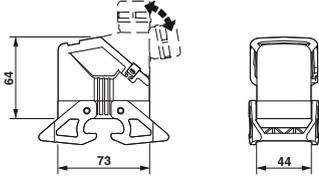
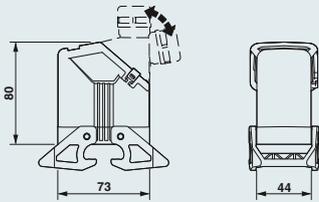
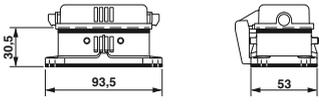
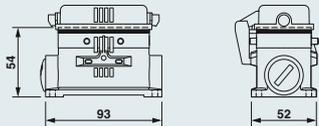
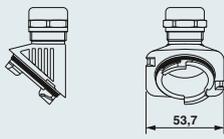
Size B10, metal, EVO housing, double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 64 mm 		HC-EVO-B10-HLWD-EL-AL	1411457	1	
Sleeve housing Height: 80 mm 		HC-EVO-B10-HHWD-EL-AL	1411454	1	
Panel mounting base Height: 30.5 mm 		With cover HC-STA-B10-BFDC-ELC-AL	1411323	1	
Box mounting base¹⁾ Height: 54 mm 	2x M20 2x M25 2x Pg16	With cover HC-STA-B10-SLFDC-2SSM20-ELC-AL HC-STA-B10-SLFDC-2SSM25-ELC-AL HC-STA-B10-SLFDC-2SSP16-ELC-AL	1412830 1412831 1412832	1 1 1	
Cable gland 	Clamping area 9 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	HC-B-G-M20-EC-AL HC-B-G-M25-EC-AL HC-B-G-M32-EC-AL HC-B-G-M40-EC-AL	1411439 1411446 1411440 1411441	1 1 1 1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

¹⁾ Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 661



EMC cable gland
From page 660



Replacement seals
From page 662



Replacement latch
From page 663

Heavy-duty connectors

HEAVYCON B – housing

Size B10, metal, sleeve housing with double locking latch

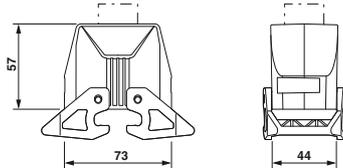
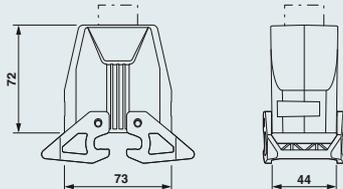
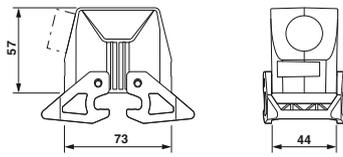
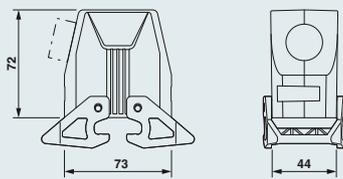


General data

Housing material
 Locking latch material
 Sealing material
 IP degree of protection (when plugged in)
 NEMA degree of protection (when plugged in)
 Ambient temperature (operation)

Technical data
Die-cast aluminum, salt water resistant
PA
-
IP66 / IP67
4 / 4X / 12
-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 57 mm 	1x M20 1x M25	Cable outlet: top HC-STA-B10-HLWD-1TTM20-EL-AL	1412637	1	
		HC-STA-B10-HLWD-1TTM25-EL-AL	1412638	1	
	1x Pg16 1x Pg21	HC-STA-B10-HLWD-1TTP16-EL-AL	1412639	1	
		HC-STA-B10-HLWD-1TTP21-EL-AL	1412640	1	
Sleeve housing Height: 72 mm 	1x M25 1x M32	Cable outlet: top HC-STA-B10-HHWD-1TTM25-EL-AL	1412612	1	
		HC-STA-B10-HHWD-1TTM32-EL-AL	1412613	1	
	1x Pg21 1x Pg29	HC-STA-B10-HHWD-1TTP21-EL-AL	1412614	1	
		HC-STA-B10-HHWD-1TTP29-EL-AL	1412615	1	
Sleeve housing Height: 57 mm 	1x M20 1x M25	Cable outlet: lateral HC-STA-B10-HLWD-1STM20-EL-AL	1412633	1	
		HC-STA-B10-HLWD-1STM25-EL-AL	1412634	1	
	1x Pg16 1x Pg21	HC-STA-B10-HLWD-1STP16-EL-AL	1412635	1	
		HC-STA-B10-HLWD-1STP21-EL-AL	1412636	1	
Sleeve housing Height: 72 mm 	1x M25 1x M32	Cable outlet: lateral HC-STA-B10-HHWD-1STM25-EL-AL	1412608	1	
		HC-STA-B10-HHWD-1STM32-EL-AL	1412609	1	
	1x Pg21 1x Pg29	HC-STA-B10-HHWD-1STP21-EL-AL	1412610	1	
		HC-STA-B10-HHWD-1STP29-EL-AL	1412611	1	

Notes:
 For further accessories, see from page 658
 Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



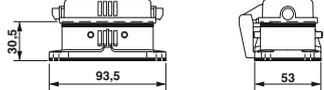
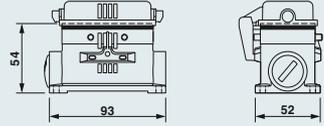
**Size B10, metal,
supporting base element
for double locking latch**



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base Height: 30.5 mm 		With cover HC-STA-B10-BFDC-ELC-AL	1411323	1	
Box mounting base¹⁾ Height: 54 mm 	2x M20 2x M25 2x Pg16	With cover HC-STA-B10-SLFDC-2SSM20-ELC-AL HC-STA-B10-SLFDC-2SSM25-ELC-AL HC-STA-B10-SLFDC-2SSP16-ELC-AL	1412830 1412831 1412832	1 1 1	

Notes:

For further accessories, see from page 658

¹⁾ Supplied with a plastic sealing cap

Accessories



Cable glands
From page 694



Replacement seals
From page 662



Replacement protective cover
From page 653



Cover plates
From page 666

Heavy-duty connectors

HEAVYCON B – housing

Size B16, plastic, ADVANCE PL sleeve housing with cable gland

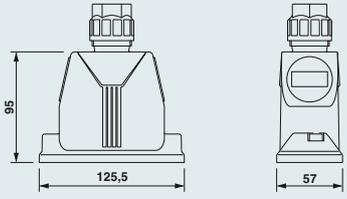
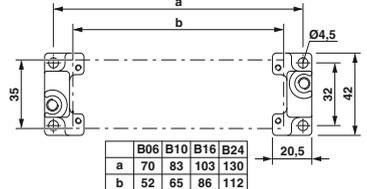
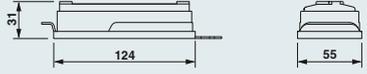
General data

Housing material	PA
Lock material	Stainless steel
Sealing material	NBR
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 100°C

Technical data



Ordering data

Description	Clamping area	Type	Order No.	Pcs. / Pkt.	Dimensions															
Sleeve housing¹⁾ Height: 95 mm 	11 mm ... 21 mm 19 mm ... 28 mm	Cable outlet: top HC-ADV-B16-HHWH-1TGM32-PL HC-ADV-B16-HHWH-1TGM40-PL	1404231 1404233	1 1																
Sleeve housing¹⁾ Height: 95 mm 	11 mm ... 21 mm 19 mm ... 28 mm	Cable outlet: lateral HC-ADV-B16-HHWH-1SGM32-PL HC-ADV-B16-HHWH-1SGM40-PL	1404232 1404234	1 1																
Panel mounting flange 		2 pcs. per housing HC-B-AF Set with 2 panel mounting flanges HC-B-AF-SET	1686533 1604638	20 1	 <table border="1" data-bbox="1204 1533 1356 1585"> <thead> <tr> <th></th> <th>B06</th> <th>B10</th> <th>B16</th> <th>B24</th> </tr> </thead> <tbody> <tr> <td>a</td> <td>70</td> <td>83</td> <td>103</td> <td>130</td> </tr> <tr> <td>b</td> <td>52</td> <td>65</td> <td>86</td> <td>112</td> </tr> </tbody> </table>		B06	B10	B16	B24	a	70	83	103	130	b	52	65	86	112
	B06	B10	B16	B24																
a	70	83	103	130																
b	52	65	86	112																
Protective cover 		for sleeve side, IP50 HC-B 16-TMS-SD-IP50 for panel mounting side, IP66 HC-B 16-TMS-SD-IP66	1690752 1411517	10 10																

Notes:

Marking label: US-EMP (20X9) Order No. [0829439](#)

¹⁾ Screw locking with M6 Allen screws

Accessories



Allen key
see Catalog 3



Replacement seals
From page 662

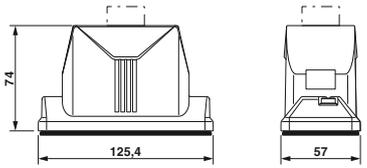
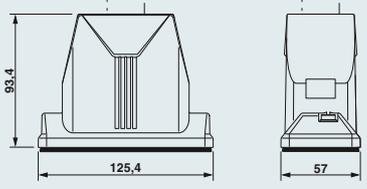
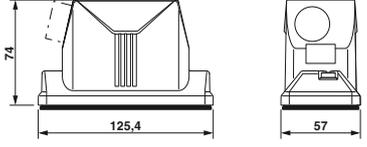
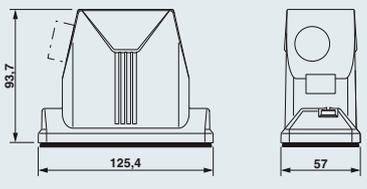
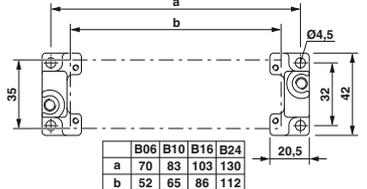
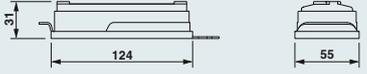
Size B16, metal, ADVANCE sleeve housing



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Lock material	Stainless steel
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP68 / IP69K
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions															
Sleeve housing¹⁾ Height: 74 mm 	1x M25	Cable outlet: top HC-ADV-B16-HLWH-1TTM25-EMC-AL	1414975	1																
Sleeve housing¹⁾ Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: top HC-ADV-B16-HHWH-1TTM25-EMC-AL HC-ADV-B16-HHWH-1TTM32-EMC-AL HC-ADV-B16-HHWH-1TTM40-EMC-AL	1414977 1413416 1413418	1 1 1																
Cable entry: lateral¹⁾ Height: 74 mm 	1x M25	Cable outlet: lateral HC-ADV-B16-HLWH-1STM25-EMC-AL	1414976	1																
Sleeve housing¹⁾ Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: lateral HC-ADV-B16-HHWH-1STM25-EMC-AL HC-ADV-B16-HHWH-1STM32-EMC-AL HC-ADV-B16-HHWH-1STM40-EMC-AL	1414978 1413417 1413419	1 1 1																
Panel mounting flange 		2 pcs. per housing HC-B-AF Set with 2 panel mounting flanges HC-B-AF-SET	1686533 1604638	20 1	 <table border="1" data-bbox="1189 1533 1340 1585"> <tr> <td></td> <td>B06</td> <td>B10</td> <td>B16</td> <td>B24</td> </tr> <tr> <td>a</td> <td>70</td> <td>83</td> <td>103</td> <td>130</td> </tr> <tr> <td>b</td> <td>52</td> <td>65</td> <td>86</td> <td>112</td> </tr> </table>		B06	B10	B16	B24	a	70	83	103	130	b	52	65	86	112
	B06	B10	B16	B24																
a	70	83	103	130																
b	52	65	86	112																
Protective cover 		for sleeve side, IP50 HC-B 16-TMS-SD-IP50 for panel mounting side, IP66 HC-B 16-TMS-SD-IP66	1690752 1411517	10 10																

Notes:

In order to achieve optimum shielding results, the mounting surface must be conductive

Marking label: US-EMLP-HA (20X9), Order No. 0830989

¹⁾ Screw locking with M6 Allen screws

Accessories



Cable glands
From page 694



Allen key
see Catalog 3



Replacement seals
From page 662

Heavy-duty connectors

HEAVYCON B – housing

Size B16, plastic, EVO housing, single locking latch



General data

Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Technical data

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 63 mm		HC-EVO-B16-HLFS-PLBK	1420931	1	
Sleeve housing Height: 78 mm		HC-EVO-B16-HHFS-PLBK	1407642	1	
Panel mounting base Height: 30.5 mm		Without cover HC-EVO-B16-BWS-PLRBK	1407646	1	
		With cover HC-EVO-B16-BWSC-PLRBK	1407647	1	
Box mounting base ¹⁾ Height: 84 mm	2x M25	Without cover HC-EVO-B16-SHWS-2SSM25-PLRBK	1421381	1	
	2x M32	HC-EVO-B16-SHWS-2SSM32-PLRBK	1421363	1	
	2x M40	HC-EVO-B16-SHWS-2SSM40-PLRBK	1407650	1	
	2x M25	With cover HC-EVO-B16-SHWSC-2SSM25-PLRBK	1421382	1	
	2x M32	HC-EVO-B16-SHWSC-2SSM32-PLRBK	1421364	1	
2x M40	HC-EVO-B16-SHWSC-2SSM40-PLRBK	1407651	1		
Coupling housing Height: 81 mm		HC-EVO-B16-CHWS-PLRBK	1407654	1	
Cable gland	Clamping area 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	HC-B-G-M20-PLRBK	1407669	1	
		HC-B-G-M25-PLRBK	1407670	1	
		HC-B-G-M32-PLRBK	1407671	1	
		HC-B-G-M40-PLRBK	1407672	1	

Notes:

For further accessories, see from page 658

Marking label: US-EMP (20X9) Order No. 0829439

¹⁾ One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



Connector set
From page 636

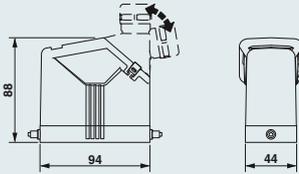
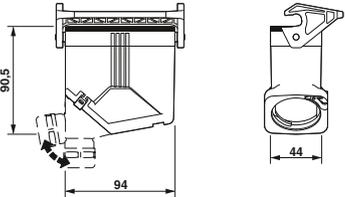
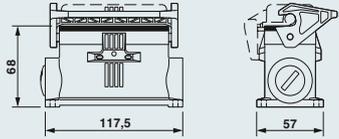
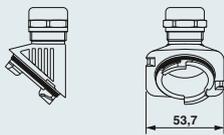
Size B16, metal, EVO housing, single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 88 mm 		HC-EVO-B16-HHFS-EL-AL	1411461	1	
Coupling housing Height: 90.5 mm 		Without cover HC-STA-B16-BWS-ELC-AL With cover HC-STA-B16-BWSC-ELC-AL	1411324 1411325	1 1	
Box mounting base¹⁾ Height: 68 mm 	2x M25 2x M32 2x Pg21 2x M25 2x M32 2x Pg21	Without cover HC-STA-B16-SLWS-2SSM25-ELC-AL HC-STA-B16-SLWS-2SSM32-ELC-AL HC-STA-B16-SLWS-2SSP21-ELC-AL With cover HC-STA-B16-SLWSC-2SSM25-ELC-AL HC-STA-B16-SLWSC-2SSM32-ELC-AL HC-STA-B16-SLWSC-2SSP21-ELC-AL	1412861 1412862 1412863 1412865 1412866 1412867	1 1 1 1 1 1	
Cable gland 	Clamping area 9 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	HC-B-G-M20-EC-AL HC-B-G-M25-EC-AL HC-B-G-M32-EC-AL HC-B-G-M40-EC-AL	1411439 1411446 1411440 1411441	1 1 1 1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

¹⁾ Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 661



EMC cable gland
From page 660



Replacement seals
From page 662



Connector set
From page 637

Heavy-duty connectors

HEAVYCON B – housing

Size B16, metal, sleeve housing for single locking latch

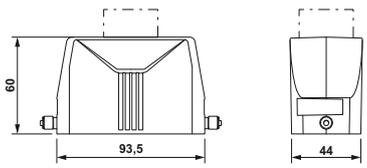
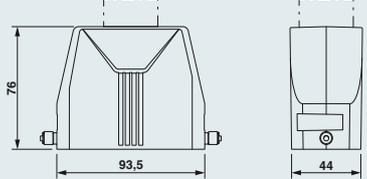
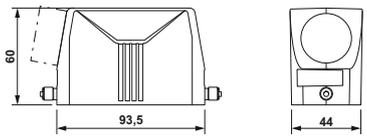
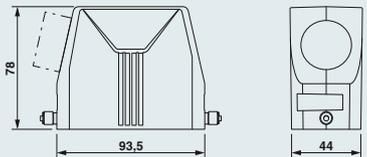


General data

Housing material
Locking latch material
Sealing material
IP degree of protection (when plugged in)
NEMA degree of protection (when plugged in)
Ambient temperature (operation)

Technical data	
Die-cast aluminum, salt water resistant	
-	
-	
IP66 / IP67	
4 / 4X / 12	
-40°C ... 125°C	

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions	
Sleeve housing Height: 60 mm 	1x M25 1x M32	Cable outlet: top HC-STA-B16-HLFS-1TTM25-EL-AL	1412729	1		
		HC-STA-B16-HLFS-1TTM32-EL-AL	1412730	1		
	1x Pg16 1x Pg21	HC-STA-B16-HLFS-1TTP16-EL-AL	1412731	1		
		HC-STA-B16-HLFS-1TTP21-EL-AL	1412732	1		
Sleeve housing Height: 76 mm 	1x M32 1x M40	Cable outlet: top HC-STA-B16-HHFS-1TTM32-EL-AL	1412689	1		
		HC-STA-B16-HHFS-1TTM40-EL-AL	1412700	1		
	1x Pg21 1x Pg29	HC-STA-B16-HHFS-1TTP21-EL-AL	1412701	1		
		HC-STA-B16-HHFS-1TTP29-EL-AL	1412702	1		
Sleeve housing Height: 60 mm 	1x M25 1x M32	Cable outlet: lateral HC-STA-B16-HLFS-1STM25-EL-AL	1412725	1		
		HC-STA-B16-HLFS-1STM32-EL-AL	1412726	1		
	1x Pg16 1x Pg21	HC-STA-B16-HLFS-1STP16-EL-AL	1412727	1		
		HC-STA-B16-HLFS-1STP21-EL-AL	1412728	1		
Sleeve housing Height: 76 mm 	1x M32 1x M40	Cable outlet: lateral HC-STA-B16-HHFS-1STM32-EL-AL	1412679	1		
		HC-STA-B16-HHFS-1STM40-EL-AL	1412682	1		
	1x Pg21 1x Pg29	HC-STA-B16-HHFS-1STP21-EL-AL	1412683	1		
		HC-STA-B16-HHFS-1STP29-EL-AL	1412684	1		

Notes:
For further accessories, see from page 658
Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories

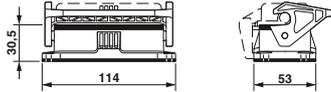
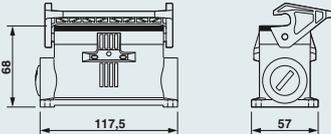
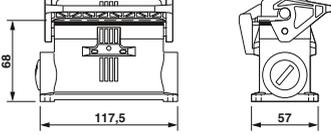
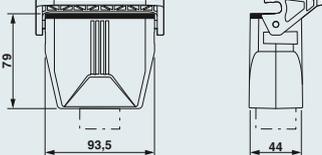
 Cable glands From page 694	 Protective cover From page 654	 Cover plates From page 666	 Connector set From page 638
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Size B16, metal, supporting base element with single locking latch



General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Technical data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Description		Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base Height: 30.5 mm 			Without cover	1411324	1	
			With cover	1411325	1	
Box mounting base¹⁾ Height: 68 mm 	2x M25 2x M32	2x Pg21	Without cover			
			HC-STA-B16-SLWS-2SSM25-ELC-AL	1412861	1	
			HC-STA-B16-SLWS-2SSM32-ELC-AL	1412862	1	
Box mounting base¹⁾ Height: 68 mm 	2x M25 2x M32	2x Pg21	With cover			
			HC-STA-B16-SLWSC-2SSM25-ELC-AL	1412865	1	
			HC-STA-B16-SLWSC-2SSM32-ELC-AL	1412866	1	
Coupling housing Height: 79 mm 	1x M25 1x M32	1x Pg21 1x Pg29	Cable outlet: top			
			HC-STA-B16-CHWS-1TTM25-ELC-AL	1412645	1	
			HC-STA-B16-CHWS-1TTM32-ELC-AL	1412646	1	
			HC-STA-B16-CHWS-1TTP21-ELC-AL	1412647	1	
			HC-STA-B16-CHWS-1TTP29-ELC-AL	1412648	1	

Notes:
For further accessories, see from page 658
¹⁾ Supplied with a plastic sealing cap

Accessories

			
Cable glands From page 694	Replacement seals From page 662	Replacement protective cover From page 653	Replacement latch From page 663

Heavy-duty connectors

HEAVYCON B – housing

Size B16, plastic, EVO housing, double locking latch



General data

Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Technical data

Ordering data

Description	Thread
-------------	--------

Sleeve housing
Height: 63 mm



Sleeve housing
Height: 78 mm



Panel mounting base
Height: 30.5 mm



Box mounting base¹⁾
Height: 84 mm



2x M25
2x M32
2x M40

Coupling housing
Height: 84 mm



Cable gland



Clamping area
7 mm ... 13 mm
9 mm ... 17 mm
11 mm ... 21 mm
19 mm ... 28 mm

Type	Order No.	Pcs. / Pkt.
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HC-EVO-B16-HLFD-PLBK

1420932

1

HC-EVO-B16-HHFD-PLBK

1407643

1

Without cover
HC-EVO-B16-BWD-PLRBK

1407648

1

Without cover
HC-EVO-B16-SHWD-2SSM25-PLRBK
HC-EVO-B16-SHWD-2SSM32-PLRBK
HC-EVO-B16-SHWD-2SSM40-PLRBK

1421455

1421365

1407652

1

1

1

HC-EVO-B16-CHWD-PLRBK

1407655

1

HC-B-G-M20-PLRBK
HC-B-G-M25-PLRBK
HC-B-G-M32-PLRBK
HC-B-G-M40-PLRBK

1407669

1407670

1407671

1407672

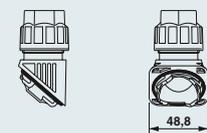
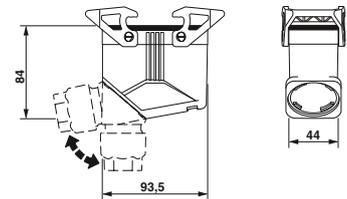
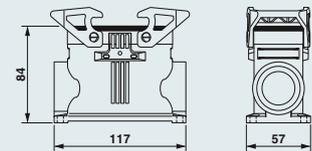
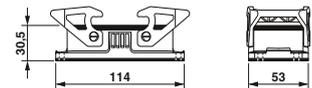
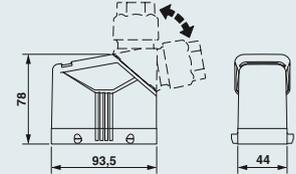
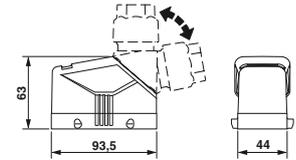
1

1

1

1

Dimensions



Notes:

For further accessories, see from page 658

Marking label: US-EMP (20X9) Order No. 0829439

¹⁾ One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



Connector set
From page 636

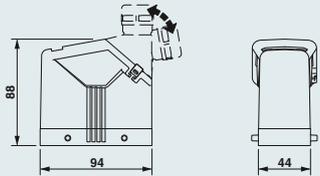
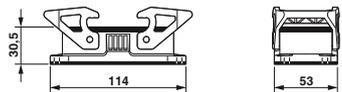
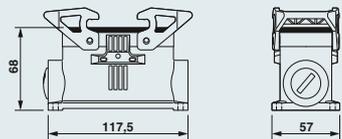
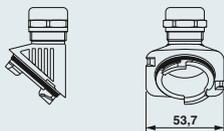
Size B16, metal, EVO housing, double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 88 mm 		HC-EVO-B16-HHFD-EL-AL	1411460	1	
Panel mounting base Height: 30.5 mm 		Without cover HC-STA-B16-BWD-ELC-AL	1411327	1	
Box mounting base¹⁾ Height: 68 mm 	2x M25 2x M32 2x Pg21	Without cover HC-STA-B16-SLWD-2SSM25-ELC-AL HC-STA-B16-SLWD-2SSM32-ELC-AL HC-STA-B16-SLWD-2SSP21-ELC-AL	1412855 1412856 1412857	1 1 1	
Cable gland 	Clamping area 9 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	HC-B-G-M20-EC-AL HC-B-G-M25-EC-AL HC-B-G-M32-EC-AL HC-B-G-M40-EC-AL	1411439 1411446 1411440 1411441	1 1 1 1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

¹⁾ Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 661



EMC cable gland
From page 660



Replacement seals
From page 662



Connector set
From page 637

Heavy-duty connectors

HEAVYCON B – housing

Size B16, metal, sleeve housing for double locking latch

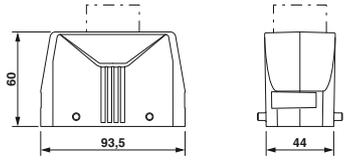
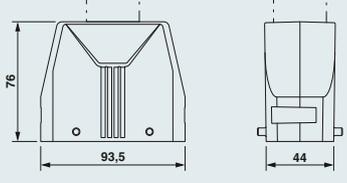
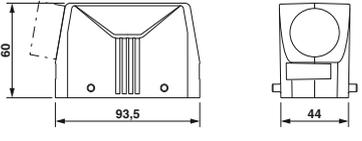
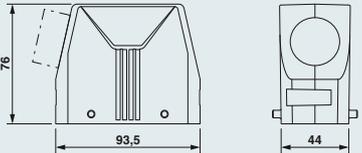


General data

Housing material
Locking latch material
Sealing material
IP degree of protection (when plugged in)
NEMA degree of protection (when plugged in)
Ambient temperature (operation)

Technical data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	-
Sealing material	-
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 60 mm 	1x M25 1x M32	Cable outlet: top HC-STA-B16-HLFD-1TTM25-EL-AL	1412721	1	
		HC-STA-B16-HLFD-1TTM32-EL-AL	1412722	1	
	1x Pg16 1x Pg21	HC-STA-B16-HLFD-1TTP16-EL-AL	1412723	1	
		HC-STA-B16-HLFD-1TTP21-EL-AL	1412724	1	
Sleeve housing Height: 76 mm 	1x M32 1x M40	Cable outlet: top HC-STA-B16-HHFD-1TTM32-EL-AL	1412653	1	
		HC-STA-B16-HHFD-1TTM40-EL-AL	1412654	1	
	1x Pg21 1x Pg29	HC-STA-B16-HHFD-1TTP21-EL-AL	1412669	1	
		HC-STA-B16-HHFD-1TTP29-EL-AL	1412678	1	
Sleeve housing Height: 60 mm 	1x M25 1x M32	Cable outlet: lateral HC-STA-B16-HLFD-1STM25-EL-AL	1412717	1	
		HC-STA-B16-HLFD-1STM32-EL-AL	1412718	1	
	1x Pg16 1x Pg21	HC-STA-B16-HLFD-1STP16-EL-AL	1412719	1	
		HC-STA-B16-HLFD-1STP21-EL-AL	1412720	1	
Sleeve housing Height: 76 mm 	1x M32 1x M40	Cable outlet: lateral HC-STA-B16-HHFD-1STM32-EL-AL	1412649	1	
		HC-STA-B16-HHFD-1STM40-EL-AL	1412650	1	
	1x Pg21 1x Pg29	HC-STA-B16-HHFD-1STP21-EL-AL	1412651	1	
		HC-STA-B16-HHFD-1STP29-EL-AL	1412652	1	

Notes:
For further accessories, see from page 658
Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories

 Cable glands From page 694	 Protective cover From page 654	 Cover plates From page 666	 Connector set From page 638
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Size B16, metal, supporting base element with double locking latch

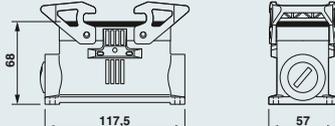
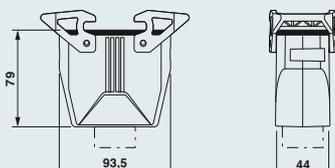


Technical data

General data
 Housing material
 Locking latch material
 Sealing material
 IP degree of protection (when plugged in)
 NEMA degree of protection (when plugged in)
 Ambient temperature (operation)

Die-cast aluminum, salt water resistant
 PA
 NBR, conductive
 IP66 / IP67
 4 / 4X / 12
 -40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base Height: 30.5 mm 		Without cover HC-STA-B16-BWD-ELC-AL	1411327	1	
Box mounting base¹⁾ Height: 68 mm 	2x M25 2x M32 2x Pg21	Without cover HC-STA-B16-SLWD-2SSM25-ELC-AL HC-STA-B16-SLWD-2SSM32-ELC-AL HC-STA-B16-SLWD-2SSP21-ELC-AL	1412855 1412856 1412857	1 1 1	
Coupling housing Height: 79 mm 	1x M25 1x M32 1x Pg21 1x Pg29	Cable outlet: top HC-STA-B16-CHWD-1TTM25-ELC-AL HC-STA-B16-CHWD-1TTM32-ELC-AL HC-STA-B16-CHWD-1TTP21-ELC-AL HC-STA-B16-CHWD-1TTP29-ELC-AL	1412641 1412642 1412643 1412644	1 1 1 1	

Notes:

For further accessories, see from page 658

¹⁾ Supplied with a plastic sealing cap

Accessories



Cable glands
From page 694



Replacement seals
From page 662



Replacement protective cover
From page 653



Replacement latch
From page 663

Heavy-duty connectors

HEAVYCON B – housing

Size B16, plastic, EVO housing, double locking latch

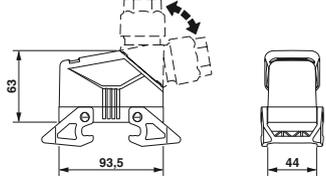
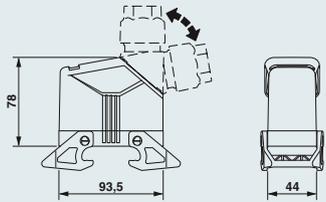
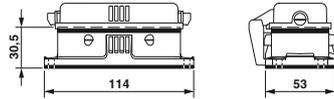
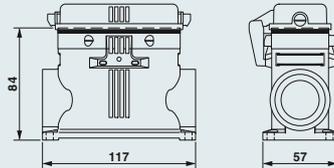
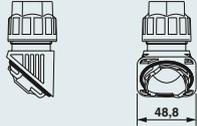


General data

Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Technical data

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 63 mm 		HC-EVO-B16-HLWD-PLBK	1420933	1	
Sleeve housing Height: 78 mm 		HC-EVO-B16-HHWD-PLBK	1407644	1	
Panel mounting base Height: 30.5 mm 		With cover HC-EVO-B16-BFDC-PLRBK	1407649	1	
Box mounting base¹⁾ Height: 84 mm 	2x M25 2x M32 2x M40	With cover HC-EVO-B16-SHFDC-2SSM25-PLRBK HC-EVO-B16-SHFDC-2SSM32-PLRBK HC-EVO-B16-SHFDC-2SSM40-PLRBK	1421458 1421366 1407653	1 1 1	
Cable gland 	Clamping area 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	HC-B-G-M20-PLRBK HC-B-G-M25-PLRBK HC-B-G-M32-PLRBK HC-B-G-M40-PLRBK	1407669 1407670 1407671 1407672	1 1 1 1	

Notes:

For further accessories, see from page 658

Marking label: US-EMP (20X9) Order No. 0829439

¹⁾ One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



Replacement latch
From page 663

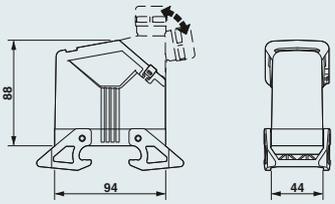
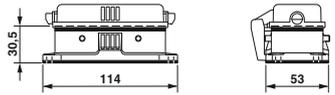
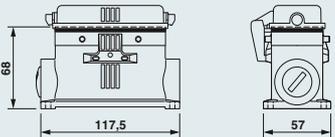
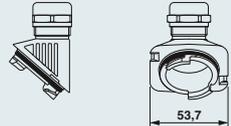
Size B16, metal, EVO housing, double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 88 mm 		HC-EVO-B16-HHWD-EL-AL	1411462	1	
Panel mounting base Height: 30.5 mm 		With cover HC-STA-B16-BFDC-ELC-AL	1411328	1	
Box mounting base¹⁾ Height: 68 mm 	2x M25 2x M32 2x Pg16 2x Pg21	With cover HC-STA-B16-SLFDC-2SSM25-ELC-AL HC-STA-B16-SLFDC-2SSM32-ELC-AL HC-STA-B16-SLFDC-2SSP16-ELC-AL HC-STA-B16-SLFDC-2SSP21-ELC-AL	1412849 1412850 1412852 1412853	1 1 1 1	
Cable gland 	Clamping area 9 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	HC-B-G-M20-EC-AL HC-B-G-M25-EC-AL HC-B-G-M32-EC-AL HC-B-G-M40-EC-AL	1411439 1411446 1411440 1411441	1 1 1 1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

¹⁾ Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 661



EMC cable gland
From page 660



Replacement seals
From page 662



Replacement latch
From page 663

Heavy-duty connectors

HEAVYCON B – housing

Size B16, metal, sleeve housing with double locking latch

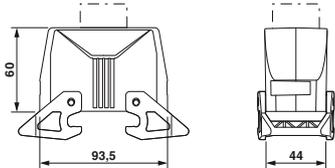
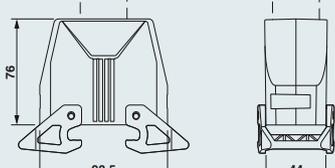
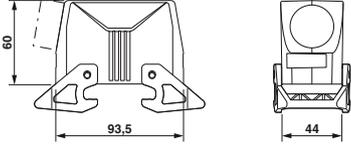
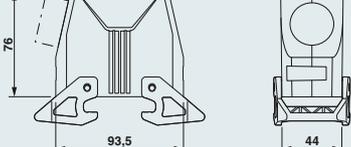


General data

Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	-
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Technical data

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 60 mm 	1x M25 1x M32	Cable outlet: top HC-STA-B16-HLWD-1TTM25-EL-AL	1412738	1	
		HC-STA-B16-HLWD-1TTM32-EL-AL	1412739	1	
	1x Pg16 1x Pg21	HC-STA-B16-HLWD-1TTP16-EL-AL	1412740	1	
		HC-STA-B16-HLWD-1TTP21-EL-AL	1412741	1	
Sleeve housing Height: 76 mm 	1x M32 1x M40	Cable outlet: top HC-STA-B16-HHWD-1TTM32-EL-AL	1412708	1	
		HC-STA-B16-HHWD-1TTM40-EL-AL	1412709	1	
	1x Pg21 1x Pg29	HC-STA-B16-HHWD-1TTP21-EL-AL	1412715	1	
		HC-STA-B16-HHWD-1TTP29-EL-AL	1412716	1	
Sleeve housing Height: 60 mm 	1x M25 1x M32	Cable outlet: lateral HC-STA-B16-HLWD-1STM25-EL-AL	1412733	1	
		HC-STA-B16-HLWD-1STM32-EL-AL	1412734	1	
	1x Pg16 1x Pg21	HC-STA-B16-HLWD-1STP16-EL-AL	1412735	1	
		HC-STA-B16-HLWD-1STP21-EL-AL	1412737	1	
Sleeve housing Height: 76 mm 	1x M32 1x M40	Cable outlet: lateral HC-STA-B16-HHWD-1STM32-EL-AL	1412703	1	
		HC-STA-B16-HHWD-1STM40-EL-AL	1412704	1	
	1x Pg21 1x Pg29	HC-STA-B16-HHWD-1STP21-EL-AL	1412705	1	
		HC-STA-B16-HHWD-1STP29-EL-AL	1412706	1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 694



Protective cover
From page 654



Replacement latch
From page 663

**Size B16, metal,
supporting base element
for double locking latch**



General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Technical data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data				
Description	Thread	Type	Order No.	Pcs. / Pkt.
Panel mounting base Height: 30.5 mm		With cover HC-STA-B16-BFDC-ELC-AL	1411328	1
Box mounting base¹⁾ Height: 68 mm	2x M25 2x M32	With cover HC-STA-B16-SLFDC-2SSM25-ELC-AL	1412849	1
		HC-STA-B16-SLFDC-2SSM32-ELC-AL	1412850	1
	2x Pg16 2x Pg21	HC-STA-B16-SLFDC-2SSP16-ELC-AL	1412852	1
		HC-STA-B16-SLFDC-2SSP21-ELC-AL	1412853	1

Dimensions	

Notes:
For further accessories, see from page 658
¹⁾ Supplied with a plastic sealing cap

Accessories

Cable glands From page 694	Replacement seals From page 662	Replacement protective cover From page 653	Cover plates From page 666

Heavy-duty connectors

HEAVYCON B – housing

Size B24, plastic, ADVANCE PL sleeve housing with cable gland

General data

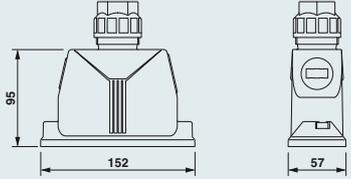
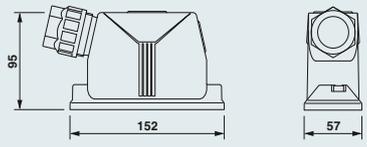
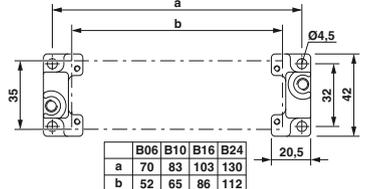
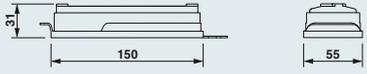
Housing material	PA
Lock material	Stainless steel
Sealing material	NBR
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 100°C

Technical data

Housing material	PA
Lock material	Stainless steel
Sealing material	NBR
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 100°C



Ordering data

Description	Clamping area	Type	Order No.	Pcs. / Pkt.	Dimensions															
Sleeve housing¹⁾ Height: 95 mm 	11 mm ... 21 mm 19 mm ... 28 mm	Cable outlet: top HC-ADV-B24-HHWH-1TGM32-PL HC-ADV-B24-HHWH-1TGM40-PL	1404235 1404238	1 1																
Sleeve housing¹⁾ Height: 95 mm 	11 mm ... 21 mm 19 mm ... 28 mm	Cable outlet: lateral HC-ADV-B24-HHWH-1SGM32-PL HC-ADV-B24-HHWH-1SGM40-PL	1404237 1404239	1 1																
Panel mounting flange 		2 pcs. per housing HC-B-AF Set with 2 panel mounting flanges HC-B-AF-SET	1686533 1604638	20 1	 <table border="1" data-bbox="1204 1533 1356 1585"> <thead> <tr> <th></th> <th>B06</th> <th>B10</th> <th>B16</th> <th>B24</th> </tr> </thead> <tbody> <tr> <td>a</td> <td>70</td> <td>83</td> <td>103</td> <td>130</td> </tr> <tr> <td>b</td> <td>52</td> <td>65</td> <td>86</td> <td>112</td> </tr> </tbody> </table>		B06	B10	B16	B24	a	70	83	103	130	b	52	65	86	112
	B06	B10	B16	B24																
a	70	83	103	130																
b	52	65	86	112																
Protective cover 		for sleeve side, IP50 HC-B 24-TMS-SD-IP50 for panel mounting side, IP66 HC-B 24-TMS-SD-IP66	1690765 1411520	10 10																

Notes:

Marking label: US-EMP (20X9) Order No. [0829439](#)

¹⁾ Screw locking with M6 Allen screws

Accessories



Allen key
see Catalog 3



Replacement seals
From page 662

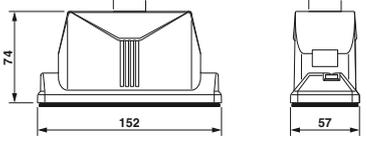
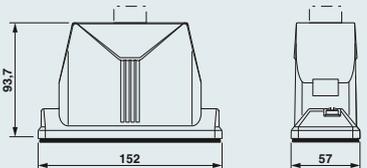
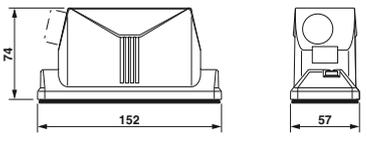
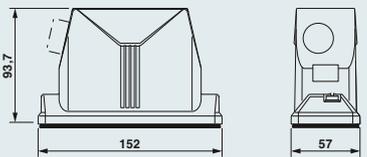
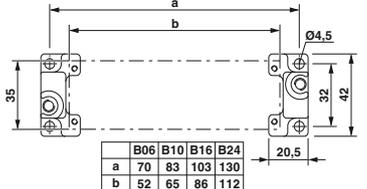
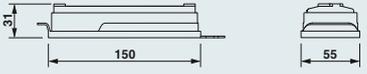
Size B24, metal, ADVANCE sleeve housing



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Lock material	Stainless steel
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP68 / IP69K
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions															
Sleeve housing¹⁾ Height: 74 mm 	1x M25	Cable outlet: top HC-ADV-B24-HLWH-1TTM25-EMC-AL	1414982	1																
Sleeve housing¹⁾ Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: top HC-ADV-B24-HHWH-1TTM25-EMC-AL HC-ADV-B24-HHWH-1TTM32-EMC-AL HC-ADV-B24-HHWH-1TTM40-EMC-AL	1414980 1413430 1413432	1 1 1																
Sleeve housing¹⁾ Height: 74 mm 	1x M25	Cable outlet: lateral HC-ADV-B24-HLWH-1STM25-EMC-AL	1414983	1																
Sleeve housing¹⁾ Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: lateral HC-ADV-B24-HHWH-1STM25-EMC-AL HC-ADV-B24-HHWH-1STM32-EMC-AL HC-ADV-B24-HHWH-1STM40-EMC-AL	1414981 1413431 1413433	1 1 1																
Panel mounting flange 		2 pcs. per housing HC-B-AF Set with 2 panel mounting flanges HC-B-AF-SET	1686533 1604638	20 1	 <table border="1" data-bbox="1189 1533 1348 1585"> <tr> <td></td> <td>B06</td> <td>B10</td> <td>B16</td> <td>B24</td> </tr> <tr> <td>a</td> <td>70</td> <td>83</td> <td>103</td> <td>130</td> </tr> <tr> <td>b</td> <td>52</td> <td>65</td> <td>86</td> <td>112</td> </tr> </table>		B06	B10	B16	B24	a	70	83	103	130	b	52	65	86	112
	B06	B10	B16	B24																
a	70	83	103	130																
b	52	65	86	112																
Protective cover 		for sleeve side, IP50 HC-B 24-TMS-SD-IP50 for panel mounting side, IP66 HC-B 24-TMS-SD-IP66	1690765 1411520	10 10																

Notes:

In order to achieve optimum shielding results, the mounting surface must be conductive

Marking label: US-EMLP-HA (20X9), Order No. 0830989

¹⁾ Screw locking with M6 Allen screws

Accessories



Cable glands
From page 694



Allen key
see Catalog 3



Replacement seals
From page 662

Heavy-duty connectors

HEAVYCON B – housing

Size B24, plastic, EVO housing, single locking latch



General data

Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Technical data

Ordering data

Description	Thread
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Sleeve housing Height: 63 mm	
---------------------------------	--



Sleeve housing Height: 87.5 mm	
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Panel mounting base Height: 30.5 mm	
--	--



Box mounting base ¹⁾ Height: 84 mm	
--	--



Coupling housing Height: 90 mm	
-----------------------------------	--



Cable gland	Clamping area
	7 mm ... 13 mm
	9 mm ... 17 mm
	11 mm ... 21 mm
	19 mm ... 28 mm



Type	Order No.	Pcs. / Pkt.
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HC-EVO-B24-HLFS-PLBK	1420934	1
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HC-EVO-B24-HHFS-PLBK	1407656	1
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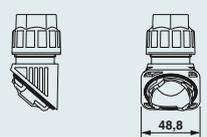
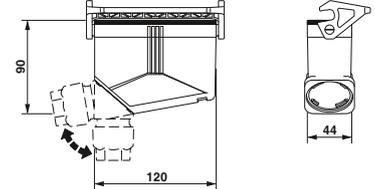
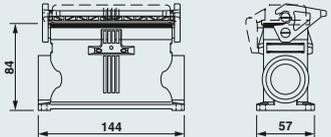
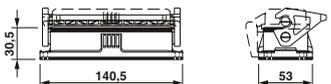
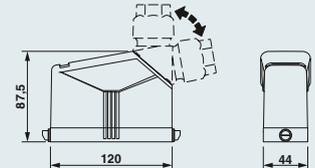
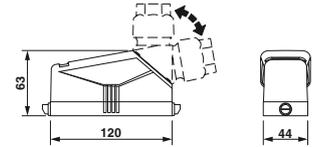
Without cover HC-EVO-B24-BWS-PLRBK	1407659	1
With cover HC-EVO-B24-BWSC-PLRBK	1407660	1

Without cover HC-EVO-B24-SHWS-2SSM25-PLRBK	1421459	1
HC-EVO-B24-SHWS-2SSM32-PLRBK	1421367	1
HC-EVO-B24-SHWS-2SSM40-PLRBK	1407663	1
With cover HC-EVO-B24-SHWSC-2SSM25-PLRBK	1421460	1
HC-EVO-B24-SHWSC-2SSM32-PLRBK	1421369	1
HC-EVO-B24-SHWSC-2SSM40-PLRBK	1407664	1

HC-EVO-B24-CHWS-PLRBK	1407667	1
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HC-B-G-M20-PLRBK	1407669	1
HC-B-G-M25-PLRBK	1407670	1
HC-B-G-M32-PLRBK	1407671	1
HC-B-G-M40-PLRBK	1407672	1

Dimensions



Notes:
For further accessories, see from page 658
Marking label: US-EMP (20X9) Order No. 0829439
¹⁾ One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



Connector set
From page 636

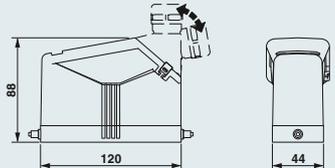
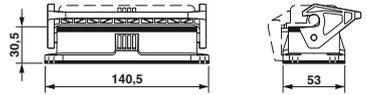
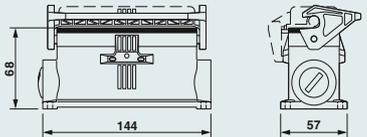
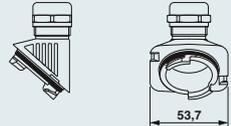
Size B24, metal, EVO housing, single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 88 mm 		HC-EVO-B24-HHFS-EL-AL	1411473	1	
Panel mounting base Height: 30.5 mm 		Without cover HC-STA-B24-BWS-ELC-AL With cover HC-STA-B24-BWSC-ELC-AL	1411329 1411330	1 1	
Box mounting base¹⁾ Height: 68 mm 	2x M25 2x M32 2x Pg21 2x M25 2x M32 2x Pg21	Without cover HC-STA-B24-SLWS-2SSM25-ELC-AL HC-STA-B24-SLWS-2SSM32-ELC-AL HC-STA-B24-SLWS-2SSP21-ELC-AL With cover HC-STA-B24-SLWSC-2SSM25-ELC-AL HC-STA-B24-SLWSC-2SSM32-ELC-AL HC-STA-B24-SLWSC-2SSP21-ELC-AL	1412877 1412878 1412879 1412881 1412882 1412883	1 1 1 1 1 1	
Cable gland 	Clamping area 9 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	HC-B-G-M20-EC-AL HC-B-G-M25-EC-AL HC-B-G-M32-EC-AL HC-B-G-M40-EC-AL	1411439 1411446 1411440 1411441	1 1 1 1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

¹⁾ Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 661



EMC cable gland
From page 660



Replacement seals
From page 662



Connector set
From page 637

Heavy-duty connectors

HEAVYCON B – housing

Size B24, metal, sleeve housing for single locking latch

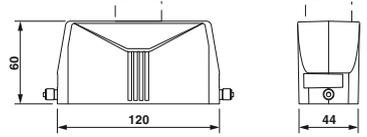
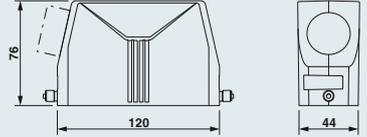
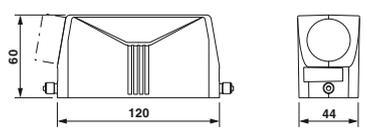
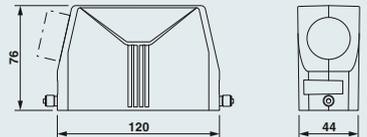


General data

Housing material
Locking latch material
Sealing material
IP degree of protection (when plugged in)
NEMA degree of protection (when plugged in)
Ambient temperature (operation)

Technical data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	-
Sealing material	-
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 60 mm 	1x M25 1x M32	Cable outlet: top HC-STA-B24-HLFS-1TTM25-EL-AL	1412788	1	
		HC-STA-B24-HLFS-1TTM32-EL-AL	1412789	1	
	1x Pg16 1x Pg21 1x Pg29	HC-STA-B24-HLFS-1TTP16-EL-AL	1412790	1	
		HC-STA-B24-HLFS-1TTP21-EL-AL	1412791	1	
		HC-STA-B24-HLFS-1TTP29-EL-AL	1412792	1	
Sleeve housing Height: 76 mm 	1x M32 1x M40	Cable outlet: top HC-STA-B24-HHFS-1TTM32-EL-AL	1412761	1	
		HC-STA-B24-HHFS-1TTM40-EL-AL	1412098	1	
	1x Pg21 1x Pg29	HC-STA-B24-HHFS-1TTP21-EL-AL	1412762	1	
		HC-STA-B24-HHFS-1TTP29-EL-AL	1412763	1	
Sleeve housing Height: 60 mm 	1x M25 1x M32	Cable outlet: lateral HC-STA-B24-HLFS-1STM25-EL-AL	1412783	1	
		HC-STA-B24-HLFS-1STM32-EL-AL	1412784	1	
	1x Pg16 1x Pg21	HC-STA-B24-HLFS-1STP16-EL-AL	1412785	1	
		HC-STA-B24-HLFS-1STP21-EL-AL	1412786	1	
Sleeve housing Height: 76 mm 	1x M32 1x M40	Cable outlet: lateral HC-STA-B24-HHFS-1STM32-EL-AL	1412757	1	
		HC-STA-B24-HHFS-1STM40-EL-AL	1412758	1	
	1x Pg21 1x Pg29	HC-STA-B24-HHFS-1STP21-EL-AL	1412759	1	
		HC-STA-B24-HHFS-1STP29-EL-AL	1412760	1	

Notes:

For further accessories, see from page 658
Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 694



Protective cover
From page 654



Cover plates
From page 666

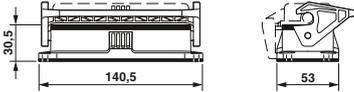
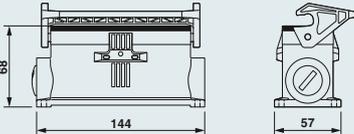
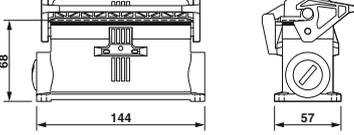
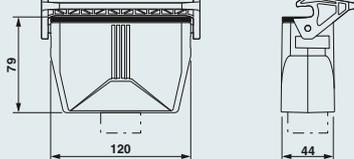


Connector set
From page 638

Size B24, metal, supporting base element with single locking latch



General data		Technical data	
Housing material		Die-cast aluminum, salt water resistant	
Locking latch material		PA	
Sealing material		NBR, conductive	
IP degree of protection (when plugged in)		IP66 / IP67	
NEMA degree of protection (when plugged in)		4 / 4X / 12	
Ambient temperature (operation)		-40°C ... 125°C	

Description		Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base Height: 30.5 mm 			Without cover HC-STA-B24-BWS-ELC-AL	1411329	1	
			With cover HC-STA-B24-BWSC-ELC-AL	1411330	1	
Box mounting base¹⁾ Height: 68 mm 		2x M25 2x M32	Without cover HC-STA-B24-SLWS-2SSM25-ELC-AL	1412877	1	
		2x Pg21	HC-STA-B24-SLWS-2SSM32-ELC-AL	1412878	1	
			HC-STA-B24-SLWS-2SSP21-ELC-AL	1412879	1	
Box mounting base¹⁾ Height: 68 mm 		2x M25 2x M32	With cover HC-STA-B24-SLWSC-2SSM25-ELC-AL	1412881	1	
			HC-STA-B24-SLWSC-2SSM32-ELC-AL	1412882	1	
		2x Pg21	HC-STA-B24-SLWSC-2SSP21-ELC-AL	1412883	1	
Coupling housing Height: 77 mm 		1x M32 1x M40	Cable outlet: top HC-STA-B24-CHWS-1TTM32-ELC-AL	1412746	1	
			HC-STA-B24-CHWS-1TTM40-ELC-AL	1412747	1	
		1x Pg21	HC-STA-B24-CHWS-1TTP21-ELC-AL	1412748	1	
		1x Pg29	HC-STA-B24-CHWS-1TTP29-ELC-AL	1412749	1	

Notes:
For further accessories, see from page 658
¹⁾ Supplied with a plastic sealing cap

Accessories

			
Cable glands From page 694	Replacement seals From page 662	Replacement protective cover From page 653	Replacement latch From page 663

Heavy-duty connectors

HEAVYCON B – housing

Size B24, plastic, EVO housing, double locking latch



General data

Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Technical data

Ordering data

Description	Thread
-------------	--------

Sleeve housing
Height: 63 mm



Sleeve housing
Height: 87.5 mm



Panel mounting base
Height: 30.5 mm



Box mounting base¹⁾
Height: 84 mm



Coupling housing
Height: 90 mm



Cable gland



Clamping area

7 mm ... 13 mm
9 mm ... 17 mm
11 mm ... 21 mm
19 mm ... 28 mm

Type	Order No.	Pcs. / Pkt.
------	-----------	-------------

HC-EVO-B24-HLFD-PLBK

1420935

1

HC-EVO-B24-HHFD-PLBK

1407657

1

Without cover
HC-EVO-B24-BWD-PLRBK

1407661

1

Without cover
HC-EVO-B24-SHWD-2SSM25-PLRBK
HC-EVO-B24-SHWD-2SSM32-PLRBK
HC-EVO-B24-SHWD-2SSM40-PLRBK

1421461

1421370

1407665

1

1

1

HC-EVO-B24-CHWD-PLRBK

1407668

1

HC-B-G-M20-PLRBK
HC-B-G-M25-PLRBK
HC-B-G-M32-PLRBK
HC-B-G-M40-PLRBK

1407669

1407670

1407671

1407672

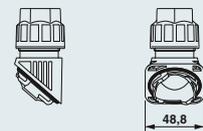
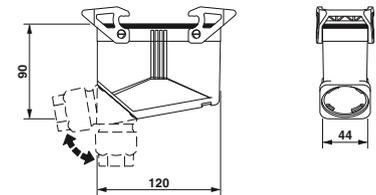
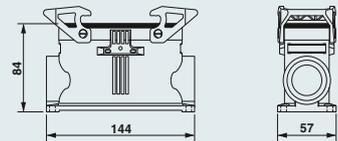
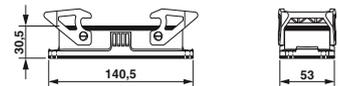
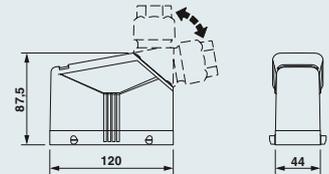
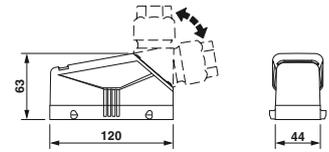
1

1

1

1

Dimensions



Notes:

For further accessories, see from page 658

Marking label: US-EMP (20X9) Order No. [0829439](#)

For coupling housings, visit phoenixcontact.net/products

¹⁾ One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



Connector set
From page 636

Size B24, metal, EVO housing, double locking latch

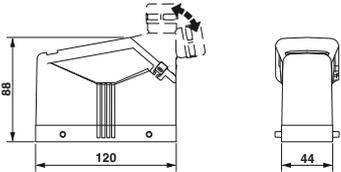
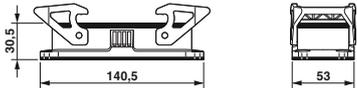
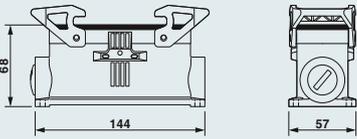
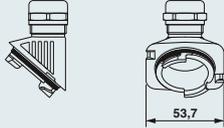


Technical data

General data

Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 88 mm 		HC-EVO-B24-HHFD-EL-AL	1411472	1	
Panel mounting base Height: 30.5 mm 		Without cover HC-STA-B24-BWD-ELC-AL	1411331	1	
Box mounting base¹⁾ Height: 68 mm 	2x M25 2x M32 2x Pg21	Without cover HC-STA-B24-SLWD-2SSM25-ELC-AL HC-STA-B24-SLWD-2SSM32-ELC-AL HC-STA-B24-SLWD-2SSP21-ELC-AL	1412873 1412874 1412875	1 1 1	
Cable gland 	Clamping area 9 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	HC-B-G-M20-EC-AL HC-B-G-M25-EC-AL HC-B-G-M32-EC-AL HC-B-G-M40-EC-AL	1411439 1411446 1411440 1411441	1 1 1 1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

¹⁾ Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 661



EMC cable gland
From page 660



Replacement seals
From page 662



Connector set
From page 637

Heavy-duty connectors

HEAVYCON B – housing

Size B24, metal, sleeve housing for double locking latch

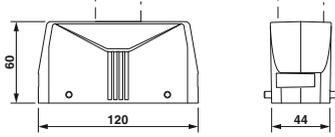
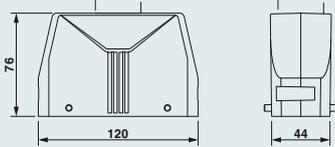
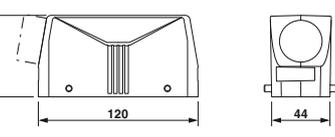
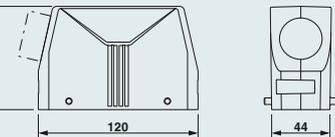


General data

Housing material
Locking latch material
Sealing material
IP degree of protection (when plugged in)
NEMA degree of protection (when plugged in)
Ambient temperature (operation)

Technical data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	-
Sealing material	-
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 60 mm 	1x M25 1x M32	Cable outlet: top HC-STA-B24-HLFD-1TTM25-EL-AL	1412778	1	
		HC-STA-B24-HLFD-1TTM32-EL-AL	1412779	1	
	1x Pg16 1x Pg21 1x Pg29	HC-STA-B24-HLFD-1TTP16-EL-AL	1412780	1	
		HC-STA-B24-HLFD-1TTP21-EL-AL	1412781	1	
		HC-STA-B24-HLFD-1TTP29-EL-AL	1412782	1	
Sleeve housing Height: 76 mm 	1x M32 1x M40	Cable outlet: top HC-STA-B24-HHFD-1TTM32-EL-AL	1412754	1	
		HC-STA-B24-HHFD-1TTM40-EL-AL	1412099	1	
	1x Pg21 1x Pg29	HC-STA-B24-HHFD-1TTP21-EL-AL	1412755	1	
		HC-STA-B24-HHFD-1TTP29-EL-AL	1412756	1	
Sleeve housing Height: 60 mm 	1x M25 1x M32	Cable outlet: lateral HC-STA-B24-HLFD-1STM25-EL-AL	1412773	1	
		HC-STA-B24-HLFD-1STM32-EL-AL	1412774	1	
	1x Pg16 1x Pg21	HC-STA-B24-HLFD-1STP16-EL-AL	1412775	1	
		HC-STA-B24-HLFD-1STP21-EL-AL	1412776	1	
Sleeve housing Height: 76 mm 	1x M32 1x M40	Cable outlet: lateral HC-STA-B24-HHFD-1STM32-EL-AL	1412750	1	
		HC-STA-B24-HHFD-1STM40-EL-AL	1412751	1	
	1x Pg21 1x Pg29	HC-STA-B24-HHFD-1STP21-EL-AL	1412752	1	
		HC-STA-B24-HHFD-1STP29-EL-AL	1412753	1	

Notes:
For further accessories, see from page 658
Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories

 Cable glands From page 694	 Protective cover From page 654	 Cover plates From page 666	 Connector set From page 638
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Size B24, metal, base element with double locking latch



General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Technical data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

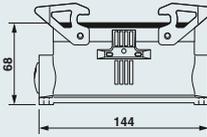
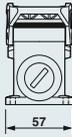
Ordering data				
Description	Thread	Type	Order No.	Pcs. / Pkt.

Dimensions	
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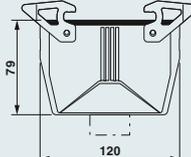
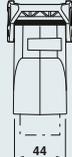
Panel mounting base Height: 30.5 mm 		Without cover HC-STA-B24-BWD-ELC-AL	1411331	1
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Box mounting base¹⁾ Height: 68 mm 	2x M25	Without cover HC-STA-B24-SLWD-2SSM25-ELC-AL	1412873	1
	2x M32			
	2x Pg21	HC-STA-B24-SLWD-2SSP21-ELC-AL	1412875	1

	
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Coupling housing Height: 77 mm 	1x M32	Cable outlet: top HC-STA-B24-CHWD-1TTM32-ELC-AL	1412742	1
	1x M40	HC-STA-B24-CHWD-1TTM40-ELC-AL	1412743	1
	1x Pg21	HC-STA-B24-CHWD-1TTP21-ELC-AL	1412744	1
	1x Pg29	HC-STA-B24-CHWD-1TTP29-ELC-AL	1412745	1

	
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Notes:
For further accessories, see from page 658
¹⁾ Supplied with a plastic sealing cap

Accessories

 Cable glands From page 694	 Replacement seals From page 662	 Replacement protective cover From page 653	 Replacement latch From page 663
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Heavy-duty connectors

HEAVYCON B – housing

Size B24, plastic, EVO housing, double locking latch

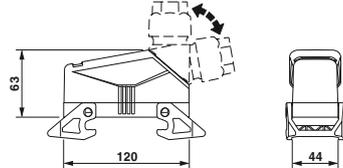
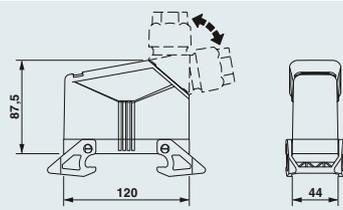
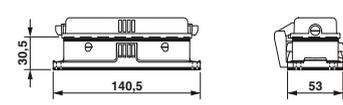
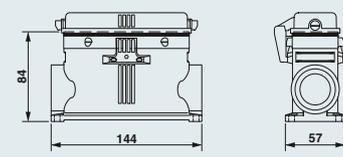
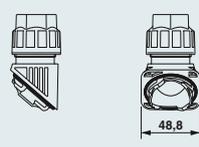


General data

Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Technical data

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 63 mm 		HC-EVO-B24-HLWD-PLBK	1420936	1	
Sleeve housing Height: 87.5 mm 		HC-EVO-B24-HHWD-PLBK	1407658	1	
Panel mounting base Height: 30.5 mm 		With cover HC-EVO-B24-BFDC-PLRBK	1407662	1	
Box mounting base¹⁾ Height: 84 mm 	2x M25 2x M32 2x M40	With cover HC-EVO-B24-SHFDC-2SSM25-PLRBK HC-EVO-B24-SHFDC-2SSM32-PLRBK HC-EVO-B24-SHFDC-2SSM40-PLRBK	1421462 1421380 1407666	1 1 1	
Cable gland 	Clamping area 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	HC-B-G-M20-PLRBK HC-B-G-M25-PLRBK HC-B-G-M32-PLRBK HC-B-G-M40-PLRBK	1407669 1407670 1407671 1407672	1 1 1 1	

Notes:

For further accessories, see from page 658

Marking label: US-EMP (20X9) Order No. [0829439](#)

For coupling housings, visit phoenixcontact.net/products

¹⁾ One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



Replacement latch
From page 663

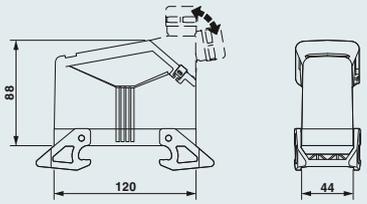
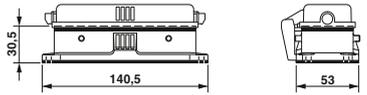
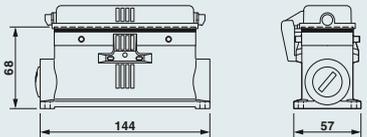
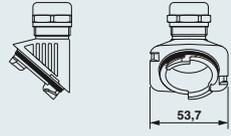
Size B24, metal, EVO housing, double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 88 mm 		HC-EVO-B24-HHWD-EL-AL	1411474	1	
Panel mounting base Height: 30.5 mm 		With cover HC-STA-B24-BFDC-ELC-AL	1411332	1	
Box mounting base¹⁾ Height: 68 mm 	2x M25 2x M32 2x Pg21	With cover HC-STA-B24-SLFDC-2SSM25-ELC-AL HC-STA-B24-SLFDC-2SSM32-ELC-AL HC-STA-B24-SLFDC-2SSP21-ELC-AL	1412869 1412870 1412871	1 1 1	
Cable gland 	Clamping area 9 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	HC-B-G-M20-EC-AL HC-B-G-M25-EC-AL HC-B-G-M32-EC-AL HC-B-G-M40-EC-AL	1411439 1411446 1411440 1411441	1 1 1 1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

¹⁾ Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 661



EMC cable gland
From page 660



Replacement seals
From page 662



Replacement latch
From page 663

Heavy-duty connectors

HEAVYCON B – housing

Size B24, metal, sleeve housing with double locking latch

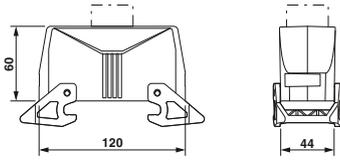
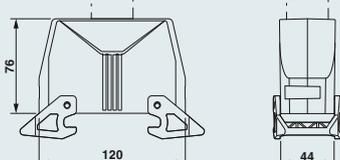
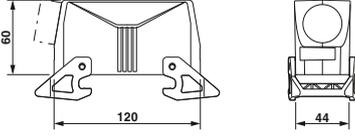
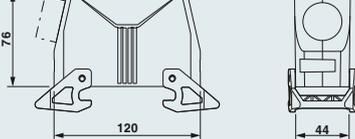


General data

Housing material
Locking latch material
Sealing material
IP degree of protection (when plugged in)
NEMA degree of protection (when plugged in)
Ambient temperature (operation)

Technical data
Die-cast aluminum, salt water resistant
PA
-
IP66 / IP67
4 / 4X / 12
-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 60 mm 	1x M25 1x M32	Cable outlet: top HC-STA-B24-HLWD-1TTM25-EL-AL	1412799	1	
		HC-STA-B24-HLWD-1TTM32-EL-AL	1412800	1	
	1x Pg16 1x Pg21 1x Pg29	HC-STA-B24-HLWD-1TTP16-EL-AL	1412801	1	
		HC-STA-B24-HLWD-1TTP21-EL-AL	1412802	1	
		HC-STA-B24-HLWD-1TTP29-EL-AL	1412803	1	
Sleeve housing Height: 76 mm 	1x M32 1x M40	Cable outlet: top HC-STA-B24-HHWD-1TTM32-EL-AL	1412769	1	
		HC-STA-B24-HHWD-1TTM40-EL-AL	1412770	1	
	1x Pg21 1x Pg29	HC-STA-B24-HHWD-1TTP21-EL-AL	1412771	1	
		HC-STA-B24-HHWD-1TTP29-EL-AL	1412772	1	
Sleeve housing Height: 60 mm 	1x M25 1x M32	Cable outlet: lateral HC-STA-B24-HLWD-1STM25-EL-AL	1412793	1	
		HC-STA-B24-HLWD-1STM32-EL-AL	1412795	1	
	1x Pg16 1x Pg21	HC-STA-B24-HLWD-1STP16-EL-AL	1412796	1	
		HC-STA-B24-HLWD-1STP21-EL-AL	1412797	1	
Sleeve housing Height: 76 mm 	1x M32 1x M40	Cable outlet: lateral HC-STA-B24-HHWD-1STM32-EL-AL	1412764	1	
		HC-STA-B24-HHWD-1STM40-EL-AL	1412766	1	
	1x Pg21 1x Pg29	HC-STA-B24-HHWD-1STP21-EL-AL	1412767	1	
		HC-STA-B24-HHWD-1STP29-EL-AL	1412768	1	

Notes:
For further accessories, see from page 658
Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 694



Protective cover
From page 654



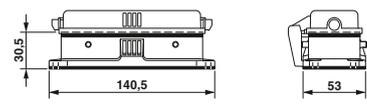
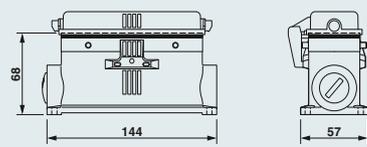
Replacement latch
From page 663

Size B24, metal, supporting base element for double locking latch



General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Technical data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Description		Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base Height: 30.5 mm 			With cover HC-STA-B24-BFDC-ELC-AL	1411332	1	
Box mounting base¹⁾ Height: 68 mm 		2x M25 2x M32 2x Pg21	With cover HC-STA-B24-SLFDC-2SSM25-ELC-AL HC-STA-B24-SLFDC-2SSM32-ELC-AL HC-STA-B24-SLFDC-2SSP21-ELC-AL	1412869 1412870 1412871	1 1 1	

Notes:
For further accessories, see from page 658
¹⁾ Supplied with a plastic sealing cap

Accessories

 Cable glands From page 694	 Replacement seals From page 662	 Replacement protective cover From page 653	 Cover plates From page 666
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Heavy-duty connectors

HEAVYCON B – housing

Size B32, metal, housing, double locking latch

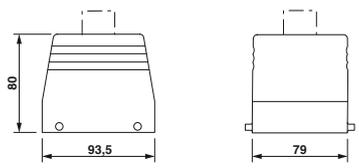
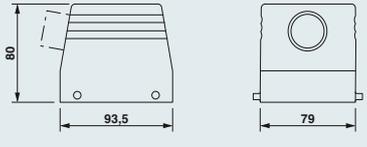
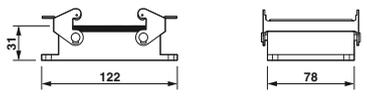
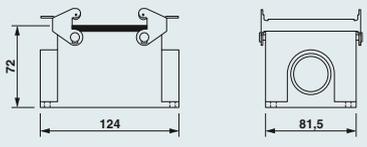
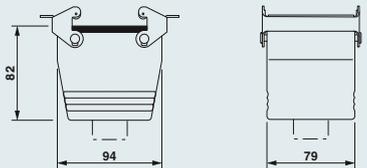
General data

Housing material	Aluminum die-cast
Locking latch material	Steel, galvanized
Sealing material	NBR
IP degree of protection (when plugged in)	IP65
Ambient temperature (operation)	-40°C ... 125°C

Technical data



Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 80 mm 	1x M32 1x M40 1x M50 1x Pg29 1x Pg36	Cable outlet: top HC-B 32-TFQ-80/O1STM32G HC-B 32-TFQ-80/O1STM40G HC-B 32-TFQ-80/O1STM50G HC-B 32-TFQ-80/O1PG29G HC-B 32-TFQ-80/O1PG36G	1645383 1647307 1460197 1675081 1460138	10 10 10 10 10	
Sleeve housing Height: 80 mm 	1x M32 1x M40 1x M50 1x Pg29 1x Pg36	Cable outlet: lateral HC-B 32-TFQ-80/O1STM32S HC-B 32-TFQ-80/O1STM40S HC-B 32-TFQ-80/O1STM50S HC-B 32-TFQ-80/O1PG29S HC-B 32-TFQ-80/O1PG36S	1645150 1645451 1585980 1675094 1644818	10 10 10 10 10	
Panel mounting base Height: 31 mm 		Without cover HC-B 32-AMQ	1775693	10	
Box mounting base Height: 72 mm 	1x M32 2x M32 2x M40 1x Pg29 2x Pg29	Without cover HC-B 32-SMQ-72/O1M32 HC-B 32-SMQ-72/O1PG29 HC-B 32-SMQ-72/O2M32 HC-B 32-SMQ-72/O2M40 HC-B 32-SMQ-72/O2PG29	1604867 1675036 1604868 1604869 1675049	10 10 10 10 10	
Coupling housing Height: 82 mm 	1x M32 1x M40 1x Pg21 1x Pg29	Cable outlet: top HC-B 32-KMQ-82/O1STM32 HC-B 32-KMQ-82/O1STM40 HC-B 32-KMQ-82/O1PG21 HC-B 32-KMQ-82/O1PG29	1647284 1647297 1675010 1675023	10 10 10 10	

Notes:

For further accessories, see from page 658

Accessories



Cable glands
From page 694



Flat gaskets
From page 662



Cover plates
From page 666

Size B48, metal, housing, single locking latch

General data

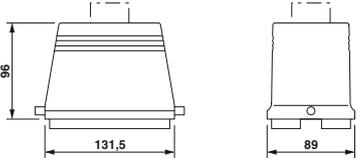
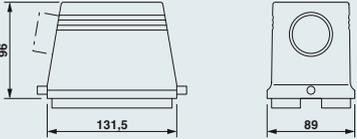
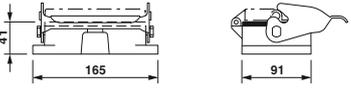
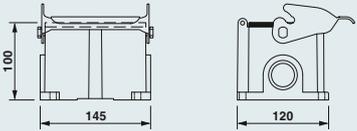
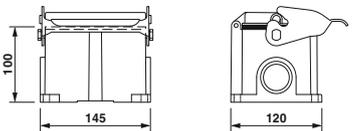
Housing material
Locking latch material
Sealing material
IP degree of protection (when plugged in)
Ambient temperature (operation)

Technical data

Aluminum die-cast
Steel, galvanized
NBR
IP65
-40°C ... 125°C



Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 96 mm 	1x M32 1x M40 1x M50 1x Pg29 1x Pg36	Cable outlet: top			
		HC-B 48-TFL-96/O1STM32G	1647349	1	
		HC-B 48-TFL-96/O1STM40G	1647310	1	
		HC-B 48-TFL-96/O1STM50G	1460337	10	
		HC-B 48-TFL-96/O1PG29G	1675159	1	
		HC-B 48-TFL-96/O1PG36G	1675175	1	
Sleeve housing Height: 96 mm 	1x M32 1x M40 1x M50 1x Pg29 1x Pg36	Cable outlet: lateral			
		HC-B 48-TFL-96/O1STM32S	1647336	1	
		HC-B 48-TFL-96/O1STM40S	1647323	1	
		HC-B 48-TFL-96/O1STM50S	1460351	1	
		HC-B 48-TFL-96/O1PG29S	1675162	1	
		HC-B 48-TFL-96/O1PG36S	1675188	1	
Panel mounting base Height: 41 mm 		Without cover			
		HC-B 48-AML	1772175	1	
		With cover			
		HC-B 48-AMLD	1772188	1	
Box mounting base Height: 100 mm 	1x M32 2x M32 2x M40 2x Pg29 2x Pg36	Without cover			
		HC-B 48-SML-100/O1M32	1604875	1	
		HC-B 48-SML-100/O1PG29	1675117	1	
		HC-B 48-SML-100/O2M32	1460228	10	
		HC-B 48-SML-100/O2M40	1604876	1	
		HC-B 48-SML-100/O2PG29	1675120	1	
		HC-B 48-SML-100/O2PG36	1460248	10	
Box mounting base Height: 100 mm 	1x M32 2x M40 2x Pg36	With cover			
		HC-B 48-SMLD-100/O1M32	1604877	1	
		HC-B 48-SMLD-100/O2M40	1604878	1	
		HC-B 48-SMLD-100/O2PG36	1460037	10	

Notes:

For further accessories, see from page 658

Accessories



Cable glands
From page 694



Flat gaskets
From page 662



Cover plates
From page 666

Heavy-duty connectors

HEAVYCON B – housing

Connector sets, EVO housing, plastic, Push-in connection



General data

Housing material	PA
Sealing material	NBR
Inflammability class according to UL 94	V0
Insertion/withdrawal cycles	≥ 500
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Technical data

Ordering data

Description	Pos.	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Connector set 	6	B6	Single locking latch, with cover HC-EVO-B06PT-BWSC-HL-M20-PLRBK	1407710	1	
Connector set 	10	B10	Single locking latch, with cover HC-EVO-B10PT-BWSC-HL-M25-PLRBK	1408791	1	
	10	B10	Double locking latch, without cover HC-EVO-B10PT-BWD-HL-M25-PLRBK	1407711	1	
Connector set 	16	B16	Single locking latch, with cover HC-EVO-B16PT-BWSC-HH-M25-PLRBK	1408793	1	
	16	B16	Double locking latch, without cover HC-EVO-B16PT-BWD-HH-M25-PLRBK	1407712	1	
Connector set 	24	B24	Single locking latch, with cover HC-EVO-B24PT-BWSC-HH-M32-PLRBK	1408794	1	
	24	B24	Double locking latch, without cover HC-EVO-B24PT-BWD-HH-M32-PLRBK	1407713	1	
Sample kit 			CASE HC EVO OVERVIEW	5053053	1	

Notes:

For further accessories, see from page 652

Only operate connectors when there is no load/the power is switched off

For assembly instructions, see phoenixcontact.net/products

Accessories



EVO unlocking
From page 661



Replacement latch
From page 663



Replacement seals
From page 662

**Connector sets,
EVO housing, metal,
Push-in connection**



General data	
Housing material	Die-cast aluminum, salt water resistant
Sealing material	NBR, conductive
Inflammability class according to UL 94	V0
Insertion/withdrawal cycles	≥ 500
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Technical data

Die-cast aluminum, salt water resistant
NBR, conductive
V0
≥ 500
IP66 / IP67
4 / 4X / 12
-40°C ... 125°C

Ordering data

Description	Pos.	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Connector set						
	6	B6	Single locking latch, with cover HC-EVO-B06PT-BWSC-HL-M20ELC-AL	1411487	1	
Connector set						
	10	B10	Single locking latch, with cover HC-EVO-B10PT-BWSC-HL-M25ELC-AL	1411491	1	
	10	B10	Double locking latch, without cover HC-EVO-B10PT-BWD-HL-M25ELC-AL	1411488	1	
Connector set						
	16	B16	Single locking latch, with cover HC-EVO-B16PT-BWSC-HH-M25ELC-AL	1411492	1	
	16	B16	Double locking latch, without cover HC-EVO-B16PT-BWD-HH-M25ELC-AL	1411489	1	
Connector set						
	24	B24	Single locking latch, with cover HC-EVO-B24PT-BWSC-HH-M32ELC-AL	1411493	1	
	24	B24	Double locking latch, without cover HC-EVO-B24PT-BWD-HH-M32ELC-AL	1411490	1	
Sample kit						
			CASE HC EVO OVERVIEW	5053053	1	

Notes:
For further accessories, see from page 652
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products

Accessories



Replacement latch
From page 663



Replacement seals
From page 662

Heavy-duty connectors

HEAVYCON B – housing

Connector sets, STANDARD housing, metal, Push-in connection



General data	
Housing material	Die-cast aluminum, salt water resistant
Sealing material	NBR
Inflammability class according to UL 94	V0
Insertion/withdrawal cycles	≥ 500
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Technical data

Die-cast aluminum, salt water resistant
NBR
V0
≥ 500
IP66 / IP67
4 / 4X / 12
-40°C ... 125°C

Ordering data

Description	Pos.	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Connector set, cable outlet: top 	6	B6	Single locking latch, with cover HC-STA-B06PT-BWSC-LT-M20-ELCAL	1416344	1	
Connector set, cable outlet: top 	10	B10	Single locking latch, with cover HC-STA-B10PT-BWSC-LT-M25-ELCAL	1416345	1	
	10	B10	Double locking latch, without cover HC-STA-B10PT-BWD-LT-M25-ELCAL	1416346	1	
Connector set, cable outlet: top 	16	B16	Single locking latch, with cover HC-STA-B16PT-BWSC-LT-M25-ELCAL	1416348	1	
	16	B16	Double locking latch, without cover HC-STA-B16PT-BWD-LT-M25-ELCAL	1416349	1	
Connector set, cable outlet: top 	24	B24	Single locking latch, with cover HC-STA-B24PT-BWSC-LT-M32-ELCAL	1416351	1	
	24	B24	Double locking latch, without cover HC-STA-B24PT-BWD-LT-M32-ELCAL	1416352	1	

Notes:
For further accessories, see from page 652
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products

Accessories



Replacement latch
From page 663

Replacement seals
From page 662

**Connector sets,
STANDARD housing, metal,
Push-in connection**



General data	
Housing material	Die-cast aluminum, salt water resistant
Sealing material	NBR
Inflammability class according to UL 94	V0
Insertion/withdrawal cycles	≥ 500
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Technical data

Housing material	Die-cast aluminum, salt water resistant
Sealing material	NBR
Inflammability class according to UL 94	V0
Insertion/withdrawal cycles	≥ 500
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Pos.	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Connector set, cable outlet: lateral 	6	B6	Single locking latch, with cover HC-STA-B06PT-BWSC-LS-M20-ELCAL	1416353	1	
Connector set, cable outlet: lateral 	10	B10	Single locking latch, with cover HC-STA-B10PT-BWSC-LS-M25-ELCAL	1416354	1	
	10	B10	Double locking latch, without cover HC-STA-B10PT-BWD-LS-M25-ELCAL	1416355	1	
Connector set, cable outlet: lateral 	16	B16	Single locking latch, with cover HC-STA-B16PT-BWSC-LS-M25-ELCAL	1416356	1	
	16	B16	Double locking latch, without cover HC-STA-B16PT-BWD-LS-M25-ELCAL	1416357	1	
Connector set, cable outlet: lateral 	24	B24	Single locking latch, with cover HC-STA-B24PT-BWSC-LS-M32-ELCAL	1416358	1	
	24	B24	Double locking latch, without cover HC-STA-B24PT-BWD-LS-M32-ELCAL	1416359	1	

Notes:
For further accessories, see from page 652
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products

Accessories



Replacement latch
From page 663



Replacement seals
From page 662

Size B10, B16, B24, plastic, EVO double sleeve housing, for double locking latch

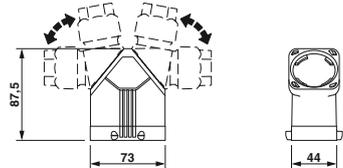
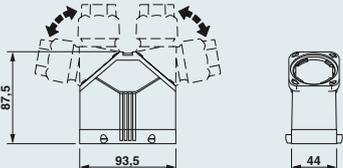
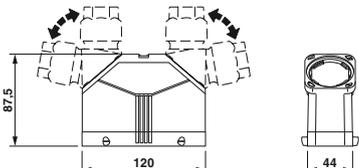
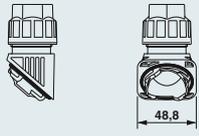
General data

Housing material	PA
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C (static)

Technical data



Ordering data

Description	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Double sleeve housing 	B10	for double locking latch HC-EVO-B10-HHFD-2B-PL-BK	1411495	1	
Double sleeve housing 	B16	for double locking latch HC-EVO-B16-HHFD-2B-PL-BK	1411496	1	
Double sleeve housing 	B24	for double locking latch HC-EVO-B24-HHFD-2B-PL-BK	1411497	1	
Cable gland 	Clamping area 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	HC-B-G-M20-PLRBK HC-B-G-M25-PLRBK HC-B-G-M32-PLRBK HC-B-G-M40-PLRBK	1407669 1407670 1407671 1407672	1 1 1 1	

Notes:

For further accessories, see page 658

Marking label: US-EMP (20X9) Order No. [0829439](#)

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659

Heavy-duty connectors

HEAVYCON B – housing

Size B6, metal,
ADVANCE sleeve housing,
outdoor applications

new



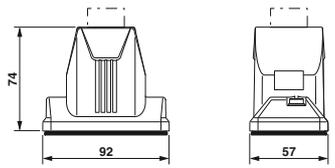
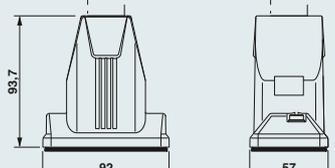
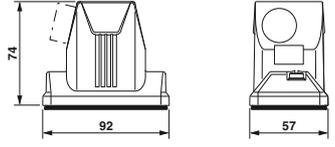
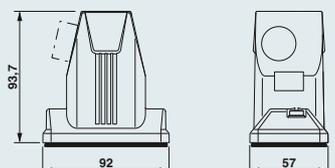
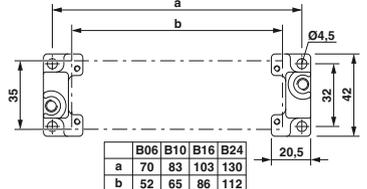
General data

Housing material
Surface material
Lock material
Sealing material
IP degree of protection (when plugged in)
NEMA degree of protection (when plugged in)
Ambient temperature (operation)

Technical data

Die-cast aluminum, salt water resistant
Powder-coated, black
Stainless steel
Viton
IP66 / IP68 / IP69K
4 / 4X / 12
-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions															
Sleeve housing ¹⁾ Height: 74 mm 	1x M20	Cable outlet: top HC-ADV-B06-HLWH-1TTM20-MF-BK	1420904	1																
	1x M25	HC-ADV-B06-HLWH-1TTM25-MF-BK	1420905	1																
Sleeve housing ¹⁾ Height: 93.7 mm 	1x M25	Cable outlet: top HC-ADV-B06-HHWH-1TTM25-MF-BK	1420900	1																
	1x M32	HC-ADV-B06-HHWH-1TTM32-MF-BK	1420901	1																
Sleeve housing ¹⁾ Height: 74 mm 	1x M20	Cable outlet: lateral HC-ADV-B06-HLWH-1STM20-MF-BK	1420902	1																
	1x M25	HC-ADV-B06-HLWH-1STM25-MF-BK	1420903	1																
Sleeve housing ¹⁾ Height: 93.7 mm 	1x M25	Cable outlet: lateral HC-ADV-B06-HHWH-1STM25-MF-BK	1420898	1																
	1x M32	HC-ADV-B06-HHWH-1STM32-MF-BK	1420899	1																
Panel mounting flange 		2 pcs. per housing HC-B-AF Set with 2 panel mounting flanges HC-B-AF-SET	1686533 1604638	20 1	 <table border="1" data-bbox="1204 1533 1356 1585"> <thead> <tr> <th></th> <th>B06</th> <th>B10</th> <th>B16</th> <th>B24</th> </tr> </thead> <tbody> <tr> <td>a</td> <td>70</td> <td>83</td> <td>103</td> <td>130</td> </tr> <tr> <td>b</td> <td>52</td> <td>65</td> <td>86</td> <td>112</td> </tr> </tbody> </table>		B06	B10	B16	B24	a	70	83	103	130	b	52	65	86	112
	B06	B10	B16	B24																
a	70	83	103	130																
b	52	65	86	112																
Protective cover 		for sleeve side, IP50 HC-B 10-TMS-SD-IP50 for panel mounting side, IP66 HC-B 10-TMS-SD-IP66	1690749 1411504	10 10																

Notes:

Marking label: US-EMLP-HA (20X9), Order No. [0830989](#)

¹⁾ Screw locking with M6 Allen screws

Accessories



Screw connections
From page 694



Allen key
see Catalog 3



Replacement seals
From page 662

new

Size B10, metal, ADVANCE sleeve housing, outdoor applications

General data

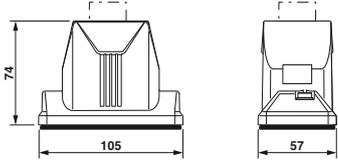
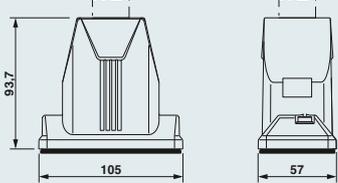
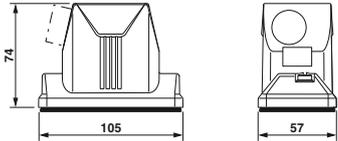
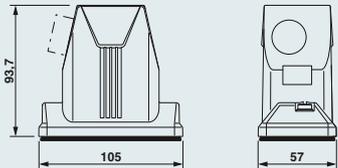
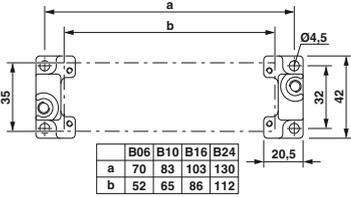
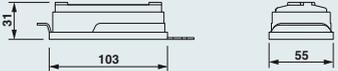
Housing material
Surface material
Lock material
Sealing material
IP degree of protection (when plugged in)
NEMA degree of protection (when plugged in)
Ambient temperature (operation)

Technical data

Die-cast aluminum, salt water resistant
Powder-coated, black
Stainless steel
Viton
IP66 / IP68 / IP69K
4 / 4X / 12
-40°C ... 125°C



Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing¹⁾ Height: 74 mm 	1x M20 1x M25	Cable outlet: top HC-ADV-B10-HLWH-1TTM20-MF-BK	1420912	1	
		HC-ADV-B10-HLWH-1TTM25-MF-BK	1420913	1	
Sleeve housing¹⁾ Height: 93.7 mm 	1x M25 1x M32	Cable outlet: top HC-ADV-B10-HHWH-1TTM25-MF-BK	1420908	1	
		HC-ADV-B10-HHWH-1TTM32-MF-BK	1420909	1	
Sleeve housing¹⁾ Height: 74 mm 	1x M20 1x M25	Cable outlet: lateral HC-ADV-B10-HLWH-1STM20-MF-BK	1420910	1	
		HC-ADV-B10-HLWH-1STM25-MF-BK	1420911	1	
Sleeve housing¹⁾ Height: 93.7 mm 	1x M25 1x M32	Cable outlet: lateral HC-ADV-B10-HHWH-1STM25-MF-BK	1420906	1	
		HC-ADV-B10-HHWH-1STM32-MF-BK	1420907	1	
Panel mounting flange 		2 pcs. per housing HC-B-AF Set with 2 panel mounting flanges HC-B-AF-SET	1686533 1604638	20 1	
Protective cover 		for sleeve side, IP50 HC-B 10-TMS-SD-IP50 for panel mounting side, IP66 HC-B 10-TMS-SD-IP66	1690749 1411504	10 10	

Notes:

Marking label: US-EMLP-HA (20X9), Order No. 0830989

¹⁾ Screw locking with M6 Allen screws

Accessories



Screw connections
From page 694



Allen key
see Catalog 3



Replacement seals
From page 662

Heavy-duty connectors

HEAVYCON B – housing

Size B16, metal, ADVANCE sleeve housing, outdoor applications

new



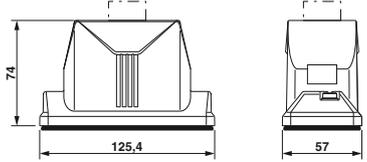
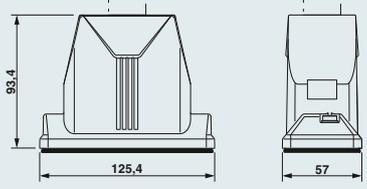
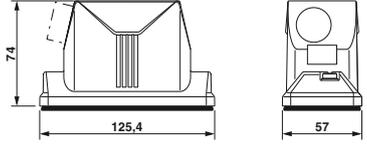
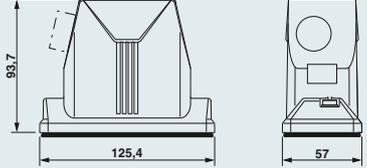
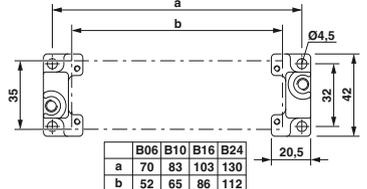
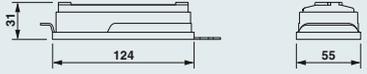
General data

Housing material
Surface material
Lock material
Sealing material
IP degree of protection (when plugged in)
NEMA degree of protection (when plugged in)
Ambient temperature (operation)

Technical data

Die-cast aluminum, salt water resistant
Powder-coated, black
Stainless steel
Viton
IP66 / IP68 / IP69K
4 / 4X / 12
-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions															
Sleeve housing¹⁾ Height: 74 mm 	1x M25	Cable outlet: top HC-ADV-B16-HLWH-1TTM25-MF-BK	1420921	1																
Sleeve housing¹⁾ Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: top HC-ADV-B16-HHWH-1TTM25-MF-BK HC-ADV-B16-HHWH-1TTM32-MF-BK HC-ADV-B16-HHWH-1TTM40-MF-BK	1420917 1420918 1420919	1 1 1																
Cable entry: lateral¹⁾ Height: 74 mm 	1x M25	Cable outlet: lateral HC-ADV-B16-HLWH-1STM25-MF-BK	1420920	1																
Sleeve housing¹⁾ Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: lateral HC-ADV-B16-HHWH-1STM25-MF-BK HC-ADV-B16-HHWH-1STM32-MF-BK HC-ADV-B16-HHWH-1STM40-MF-BK	1420914 1420915 1420916	1 1 1																
Panel mounting flange 		2 pcs. per housing HC-B-AF Set with 2 panel mounting flanges HC-B-AF-SET	1686533 1604638	20 1	 <table border="1" data-bbox="1204 1533 1356 1585"> <thead> <tr> <th></th> <th>B06</th> <th>B10</th> <th>B16</th> <th>B24</th> </tr> </thead> <tbody> <tr> <td>a</td> <td>70</td> <td>83</td> <td>103</td> <td>130</td> </tr> <tr> <td>b</td> <td>52</td> <td>65</td> <td>86</td> <td>112</td> </tr> </tbody> </table>		B06	B10	B16	B24	a	70	83	103	130	b	52	65	86	112
	B06	B10	B16	B24																
a	70	83	103	130																
b	52	65	86	112																
Protective cover 		for sleeve side, IP50 HC-B 16-TMS-SD-IP50 for panel mounting side, IP66 HC-B 16-TMS-SD-IP66	1690752 1411517	10 10																

Notes:

Marking label: US-EMLP-HA (20X9), Order No. [0830989](#)

¹⁾ Screw locking with M6 Allen screws

Accessories



Screw connections
From page 694



Allen key
see Catalog 3



Replacement seals
From page 662

new

Size B24, metal, ADVANCE sleeve housing, outdoor applications

General data

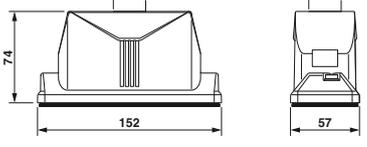
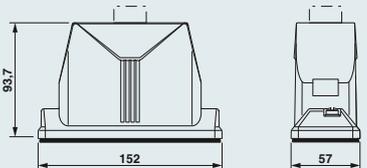
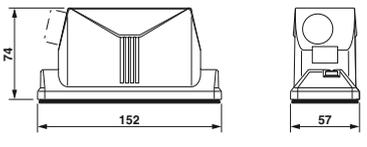
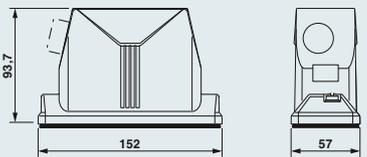
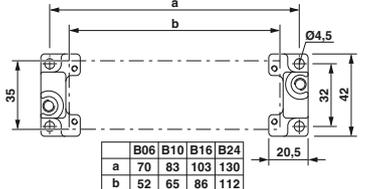
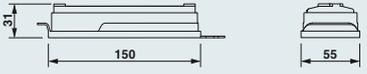
Housing material
Surface material
Lock material
Sealing material
IP degree of protection (when plugged in)
NEMA degree of protection (when plugged in)
Ambient temperature (operation)

Technical data

Die-cast aluminum, salt water resistant
Powder-coated, black
Stainless steel
Viton
IP66 / IP68 / IP69K
4 / 4X / 12
-40°C ... 125°C



Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions															
Sleeve housing¹⁾ Height: 74 mm 	1x M25	Cable outlet: top HC-ADV-B24-HLWH-1TTM25-MF-BK	1420929	1																
Sleeve housing¹⁾ Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: top HC-ADV-B24-HHWH-1TTM25-MF-BK HC-ADV-B24-HHWH-1TTM32-MF-BK HC-ADV-B24-HHWH-1TTM40-MF-BK	1420925 1420926 1420927	1 1 1																
Sleeve housing¹⁾ Height: 74 mm 	1x M25	Cable outlet: lateral HC-ADV-B24-HLWH-1STM25-MF-BK	1420928	1																
Sleeve housing¹⁾ Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: lateral HC-ADV-B24-HHWH-1STM25-MF-BK HC-ADV-B24-HHWH-1STM32-MF-BK HC-ADV-B24-HHWH-1STM40-MF-BK	1420922 1420923 1420924	1 1 1																
Panel mounting flange 		2 pcs. per housing HC-B-AF Set with 2 panel mounting flanges HC-B-AF-SET	1686533 1604638	20 1	 <table border="1" data-bbox="1189 1533 1348 1585"> <thead> <tr> <th></th> <th>B06</th> <th>B10</th> <th>B16</th> <th>B24</th> </tr> </thead> <tbody> <tr> <td>a</td> <td>70</td> <td>83</td> <td>103</td> <td>130</td> </tr> <tr> <td>b</td> <td>52</td> <td>65</td> <td>86</td> <td>112</td> </tr> </tbody> </table>		B06	B10	B16	B24	a	70	83	103	130	b	52	65	86	112
	B06	B10	B16	B24																
a	70	83	103	130																
b	52	65	86	112																
Protective cover 		for sleeve side, IP50 HC-B 24-TMS-SD-IP50 for panel mounting side, IP66 HC-B 24-TMS-SD-IP66	1690765 1411520	10 10																

Notes:

Marking label: US-EMLP-HA (20X9), Order No. 0830989

¹⁾ Screw locking with M6 Allen screws

Accessories



Cable glands
From page 694



Allen key
see Catalog 3



Replacement seals
From page 662

Heavy-duty connectors

HEAVYCON B – housing

Size **B6, B10, B16, B24**, metal,
ADVANCE sleeve housing,
without bore hole

new



Technical data

General data

Housing material
Lock material
Sealing material
IP degree of protection (when plugged in)
NEMA degree of protection (when plugged in)
Ambient temperature (operation)

Die-cast aluminum, salt water resistant
Stainless steel
NBR, conductive
IP66 / IP68 / IP69K
4 / 4X / 12
-40°C ... 125°C

Ordering data

Description

Size

Type

Order No.

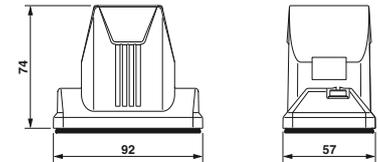
Pcs. / Pkt.

Dimensions

Sleeve housing¹⁾



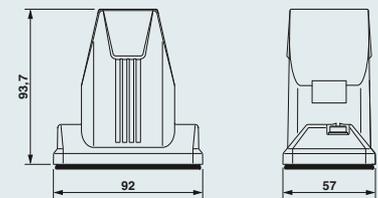
Height: 74 mm
B6 **HC-ADV-B06-HLWH-BLANK-ELC-AL** **1420048** 1
B10 **HC-ADV-B10-HLWH-BLANK-ELC-AL** **1420051** 1
B16 **HC-ADV-B16-HLWH-BLANK-ELC-AL** **1420053** 1
B24 **HC-ADV-B24-HLWH-BLANK-ELC-AL** **1420055** 1



Sleeve housing¹⁾



Height: 93.7 mm
B6 **HC-ADV-B06-HHWH-BLANK-ELC-AL** **1420050** 1
B10 **HC-ADV-B10-HHWH-BLANK-ELC-AL** **1420052** 1
B16 **HC-ADV-B16-HHWH-BLANK-ELC-AL** **1420054** 1
B24 **HC-ADV-B24-HHWH-BLANK-ELC-AL** **1420056** 1



Panel mounting flange



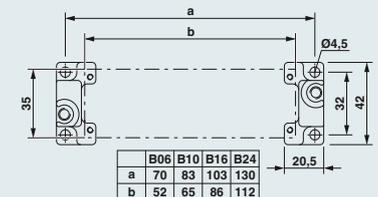
2 pcs. per housing
HC-B-AF
Set with 2 panel mounting flanges
HC-B-AF-SET

1686533

20

1604638

1



Notes:

In order to achieve optimum shielding results, the mounting surface must be conductive

Marking label: US-EMLP-HA (20X9), Order No. **0830989**

¹⁾ Screw locking with M6 Allen screws

Accessories



Allen key
see Catalog 3



Replacement seals
From page 662

new

Size B6, B10, B16, B24, metal, STANDARD sleeve housing, without bore hole

General data

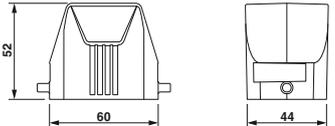
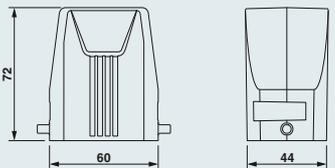
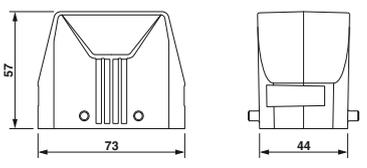
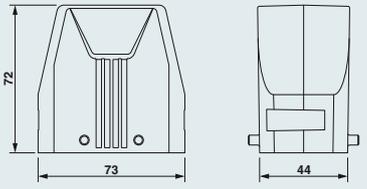
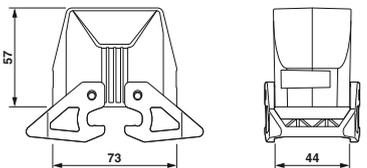
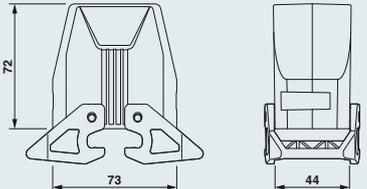
Housing material
Locking latch material
IP degree of protection (when plugged in)
NEMA degree of protection (when plugged in)
Ambient temperature (operation)

Technical data

Die-cast aluminum, salt water resistant
PA
IP66 / IP67
4 / 4X / 12
-40°C ... 125°C



Ordering data

Description	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing, for single locking latch 		Height: 57 mm			
	B6	HC-STA-B06-HLFS-BLANK-EL-AL	1419900	1	
	B10	HC-STA-B10-HLFS-BLANK-EL-AL	1419902	1	
	B16	HC-STA-B16-HLFS-BLANK-EL-AL	1419905	1	
	B24	HC-STA-B24-HLFS-BLANK-EL-AL	1419937	1	
Sleeve housing, for single locking latch 		Height: 72 mm			
	B6	HC-STA-B06-HHFS-BLANK-EL-AL	1419901	1	
	B10	HC-STA-B10-HHFS-BLANK-EL-AL	1419903	1	
	B16	HC-STA-B16-HHFS-BLANK-EL-AL	1419934	1	
	B24	HC-STA-B24-HHFS-BLANK-EL-AL	1419957	1	
Sleeve housing, for double locking latch 		Height: 57 mm			
	B10	HC-STA-B10-HLFD-BLANK-EL-AL	1419972	1	
	B16	HC-STA-B16-HLFD-BLANK-EL-AL	1419999	1	
	B24	HC-STA-B24-HLFD-BLANK-EL-AL	1420010	1	
Sleeve housing, for double locking latch 		Height: 72 mm			
	B10	HC-STA-B10-HHFD-BLANK-EL-AL	1419979	1	
	B16	HC-STA-B16-HHFD-BLANK-EL-AL	1420000	1	
	B24	HC-STA-B24-HHFD-BLANK-EL-AL	1420011	1	
Sleeve housing, with double locking latch 		Height: 57 mm			
	B10	HC-STA-B10-HLWD-BLANK-EL-AL	1420034	1	
	B16	HC-STA-B16-HLWD-BLANK-EL-AL	1420036	1	
	B24	HC-STA-B24-HLWD-BLANK-EL-AL	1420046	1	
Sleeve housing, with double locking latch 		Height: 72 mm			
	B10	HC-STA-B10-HHWD-BLANK-EL-AL	1420035	1	
	B16	HC-STA-B16-HHWD-BLANK-EL-AL	1420044	1	
	B24	HC-STA-B24-HHWD-BLANK-EL-AL	1420047	1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Protective cover
From page 654



Cover plates
From page 666



Replacement latch
From page 663

Heavy-duty connectors

HEAVYCON Compact – contact inserts

Compact series

200 V ... 690 V, 10 A ... 40 A

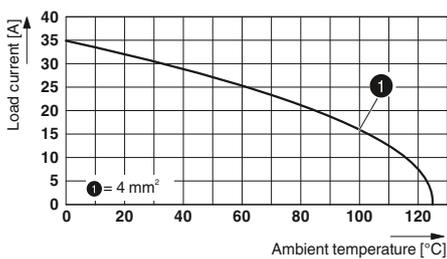
Connection technology:
– Crimp connection

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off

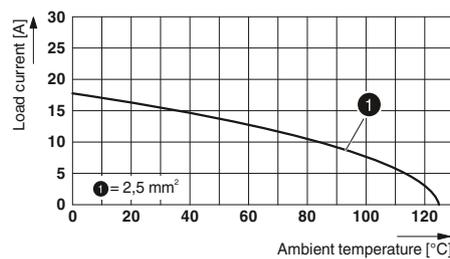


Type	Technical data			
	① HC-COM- 8-E...C	② HC-COM- 17-E...C	③ HC-COM- 4/2-E...C	
			Power contacts	Control contacts
Approvals	UL, CSA, cUL, ENEC	UL, CSA, cUL, ENEC	UL, CSA, cUL, ENEC	
IEC data				
Rated current, contacts (at 40°C)	[A] 16	10	40	10
Overvoltage category	III	III	III	
Degree of pollution	3	3	3	
Rated voltage (III/3) contacts	[V] 500	200	400 / 690	250
Rated surge voltage, contacts	[kV] 6	4	6	4
Connection cross section	[mm²] 0.5 ... 4	0.14 ... 2.5	1.5 ... 6	0.14 ... 2.5
UL data				
Rated voltage	[V] 600	600	600	-
Rated current	[A] -	19.5	40	-
Connection cross section	AWG 20-12	22-14	16-10	-
CSA / cUL data				
Rated voltage	[V] 600	600	600	-
Rated current	[A] 19	19	19	-
Connection cross section	AWG 20-12	20-12	20-12	-
Material data				
Contact carrier material	PC	PC	PC	
Inflammability class according to UL 94	V0	V0	V0	
Contact material	Copper alloy	Copper alloy	Copper alloy	
Contact surface material	Ag (alternatively Au)	Ag (alternatively Au)	Ag	Ag (alternatively Au)
Temperature data				
Ambient temperature range	[°C] -40 ... 100	-40 ... 100	-40 ... 100	
General data				
Connection technology	Crimp connection	Crimp connection	Crimp connection	Crimp connection
Stripping length	[mm] 7.5	8	9 9.6	8 6
No. of pos.	8	17	4	2
Contact numbering	1 - 8	1 - 17	1-4	1-2
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	

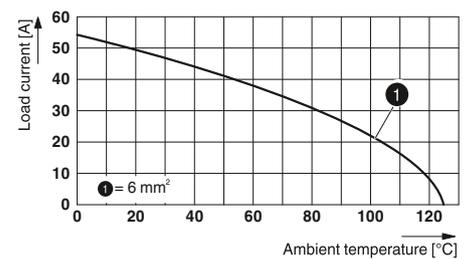
Derating curves



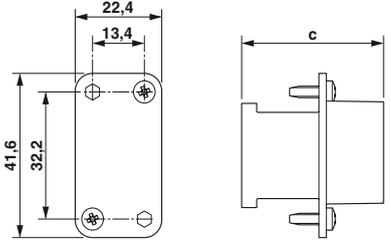
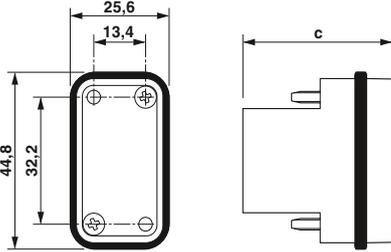
HC-COM- 8-E...C



HC-COM- 17-E...C



HC-COM- 4/2-E...C

Description	Pos.	Number	Size	Ordering data			Pcs. / Pkt.	Dimensions (in mm)																																			
				Type	Socket	Pin																																					
Crimp connection CK 2,5 	8	1 - 8	COM	① HC-COM- 8-E...C	1408494	1408481	2	 <p>Dimensional drawing: socket</p>  <p>Dimensional drawing: pin</p>																																			
Crimp connection CK 1,6 	17	1 - 17	COM	② HC-COM- 17-E...C	1408478	1408465	2																																				
Crimp connection CK 4,0/CK 1,6 	4 / 2	1-4	COM	③ HC-COM- 4/2-E...C	1408517	1408504	2																																				
Turned crimp contacts CK 1,6 Silver-plated 			Cross section mm ² / AWG 0.14 - 0.37 / 26 - 22 0.5 / 20 0.75 / 18 0.75 - 1 / 18 1.5 / 16 2.5 / 14	CK1,6-ED-0,37... AG CK1,6-ED-0,50... AG CK1,6-ED-0,75... AG CK1,6-ED-1,00... AG CK1,6-ED-1,50... AG CK1,6-ED-2,50... AG	1663394 1663404 1663417 1663420 1663433 1663446	1663336 1663349 1663352 1663365 1663378 1663381	100 100 100 100 100 100	<table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>① Socket</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>① Pin</td> <td></td> <td></td> <td>38.5</td> <td></td> </tr> <tr> <td>② Socket</td> <td></td> <td></td> <td>36.7</td> <td></td> </tr> <tr> <td>② Pin</td> <td></td> <td></td> <td>38.7</td> <td></td> </tr> <tr> <td>③ Socket</td> <td></td> <td></td> <td>48.05</td> <td></td> </tr> <tr> <td>③ Pin</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		a	b	c	d	① Socket					① Pin			38.5		② Socket			36.7		② Pin			38.7		③ Socket			48.05		③ Pin				
	a	b	c	d																																							
① Socket																																											
① Pin			38.5																																								
② Socket			36.7																																								
② Pin			38.7																																								
③ Socket			48.05																																								
③ Pin																																											
Turned crimp contacts CK 2,5 Silver-plated 			Cross section mm ² / AWG 0.5 / 20 0.75 / 18 0.75 - 1 / 18 1.5 / 16 2.5 / 14 4 / 12	CK2,5-ED-0,50... AG CK2,5-ED-0,75... AG CK2,5-ED-1,00... AG CK2,5-ED-1,50... AG CK2,5-ED-2,50... AG CK2,5-ED-4,00... AG	1663640 1663653 1663666 1663679 1663682 1663705	1663572 1663585 1663598 1663608 1663611 1663637	100 100 100 100 100 100																																				
Turned crimp contacts CK 4,0 Silver-plated 			Cross section mm ² / AWG 1.5 / 16 2.5 / 14 4 / 12 6 / 10	CK4,0-ED-1,50... AG CK4,0-ED-2,50... AG CK4,0-ED-4,00... AG CK4,0-ED-6,00... AG	1663271 1663284 1663297 1663307	1663239 1663242 1663255 1663268	25 25 25 25																																				

Accessories



Dummy sockets
From page 657



Crimping tools
From page 670



Crimp contacts, gold-plated
phoenixcontact.net/products

Heavy-duty connectors

HEAVYCON Compact – housing

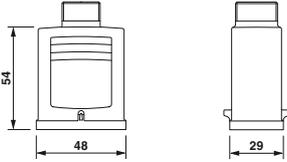
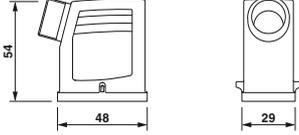
Compact series, plastic, sleeve housing



Technical data

General data	
Housing material	Polycarbonate
Lock material	-
Sealing material	-
IP degree of protection (when plugged in)	IP65 / IP66
Ambient temperature (operation)	-40°C ... 125°C

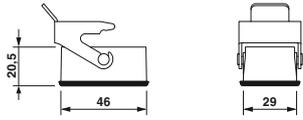
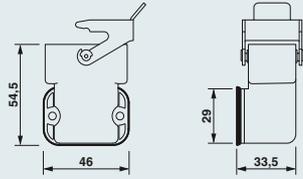
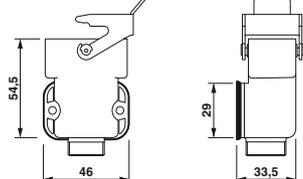
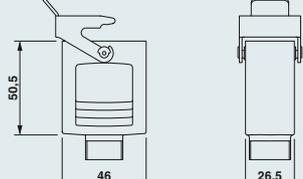
Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 54 mm 	1x Pg16	Cable outlet: top HC-COM-K-TFL-01PG16-G	1408342	2	
Sleeve housing Height: 54 mm 	1x Pg16	Cable outlet: lateral HC-COM-K-TFL-01PG16-S	1408339	2	
Pg16 cable gland 		VC-K-KV-PG16(9-13) VC-K-KV-PG16(11,5-15,5)	1853764 1854844	5 5	

Compact series, plastic, supporting base element



General data		Technical data
Housing material		Polycarbonate
Lock material		Stainless steel
Sealing material		NBR
IP degree of protection (when plugged in)		IP65 / IP66
Ambient temperature (operation)		-40°C ... 125°C

Description		Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base Height: 20.5 mm 			Straight version HC-COM-K-AML-GR	1408355	2	
Panel mounting base Height: 33.5 mm 			Angled version HC-COM-K-AML-GW	1408368	2	
Box mounting base Height: 33.5 mm 	1x Pg16		HC-COM-K-SML-O1PG16	1408371	2	
Coupling housing Height: 50.5 mm 	1x Pg16		HC-COM-K-KML-O1PG16	1408384	2	
Pg16 cable gland 			HC-COM-K-KV-PG16(9-12) SML HC-COM-K-KV-PG16(11,5-15) SML	1409286 1409299	2 2	
Protective cover, plastic 			Socket HC-COM-K-SD-FLU-BU/FS Pin HC-COM-K-SD-FLU-ST/FS	1408397 1408407	2 2	

Notes:

Box mounting base with open base

Heavy-duty connectors

HEAVYCON accessories

Protective cover for housing D7 series

– With lanyard

new



Protective cover without single locking latch

new



Protective cover with single locking latch

General data	
Material, protective cover	
Degree of protection	
Flammability rating according to UL 94	
Ambient temperature (operation)	[°C]

Technical data

Plastic, black		
Material	PA	
Degree of protection	IP54 / IP65	
Flammability rating according to UL 94	HB	
Ambient temperature (operation)	-20 ... 100	

Ordering data

Description	
Protective covers , for sleeve housings	
Socket	
Pin	
Protective cover , for supporting base element	
Socket	
Pin	
Protective cover , for coupling housing	
Socket	
Pin	

Type	Order No.	Pcs. / Pkt.
HC-STA-D07-BCSFS-PLR-BK	1419272	1
HC-STA-D07-BCSFS-PL-BK	1419273	1
HC-STA-D07-BCLFS-PLR-BK	1419270	1

Technical data

Plastic, black		
Material	PA	
Degree of protection	IP66	
Flammability rating according to UL 94	V0	
Ambient temperature (operation)	-20 ... 100	

Ordering data

Type	Order No.	Pcs. / Pkt.
HC-STA-D07-HCLWS-PLR-BK	1419274	1
HC-STA-D07-HCLWS-PL-BK	1419275	1
HC-STA-D07-BCLFS-PL-BK	1419271	1

Protective cover for panel mounting bases D series

– For panel mounting bases, box mounting bases, and coupling housings with locking latch
– With lanyard

new



Protective cover without single locking latch

new



Protective cover without double locking latch

General data	
Material	
Degree of protection	
Flammability rating according to UL 94	
Ambient temperature (operation)	[°C]

Technical data

Plastic, black		
Material	PA	
Degree of protection	IP54	
Flammability rating according to UL 94	HB	
Ambient temperature (operation)	-20 ... 100	

Ordering data

Description	
Protective cover , for housing sizes:	
D15	
D25	
D50	

Type	Order No.	Pcs. / Pkt.
HC-D15-BCSFS-PRBK	1414641	10
HC-D25-BCSFS-PRBK	1414642	10

Technical data

Plastic, black		
Material	NBR	
Degree of protection	IP54	
Flammability rating according to UL 94	-	
Ambient temperature (operation)	-20 ... 100	

Ordering data

Type	Order No.	Pcs. / Pkt.
HC-STA-D50-BCSFD-PL-BK	1424417	1

Replacement protective cover for EVO supporting base elements D series

- For HEAVYCON EVO supporting base element
- With joint



Hinged protective cover

Technical data		
Plastic, black		
General data		
Material	PA	
Degree of protection	IP65 / IP66	
Flammability rating according to UL 94	V0	
Ambient temperature (operation)	-40 ... 125 [°C]	
Ordering data		
Type	Order No.	Pcs. / Pkt.
Replacement protective cover, for housing sizes:		
D15	HC-D15-BC-HI-PLBK	1414673 1
D25	HC-D25-BC-HI-PLBK	1414674 1

Replacement protective cover for EVO supporting base elements B series

- For HEAVYCON EVO supporting base element
- With joint



Hinged protective cover

Technical data		
Plastic, black		
General data		
Material	PA	
Degree of protection	IP65 / IP66	
Flammability rating according to UL 94	V0	
Ambient temperature (operation)	-40 ... 100 [°C]	
Ordering data		
Type	Order No.	Pcs. / Pkt.
Replacement protective cover, for housing sizes:		
B6	HC-B06-BC-HI-PLBK	1407692 1
B10	HC-B10-BC-HI-PLBK	1407693 1
B16	HC-B16-BC-HI-PLBK	1407694 1
B24	HC-B24-BC-HI-PLBK	1407695 1

Heavy-duty connectors

HEAVYCON accessories

Protective cover for sleeve housing B series

- For sleeve housing without locking latch
- With lanyard
- With seal



Protective cover with single locking latch

Technical data

	Technical data		
	Plastic, gray	Plastic, black	Metal
General data			
Material, protective cover	PA	PA	Al
Degree of protection	IP54	IP54 / IP66	IP65
Flammability rating according to UL 94	HB	HB	-
Ambient temperature (operation) [°C]	-20 ... 100	-20 ... 100	-40 ... 125

Ordering data

Description	Ordering data					
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Protective cover, for housing sizes:						
B6	1678282	10	1414634	10	1644546	10
B10	1678295	10	1414635	10	1584512	10
B16	1678318	10	1414636	10	1584525	10
B24	1678334	10	1414637	10	1584538	10



Protective cover with double locking latch

Technical data

	Technical data		
	Plastic, gray	Plastic, black	Metal
General data			
Material, protective cover	PA	PA	Al
Degree of protection	IP54	IP54 / IP66	IP65
Flammability rating according to UL 94	HB	HB	-
Ambient temperature (operation) [°C]	-20 ... 100	-20 ... 100	-40 ... 125

Ordering data

Description	Ordering data					
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Protective cover, for housing sizes:						
B6	1678305	10	1414638	10	1584541	10
B10	1678321	10	1414639	10	1584554	10
B16	1678347	10	1414640	10	1584567	10

Protective cover for sleeve housing B series

- For sleeve housing with locking latch
- With lanyard
- With seal



Protective cover without double locking latch

Technical data

	Technical data		
	Plastic, gray	Plastic, black	Metal
General data			
Material, protective cover	PA	PA	Al
Degree of protection	IP54	IP54 / IP66	IP65
Flammability rating according to UL 94	HB	HB	-
Ambient temperature (operation) [°C]	-20 ... 100	-20 ... 100	-40 ... 125

Ordering data

Description	Ordering data					
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Protective cover, for housing sizes:						
B10	1687260	10	1414631	10	1647750	10
B16	1687273	10	1414632	10	1647763	10
B24	1687286	10	1414633	10	1647776	10

Protective cover for panel mounting bases B series

- For panel mounting bases, box mounting bases, and coupling housings with locking latch
- With lanyard
- Without seal



Protective cover without single locking latch



Protective cover without double locking latch

General data	
Material, protective cover	
Degree of protection	
Flammability rating according to UL 94	
Ambient temperature (operation)	[°C]

Technical data		
Plastic, gray	Plastic, black	Metal
PA	PA	Al
IP54	IP66	IP65
HB	HB	-
-20 ... 100	-20 ... 100	-40 ... 125

Technical data		
Plastic, gray	Plastic, black	Metal
PA	PA	Al
IP54	IP66	IP65
HB	HB	-
-20 ... 100	-20 ... 100	-40 ... 125

Description

Ordering data					
Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.

Ordering data					
Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.

Protective cover, for housing sizes:

B6	1660180	10	1414623	10	1644559	10						
B10	1660177	10	1414625	10	1644562	10	1772586	10	1414628	10	1644575	10
B16	1660151	10	1414626	10	1644588	10	1772599	10	1414629	10	1644591	10
B24	1660148	10	1414627	10	1644601	10	1772609	10	1414630	10	1644614	10
B32							1646120	10				

Protective cover for housing B series

new

- Color: transparent/white
- Without seal



Protective cover with clip locking

General data	
Material, protective cover	
Degree of protection	
Ambient temperature (operation)	[°C]

Technical data
PA
IP20
0 ... 20

Description

Ordering data		
Type	Order No.	Pcs./Pkt.
HC-STA-B06-DC-PL	1421100	5
HC-STA-B10-DC-PL	1421101	5
HC-STA-B16-DC-PL	1421102	5
HC-STA-B24-DC-PL	1421103	5

Protective cover, for housing sizes:

B6				
B10				
B16				
B24				

Heavy-duty connectors

HEAVYCON accessories

Coding profiles

– Can be coded in seconds, thanks to the coding profiles



HC/HC-S coding profile



HS2/MOD-K coding profile

		Technical data			Technical data		
General data							
Material		PA			PA		
		Ordering data			Ordering data		
Description		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Coding profiles , for contact inserts in series: HC-B... and terminal adapter HC-B...A-UT..., HC-B...A-DT... HC-A10..., HC-A16..., HC-BB...		CP-HC	1686478	10			
Coding profiles , for contact inserts in series: HC-HS2-D7-E...S HC-A3..., HC-A4..., HC-MOD-K...		CP-HC-S	1410916	10	HC-HS 2-CP	1586280	50
					HC-MOD-K-CP	1408562	1

Coding bolts

– Prevent up to 6 plug-in connections from being mismatched

Notes:
For assembly instructions, see phoenixcontact.net/products



Coded bolts

		Technical data		
General data				
Material		Steel		
		Ordering data		
Description		Type	Order No.	Pcs. / Pkt.
Coding bolt , for contact inserts in series: HC-B...		HC-CB	1772722	10

Guide pins, sockets

- Prevent up to 16 plug-in connections from being mismatched
- Mandatory for HC-D..., HC-DD... as well as HC-M-25-CT..., HC-M-04-KT..., and HC-M-DSUB09...

Notes:
For assembly instructions, see phoenixcontact.net/products



Guide pin/guide socket

General data		Technical data		
Material		Steel, galvanized		
Description		Ordering data		
<p>Guide sockets and pins, for coding to protect against mismatching and as a guide to prevent accidentally jamming the connector in at an angle, cannot be used with HC-Modular or HC-D7...</p> <p>Guide pin</p> <p>Guide socket</p>		Type	Order No.	Pcs. / Pkt.
		HC-CST	1676857	10
		HC-CBU	1676860	10

Dummy sockets

Prevent connectors of the same type from being mismatched. A dummy socket seals off a socket contact. It is then no longer possible to insert a pin contact in the same position as the dummy socket.

Notes:
For assembly instructions, see phoenixcontact.net/products



Dummy socket



Dummy socket

General data		Technical data			Technical data		
Material		PA			Copper alloy		
Description		Ordering data			Ordering data		
<p>Dummy sockets, for contact inserts with turned socket contacts of type:</p> <p>CK-2,5-ED...</p> <p>CK-1,6-ED...</p>		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
		CK2,5-ED-BB	1584693	100	CK1,6-ED-BB	1645888	50

Heavy-duty connectors

HEAVYCON accessories

Plastic cable glands and plastic thread adapters for D series EVO housing

Notes:
EVO unlocking for EVO plastic housing; see page 661



Plastic cable gland



Plastic thread adapter

		Technical data			Technical data		
General data							
Material		PA			PA		
Ambient temperature (operation) [°C]		-40 ... 100			-40 ... 125		
		Ordering data			Ordering data		
Description	Thread type	Type	Order No.	Pcs./Pkt.	Type	Order No.	Pcs./Pkt.
Cable gland , for HEAVYCON EVO D series plastic housing, for cable diameter:							
7 mm ... 13 mm	M20	HC-D-G-M20-PLRBK	1411350	1			
9 mm ... 17 mm	M25	HC-D-G-M25-PLRBK	1411351	1			
Thread adapter , for HEAVYCON EVO D series plastic housing							
	M25				HC-D-TA-M25-PLRBK	1411352	1
	Pg16				HC-D-TA-PG16-PLR-BK	1411353	1
	3/4 inch NPT				HC-D-TA-NPT-3/4-PLR-BK	1411354	1

Plastic cable glands for EVO B series housing

Notes:
EVO unlocking for EVO plastic housing; see page 661



Plastic cable gland



Plastic cable gland for multiple cables

		Technical data			Technical data		
General data							
Material		PA			PA		
Ambient temperature (operation) [°C]		-40 ... 100			-30 ... 100		
		Ordering data			Ordering data		
Description	Thread type	Type	Order No.	Pcs./Pkt.	Type	Order No.	Pcs./Pkt.
Cable gland , for HEAVYCON EVO B series plastic housing, for cable diameter:							
7 mm ... 13 mm	M20	HC-B-G-M20-PLRBK	1407669	1			
9 mm ... 17 mm	M25	HC-B-G-M25-PLRBK	1407670	1			
11 mm ... 21 mm	M32	HC-B-G-M32-PLRBK	1407671	1			
19 mm ... 28 mm	M40	HC-B-G-M40-PLRBK	1407672	1			
Cable gland , for B series HEAVYCON EVO plastic housing, with seal insert for cable diameter:							
without bore hole	M40				HC-B-GM0-M40-PLTBK	1414643	1
4x 10 mm	M40				HC-B-GM4X10-M40-PLTBK	1414644	1
5x 8.5 mm	M40				HC-B-GM5X8,5-M40-PLTBK	1414645	1
8x 6.5 mm	M40				HC-B-GM8X6,5-M40-PLTBK	1414646	1

Plastic cable glands with bend protection and strain relief for B series EVO housing

Notes:

EVO unlocking for EVO plastic housing; see page 661



Plastic cable gland with bend protection



Plastic cable gland with strain relief

General data	
Material	PA
Ambient temperature (operation)	-40 ... 100 [°C]

Technical data		
Material		
PA		
Ambient temperature (operation)		
-40 ... 100		

Technical data		
Material		
PA		
Ambient temperature (operation)		
-40 ... 100		

Description	Thread type
Cable gland , for HEAVYCON EVO B series plastic housing, for cable diameter:	
6 mm ... 13 mm	M20
9 mm ... 17 mm	M25
13 mm ... 21 mm	M32

Ordering data		
Type	Order No.	Pcs. / Pkt.
HC-B-GB-M20-PLRBK	1414660	1
HC-B-GB-M25-PLRBK	1414661	1
HC-B-GB-M32-PLRBK	1414662	1

Ordering data		
Type	Order No.	Pcs. / Pkt.
HC-B-GTRS-M20-PLRBK	1414651	1
HC-B-GTRS-M25-PLRBK	1414652	1
HC-B-GTRS-M32-PLRBK	1414654	1

Plastic thread adapter for B series EVO housing

Notes:

EVO unlocking for EVO plastic housing; see page 661



Plastic thread adapter

General data	
Material	PA
Ambient temperature (operation)	-40 ... 100 [°C]

Technical data		
Material		
PA		
Ambient temperature (operation)		
-40 ... 100		

Description	Thread type
Thread adapter , for B series HEAVYCON EVO plastic housing	
	M20
	M25
	M32
	M40
	Pg13,5
	Pg16
	Pg21
	Pg29
	1/2-inch NPT
	3/4 inch NPT
	1/1 inch NPT
	1 1/4 in. NPT

Ordering data		
Type	Order No.	Pcs. / Pkt.
HC-B-TA-M20-PLR-BK	1414243	1
HC-B-TA-M25-PLR-BK	1414244	1
HC-B-TA-M32-PLR-BK	1414245	1
HC-B-TA-M40-PLR-BK	1414246	1
HC-B-TA-PG13-PLR-BK	1414247	1
HC-B-TA-PG16-PLR-BK	1414248	1
HC-B-TA-PG21-PLR-BK	1414249	1
HC-B-TA-PG29-PLR-BK	1414250	1
HC-B-TA-NPT-1/2-PLR-BK	1414251	1
HC-B-TA-NPT-3/4-PLR-BK	1414252	1
HC-B-TA-NPT-1/1-PLR-BK	1414253	1
HC-B-TA-NPT-1 1/4-PLR-BK	1414254	1

Heavy-duty connectors

HEAVYCON accessories

Metal cable glands for EVO B series housing



Metal cable gland for EMC applications



Metal cable gland for multiple cables

		Technical data			Technical data		
General data							
Material		Die-cast aluminum, corrosion-resistant			Die-cast aluminum, corrosion-resistant		
Ambient temperature (operation) [°C]		-40 ... 125			-30 ... 100		
		Ordering data			Ordering data		
Description	Thread type	Type	Order No.	Pcs./Pkt.	Type	Order No.	Pcs./Pkt.
Cable gland, for HEAVYCON EVO B series metal housing, for EMC applications, for cable diameter:							
9 mm ... 13 mm	M20	HC-B-G-M20-EC-AL	1411439	1			
11 mm ... 16 mm	M25	HC-B-G-M25-EC-AL	1411446	1			
14 mm ... 21 mm	M32	HC-B-G-M32-EC-AL	1411440	1			
19 mm ... 27 mm	M40	HC-B-G-M40-EC-AL	1411441	1			
Cable gland, for HEAVYCON EVO metal housing, for higher strain relief, with NBR seal, for cable diameter:							
without bore hole	M40				HC-B-GM0-M40-ET-AL	1414647	1
4x 10 mm	M40				HC-B-GM4X10-M40-ET-AL	1414648	1
5x 8.5 mm	M40				HC-B-GM5X8,5-M40-ET-AL	1414649	1
8x 6.5 mm	M40				HC-B-GM8X6,5-M40-ET-AL	1414650	1

Metal cable glands with bend protection and strain relief for B series EVO housing



Metal cable gland with bend protection



Metal cable gland with strain relief

		Technical data			Technical data		
General data							
Material		-			-		
Ambient temperature (operation) [°C]		-40 ... 100			-40 ... 100		
		Ordering data			Ordering data		
Description	Thread type	Type	Order No.	Pcs./Pkt.	Type	Order No.	Pcs./Pkt.
Cable gland, for B series HEAVYCON EVO metal housing, for cable diameter:							
6 mm ... 13 mm	M20	HC-B-GB-M20-ER-AL	1414663	1	HC-B-GTRS-M20-ER-AL	1414656	1
9 mm ... 17 mm	M25	HC-B-GB-M25-ER-AL	1414664	1	HC-B-GTRS-M25-ER-AL	1414657	1
13 mm ... 21 mm	M32	HC-B-GB-M32-ER-AL	1414665	1	HC-B-GTRS-M32-ER-AL	1414658	1
16 mm ... 28 mm	M40	HC-B-GB-M40-ER-AL	1414666	1	HC-B-GTRS-M40-ER-AL	1414659	1

**Metal thread adapter
for B series EVO housings**



Metal thread adapter

General data		Technical data		
Material		Die-cast aluminum, corrosion-resistant		
Ambient temperature (operation)	[°C]	-40 ... 125		
Description		Ordering data		
Description	Thread type	Type	Order No.	Pcs. / Pkt.
Thread adapter, for B series HEAVYCON EVO metal housings				
	M20	HC-B-TA-M20-ER-AL	1414256	1
	M25	HC-B-TA-M25-ER-AL	1414257	1
	M32	HC-B-TA-M32-ER-AL	1414258	1
	M40	HC-B-TA-M40-ER-AL	1414259	1
	Pg13,5	HC-B-TA-PG13-ER-AL	1414260	1
	Pg16	HC-B-TA-PG16-ER-AL	1414261	1
	Pg21	HC-B-TA-PG21-ER-AL	1414262	1
	Pg29	HC-B-TA-PG29-ER-AL	1414263	1
	1/2-inch NPT	HC-B-TA-NPT-1/2-ER-AL	1414264	1
	3/4 inch NPT	HC-B-TA-NPT-3/4-ER-AL	1414265	1
	1/1 inch NPT	HC-B-TA-NPT-1/1-ER-AL	1414266	1
	1 1/4 in. NPT	HC-B-TA-NPT-1 1/4-ER-AL	1414267	1

**EVO unlocking
for EVO plastic housing**



EVO unlocking

General data		Technical data		
Material		-		
Description		Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	
Water pump pliers , with groove joint, gripping surfaces with dual notching, acc. to VDE ISO 8976, size: 240 mm	UNIFOX-WP	1212365	1	

Heavy-duty connectors

HEAVYCON accessories

Seals for B series EVO and STANDARD housing



Notes:
Adhere seals to the housing using Loctite® 454.



Replacement flat gasket for panel mounting base



Replacement profile gasket for supporting base element

General data	
Material	NBR, conductive
Ambient temperature (operation)	-40 ... 125 [°C]

Technical data		
NBR, conductive		
-40 ... 125		

Technical data		
NBR, conductive		
-40 ... 125		

Description	
Replacement flat gasket , for HEAVYCON housing in sizes:	
B6	
B10	
B16	
B24	
Replacement profile gasket , for HEAVYCON housing in sizes:	
B6	
B10	
B16	
B24	

Ordering data		
Type	Order No.	Pcs. / Pkt.
HC-B06-SG-CBK	1411483	10
HC-B10-SG-CBK	1411484	10
HC-B16-SG-CBK	1411485	10
HC-B24-SG-CBK	1411486	10

Ordering data		
Type	Order No.	Pcs. / Pkt.
HC-B06-SP-CBK	1411477	10
HC-B10-SP-CBK	1411479	10
HC-B16-SP-CBK	1411480	10
HC-B24-SP-CBK	1411482	10

Seals for B series ADVANCE housing and D7 series housing

new



Notes:
Adhere seals to the housing using Loctite® 454.



Replacement profile gasket for ADVANCE sleeve housing



Replacement flat gasket for D7 series housing

General data	
Material	NBR
Ambient temperature (operation)	-40 ... 125 [°C]

Technical data		
NBR		
-40 ... 125		

Technical data		
NBR		
-40 ... 125		

Description	
Replacement profile gasket , conductive, for uneven mounting surfaces, for HEAVYCON ADVANCE sleeve housing in sizes:	
B6	
B10	
B16	
B24	
Replacement flat gasket , for HEAVYCON housing in sizes:	
D7	

Ordering data		
Type	Order No.	Pcs. / Pkt.
HC-B 6-TMS-EEE-PR-DI	1409794	10
HC-B 10-TMS-EEE-PR-DI	1409804	10
HC-B 16-TMS-EEE-PR-DI	1409817	10
HC-B 24-TMS-EEE-PR-DI	1409820	10

Ordering data		
Type	Order No.	Pcs. / Pkt.
HC-D07-SG-RBK	1424441	10

Latch for D7 and D series
EVO and STANDARD housing

new



Replacement latch
for D7 series STANDARD housing



Replacement latch
for EVO D series plastic housing

				Technical data			Technical data		
General data									
Material				PA			PA		
Ambient temperature (operation) [°C]				-40 ... 125			-40 ... 125		
				Ordering data			Ordering data		
Description				Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Replacement single locking latch, plastic, for HEAVYCON housing in sizes:									
D7				HC-D07-SL-PLBK	1424440	10			
Replacement single locking latch, plastic, for HEAVYCON housing in sizes:									
D15							HC-D15-SL-PLBK	1414667	10
D25							HC-D25-SL-PLBK	1414668	10

Latch for B series
EVO and STANDARD housing



Replacement latch
for EVO B series plastic housing



Replacement latch for EVO and
STANDARD B series metal housing

				Technical data			Technical data		
General data									
Material				PA			PA		
Ambient temperature (operation) [°C]				-40 ... 100			-40 ... 125		
				Ordering data			Ordering data		
Description				Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Replacement single locking latch, plastic, for HEAVYCON housing in sizes:									
B6				HC-B06-SL-PLBK	1407697	10	HC-STA-B06-SL-PLBK	1412591	1
B10				HC-B10-SL-PLBK	1407698	10	HC-STA-B10-SL-PLBK	1412804	1
B16				HC-B16-SL-PLBK	1407700	10	HC-STA-B16-SL-PLBK	1412284	1
B24				HC-B24-SL-PLBK	1407701	10	HC-STA-B24-SL-PLBK	1412885	1
Replacement double locking latch, plastic, for HEAVYCON housing in sizes:									
B10 ... B24				HC-B10-24-DL-PLBK	1407696	10	HC-STA-B10-24-DL-PLBK	1412886	1

Heavy-duty connectors

HEAVYCON accessories

PE screws, PE multiplier

If several PE conductors are routed via one contact insert, additional PE connections are required. This is done using additional PE screws or the PE multiplier.



PE screw



PE multiplier

		Technical data			Technical data		
General data							
Material		Steel, galvanized			Brass, nickel-plated		
Connection cross section [mm ²]		-			0.5 ... 2.5		
Connection cross section AWG		-			20 ... 14		
		Ordering data			Ordering data		
Description		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
PE screw , for contact inserts in series:							
HC-B..., HC-BB..., HC-DD..., HC-D40..., HC-D64...		HC-B-PES	1604997	10			
HC-HS 6...		HC-HS-PES	1586219	100			
PE screw , for contact inserts in series:							
HC-A..., HC-D15..., HC-D25...		HC-A-PES	1584868	10			
PE multiplier , with 3 PE connections, for contact inserts in series:							
HC-B..., HC-BB..., HC-DD..., HC-D40..., HC-D64...					HC-B-3PE	1644326	1

Strain relief clamps

Cable harnesses with crimp contacts must not put a strain on the engaged contacts with their weight.

The use of strain relief clamps eliminates this type of strain.



Lateral cable outlet



Straight cable outlet

		Technical data			Technical data		
General data							
Material		Steel, galvanized			Steel, galvanized		
		Ordering data			Ordering data		
Description		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Strain relief clamps , clamping area of 9 - 19 mm, for contact inserts in series:							
HC-B..., HC-BB..., HC-D40..., HC-D64..., HC-DD..., HC-HV...		HC-B-ZS	1685330	10	HC-B-ZG	1685327	10

Replacement bolt and sealing screw



Replacement bolt



Sealing screw

		Technical data			Technical data		
General data							
Material		Steel, galvanized			Steel, galvanized		
		Ordering data			Ordering data		
Description		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Replacement bolt , steel, for HEAVYCON HC-B...TFL... sleeve housing (not EMC housing) in size: B48 M3 sealing screw , IP67, for HEAVYCON housing in size: D7		HC-B 48-LB ERSBOLZ	1636114	10	HC-D 7-DS-IP65	1686229	100

Docking frame

Docking frames ensure that socket and pin inserts are located in insert systems and contact is made reliably.

Notes:
Due to the floating frame, the mounting panel must be grounded.



Docking frames

		Technical data		
General data				
Material		Stainless steel		
Insertion/withdrawal cycles		≥ 500		
Ambient temperature (operation)		-40 ... 125 [°C]		
		Ordering data		
Description		Type	Order No.	Pcs. / Pkt.
Docking frame , with 4 flat headed screws with shoulder, for contact inserts in series: B6, DD24, BB10, K, M B10, DD42, BB18, K, M B16, D40, DD72, BB32, K, M B24, D64, DD108, BB46, K, M		HC-B 6-ANDOCK HC-B 10-ANDOCK HC-B 16-ANDOCK HC-B 24-ANDOCK	1586112 1586125 1586138 1586141	1 1 1 1

Heavy-duty connectors

HEAVYCON accessories

Cover plates

For sealing unused openings in control cabinet manufacturing.



Cover plate, height:
3.5 mm



Cover plate, height:
7 mm

		Technical data			Technical data		
General data							
Material		PA		PA			
Color		gray		gray			
Degree of protection		-		-			
Flammability rating according to UL 94		HB		HB			
Ambient temperature (operation)	[°C]	-20 ... 100		-20 ... 100			
		Ordering data			Ordering data		
Description		Type	Order No.	Pcs./Pkt.	Type	Order No.	Pcs./Pkt.
Cover plate , for a panel cutout in size:							
B6 (cutout: 35 mm x 52 mm)		HC-B 6-AP-GY	1660368	10			
B10 (cutout: 35 mm x 65 mm)		HC-B 10-AP-GY	1660371	10			
B16 (cutout: 35 mm x 86 mm)		HC-B 16-AP-GY	1660384	10	HC-B 16-APV-GY	1661121	10
B24 (cutout: 35 mm x 113 mm)		HC-B 24-AP-GY	1660397	10	HC-B 24-APV-GY	1661037	10
D15 (cutout: 24 mm x 58 mm)		HC-D 15-AP-GY	1660342	10			
D25 (cutout: 24 mm x 74 mm)		HC-D 25-AP-GY	1660355	10			

Adapter plates

For changing panel cutouts to a different size.



Adapter plate



Adapter plate

		Technical data			Technical data		
General data							
Material		PA		PA			
Color		gray		gray			
Degree of protection		-		-			
Flammability rating according to UL 94		HB		HB			
Ambient temperature (operation)	[°C]	-20 ... 100		-20 ... 100			
		Ordering data			Ordering data		
Description		Type	Order No.	Pcs./Pkt.	Type	Order No.	Pcs./Pkt.
Adapter plate , for reduction from a B24 panel cutout to:							
3 x D7 (cutout: 21.5 mm x 21.5 mm)		HC-B 24-ADP-3D 7-GY	1661448	10			
Adapter plate , for reduction from a B24 panel cutout to:							
3 x circular connector cutouts (Ø 21 mm)					HC-B 24-ADP-3RST-GY	1662175	10

**D-SUB adapter plates,
D series**

For installing D-SUB connectors in HEAVYCON D series housing.

Notes:
Order D-SUB connectors separately
D-SUB assembly in the adapter plate: front mounting
For D-SUB insert matrix see page 446



**Adapter plate
for a D-SUB connector**

Technical data

General data	
Material	PA
Color	gray
Ambient temperature (operation)	-20 ... 100 [°C]

Ordering data

Description
D-SUB adapter plate , for equipping HC-D15... housings with one D-SUB connector, D-SUB type: D-SUB 09 D-SUB 15 D-SUB 25

Type	Order No.	Pcs. / Pkt.
HC-D 15-ADP/1 DSUB 9	1661312	2
HC-D 15-ADP/1 DSUB 15	1775253	2
HC-D 15-ADP/1 DSUB 25	1775266	2

**D-SUB adapter plates,
B series**

For installing D-SUB connectors in HEAVYCON B series housing.

Notes:
Order D-SUB connectors separately
D-SUB assembly in the adapter plate: front mounting
For D-SUB insert matrix see page 446



**Adapter plate
for a D-SUB connector**

Technical data

General data	
Material	PA
Color	gray
Flammability rating according to UL 94	HB
Ambient temperature (operation)	-20 ... 100 [°C]

Ordering data

Description
D-SUB adapter plate , for mounting HEAVYCON housings with D-SUB connector, for housing size / D-SUB type: B6 / D-SUB 09 B6 / D-SUB 15 B10 / D-SUB 25 B16 / D-SUB 37 B16 / D-SUB 50

Type	Order No.	Pcs. / Pkt.
HC-B 6-ADP/1 DSUB 9	1775457	2
HC-B 6-ADP/1 DSUB 15	1775473	2
HC-B 10-ADP/1 DSUB 25	1775499	2
HC-B 16-ADP/1 DSUB 37	1775512	2
HC-B 16-ADP/1 DSUB 50	1775538	2



**Adapter plate
for two D-SUB connectors**

Technical data

General data	
Material	PA
Color	gray
Flammability rating according to UL 94	HB
Ambient temperature (operation)	-20 ... 100 [°C]

Ordering data

Type	Order No.	Pcs. / Pkt.
HC-B 6-ADP/2 DSUB 9	1775460	2
HC-B 6-ADP/2 DSUB 15	1775486	2
HC-B 10-ADP/2 DSUB 25	1775509	2
HC-B 16-ADP/2 DSUB 37	1775525	2
HC-B 16-ADP/2 DSUB 50	1775541	2

Heavy-duty connectors

HEAVYCON accessories

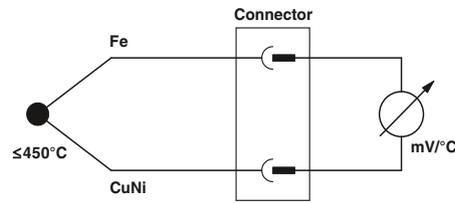
Type J iron and constantan crimp contacts

In hot runner injection molding machines, temperatures are often measured using iron or constantan thermocouples. Iron or constantan elements are used for temperatures up to around 450°C.

Temperature measurements using iron or constantan elements on the brass crimp contact of a connector cause thermoelectric voltages that falsify the measuring result. The use of iron or constantan crimp contacts is therefore recommended.

Crimp contacts made from iron or constantan can be used in series A/B/BB/HV contact inserts and the HC-M-HV..., HC-M-06..., HC-M-08..., HC-M-20... modules.

It is possible to use mixed contact configurations (standard, thermal contacts) for the crimp contact inserts.



Turned crimp contacts, for CK 2,5 crimp contacts: HC-A..., HC-B..., HC-BB..., HC-HV..., HC-M...

Notes:
For crimping pliers, assembly and removal tools, see page 670

Material data	
Contact material	Iron
Contact surface material	Hard gold-plated
Stripping length of the individual wire	7.5 mm (9.5 mm at HC-M-HV...)
Insertion/withdrawal cycles	≥ 500
Temperature data	
Ambient temperature (operation)	-40°C ... 125°C

Technical data		
Iron	Copper-nickel (constantan)	
Hard gold-plated	-	
7.5 mm (9.5 mm at HC-M-HV...)	7.5 mm (9.5 mm at HC-M-HV...)	
≥ 500	≥ 500	
-40°C ... 125°C		-40°C ... 125°C

Description	
Turned socket contacts, 0.5 mm²	
Iron (Fe), Au surface	
Constantan (CuNi), uncoated	
Turned male contacts, 0.5 mm²	
Iron (Fe), Au surface	
Constantan (CuNi), uncoated	

Ordering data		
Type	Order No.	Pcs./ Pkt.
CK2,5-ED-0,5BU FE	1585773	25
CK2,5-ED-0,5BU CUNI	1585757	25
CK2,5-ED-0,5ST FE	1585760	25
CK2,5-ED-0,5ST CUNI	1585744	25

FO crimp contacts

Fiber optic crimp contacts (980/1000 μm) are suitable for coupling fiber optics (polymer optical fibers). You can use the following crimp contact carriers:

- VC-D (for turned contacts)
- HC M 12..., HC-M-17..., HC-M-03/04...
- HC-D... (for turned contacts) and
- HC-DD...

The optic fibers are polished, stripped, and then crimped.



Crimp contacts for fiber optic cables, polymer optical fibers (POF)

Material data	
Contact material	Nickel silver
Insertion/withdrawal cycles	≥ 500

Technical data		
Nickel silver		
≥ 500		

Description	
Fiber optic contact POF, turned, for VC-D contact carriers	
Socket	
Pin	
Tools, for fiber optics:	
Crimping pliers	
Polisher	
Stripping pliers	
Polishing strip	
Polishing paper	

Ordering data		
Type	Order No.	Pcs./ Pkt.
CK1,6-ED-BU-POF	1885004	50
CK1,6-ED-ST-POF	1884995	50
CRIMPFOX-1,6-ED-POF-N	1584839	1
POLISHER-POF	1686122	1
PSM-FO-STRIP	2744199	1
POLFOL 1 MIC-POF	1636800	10
POLPAP 1500-POF	1636813	10

Shield connection



The HEAVYCON D bus contact is used to connect shielded, 2-wire bus lines.

The connection takes up 4 adjacent positions in the contact carrier. The overall shielding braid is also suitable as a T-coupler (two positions for the cable shield).



For crimp contact carriers of series HC-D40 / -D64 / HC-M-12

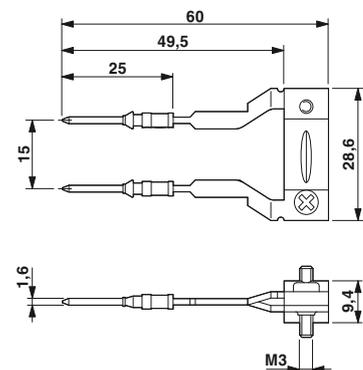
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Technical data	
Electrical data	
Rated voltage	60 V
Rated current	10 A
Transmission speed	-
Material specifications for distributor	
Contact material	Copper alloy
Contact surface material	Hard silver-plated
Mechanical data	
External cable diameter	6 mm ... 9 mm
Temperature data	
Ambient temperature (operation)	-40°C ... 60°C

Technical data		
Rated voltage	60 V	
Rated current	10 A	
Transmission speed	-	
Material specifications for distributor		
Contact material	Copper alloy	
Contact surface material	Hard silver-plated	
Mechanical data		
External cable diameter	6 mm ... 9 mm	
Temperature data		
Ambient temperature (operation)	-40°C ... 60°C	

Ordering data	
Description	
Shield connection , for two shielded cables, incl. two loose socket crimp contacts for PROFIBUS cables.	
Shield connection , for one shielded cable on pin contact carriers, incl. two loose crimp contacts for PROFIBUS cable	
Shield connection , for shielded cables on socket contact carriers, without loose crimp contacts	
For one bus line	
For two bus lines	
Shield connection , for shielded cables on pin contact carriers, without loose crimp contacts	
For one bus line	
For two bus lines	
Crimping pliers	
- For turned contacts; 0.14 ... 4 mm ²	
Removal tool	
- For contacts CK1,6-ED.../CK1,6-ER.../CK1,6...POF	
Assembly tool	
- For contacts CK1,6-ED.../CK2,5-ED.../CK1,6-ER...	

Ordering data		
Type	Order No.	Pcs. / Pkt.
HC-D 4-BU-2BUS	1886139	1
HC-D 4-ST-1BUS	1886142	1
HC-D 4-1BU	1886143	1
HC-D 4-2BU	1886140	1
HC-D 4-1ST	1886144	1
HC-D 4-2ST	1886141	1
CRIMPFOX-1,6/2,5-ED-4,0	1687419	1
VC-EW 1,6	1884869	1
CK1,6/2,5-MWZ	1676734	1



HC-D 4-...BUS

Heavy-duty connectors

HEAVYCON accessories

CRIMPFOX crimping pliers for turned contacts

- The integrated positioning tool ensures that the contacts are perfectly aligned in the die
- Marked die stations for precise processing of the relevant cross sections

Notes:
Spare dies and spare retaining springs can be found in the product area on our website at phoenixcontact.net/products.



Conductor cross section of 0.14 - 4 mm²

Conductor cross section of 6 - 10 mm²

Application range	
Conductor	[mm ²] / AWG
Compression	

Description	
Crimping pliers , for turned pin and socket contacts, CK1,6-ED..., CK2,5-ED..., CK4,0-ED... 0.14 - 4.0 mm ² - For CK4,0-ED...6 - 10 mm ² turned contacts	

Removal tool	
- For contacts CK1,6-ED.../CK1,6-ER.../CK1,6...POF - For contacts CK2,5-ED... - For contacts CK4,0-ED...	

Technical data

0.14 ... 4 / 26 ... 12
Square crimp

Ordering data

Type	Order No.	Pcs. / Pkt.
CRIMPFOX-TC 4	1212113	1

Accessories

VC-EW 1,6	1884869	1
CK2,5-EWZ	1662722	1
CK4,0-EWZ	1662735	1

Technical data

6 ... 10 / 10 ... 8
Square crimp

Ordering data

Type	Order No.	Pcs. / Pkt.
CRIMPFOX-TC 10	1212114	1

Accessories

CK4,0-EWZ	1662735	1
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CRIMPFOX universal pliers for accommodating various crimp inserts

- One of the key features of the CRIMPFOX-M crimping pliers is the way the crimp inserts can be quickly replaced without the need for tools

Notes:
For more crimping dies for ferrules, cable lugs, slip-on sleeves, turned contacts, coaxial, RJ45, and RJ11 connectors, visit phoenixcontact.net/products



Basic pliers

Application range	
Compression	

Description	
Basic pliers , for accommodating dies for various contact types, unlockable pressure lock, lateral entry	

Die , for turned pin and socket contacts	
CK2,5-ED..., CK4,0-ED..., cross section 0.5 - 4 mm ² CK4,0-ED..., cross section 6 - 10 mm ²	

Technical data

Universal

Ordering data

Type	Order No.	Pcs. / Pkt.
CRIMPFOX-M	1212072	1

Accessories

CRIMPFOX-M TC 4/DIE	1212075	1
CRIMPFOX-M TC 10/DIE	1212076	1

CRIMPFOX crimping pliers for rolled contacts

- For processing rolled contacts for fiber optics (POF)



Conductor cross section of 0.5 - 1.5 mm²

Technical data	
Application range	
Conductor [mm ²] / AWG	0.5 ... 1.5 / -
Compression	Universal
Ordering data	
Description	Type
Crimping pliers - For rolled contacts CK1,6-ER...	CRIMPFOX-1,6-ER-1,50-AT
	Order No. 1884843
	Pcs. / Pkt. 1
Accessories	
Assembly tool - For contacts CK1,6-ED.../CK2,5-ED.../CK1,6-ER...	CK1,6/2,5-MWZ
	Order No. 1676734
	Pcs. / Pkt. 1
Removal tool - For contacts CK1,6-ED.../CK1,6-ER.../CK1,6...POF	VC-EW 1,6
	Order No. 1884869
	Pcs. / Pkt. 1

CRIMPFOX crimping pliers for coaxial connectors

- CRIMPFOX-CX... are crimping pliers for processing coaxial connectors
- Unlockable pressure lock
- Lateral conductor entry

Notes:
Spare dies and spare retaining springs can be found in the product area on our website at phoenixcontact.net/products.



For coaxial connectors

Conductor cross sections of 0.08 - 2.5 mm²

Technical data		Technical data	
Application range		Application range	
Compression	HEX crimp	Compression	Four-mandrel crimping
Ordering data		Ordering data	
Description	Type	Description	Type
Crimp pliers , for coaxial connectors, 1.69 mm, 3.25 mm, 4.52 mm, three marked die stations, unlockable pressure lock, lateral entry, hex crimp	CRIMPFOX-CX 4,52		
	Order No. 1212094		Order No. 1212510
	Pcs. / Pkt. 1		Pcs. / Pkt. 1
Crimping pliers , for turned contacts, universal cross section setting, up to a maximum of 2.5 mm ² , digital display with 0.01 mm increments, unlockable pressure lock, lateral entry, including positioning tool		CRIMPFOX-TC MP	
for turned contacts, four-mandrel crimping			Order No. 1212510
			Pcs. / Pkt. 1
Accessories		Accessories	
Removal tool - For coax contacts HC-M-04...KOAX... - For D-SUB contacts VS-...CD...	HC-M4-KOAX-EWZ	EWR	
	Order No. 1676747		Order No. 1665075
	Pcs. / Pkt. 1		Pcs. / Pkt. 1

Heavy-duty connectors

DUPLICON stackable power distribution



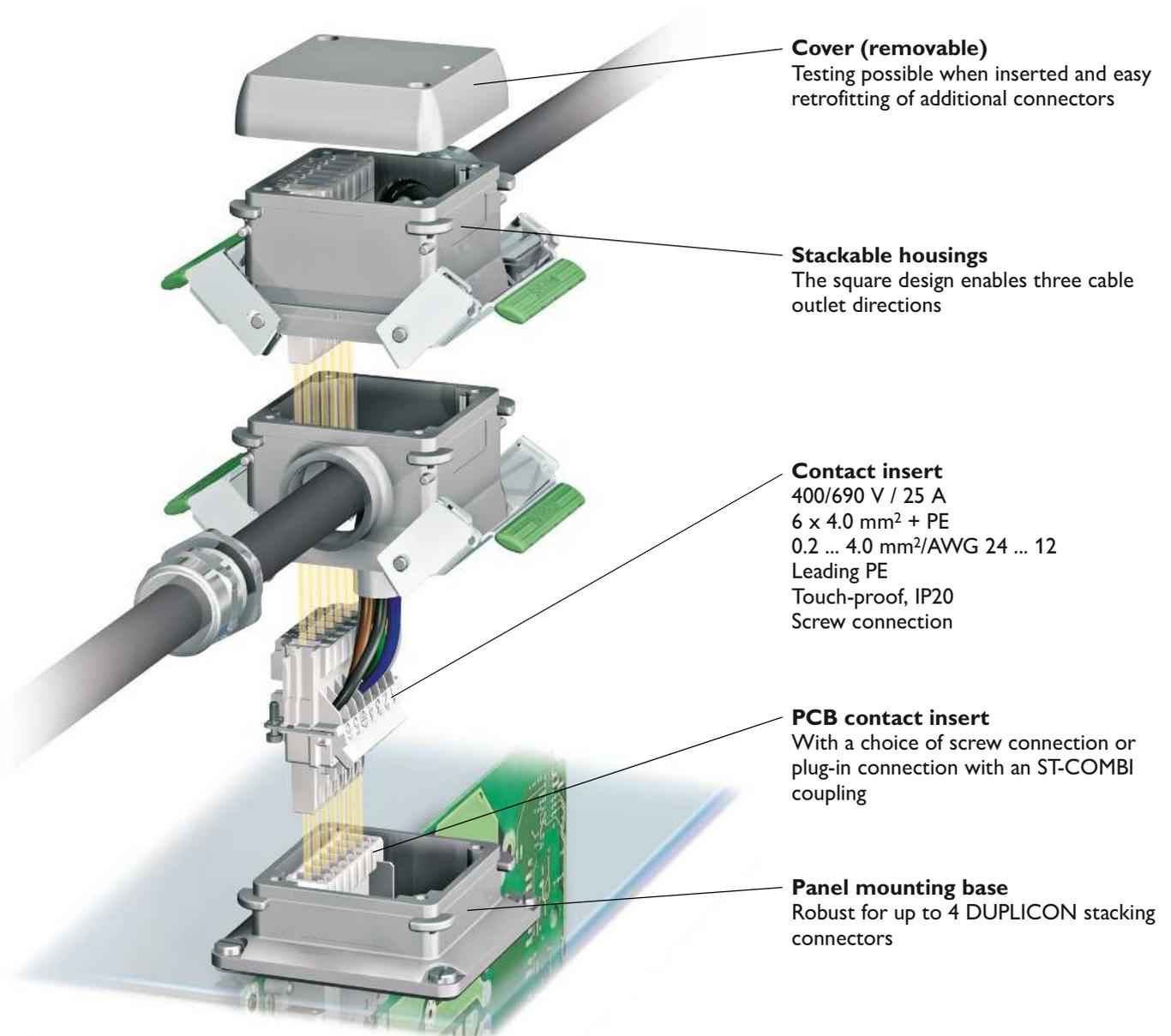
DUPLICON is a consistent power distribution system for 6 x 4 mm² and PE conductors (25 A / 400/690 V). Possible applications range from the busbar to ST-COMBI in the control cabinet through to the PCB or plug-in connection on the power consumer. The system has a minimum of components and is flexible in terms of handling. The robust metal housing with vibration-proof locking latches qualifies DUPLICON for the harshest operating conditions.

DUPLICON features IP67 degree of protection. The contact inserts have a leading PE contact. The screw connections can be assembled with standard tools. DUPLICON acts as an interface between the control cabinet and the device or actuators and drives.

With its additional connections, DUPLICON offers a broad range of possible applications: Connection of 24 V, connection of two-wire bus lines for AS-i or PROFIBUS, and connection to the signal network.

Thanks to the plug-in design, all cables can be conveniently assembled in the workshop and quickly connected together in the system. All connections are touch-proof according to DIN VDE 0105 and meet the requirements of BGV A2 accident prevention regulations.

i Your web code: #0004



Cover (removable)

Testing possible when inserted and easy retrofitting of additional connectors

Stackable housings

The square design enables three cable outlet directions

Contact insert

400/690 V / 25 A
6 x 4.0 mm² + PE
0.2 ... 4.0 mm²/AWG 24 ... 12
Leading PE
Touch-proof, IP20
Screw connection

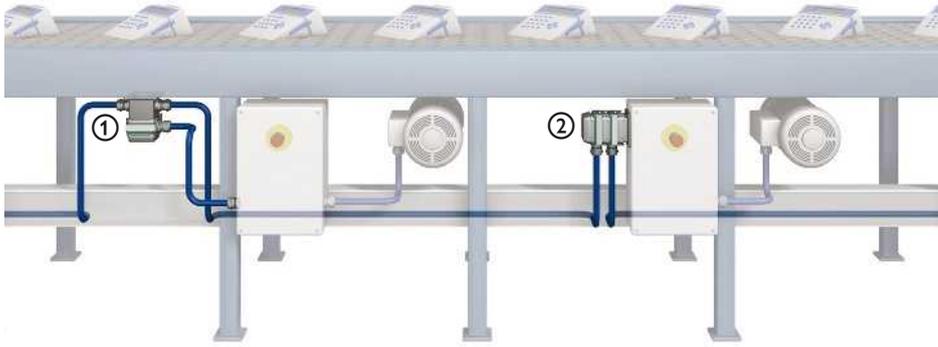
PCB contact insert

With a choice of screw connection or plug-in connection with an ST-COMBI coupling

Panel mounting base

Robust for up to 4 DUPLICON stacking connectors

Stationary power distribution



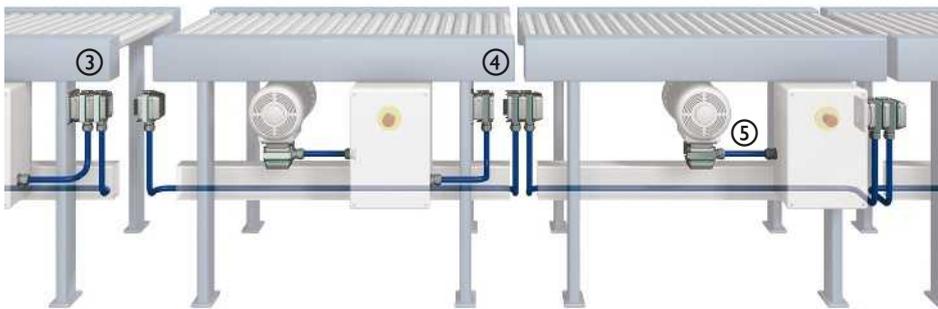
There are two DUPLICON options for stationary power distribution:

- ① Using a T-box, which is installed permanently next to the power consumer and has a plug-in cable outlet.
- ② With a stackable device connection. Direct device connection is always the best

option, but this requires design-based integration.

The main advantage is the ability to plug in the cables separately. This simplifies startup and also enables the device to be replaced without interruption during subsequent servicing.

Modular power distribution



③ Your power distribution can be configured in advance, thanks the stackable design. Plug and Play ensures fast and safe startup.

④ During servicing, the main power cable is disconnected from the consumer without causing any interruption. The system continues to run.

⑤ DUPLICON is also designed as a motor connector. The square design enables three different cable outlet directions. The vibration-resistant locking mechanism can withstand the harshest operating conditions.

The modular contact inserts offer a wide range of possible applications.

Cable routing options



With hybrid cables

In the simplest case, one cable is inserted per stackable housing. With the aid of an M25 adapter screw connection, cables with a diameter of up to 21 mm can be connected.



With separate cables

The cable glands with two bore holes allow thin power and 24 V cables to be routed separately into a stackable housing.



With opposing cables

Housings with two cable entries allow cables with larger diameters or combinations, e.g., with AS-i cables or PROFIBUS, to be routed in.

Heavy-duty connectors

DUPLICON stackable power distribution

Connector sets

Suitable standard and EMC cable glands can be found in the section on installation and mounting material.

Notes:
For cable glands, see from page 694
For accessories, see page 681



**Stackable connector set
(stackable housing, contact insert)**



**Panel feed-through set
(panel mounting base, stackable housing,
2 contact inserts, housing cover)**



Technical data

Technical data	
Electrical data according to IEC 61076-2-101	
Rated voltage (III/3)	400 V (L-PE) / 690 V (L-L)
Rated surge voltage	6 kV
Rated current	25 A
Overvoltage category / Degree of pollution	III / 3
Contact resistance	1.5 mΩ
Material data	
Housing material	Aluminum die-cast
Housing surface material	EMC-conductive
Seal material	NBR
Locking latch material	Stainless steel
Contact material	Cu
Contact surface material	Ag
Contact carrier material	PA
Material grip body interlock	PA
Flammability rating according to UL 94	V0
Mechanical data	
Degree of protection	IP65/IP66/IP67
Insertion/withdrawal cycles	≥ 100
Connection data	
Connection technology	Screw connection
Stripping length of the individual wire	10 mm
Conductor cross section	0.2 mm ² ... 4 mm ² (6 mm ² without ferrule)
Connection cross section AWG	24 ... 12 (AWG 10 without ferrule)
Tightening torque	0.5 Nm ... 0.6 Nm
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C



Technical data

Technical data	
Electrical data according to IEC 61076-2-101	
Rated voltage (L-PE) / 690 V (L-L)	400 V (L-PE) / 690 V (L-L)
Rated surge voltage	6 kV
Rated current	25 A
Overvoltage category / Degree of pollution	III / 3
Contact resistance	1.5 mΩ
Material data	
Housing material	Aluminum die-cast
Housing surface material	EMC-conductive
Seal material	NBR
Locking latch material	Stainless steel
Contact material	Cu
Contact surface material	Ag
Contact carrier material	PA
Material grip body interlock	PA
Flammability rating according to UL 94	V0
Mechanical data	
Degree of protection	IP65/IP66/IP67
Insertion/withdrawal cycles	≥ 100
Connection data	
Connection technology	Screw connection
Stripping length of the individual wire	10 mm
Conductor cross section	0.2 mm ² ... 4 mm ² (6 mm ² without ferrule)
Connection cross section AWG	24 ... 12 (AWG 10 without ferrule)
Tightening torque	0.5 Nm ... 0.6 Nm
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C

Ordering data

Description		
DUPLICON sets, stackable housing without cable screw connection		
With M20 thread		
With M25 thread		

Type	Order No.	Pcs. / Pkt.
DC-B 6-SET-HD-M20-M-7X4-UT	1602216	1
DC-B 6-SET-HD-M25-M-7X4-UT	1602229	1

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-SET-WF-M20R-M-7X4-UT	1602232	1
DC-B 6-SET-WF-M25R-M-7X4-UT	1602258	1

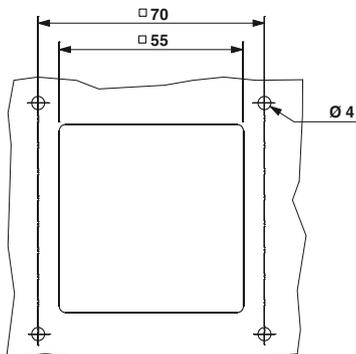
Accessories

Special cable screw connection M25, brass		
With 10 mm and 11 mm hole		

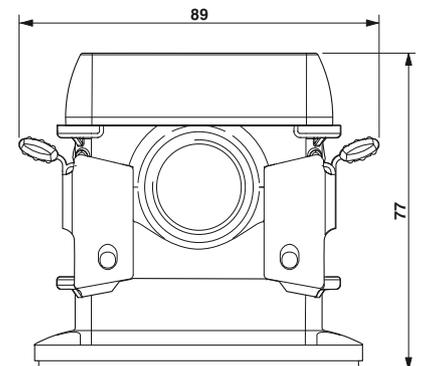
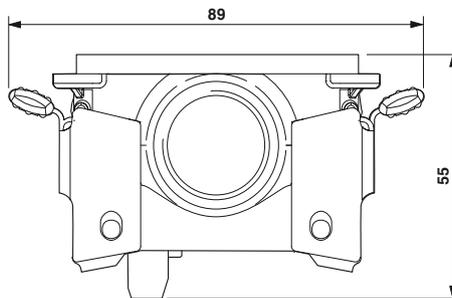
HC-M-KV-M25(1X10/1X11)	1580228	10
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Accessories

HC-M-KV-M25(1X10/1X11)	1580228	10
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Panel cutout: DC-B 6-SET-WF...





Coupling set
(basic housing, 2 stackable housings, 2 contact inserts, housing cover)



Distributor set
(basic housing, 3 stackable housings, 3 contact inserts, housing cover)



T-box set
(T-box with contact insert, stackable housing with contact insert, housing cover)



Technical data

400 V (L-PE) / 690 V (L-L)
6 kV
25 A
III / 3
1.5 mΩ
Aluminum die-cast
EMC-conductive
NBR
Stainless steel
Cu
Ag
PA
PA
V0
IP65/IP66/IP67
≥ 100
Screw connection
10 mm
0.2 mm ² ... 4 mm ² (6 mm ² without ferrule)
24 ... 12 (AWG 10 without ferrule)
0.5 Nm ... 0.6 Nm
-40°C ... 100°C

Technical data

400 V (L-PE) / 690 V (L-L)
6 kV
25 A
III / 3
1.5 mΩ
Aluminum die-cast
EMC-conductive
NBR
Stainless steel
Cu
Ag
PA
PA
V0
IP65/IP66/IP67
≥ 100
Screw connection
10 mm
0.2 mm ² ... 4 mm ² (6 mm ² without ferrule)
24 ... 12 (AWG 10 without ferrule)
0.5 Nm ... 0.6 Nm
-40°C ... 100°C

Technical data

400 V (L-PE) / 690 V (L-L)
6 kV
25 A
- / 3
1.5 mΩ
Aluminum die-cast
EMC-conductive
NBR
Stainless steel
Cu
Ag
PA
PA
V0
IP65/IP66/IP67
≥ 100
Screw connection
10 mm
0.2 mm ² ... 4 mm ² (6 mm ² without ferrule)
24 ... 12
0.5 Nm ... 0.6 Nm
-40°C ... 100°C

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-SET-CO-M20-M-7X4-UT	1602274	1
DC-B 6-SET-CO-M25-M-7X4-UT	1602287	1

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-SET-3D-M20-M-7X4-UT	1602290	1
DC-B 6-SET-3D-M25-M-7X4-UT	1602300	1

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-SET-TB-M20-M-7X4-UT	1581023	1
DC-B 6-SET-TB-M25-M-7X4-UT	1581036	1

Accessories

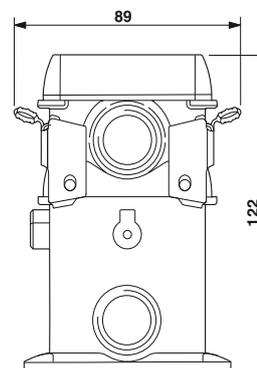
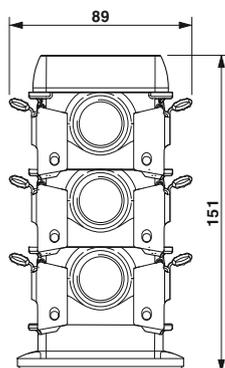
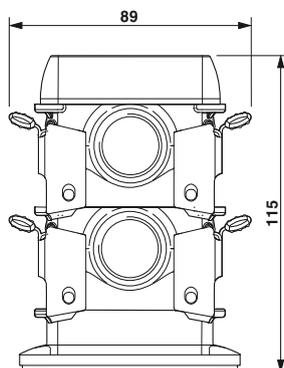
HC-M-KV-M25(1X10/1X11)	1580228	10
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Accessories

HC-M-KV-M25(1X10/1X11)	1580228	10
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Accessories

HC-M-KV-M25(1X10/1X11)	1580228	10
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Heavy-duty connectors

DUPLICON stackable power distribution

Contact inserts



The stacked contact inserts enable you to pre-assemble power lines for modular machine building and systems manufacturing. You can fit the stacked contact inserts together quickly, easily, and reliably at the mounting location.

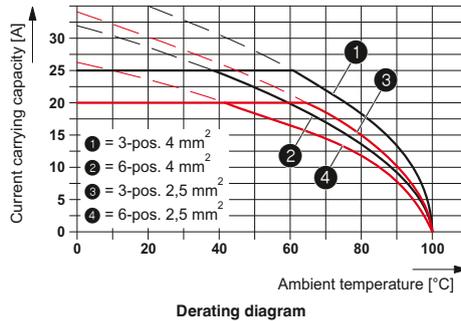
The T-box contact insert is designed for stationary installations. With two connections per position, it is used to loop through power lines on site. In contrast to the DUPLICON 3-way distributor, the T-box connector requires 20% less height and eliminates the need for an entire stacking connector.

DUPLICON is the first IP67 connector that can be tested from the outside while it is plugged in. To do so, release the two screws in the cover and all contacts can be directly accessed with standard test devices. For safety reasons, all contacts are IP20 touch-proof according to DIN VDE 0105.

Note:

Coding stars with 4 coding branches are available for the purpose of coding several connectors of the same kind against being plugged in incorrectly, Order No. **3040588**.

The 2-way insertion bridges with a 2 mm pitch, EB 2-6, Order No. **0201155**, are available for bridging two adjacent connections.



Stacked contact insert



Technical data

Technical data

Electrical data according to IEC 61076-2-101

Rated voltage (III/3)
 Rated surge voltage
 Rated current
 Overvoltage category / Degree of pollution
 No. of pos.

Material data

Contact material
 Contact surface material
 Contact carrier material
 Flammability rating according to UL 94

Mechanical data

Degree of protection
 Insertion/withdrawal cycles

Connection data

Connection technology
 Stripping length of the individual wire
 Conductor cross section
 Connection cross section AWG
 Tightening torque

Temperature data

Ambient temperature (operation)

400 V (L-PE) / 690 V (L-L)
 6 kV
 25 A
 III / 3
 6

Cu
 Ag
 PA
 V0

IP20, touch-proof
 ≥ 100

Screw connection
 10 mm
 0,2 mm² ... 4 mm² (6 mm² without ferrule)
 24 ... 12 (AWG 10 without ferrule)
 0,5 Nm ... 0,6 Nm

-40°C ... 100°C

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-ID-7X4-UT	1602203	10

Accessories

PC	3040588	50
EB 2-6	0201155	100

Description

Stacked contact insert, 6 x 4 mm² + PE

Screw connection

T-Box contact insert, 6 x 4 mm² + PE

With two screw connections per position

Panel mounting contact insert, 6 x 4 mm² + PE

180° PCB connection

Panel mounting contact insert, 6 x 4 mm² + PE

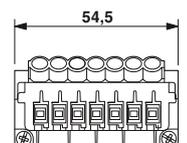
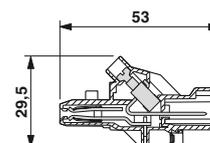
90° PCB connection

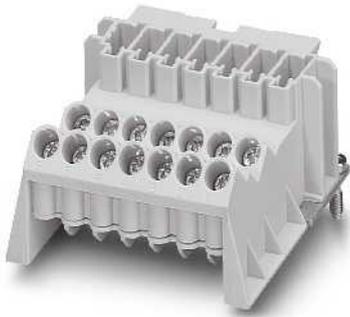
Coding star, with four coding branches, to code the connector

Insertion bridge, insulated

Replacement screws

M3 screw, V2A, for fixing the contact inserts for PCB connection in the panel mounting base





T-Box contact insert



Panel mounting contact insert,
180° PCB connection



Panel mounting contact insert,
90° PCB connection



Technical data

400 V (L-PE) / 690 V (L-L)
6 kV
25 A
III / 3
6

Cu
Ag
PA
V0

IP20, touch-proof
≥ 100

Screw connection
10 mm
0.2 mm² ... 4 mm² (6 mm² without ferrule)
24 ... 12 (AWG 10 without ferrule)
0.5 Nm ... 0.6 Nm

-40°C ... 100°C

Technical data

400 V (L-PE) / 690 V (L-L)
6 kV
25 A
III / 3
6

Cu
Ag
PA
V0

IP20, touch-proof
≥ 100

Solder connection
-
-
-
-

-40°C ... 100°C

Technical data

400 V (L-PE) / 690 V (L-L)
6 kV
25 A
III / 3
6

Cu
Ag
PA
V0

IP20, touch-proof
≥ 100

Solder connection
-
-
-
-

-40°C ... 100°C

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-IBT-7X4-UT	1581065	10

Accessories

PC	3040588	50
EB 2-6	0201155	100

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-IB-7X4-PCB-180	1602177	10

Accessories

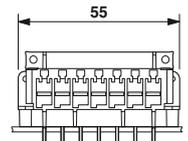
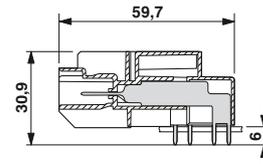
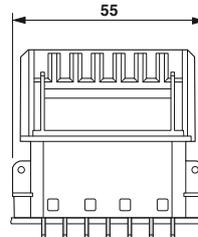
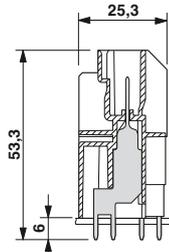
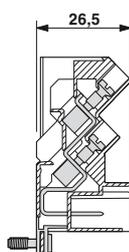
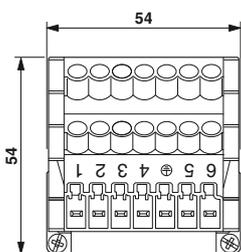
PC	3040588	50
VC-TR-S	1607826	50
DC-PCB-M3X20	1602407	100

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-IB-7X4-PCB-90	1602180	10

Accessories

PC	3040588	50
VC-TR-S	1607826	50
DC-PCB-M3X20	1602407	100



Heavy-duty connectors

DUPLICON stackable power distribution

Housing



Notes:
For cable glands see from page 694



Housing cover



Panel mounting base with open base



Technical data	
Material data	
Housing material	Aluminum die-cast
Housing surface material	EMC-conductive
Seal material	NBR
Locking latch material	-
Material grip body interlock	-
Mechanical data	
Degree of protection	IP65/IP66/IP67
Temperature data	
Ambient temperature (operation)	-40°C ... 125°C

Technical data		

Technical data		

Ordering data	
Description	
Aluminum housing cover	
Aluminum panel mounting base with open base	
Aluminum basic housing with enclosed base	
Aluminum stackable housing	
With 2 x M20 thread	
With 2 x M25 thread	
With 1 x M20 thread	
With 1 x M25 thread	
T-Box housing	
With 2 x M20 thread	
With 2 x M25 thread	

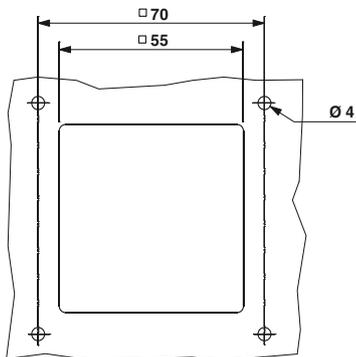
Type	Order No.	Pcs. / Pkt.
DC-B 6-CT-M	1602025	10

Type	Order No.	Pcs. / Pkt.
DC-B 6-HB-M	1602038	10

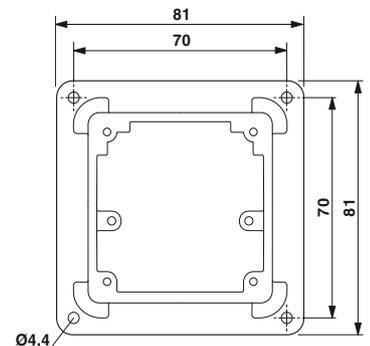
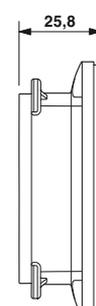
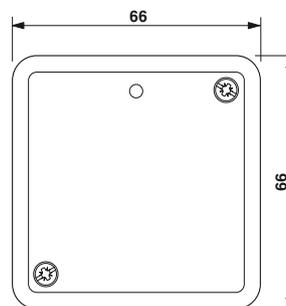
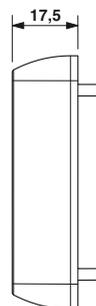
Accessories	
Special cable screw connection M25, brass	
With 10 mm and 11 mm hole	

Accessories		

Accessories		



Panel cutout: DC-B 6-HB-M





**Basic housing
with enclosed base**



**Stackable housing
without cable gland**



T-Box, box mounting base



Technical data

Aluminum die-cast
EMC-conductive

-
-

IP65/IP66/IP67

-40°C ... 125°C

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-HM-M	1602164	10

Accessories

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Technical data

Aluminum die-cast
EMC-conductive
NBR
Stainless steel
PA

IP65/IP66/IP67

-40°C ... 125°C

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-HD-M20/M20-M	1602067	10
DC-B 6-HD-M25/M25-M	1602070	10
DC-B 6-HD-M20-M	1602041	10
DC-B 6-HD-M25-M	1602054	10

Accessories

HC-M-KV-M25(1X10/1X11)	1580228	10
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Technical data

Aluminum die-cast
EMC-conductive

-
-

IP65/IP66/IP67

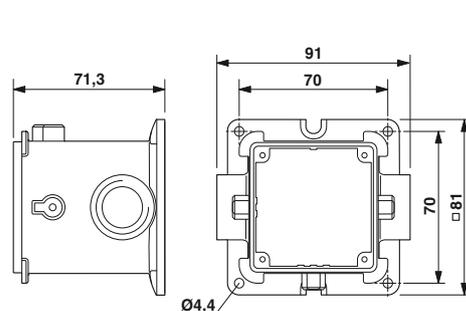
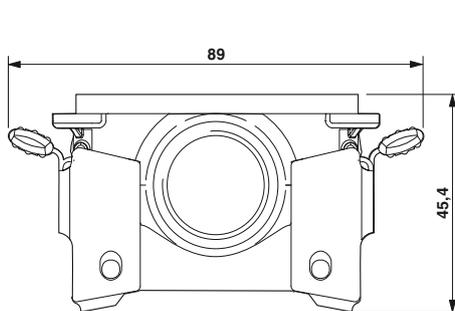
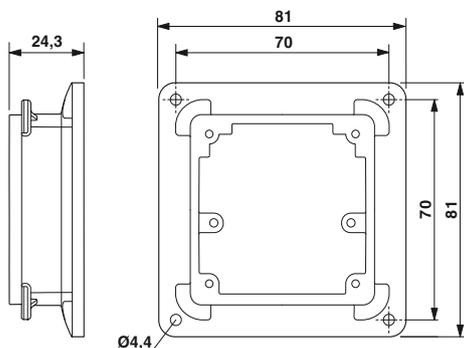
-40°C ... 125°C

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-HTC-M20-M20-M	1581049	10
DC-B 6-HTC-M25-M25-M	1581052	10

Accessories

HC-M-KV-M25(1X10/1X11)	1580228	10
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Heavy-duty connectors

DUPLICON stackable power distribution

Motor connector, hinged retaining frame



DUPLICON modular has been designed for use in drives in the power distribution field. The square-shaped housing allows flexible cable outlet directions and the absolutely vibration-free locking latch can withstand the roughest of conditions. The requirements as per railway standard EN 50155 are markedly overshot.

The modularity of contact inserts from the HEAVYCON field offers numerous applications.

The hinged retaining frames have been designed with leading PE contacts and can accommodate up to 3 contact insert modules.

The housings have one or two conductor entries in different sizes, depending on the type of cable entry.

Notes:

For contact insert modules, see from page: 560



Hinged retaining frame

ERC

Technical data

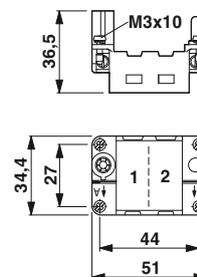
Material data		
Hinged retaining frame material		Die-cast zinc alloy
Connection data		
Connection cross section	[mm ²]	4 ... 6
Connection cross section	[mm ²]	1 ... 2.5
Connection cross section	AWG	12 ... 10 (for PE conductor – power side)
Connection cross section	AWG	18 ... 14 (for PE conductor – control side)
Temperature data		
Ambient temperature (operation)		-40°C ... 125°C

Ordering data

Description	Type	Order No.	Pcs./Pkt.
Hinged retaining frame , for sleeve housing, marking: Upper case letters (A, B, C, ...)	DC-B 6-MHR-T3	1581285	10
Hinged retaining frame , for panel mounting base, marking: Lower case letters (a, b, c, ...)	DC-B 6-MHR-A3	1581287	10
Cable lug PE extension to 16 mm ²	HC-M-MHR-PE16	1636981	50

Accessories

Cable lug PE extension to 16 mm ²	HC-M-MHR-PE16	1636981	50
Coding elements	see from page 656		



Accessories



Mounting bracket



Screw

		Technical data			Technical data		
General data							
Material		Stainless steel V2A			Steel		
Color		gray			chromated		
Design		DC-B6			-		
		Ordering data			Ordering data		
Description		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Mounting bracket , made of 3 mm stainless steel plate, with predrilled holes, with long and short sides		DC-B 6-A-SA	1602313	5			
M4 Torx® screw T20 , 12 mm long, self-tapping, consisting of high-strength steel, anti-corrosive, for housing assembly					T20-M4X12	1602410	100

Accessories

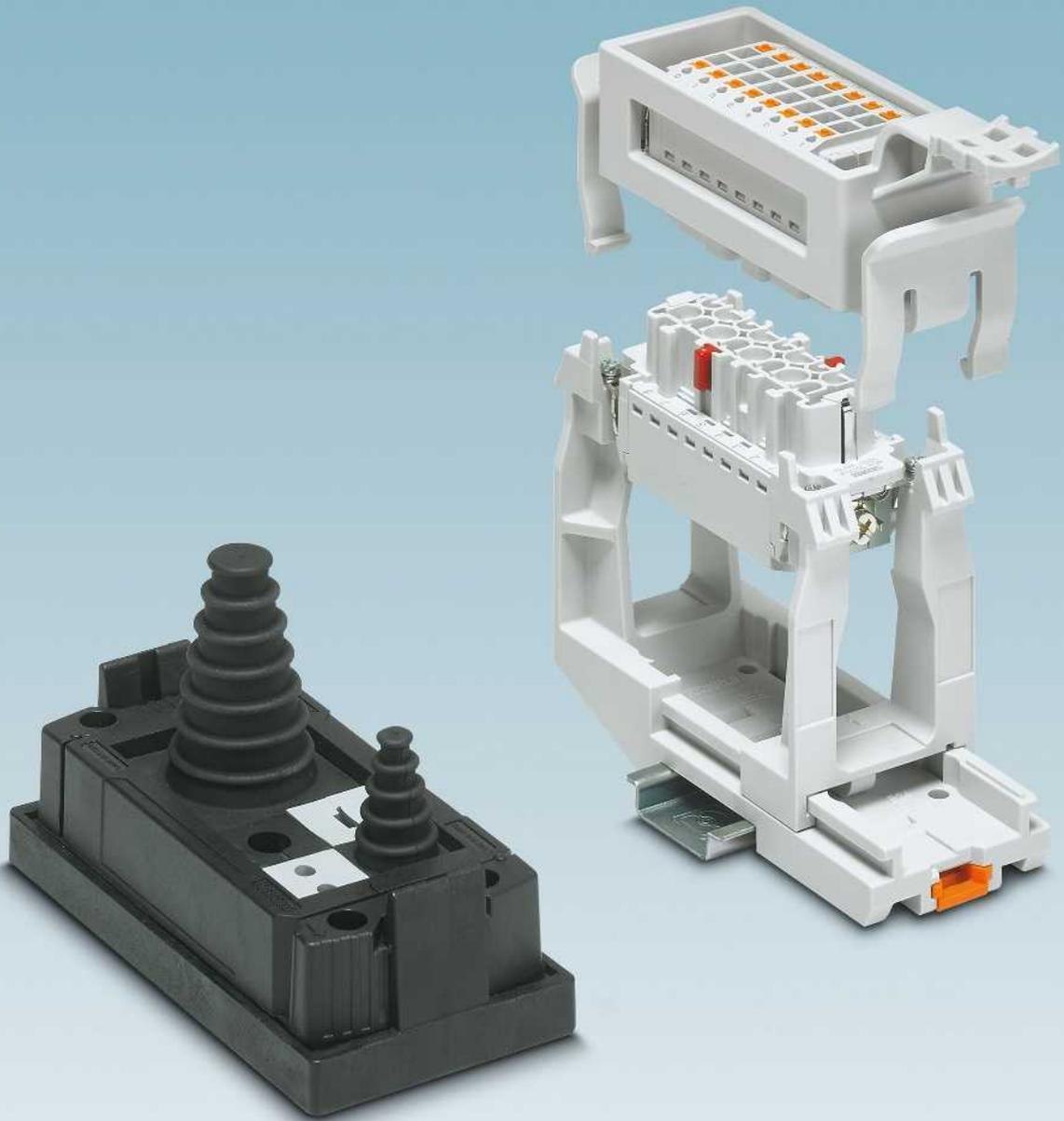


Replacement seals



Dust protection cover

		Technical data			Technical data		
General data							
Seal material		NBR			-		
Protective cover material		-			Polyamide		
Color		black			black		
Degree of protection		-			IP54		
Design		DC-B6			DC-B6		
Ambient temperature (operation)		- ... - [°C]			-40 ... 100		
		Ordering data			Ordering data		
Description		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Profile gasket for stackable housing		DC-B 6-A-HD-G	1602326	10			
Flat gasket for panel mounting base		DC-B 6-A-HB-G	1602339	10	DC-B 6-CT-P	1581078	10



Installation and mounting material

Phoenix Contact installation and mounting material gives you virtually unlimited possibilities when it comes to laying cables into and out of the control cabinet into the field.

The CES system enables water- and dust-proof cable entry into the control cabinet. Frames with modules that can be flexibly combined or space-saving membrane plates are available for this.

Where cables are subject to high tensile force, cable glands are an excellent alternative to panel feed-through systems.

With plug assembly frames from Phoenix Contact, you can implement the plug-in connection on the DIN rail. This saves entire marshalling levels in the control cabinet. The frames accommodate pre-assembled contact inserts and can be combined with HEAVYCON STANDARD sleeve housings.

Space-saving service interfaces simplify maintenance, service, and diagnostics on control cabinets or devices.

Marking material for cables and connectors, matching tools, and protective hoses simplify assembly and provide a clearer overview in control cabinets and systems.

 **Your web code: #0005**

Modular cable entry system	684
Multigates cable entry plates	690
Plug assembly frames	692
Cable glands	694
Service interfaces	714
Marking and labeling	732

Installation and mounting material

Modular cable entry system

Sealing frames for cable sleeves



- Sealing frame with integrated metal reinforcement to protect against deformation
- Only two locking elements are required (screws or latch)
- Suitable for standard panel cutouts
- Snap-on frame for simplifying on-site installation
- Sealing frame with convenient locking latch for tool-free actuation
- Marking for cable sleeve location on the underside of the frame

Notes:
For assembly instructions, see phoenixcontact.net/products
If the panel cutout width is 51 mm, HC industrial connectors and CIF plug assembly frames can also be fed through the panel using the cable entry system (CES).



Sealing frame with locking latch



General data	
Material of frames	PA
Material of cable sleeves	-
Degree of protection	IP54
Torque	1.8 Nm (mounting screw, M4 (ISO 4762/DIN 912))
Flammability rating according to UL 94	V0
Temperature range	-40 ... 120 [°C]

Technical data

Material of frames	PA
Material of cable sleeves	-
Degree of protection	IP54
Torque	1.8 Nm (mounting screw, M4 (ISO 4762/DIN 912))
Flammability rating according to UL 94	V0
Temperature range	-40 ... 120 [°C]

Description
Sealing frame, including flat gasket, for accommodating cable sleeves, for standard cutout: B10 (cutout: 35 mm x 65 mm), for up to 6 cable sleeves B16 (cutout: 35 mm x 86 mm), for up to 8 cable sleeves B24 (cutout: 35 mm x 113 mm), for up to 10 cable sleeves
Pre-assembled sealing frames with cone-shaped cable sleeves, for cables with a diameter of 2 mm ... 11 mm, for standard cutouts: B16 (cutout: 36 mm x 86 mm) B24 (cutout: 36 mm x 113 mm)
Snap-on frame, including integrated seal for mounting panel, for accommodating sealing frames, for standard cutouts: B10 (cutout: 35 mm x 65 mm) B16 (cutout: 35 mm x 86 mm) B24 (cutout: 35 mm x 113 mm)

Ordering data

Type	Order No.	Pcs. / Pkt.
CES-B10-HFFS-PLBK	0801663	1
CES-B16-HFFS-PLBK	0801662	1
CES-B24-HFFS-PLBK	0801661	1

Replacement flat gasket, for sealing frame with standard cutout: B10 (cutout: 35 mm x 65 mm) B16 (cutout: 35 mm x 86 mm) B24 (cutout: 35 mm x 113 mm) Locking plate, metal, locks an unused snap-on frame, transport protection, for standard cutouts: B10 B16 B24 Electrician's scissors, high cutting performance, thanks to micro-serrated cutting area, suitable for copper, aluminum (stranded), Kevlar® fibers, and plastic, two-component non-slip soft-grip handles, ergonomic design, adjustable screw joint M4 replacement locking screw, with 3 mm Allen screw head, for sealing frame with screw locking
Bit screwdriver, with 1/4" quick-action chuck, suitable for bits according to DIN 3126-C 6.3 and E 6.3/ISO 1173, magnetic Bit screwdriver Screw bit, hexagonal, E6.3-1/4" drive, hardened, suitable for holder according to DIN 3126-F 6.3/ISO 1173, size: hex 3 x 50 mm Screw bit, size: hex 3 x 50 mm

Accessories

CES-B10-WRG-BK	0801725	10
CES-B16-WRG-BK	0801726	10
CES-B24-WRG-BK	0801727	10

Installation and mounting material

Modular cable entry system

Cable sleeves, rubber

Advantages:

- Resistant to oil, fuels, and grease
- Halogen-free

Notes:
The CES cable entry system was developed according to DIN EN 50262 (Cable glands for electrical installations).
Assemble the cable sleeves according to the enclosed assembly instructions.



Cable sleeves, small



Cable sleeves, large

<div style="text-align: center;">(R)</div> Technical data				<div style="text-align: center;">(R)</div> Technical data			
General data				General data			
Material		NBR		NBR			
Degree of protection		IP54		IP54			
Temperature range	[°C]	-40 ... 125		-40 ... 125			
<div style="text-align: center;">(R)</div> Ordering data				<div style="text-align: center;">(R)</div> Ordering data			
Description	Color	Type	Order No.	Pcs./Pkt.	Type	Order No.	Pcs./Pkt.
Cone-shaped cable sleeves , IP65 in sealing frames with screw locking and cable binders, IP54 in sealing frames with locking latch. For cables with a diameter of:							
2 mm ... 11 mm	black	CES-SRC-BK	0801718	10	CES-LRC-BK	0801719	10
7 mm ... 24 mm	black						
Cable sleeves, IP54, without bore hole , can be used in sealing frames with locking latch and screw locking							
	black	CES-SRG-BK	0801670	10	CES-LRG-BK	0801671	10
Cable sleeves, small, slotted , can be used in sealing frames with locking latch and screw locking, for cable diameter of:							
1 mm ... 2 mm	black	CES-SRG-BK-2	0801635	10			
2 mm ... 3 mm	black	CES-SRG-BK-3	0801633	10			
3 mm ... 4 mm	black	CES-SRG-BK-4	0801632	10			
4 mm ... 5 mm	black	CES-SRG-BK-5	0801630	10			
5 mm ... 6 mm	black	CES-SRG-BK-6	0801628	10			
6 mm ... 7 mm	black	CES-SRG-BK-7	0801627	10			
7 mm ... 8 mm	black	CES-SRG-BK-8	0801625	10			
8 mm ... 9 mm	black	CES-SRG-BK-9	0801622	10			
9 mm ... 10 mm	black	CES-SRG-BK-10	0801620	10			
10 mm ... 11 mm	black	CES-SRG-BK-11	0801618	10			
11 mm ... 12 mm	black	CES-SRG-BK-12	0801617	10			
12 mm ... 13 mm	black	CES-SRG-BK-13	0801616	10			
13 mm ... 14 mm	black	CES-SRG-BK-14	0801615	10			
14 mm ... 15 mm	black	CES-SRG-BK-15	1410563	10			
15 mm ... 16 mm	black	CES-SRG-BK-16	1410576	10			
16 mm ... 17 mm	black	CES-SRG-BK-17	1410589	10			
Cable sleeves, large, slotted , can be used in sealing frames with locking latch and screw locking, for cable diameter of:							
14 mm ... 15 mm	black				CES-LRG-BK-15	0801619	10
15 mm ... 16 mm	black				CES-LRG-BK-16	0801621	10
16 mm ... 17 mm	black				CES-LRG-BK-17	0801624	10
17 mm ... 18 mm	black				CES-LRG-BK-18	0801626	10
18 mm ... 19 mm	black				CES-LRG-BK-19	0801629	10
19 mm ... 20 mm	black				CES-LRG-BK-20	0801631	10
20 mm ... 21 mm	black				CES-LRG-BK-21	0801634	10
21 mm ... 22 mm	black				CES-LRG-BK-22	0801637	10
22 mm ... 23 mm	black				CES-LRG-BK-23	0801638	10
23 mm ... 24 mm	black				CES-LRG-BK-24	0801639	10
24 mm ... 25 mm	black				CES-LRG-BK-25	0801640	10
25 mm ... 26 mm	black				CES-LRG-BK-26	0801643	10
26 mm ... 27 mm	black				CES-LRG-BK-27	0801644	10
27 mm ... 28 mm	black				CES-LRG-BK-28	0801646	10
28 mm ... 29 mm	black				CES-LRG-BK-29	0801648	10
29 mm ... 30 mm	black				CES-LRG-BK-30	0801650	10
30 mm ... 31 mm	black				CES-LRG-BK-31	0801653	10
31 mm ... 32 mm	black				CES-LRG-BK-32	0801654	10
32 mm ... 33 mm	black				CES-LRG-BK-33	0801656	10

Cable sleeves, rubber, special formats

Advantages:

- Resistant to oil, fuels, and grease
- Halogen-free

Notes:
The CES cable entry system was developed according to DIN EN 50262 (Cable glands for electrical installations).
Assemble the cable sleeves according to the enclosed assembly instructions.



Cable sleeves, small, with several bore holes



Cable sleeves, small, for AS-Interface cables

Ⓢ

General data		Technical data			Technical data		
Material		NBR		NBR			
Degree of protection		IP54		IP54			
Temperature range	[°C]	-40 ... 125		-40 ... 125			
Description		Ordering data			Ordering data		
	Color	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cable sleeves, with 2 bore holes, small, slotted , can be used in sealing frames with locking latch and screw locking, for cable diameter of:							
2x 2 mm ... 3 mm	black	CES-SRG-BK-2X3	1410398	10			
2x 3 mm ... 4 mm	black	CES-SRG-BK-2X4	1410408	10			
2x 4 mm ... 5 mm	black	CES-SRG-BK-2X5	0801657	10			
2x 5 mm ... 6 mm	black	CES-SRG-BK-2X6	0801664	10			
2x 6 mm ... 7 mm	black	CES-SRG-BK-2X7	1410084	10			
2x 7 mm ... 8 mm	black	CES-SRG-BK-2X8	1410097	10			
2x 8 mm ... 9 mm	black	CES-SRG-BK-2X9	1410411	10			
Cable sleeves, with 4 bore holes, small, slotted , can be used in sealing frames with locking latch and screw locking, for cable diameter of:							
4 x 2 mm ... 3 mm	black	CES-SRG-BK-4X3	0801665	10			
4 x 3 mm ... 4 mm	black	CES-SRG-BK-4X4	0801666	10			
4 x 4 mm ... 5 mm	black	CES-SRG-BK-4X5	1410107	10			
4 x 5 mm ... 6 mm	black	CES-SRG-BK-4X6	1410152	10			
Cable sleeve, IP54, slotted, for one AS-Interface cable, cable arrangement:							
L	black				CES-SRG-BK-1ASI-L	1410042	10
R	black				CES-SRG-BK-1ASI-R	0801667	10
Cable sleeve, IP54, slotted, for two AS-Interface cables, cable arrangement:							
LL	black				CES-SRG-BK-2ASI-LL	1410055	10
RR	black				CES-SRG-BK-2ASI-RR	0801668	10
LR	black				CES-SRG-BK-2ASI-LR	0801669	10

Installation and mounting material

Modular cable entry system

Cable sleeves, thermoplastics

Advantages:

- Low flammability of thermoplastic sleeves according to UL 94 V0
- Good resistance to acids and lyes

Notes:
The CES cable entry system was developed according to DIN EN 50262 (Cable glands for electrical installations).
Assemble the cable sleeves according to the enclosed assembly instructions.



Cable sleeves, small



Cable sleeves, large



General data				Technical data			Technical data		
Material		SEBS		SEBS		SEBS		SEBS	
Degree of protection		IP54		IP54		IP54		IP54	
Flammability rating according to UL 94		V0		V0		V0		V0	
Temperature range	[°C]	-40 ... 80		-40 ... 80		-40 ... 80		-40 ... 80	
Ordering data				Ordering data			Ordering data		
Description	Color	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.	Type	
Cable sleeves, small, slotted , can be used in sealing frames with locking latch and screw locking, for cable diameter of:									
1 mm ... 2 mm	gray	CES-STPG-GY-2	0801672	10					
2 mm ... 3 mm	gray	CES-STPG-GY-3	0801673	10					
3 mm ... 4 mm	gray	CES-STPG-GY-4	0801674	10					
4 mm ... 5 mm	gray	CES-STPG-GY-5	0801675	10					
5 mm ... 6 mm	gray	CES-STPG-GY-6	0801676	10					
6 mm ... 7 mm	gray	CES-STPG-GY-7	0801677	10					
7 mm ... 8 mm	gray	CES-STPG-GY-8	0801679	10					
8 mm ... 9 mm	gray	CES-STPG-GY-9	0801680	10					
9 mm ... 10 mm	gray	CES-STPG-GY-10	0801682	10					
10 mm ... 11 mm	gray	CES-STPG-GY-11	0801683	10					
11 mm ... 12 mm	gray	CES-STPG-GY-12	0801684	10					
12 mm ... 13 mm	gray	CES-STPG-GY-13	0801685	10					
13 mm ... 14 mm	gray	CES-STPG-GY-14	0801686	10					
14 mm ... 15 mm	gray	CES-STPG-GY-15	1410521	10					
15 mm ... 16 mm	gray	CES-STPG-GY-16	1410534	10					
16 mm ... 17 mm	gray	CES-STPG-GY-17	1410547	10					
Cable sleeves, large, slotted , can be used in sealing frames with locking latch and screw locking, for cable diameter of:									
14 mm ... 15 mm	gray				CES-LTPG-GY-15	0801687	10		
15 mm ... 16 mm	gray				CES-LTPG-GY-16	0801688	10		
16 mm ... 17 mm	gray				CES-LTPG-GY-17	0801689	10		
17 mm ... 18 mm	gray				CES-LTPG-GY-18	0801690	10		
18 mm ... 19 mm	gray				CES-LTPG-GY-19	0801691	10		
19 mm ... 20 mm	gray				CES-LTPG-GY-20	0801692	10		
20 mm ... 21 mm	gray				CES-LTPG-GY-21	0801693	10		
21 mm ... 22 mm	gray				CES-LTPG-GY-22	0801695	10		
22 mm ... 23 mm	gray				CES-LTPG-GY-23	0801696	10		
23 mm ... 24 mm	gray				CES-LTPG-GY-24	0801697	10		
24 mm ... 25 mm	gray				CES-LTPG-GY-25	0801698	10		
25 mm ... 26 mm	gray				CES-LTPG-GY-26	0801699	10		
26 mm ... 27 mm	gray				CES-LTPG-GY-27	0801700	10		
27 mm ... 28 mm	gray				CES-LTPG-GY-28	0801701	10		
28 mm ... 29 mm	gray				CES-LTPG-GY-29	0801702	10		
29 mm ... 30 mm	gray				CES-LTPG-GY-30	0801703	10		
30 mm ... 31 mm	gray				CES-LTPG-GY-31	0801705	10		
31 mm ... 32 mm	gray				CES-LTPG-GY-32	0801706	10		
32 mm ... 33 mm	gray				CES-LTPG-GY-33	0801707	10		
Cable sleeves, IP54, without bore hole , can be used in sealing frames with locking latch and screw locking									
	gray	CES-STPG-GY	0801715	10	CES-LTPG-GY	0801716	10		

Cable sleeves, thermoplastics, special formats

Advantages:

- Low flammability of thermoplastic sleeves according to UL 94 V0
- Good resistance to acids and lyes

Notes:
The CES cable entry system was developed according to DIN EN 50262 (Cable glands for electrical installations).
Assemble the cable sleeves according to the enclosed assembly instructions.



Cable sleeves, small, with several bore holes



Cable sleeves, small, for AS-Interface cables



Technical data	
Material	SEBS
Degree of protection	IP54
Flammability rating according to UL 94	V0
Temperature range	-40 ... 80

Technical data	
Material	SEBS
Degree of protection	IP54
Flammability rating according to UL 94	V0
Temperature range	-40 ... 80

Ordering data				
Type	Order No.	Pcs. / Pkt.		
Cable sleeves, with 2 bore holes, small, slotted, can be used in sealing frames with locking latch and screw locking, for cable diameter of:				
2x 2 mm ... 3 mm	gray	CES-STPG-GY-2X3	1410424	10
2x 3 mm ... 4 mm	gray	CES-STPG-GY-2X4	1410438	10
2x 4 mm ... 5 mm	gray	CES-STPG-GY-2X5	0801708	10
2x 5 mm ... 6 mm	gray	CES-STPG-GY-2X6	0801709	10
2x 6 mm ... 7 mm	gray	CES-STPG-GY-2X7	1410110	10
2x 7 mm ... 8 mm	gray	CES-STPG-GY-2X8	1410123	10
2x 8 mm ... 9 mm	gray	CES-STPG-GY-2X9	1410440	10
Cable sleeves, with 4 bore holes, small, slotted, can be used in sealing frames with locking latch and screw locking, for cable diameter of:				
4 x 2 mm ... 3 mm	gray	CES-STPG-GY-4X3	0801710	10
4 x 3 mm ... 4 mm	gray	CES-STPG-GY-4X4	0801711	10
4 x 4 mm ... 5 mm	gray	CES-STPG-GY-4X5	1410136	10
4 x 5 mm ... 6 mm	gray	CES-STPG-GY-4X6	1410149	10
Cable sleeve, IP54, slotted, for one AS-Interface cable, cable arrangement:				
L	gray			
R	gray			
Cable sleeve, IP54, slotted, for two AS-Interface cables, cable arrangement:				
LL	gray			
RR	gray			
LR	gray			

Ordering data		
Type	Order No.	Pcs. / Pkt.
Cable sleeve, IP54, slotted, for one AS-Interface cable, cable arrangement:		
CES-STPG-GY-1ASI-L	1410068	10
CES-STPG-GY-1ASI-R	0801712	10
Cable sleeve, IP54, slotted, for two AS-Interface cables, cable arrangement:		
CES-STPG-GY-2ASI-LL	1410071	10
CES-STPG-GY-2ASI-RR	0801713	10
CES-STPG-GY-2ASI-LR	0801714	10

Installation and mounting material

Cable entry plates

Multigates cable feed-throughs

- Quick installation of unassembled cables
- Flame-retardant
- Size: 222 mm x 92 mm

Notes:
Other versions available on request.
For assembly instructions, see phoenixcontact.net/products



CES Multigates cable feed-through, light gray



CES Multigates cable feed-through, black

General data	
Material	TPE-SEBS
Degree of protection	IP66 / IP67
Flammability rating according to UL 94	V0
Temperature range	-40 ... 100 [°C]

Technical data		
Material	TPE-SEBS	
Degree of protection	IP66 / IP67	
Flammability rating according to UL 94	V0	
Temperature range	-40 ... 100	[°C]

Technical data		
Material	TPE-SEBS	
Degree of protection	IP66 / IP67	
Flammability rating according to UL 94	V0	
Temperature range	-40 ... 100	[°C]

Description
CES Multigates , cable feed-throughs for cable diameter:
4 x 8-16 mm, 2 x 24-54 mm, 1 x 30-60 mm
4 x 5 - 7 mm, 4 x 8 - 12 mm, 12 x 10 - 14 mm, 4 x 14 - 20 mm, 1 x 20 - 26 mm
4 x 5-7 mm, 4 x 8-12 mm, 13 x 10-14 mm, 4 x 14-20 mm, 2 x 20-26 mm
2 x 6 - 10 mm, 14 x 7 - 12 mm, 16 x 10 - 14 mm, 2 x 12 - 18 mm, 1 x 17 - 32 mm
4 x 6-10 mm, 14 x 8-12 mm, 16 x 10-14 mm, 2 x 12-18 mm, 1 x 17-32 mm

Ordering data		
Type	Order No.	Pcs. / Pkt.
MC-3/7-MULTI-67-PV-LG	1415234	1
MC-25-MULTI-65-PV-LG	1422348	1
MC-25/27-MULTI-67-PV-LG	1415236	1
MC-35-MULTI-65-PV-LG	1422350	1
MC-35/37-MULTI-67-PV-LG	1415240	1

Ordering data		
Type	Order No.	Pcs. / Pkt.
MC-3/7-MULTI-67-PVO-BK	1415235	1
MC-25-MULTI-65-PVO-BK	1422349	1
MC-25/27-MULTI-67-PVO-BK	1415237	1
MC-35-MULTI-65-PVO-BK	1422351	1
MC-35/37-MULTI-67-PVO-BK	1415241	1

B24 Multigates cable feed-throughs

new

- High degree of protection thanks to double membrane sealing
- Quick installation of unassembled cables
- Flame-retardant
- Size: B24

Notes:
Other versions available on request.
For assembly instructions, see phoenixcontact.net/products



CES B24 Multigates cable feed-through, black

General data	
Material	TPE-SEBS
Degree of protection	IP65
Flammability rating according to UL 94	V0
Temperature range	-40 ... 90 [°C]

Technical data		
Material	TPE-SEBS	
Degree of protection	IP65	
Flammability rating according to UL 94	V0	
Temperature range	-40 ... 90	[°C]

Description
CES B24 Multigates , cable feed-throughs for cable diameter:
3 x 3 - 6 mm, 9 x 3 - 7 mm, 8 x 6 - 9 mm, 4 x 6 - 12 mm, 1 x 10 - 20 mm
26 x 3 - 6 mm, 1 x 10 - 20 mm
6 x 2 - 6 mm, 2 x 2 - 18 mm, 2 x 2 - 30 mm

Ordering data		
Type	Order No.	Pcs. / Pkt.
MH-25-MULTI-65-PV-BK	1424582	1
MH-27-MULTI-65-PV-BK	1424583	1
MH-10CL-MULTI-55-PV-BK	1424584	1

Module plates

For accommodating CES B24 sealing frames and CES Multigates cable feed-throughs.

Pre-assembled for time-saving and easy assembly:

- Partition plates
- Control cabinet base

Notes:
For assembly instructions, see phoenixcontact.net/products



Module plate



Module plate

General data	
Material	Stainless steel 1.4301/AISI 304
Sealing material	NBR
Degree of protection	IP54
Temperature range	-40 ... 100 [°C]

Technical data		
Material	Stainless steel 1.4301/AISI 304	
Sealing material	NBR	
Degree of protection	IP54	
Temperature range	-40 ... 100	

Technical data		
Material	Stainless steel 1.4301/AISI 304	
Sealing material	NBR	
Degree of protection	IP54	
Temperature range	-40 ... 100	

Description	
B24 module plates , with seal, for the CES B24 sealing frames and the B24 Multigates cable feed-throughs	
3 openings	
4 openings	
Module plate , with seal, for the CES Multigates cable feed-throughs	
one opening	
Module plate , with seal	
no opening	

Ordering data		
Type	Order No.	Pcs. / Pkt.
MD-INB24-3-SZP-S	1415242	1
MD-INB24-4-SZP-S	1415243	1

Ordering data		
Type	Order No.	Pcs. / Pkt.
MD-INC-1-SZP-S	1415245	1
MD-IN-0-SZP-S	1415244	1

Filler plugs, EMC cable catch rails

Notes:
For assembly instructions, see phoenixcontact.net/products



Filler plugs with a diameter of 2 mm to 17 mm



EMC cable catch rail for mounting on CES sealing frames

General data	
Material	PA
Degree of protection	IP54
Temperature range	-20 ... 80 [°C]

Technical data					
Material	PA				
Degree of protection	IP54				
Temperature range	-20 ... 80				

Technical data					
Material	Stainless steel				
Degree of protection	-				
Temperature range	- ... -				

Description	
Filler plugs , for sealing unused cable sleeves with a diameter of:	
2 mm / 3 mm / 4 mm	
5 mm / 6 mm / 7 mm	
8 mm / 9 mm / 10 mm	
11 mm / 12 mm / 13 mm	
14 mm / 15 mm / 16 mm	
17 mm	
EMC cable catch rail , for mounting on CES sealing frames	
CES-B16-... Long side	
CES-B24-... Long side	
CES-B16-..., CES-B24-... Short side	

Ordering data					
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
1410220	25	3063921	25	3063934	25
3063947	25	3063950	25	3063963	25
3063976	25	3063989	25	3063992	25
3064001	25	3062016	25	3062029	25
3062032	25	3062045	25	3062058	25
3062061	25				

Ordering data					
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
3063507	5				
3063510	5				
3063523	5				

Installation and mounting material

Plug assembly frames

Plastic plug assembly frame, base frame, and top frame

– For pre-assembled contact inserts

Notes:
For assembly instructions, see phoenixcontact.net/products



Base frame

new



Top frame

new

General data	
Material	PC
Ambient temperature (operation)	-40 ... 125 [°C]
Description	
Size	
Plug assembly frame, base frame	B6 - B24
Plug assembly frame, top frame	B6 B10 B16 B24

Technical data		
Material		
Ambient temperature (operation)		
Ordering data		
Type	Order No.	Pcs./Pkt.
HC-CIF-B06-24-BFAFL-PL-LG	1424338	1

Technical data		
Material		
Ambient temperature (operation)		
Ordering data		
Type	Order No.	Pcs./Pkt.
HC-CIF-B06-HFWL-PL-LG	1424334	1
HC-CIF-B10-HFWL-PL-LG	1424335	1
HC-CIF-B16-HFWL-PL-LG	1424336	1
HC-CIF-B24-HFWL-PL-LG	1424337	1

Adapter, strain relief, and interlock for plastic plug assembly frame

Notes:
For assembly instructions, see phoenixcontact.net/products



Adapter for D series contact inserts

new



Strain relief and interlock, for B series EVO plastic housing

new

General data	
Material	Steel, galvanized
Ambient temperature (operation)	- [°C]
Description	
Size	
Adapter insert, for D series contact inserts	D15 D25
Strain relief, for B series EVO plastic housing	B6 - B24
Interlock, for B series EVO plastic housing	B6 - B24

Technical data		
Material		
Ambient temperature (operation)		
Ordering data		
Type	Order No.	Pcs./Pkt.
HC-CIF-D15-AIWS-SM-NI	1424340	1
HC-CIF-D25-AIWS-SM-NI	1424341	1

Technical data		
Material		
Ambient temperature (operation)		
Ordering data		
Type	Order No.	Pcs./Pkt.
HC-B-SG-PL-BK	1424343	1
HC-CIF-B06-24-AEWL-PL-BK	1424342	1

Metal plug assembly frame, base frame

- For pre-assembled contact inserts
- Grounding for DIN rail

Notes:
The aluminum design provides a capacitive PE.
Stainless steel locking latch, handle: PA-GF
For assembly instructions, see phoenixcontact.net/products



Base frame, without double locking latch, for screw locking



Base frame, with double locking latch

Technical data			
General data			
Material	Cast aluminum, uncoated		
Ambient temperature (operation)	-40 ... 125 [°C]		
Ordering data			
Type	Order No.	Pcs. / Pkt.	
HC-CIF-2B6-BFFD-FH-AL	1404214	1	
HC-CIF-B10-BFFD-FH-AL	1404219	1	
HC-CIF-B16-BFFD-FH-AL	1404216	1	
HC-CIF-B24-BFFD-FH-AL	1404211	1	
Bit screwdriver, with 1/4" quick-action chuck, suitable for bits according to DIN 3126-C 6.3 and E 6.3/ISO 1173, magnetic			
Bit screwdriver	SF-M BH	1212070	1
Screw bit, size: hex 3 x 50 mm	SF-BIT-HEX 3-50	1212647	5

Technical data			
General data			
Material	Cast aluminum, uncoated		
Ambient temperature (operation)	-40 ... 125 [°C]		
Ordering data			
Type	Order No.	Pcs. / Pkt.	
HC-CIF-B10-BFWD-FH-AL	1404220	1	
HC-CIF-B16-BFWD-FH-AL	1404217	1	
HC-CIF-B24-BFWD-FH-AL	1404212	1	
Bit screwdriver, with 1/4" quick-action chuck, suitable for bits according to DIN 3126-C 6.3 and E 6.3/ISO 1173, magnetic			
Bit screwdriver	SF-M BH	1212070	1
Screw bit, size: hex 3 x 50 mm	SF-BIT-HEX 3-50	1212647	5

Plastic plug assembly frame, top frame

- Housing made from robust die-cast aluminum

Notes:
The aluminum design provides a capacitive PE.
For assembly instructions, see phoenixcontact.net/products



Top frame, for double locking latch

Technical data			
General data			
Material	Cast aluminum, uncoated		
Ambient temperature (operation)	-40 ... 125 [°C]		
Ordering data			
Type	Order No.	Pcs. / Pkt.	
HC-CIF-2B6-HFFD-WH-AL	1404215	1	
HC-CIF-B10-HFFD-WH-AL	1404221	1	
HC-CIF-B16-HFFD-WH-AL	1404218	1	
HC-CIF-B24-HFFD-WH-AL	1404213	1	
Bit screwdriver, with 1/4" quick-action chuck, suitable for bits according to DIN 3126-C 6.3 and E 6.3/ISO 1173, magnetic			
Bit screwdriver	SF-M BH	1212070	1
Screw bit, size: hex 3 x 50 mm	SF-BIT-HEX 3-50	1212647	5

General data	
Material	Cast aluminum, uncoated
Ambient temperature (operation)	-40 ... 125 [°C]
Ordering data	
Description	Size
Plug assembly frame, top frame, for double locking latch and optionally with locking screws, Allen screw, wrench size 3	
	For 2xB6
	For B10
	For B16
	For B24
Bit screwdriver, with 1/4" quick-action chuck, suitable for bits according to DIN 3126-C 6.3 and E 6.3/ISO 1173, magnetic	
Bit screwdriver	SF-M BH
Screw bit, size: hex 3 x 50 mm	SF-BIT-HEX 3-50

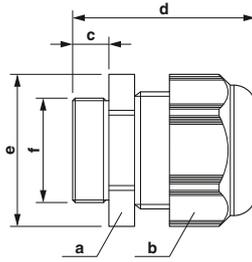
Installation and mounting material

Cable glands

Plastic cable glands, metric, EN 60423

new

- Material: polyamide 6
- UV-resistant: f1 according to UL 746C
- Cable seal: CR
- Ambient temperature: -20°C ... +100°C
- Degree of protection: IP66/IP68
- Strain relief: integrated according to EN 50262



Plastic cable glands

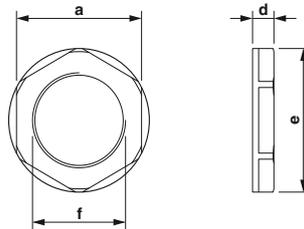
Thread type	Clamping area [mm]	Dimensions [mm]					Thread
		a	b	c	d	e	
M12 x 1.5	3.00 - 6.50	15.00	15.00	8.00	32.00	17.10	M12
M16 x 1.5	4.00 - 8.00	19.00	19.00	8.00	43.00	25.00	M16
M16 x 1.5	5.00 - 10.00	22.00	22.00	10.00	39.00	25.00	M16
M20 x 1.5	6.00 - 12.00	24.00	24.00	10.00	42.00	27.80	M20
M20 x 1.5	10.00 - 14.00	27.00	27.00	10.00	43.00	27.80	M20
M25 x 1.5	11.00 - 17.00	29.00	29.00	8.00	43.00	33.50	M25
M25 x 1.5	13.00 - 18.00	33.00	33.00	10.00	45.50	33.50	M25
M32 x 1.5	15.00 - 21.00	36.00	36.00	10.00	50.00	40.90	M32
M32 x 1.5	18.00 - 25.00	42.00	42.00	15.00	56.00	40.90	M32
M40 x 1.5	19.00 - 28.00	46.00	46.00	10.00	55.00	52.00	M40
M40 x 1.5	22.00 - 32.00	53.00	53.00	18.00	55.00	52.00	M40
M50 x 1.5	30.00 - 36.00	60.00	60.00	18.00	71.00	67.70	M50
M63 x 1.5	34.00 - 44.00	65.00	65.00	18.00	75.00	72.20	M63

Ordering data					
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
light gray		silver-gray		black	
1417652	10	1411123	10	1411131	10
1424470	10	1424475	10	1424480	10
1417653	10	1411124	10	1411132	10
1414568	5	1411125	5	1411133	5
1424471	5	1424476	5	1424481	5
1417654	5	1411126	5	1411134	5
1424472	5	1424477	5	1424482	5
1417655	5	1411127	5	1411136	5
1424473	5	1424478	5	1424483	5
1417656	5	1411128	5	1411137	5
1424474	5	1424479	5	1424484	5
1417657	1	1411129	1	1411138	1
1417658	1	1411130	1	1411139	1

Plastic counter nuts, metric, EN 60423

new

- Material: polyamide 6
- Ambient temperature: -20°C ... +100°C



Plastic counter nuts

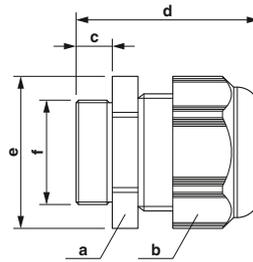
Thread type	Clamping area [mm]	Dimensions [mm]					Thread
		a	b	c	d	e	
M12	-	18.00	-	-	5.00	19.50	M12
M16	-	22.00	-	-	5.00	24.20	M16
M20	-	26.00	-	-	6.00	28.60	M20
M25	-	32.00	-	-	6.00	35.00	M25
M32	-	41.00	-	-	7.00	46.10	M32
M40	-	50.00	-	-	7.00	55.30	M40
M50	-	60.00	-	-	8.00	66.10	M50
M63	-	75.00	-	-	8.00	82.50	M63

Ordering data					
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
light gray		silver-gray		black	
1417659	10	1411205	10	1411213	10
1417660	10	1411206	10	1411214	10
1414570	5	1411207	5	1411215	5
1417661	5	1411208	5	1411216	5
1417662	5	1411209	5	1411217	5
1417664	5	1411210	5	1411218	5
1417665	5	1411211	5	1411219	5
1417666	5	1411212	5	1411220	5

**Plastic cable glands,
Pg, EN 40430**

new

- Material: polyamide 6
- UV-resistant: f1 according to UL 746C
- Cable seal: CR
- Ambient temperature:
-20°C ... +100°C
- Degree of protection: IP66/IP68
- Strain relief: integrated



Plastic cable glands

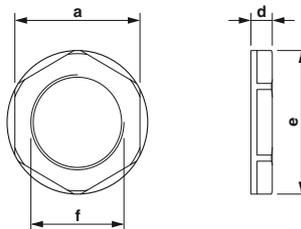
Thread type	Clamping area [mm]	Dimensions [mm]					Thread
		a	b	c	d	e	
Pg7	3.00 - 6.50	15.00	15.00	8.00	32.00	17.10	Pg7
Pg9	4.00 - 8.00	19.00	19.00	8.00	36.00	21.60	Pg9
Pg11	5.00 - 10.00	22.00	22.00	8.00	38.00	25.00	Pg11
Pg13.5	6.00 - 12.00	24.00	24.00	10.00	40.00	27.80	Pg13.5
Pg16	10.00 - 14.00	27.00	27.00	10.00	44.00	30.80	Pg16
Pg21	13.00 - 18.00	33.00	33.00	11.00	49.00	37.80	Pg21
Pg29	18.00 - 25.00	42.00	42.00	11.00	53.00	48.00	Pg29
Pg36	22.00 - 32.00	53.00	53.00	13.00	65.00	60.00	Pg36
Pg42	30.00 - 38.00	60.00	60.00	13.00	65.00	67.70	Pg42
Pg48	34.00 - 44.00	65.00	65.00	14.00	68.00	72.20	Pg48

Ordering data					
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
light gray		silver-gray		black	
1424485	10	1411140	10	1424495	10
1424486	10	1411141	10	1424496	10
1424487	5	1411142	5	1424497	5
1424488	5	1411143	5	1424498	5
1424489	5	1411144	5	1424499	5
1424490	5	1411145	5	1424500	5
1424491	5	1411146	5	1424501	5
1424492	5	1411147	5	1424502	5
1424493	1	1411149	1	1424503	1
1424494	1	1411150	1	1424504	1

**Plastic counter nuts,
Pg, EN 40430**

new

- Material: polyamide 6
- Ambient temperature:
-20°C ... +100°C



Plastic counter nuts

Thread type	Clamping area [mm]	Dimensions [mm]					Thread
		a	b	c	d	e	
Pg7	-	19.00	-	-	5.00	21.00	Pg7
Pg9	-	22.00	-	-	5.00	24.00	Pg9
Pg11	-	24.00	-	-	5.00	26.00	Pg11
Pg13.5	-	27.00	-	-	6.00	29.00	Pg13.5
Pg16	-	30.00	-	-	6.00	33.00	Pg16
Pg21	-	36.00	-	-	7.00	39.00	Pg21
Pg29	-	46.00	-	-	7.00	50.00	Pg29
Pg36	-	60.00	-	-	8.00	66.00	Pg36
Pg42	-	65.00	-	-	8.00	73.00	Pg42
Pg48	-	70.00	-	-	8.00	78.00	Pg48

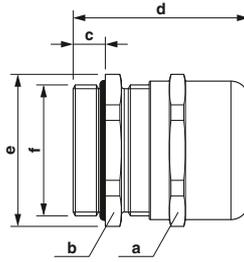
Ordering data					
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
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1424548	10	1411221	10	1424558	10
1424549	10	1411222	10	1424559	10
1424550	5	1411223	5	1424560	5
1424551	5	1411224	5	1424561	5
1424552	5	1411225	5	1424562	5
1424553	5	1411226	5	1424563	5
1424554	5	1411227	5	1424564	5
1424555	5	1411228	5	1424565	5
1424556	5	1411229	5	1424566	5
1424557	5	1411230	5	1424567	5

Installation and mounting material

Cable glands

Brass cable glands, metric, EN 60423

- Material: brass, nickel-plated
- Cable seal: CR
- O-ring: NBR
- Ambient temperature: -20°C ... +100°C
- Degree of protection: IP66/IP68/IP69
- Strain relief: integrated according to EN 50262



Brass cable gland

Notes:

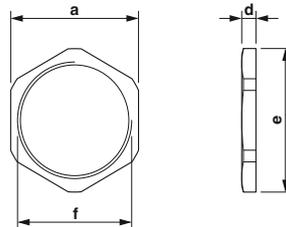
For alternative clamping ranges, see phoenixcontact.net/products

Thread type	Color	Clamping area [mm]	Dimensions [mm]					Thread
			a	b	c	d	e	
M12 x 1.5	silver	3.00 - 6.50	14.00	14.00	6.00	27.00	15.50	M12
M16 x 1.5	silver	4.00 - 8.00	17.00	18.00	7.00	30.00	22.00	M16
M16 x 1.5	silver	5.00 - 10.00	20.00	20.00	7.00	34.00	22.00	M16
M20 x 1.5	silver	6.00 - 12.00	22.00	22.00	8.00	37.00	24.50	M20
M25 x 1.5	silver	10.00 - 14.00	24.00	27.00	8.00	36.00	30.00	M25
M25 x 1.5	silver	11.00 - 17.00	27.00	27.00	8.00	40.00	30.00	M25
M32 x 1.5	silver	13.00 - 18.00	30.00	34.00	9.00	42.00	37.00	M32
M32 x 1.5	silver	15.00 - 21.00	34.00	34.00	8.00	43.00	37.00	M32
M40 x 1.5	silver	18.00 - 25.00	40.00	43.00	9.00	47.00	48.40	M40
M40 x 1.5	silver	19.00 - 28.00	43.00	43.00	9.00	53.00	48.40	M40
M50 x 1.5	silver	22.00 - 32.00	50.00	55.00	9.00	58.00	64.00	M50
M50 x 1.5	silver	27.00 - 38.00	58.00	58.00	9.00	61.00	64.00	M50
M63 x 1.5	silver	34.00 - 44.00	64.00	68.00	14.00	65.00	70.00	M63
M63 x 1.5	silver	37.00 - 53.00	75.00	75.00	10.00	60.00	70.00	M63

Ordering data		
Type	Order No.	Pcs. / Pkt.
G-INS-M12-S68N-NNES-S	1411160	10
G-INS-M16-T68N-NNES-S	1424526	10
G-INS-M16-S68N-NNES-S	1411162	10
G-INS-M20-S68N-NNES-S	1411163	5
G-INS-M25-S68N-NNES-S	1424527	5
G-INS-M25-M68N-NNES-S	1411165	5
G-INS-M32-S68N-NNES-S	1424528	5
G-INS-M32-M68N-NNES-S	1411166	5
G-INS-M40-S68N-NNES-S	1424529	5
G-INS-M40-M68N-NNES-S	1411167	5
G-INS-M50-M68N-NNES-S	1424530	1
G-INS-M50-L68N-NNES-S	1411168	1
G-INS-M63-L68N-NNES-S	1411169	1
G-INS-M63-E68N-NNES-S	1424531	1

Brass counter nuts, metric, EN 60423

- Material: brass, nickel-plated
- Ambient temperature: -70°C ... +220°C



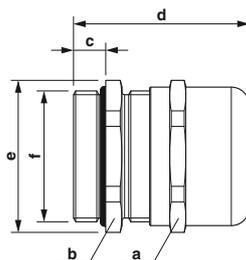
Brass counter nut

Thread type	Color	Clamping area [mm]	Dimensions [mm]					Thread
			a	b	c	d	e	
M12	silver	-	15.00	-	-	2.80	16.50	M12
M16	silver	-	19.00	-	-	2.80	21.00	M16
M20	silver	-	24.00	-	-	3.00	27.00	M20
M25	silver	-	30.00	-	-	3.50	33.50	M25
M32	silver	-	36.00	-	-	4.00	40.00	M32
M40	silver	-	46.00	-	-	5.00	50.00	M40
M50	silver	-	57.00	-	-	5.00	65.00	M50
M63	silver	-	70.00	-	-	6.00	75.00	M63

Ordering data		
Type	Order No.	Pcs. / Pkt.
A-INL-M12-N-S	1411240	100
A-INL-M16-N-S	1411241	100
A-INL-M20-N-S	1411242	100
A-INL-M25-N-S	1411243	100
A-INL-M32-N-S	1411244	100
A-INL-M40-N-S	1411246	50
A-INL-M50-N-S	1411247	25
A-INL-M63-N-S	1411248	25

**Brass cable glands,
Pg, EN 40430**

- Material: brass, nickel-plated
- Cable seal: CR
- O-ring: NBR
- Ambient temperature:
-20°C ... +100°C
- Degree of protection: IP68/IP69
- Strain relief: integrated



Brass cable gland

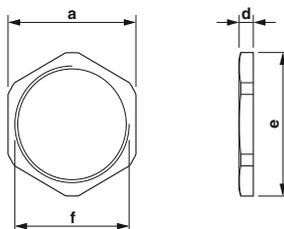
Thread type	Color	Clamping area [mm]	Dimensions [mm]					Thread
			a	b	c	d	e	
Pg7	silver	3.00 - 6.50	14.00	14.00	6.00	27.00	15.50	Pg7
Pg9	silver	4.00 - 8.00	17.00	17.00	6.00	28.00	18.90	Pg9
Pg11	silver	5.00 - 10.00	20.00	20.00	6.00	21.00	22.00	Pg11
Pg13.5	silver	6.00 - 12.00	22.00	22.00	6.50	30.00	24.50	Pg13.5
Pg16	silver	10.00 - 14.00	24.00	24.00	6.50	33.00	26.80	Pg16
Pg21	silver	13.00 - 18.00	30.00	30.00	7.20	38.00	33.00	Pg21
Pg29	silver	18.00 - 25.00	40.00	40.00	8.00	46.00	44.50	Pg29
Pg36	silver	22.00 - 32.00	50.00	50.00	9.00	57.00	55.50	Pg36
Pg42	silver	30.00 - 38.00	58.00	58.00	12.00	60.00	64.00	Pg42
Pg48	silver	34.00 - 44.00	64.00	64.00	14.00	63.00	70.00	Pg48

Ordering data

Type	Order No.	Pcs. / Pkt.
G-INS-PG7-S68N-NNES-S	1411170	10
G-INS-PG9-S68N-NNES-S	1411171	10
G-INS-PG11-S68N-NNES-S	1411172	5
G-INS-PG13,5-S68N-NNES-S	1411173	5
G-INS-PG16-S68N-NNES-S	1411174	5
G-INS-PG21-M68N-NNES-S	1411175	5
G-INS-PG29-M68N-NNES-S	1411176	5
G-INS-PG36-L68N-NNES-S	1411178	5
G-INS-PG42-L68N-NNES-S	1411179	1
G-INS-PG48-L68N-NNES-S	1411181	1

**Brass counter nuts,
Pg, EN 40430**

- Material: brass, nickel-plated
- Ambient temperature:
-70°C ... +220°C



Brass counter nut

Thread type	Color	Clamping area [mm]	Dimensions [mm]					Thread
			a	b	c	d	e	
Pg7	silver	-	15.00	-	-	2.80	16.50	Pg7
Pg9	silver	-	18.00	-	-	2.80	20.00	Pg9
Pg11	silver	-	21.00	-	-	3.00	24.00	Pg11
Pg13.5	silver	-	23.00	-	-	3.00	26.00	Pg13.5
Pg16	silver	-	26.00	-	-	3.00	29.00	Pg16
Pg21	silver	-	32.00	-	-	3.50	36.00	Pg21
Pg29	silver	-	41.00	-	-	4.00	45.00	Pg29
Pg36	silver	-	51.00	-	-	5.00	56.00	Pg36
Pg42	silver	-	60.00	-	-	5.00	65.00	Pg42
Pg48	silver	-	64.00	-	-	5.50	69.00	Pg48

Ordering data

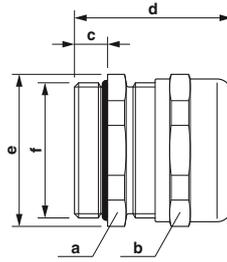
Type	Order No.	Pcs. / Pkt.
A-INL-PG7-N-S	1411255	100
A-INL-PG9-N-S	1411256	100
A-INL-PG11-N-S	1411257	100
A-INL-PG13,5-N-S	1411259	100
A-INL-PG16-N-S	1411260	100
A-INL-PG21-N-S	1411262	100
A-INL-PG29-N-S	1411263	50
A-INL-PG36-N-S	1411264	50
A-INL-PG42-N-S	1411265	25
A-INL-PG48-N-S	1411266	25

Installation and mounting material

Cable glands

Brass EMC cable glands, metric, EN 60423

- Material: brass, nickel-plated
- Cable seal: CR
- O-ring: NBR
- Ambient temperature: -20°C ... +100°C
- Degree of protection: IP66/IP68
- Strain relief: integrated according to EN 50262



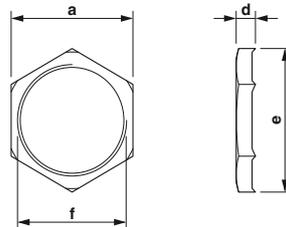
Brass EMC cable gland

Thread type	Color	Clamping area [mm]	Dimensions [mm]					Thread
			a	b	c	d	e	
M12 x 1.5	silver	3.00 - 6.50	14.00	14.00	6.00	28.00	15.50	M12
M16 x 1.5	silver	5.00 - 9.00	17.00	17.00	5.00	30.00	19.00	M16
M20 x 1.5	silver	9.00 - 13.00	22.00	22.00	6.00	33.00	24.00	M20
M25 x 1.5	silver	11.00 - 16.00	27.00	27.00	7.00	36.00	30.00	M25
M32 x 1.5	silver	14.00 - 21.00	34.00	34.00	8.00	38.00	36.00	M32
M40 x 1.5	silver	19.00 - 27.00	43.00	43.00	8.00	41.00	46.00	M40
M50 x 1.5	silver	24.00 - 35.00	55.00	55.00	9.00	49.00	60.00	M50
M63 x 1.5	silver	32.00 - 42.00	65.00	65.00	10.00	52.00	70.00	M63

Ordering data		
Type	Order No.	Pcs. / Pkt.
G-INSEC-M12-S68N-NCRS-S	1411187	10
G-INSEC-M16-S68N-NCRS-S	1411188	10
G-INSEC-M20-S68N-NCRS-S	1411189	5
G-INSEC-M25-S68N-NCRS-S	1411190	5
G-INSEC-M32-M68N-NCRS-S	1411191	5
G-INSEC-M40-M68N-NCRS-S	1411192	5
G-INSEC-M50-L68N-NCRS-S	1411193	1
G-INSEC-M63-L68N-NCRS-S	1411194	1

Brass counter nuts, metric, EN 60423, ribbed

- Material: brass, nickel-plated
- Ambient temperature: -70°C ... +220°C
- Version: ribbed



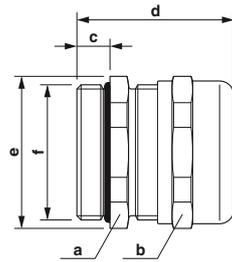
Brass counter nut

Thread type	Color	Clamping area [mm]	Dimensions [mm]					Thread
			a	b	c	d	e	
M12	silver	-	15.00	-	-	4.70	16.50	M12
M16	silver	-	19.00	-	-	4.70	21.00	M16
M20	silver	-	24.00	-	-	4.70	27.00	M20
M25	silver	-	30.00	-	-	5.20	33.50	M25
M32	silver	-	36.00	-	-	5.70	40.00	M32
M40	silver	-	46.00	-	-	6.50	50.00	M40
M50	silver	-	60.00	-	-	6.50	65.00	M50
M63	silver	-	70.00	-	-	7.00	75.00	M63

Ordering data		
Type	Order No.	Pcs. / Pkt.
A-INLE-M12-N-S	1411267	100
A-INLE-M16-N-S	1411268	100
A-INLE-M20-N-S	1411269	100
A-INLE-M25-N-S	1411270	50
A-INLE-M32-N-S	1411271	50
A-INLE-M40-N-S	1411272	50
A-INLE-M50-N-S	1411273	10
A-INLE-M63-N-S	1411274	10

**Brass EMC cable glands,
Pg, EN 40430**

- Material: brass, nickel-plated
- Cable seal: CR
- O-ring: NBR
- Ambient temperature:
-20°C ... +100°C
- Degree of protection: IP66/IP68
- Strain relief: integrated



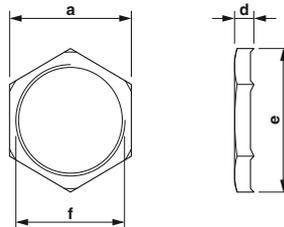
Brass EMC cable gland

Thread type	Color	Clamping area [mm]	Dimensions [mm]					Thread
			a	b	c	d	e	
Pg7	silver	3.00 - 6.50	14.00	14.00	6.00	27.00	15.50	Pg7
Pg9	silver	4.00 - 8.00	17.00	17.00	6.00	29.00	18.90	Pg9
Pg11	silver	5.00 - 10.00	20.00	20.00	6.00	30.00	22.00	Pg11
Pg13.5	silver	6.00 - 12.00	22.00	22.00	6.50	30.00	24.50	Pg13.5
Pg16	silver	10.00 - 14.00	24.00	24.00	6.50	33.00	26.80	Pg16
Pg21	silver	13.00 - 18.00	30.00	30.00	7.20	38.00	33.00	Pg21
Pg29	silver	18.00 - 25.00	40.00	40.00	8.00	47.00	44.50	Pg29
Pg36	silver	22.00 - 32.00	50.00	50.00	9.00	57.00	55.50	Pg36
Pg42	silver	30.00 - 38.00	58.00	58.00	12.00	60.00	64.00	Pg42
Pg48	silver	34.00 - 44.00	64.00	64.00	14.00	65.00	70.00	Pg48

Ordering data		
Type	Order No.	Pcs. / Pkt.
G-INSEC-PG7-S68N-NNES-S	1411195	10
G-INSEC-PG9-S68N-NNES-S	1411196	10
G-INSEC-PG11-S68N-NNES-S	1411197	5
G-INSEC-PG13,5-S68N-NNES-S	1411198	5
G-INSEC-PG16-S68N-NNES-S	1411199	5
G-INSEC-PG21-M68N-NNES-S	1411200	5
G-INSEC-PG29-M68N-NNES-S	1411201	5
G-INSEC-PG36-L68N-NNES-S	1411202	5
G-INSEC-PG42-L68N-NNES-S	1411203	1
G-INSEC-PG48-L68N-NNES-S	1411204	1

**Brass counter nuts,
Pg, EN 40430, ribbed**

- Material: brass, nickel-plated
- Ambient temperature:
-70°C ... +220°C
- Version: ribbed



Brass counter nut

Thread type	Color	Clamping area [mm]	Dimensions [mm]					Thread
			a	b	c	d	e	
Pg7	silver	-	15.00	-	-	4.70	16.50	Pg7
Pg9	silver	-	18.00	-	-	4.70	20.00	Pg9
Pg11	silver	-	21.00	-	-	4.70	24.00	Pg11
Pg13.5	silver	-	23.00	-	-	4.70	26.00	Pg13.5
Pg16	silver	-	26.00	-	-	4.70	29.00	Pg16
Pg21	silver	-	32.00	-	-	5.20	36.00	Pg21
Pg29	silver	-	41.00	-	-	5.70	45.00	Pg29
Pg36	silver	-	51.00	-	-	6.50	56.00	Pg36

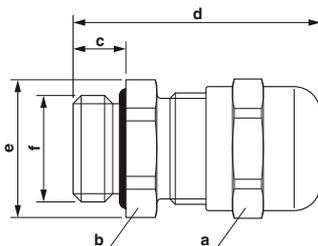
Ordering data		
Type	Order No.	Pcs. / Pkt.
A-INLE-PG7-N-S	1411275	100
A-INLE-PG9-N-S	1411276	100
A-INLE-PG11-N-S	1411277	100
A-INLE-PG13,5-N-S	1411278	100
A-INLE-PG16-N-S	1411279	100
A-INLE-PG21-N-S	1411280	50
A-INLE-PG29-N-S	1411281	50
A-INLE-PG36-N-S	1411282	50

Installation and mounting material

Cable glands

Stainless steel screw connections, metric, EN 60423

- Material: stainless steel
- Cable seal: CR
- O-ring: NBR
- Ambient temperature: -40°C ... +100°C
- Degree of protection: IP66/IP68/IP69
- Strain relief: integrated according to EN 50262



new

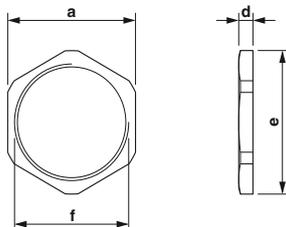
Stainless steel cable gland

Thread type	Color	Clamping area [mm]	Dimensions [mm]					Thread	
			a	b	c	d	e	f	
M12 x 1.5	silver	3.00 - 6.50	14.00	14.00	6.00	33.50	15.50	M12	
M16 x 1.5	silver	5.00 - 10.00	22.00	22.00	7.00	35.00	24.50	M16	
M20 x 1.5	silver	6.00 - 12.00	22.00	22.00	8.00	33.00	24.50	M20	
M25 x 1.5	silver	11.00 - 17.00	27.00	27.00	8.00	40.00	29.80	M25	
M32 x 1.5	silver	15.00 - 21.00	36.00	36.00	8.00	45.00	38.90	M32	
M40 x 1.5	silver	19.00 - 28.00	46.00	46.00	9.00	52.50	51.50	M40	

Ordering data		
Type	Order No.	Pcs. / Pkt.
G-INS-M12-M68N-SNES-S	1424541	1
G-INS-M16-M68N-SNES-S	1424542	1
G-INS-M20-M68N-SNES-S	1424543	1
G-INS-M25-M68N-SNES-S	1424544	1
G-INS-M32-M68N-SNES-S	1424545	1
G-INS-M40-M68N-SNES-S	1424546	1

Stainless steel lock nuts, metric, EN 60423

- Material: stainless steel
- Ambient temperature: -70°C ... +220°C



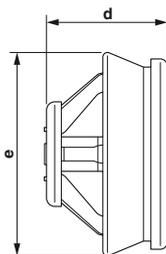
Stainless steel counter nut

Thread type	Color	Clamping area [mm]	Dimensions [mm]					Thread	
			a	b	c	d	e	f	
M12	silver	-	15.00	-	-	2.80	16.50	M12	
M16	silver	-	19.00	-	-	2.80	20.90	M16	
M20	silver	-	24.00	-	-	3.00	27.00	M20	
M25	silver	-	30.00	-	-	3.50	33.50	M25	
M32	silver	-	36.00	-	-	4.00	40.00	M32	
M40	silver	-	46.00	-	-	5.00	50.00	M40	
M50	silver	-	55.00	-	-	5.00	65.00	M50	
M63	silver	-	70.00	-	-	6.00	75.00	M63	

Ordering data		
Type	Order No.	Pcs. / Pkt.
A-INL-M12-S-S	1425175	10
A-INL-M16-S-S	1425176	10
A-INL-M20-S-S	1411249	10
A-INL-M25-S-S	1411250	10
A-INL-M32-S-S	1411251	5
A-INL-M40-S-S	1411252	5
A-INL-M50-S-S	1411253	2
A-INL-M63-S-S	1411254	1

Membrane screw connections

- Material: polypropylene
- For panel thickness of 0.8 mm ... 3.5 mm
- UV-resistant
- Ambient temperature:
-40°C ... +65°C
- Degree of protection: IP66/IP67



Membrane screw connection

Thread type	Color	Clamping area [mm]
M16	light gray	4.00 - 10.00
M20	light gray	6.00 - 13.00
M25	light gray	9.00 - 17.00

Dimensions [mm]					Thread
a	b	c	d	e	f
-	-	8.00	15.00	32.00	M16
-	-	8.00	15.00	34.00	M20
-	-	8.00	15.00	40.00	M25

Ordering data		
Type	Order No.	Pcs. / Pkt.
MG-INC-M16-S67L-PTES-LG	1415186	20
MG-INC-M20-S67L-PTES-LG	1415187	20
MG-INC-M25-M67L-PTES-LG	1415188	20

Installation and mounting material

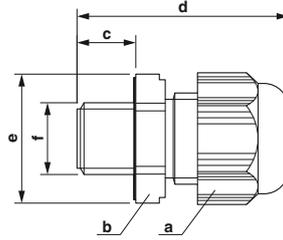
Cable glands

Plastic pressure compensation screw connections, metric, EN 60423

new

Reduces the formation of condensation

- Material: polyamide
- Cable seal: CR
- Flat gasket: NBR
- Ambient temperature: -20°C ... +100°C
- Degree of protection: IP66/IP67



Plastic pressure compensation screw connections

Notes:
For counter nuts, see page 694

Thread type	Clamping area [mm]	Dimensions [mm]					Thread
		a	b	c	d	e	
M12 x 1.5	4.00 - 8.00	19.00	19.00	8.00	33.00	-	M12
M16 x 1.5	4.00 - 8.00	19.00	19.00	10.00	35.50	-	M16
M20 x 1.5	6.00 - 12.00	24.00	24.00	10.00	40.00	-	M20

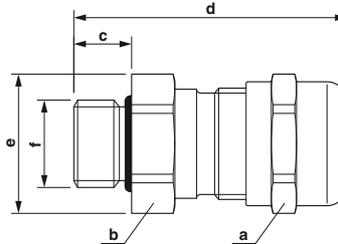
Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
light gray		black	
1424532	5	1424535	5
1424533	5	1424536	5
1424534	5	1424537	5

Brass pressure compensation screw connections, metric, EN 60423

new

Reduces the formation of condensation

- Material: brass, nickel-plated
- Cable seal: CR
- Flat gasket: CR
- Ambient temperature: -20°C ... +100°C
- Degree of protection: IP66/IP67



Brass pressure compensation screw connection

Notes:
For counter nuts, see page 700

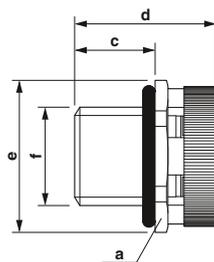
Thread type	Color	Clamping area [mm]	Dimensions [mm]					Thread
			a	b	c	d	e	
M12 x 1.5	silver	4.00 - 8.00	17.00	17.00	6.00	36.50	-	M12
M16 x 1.5	silver	4.00 - 8.00	17.00	17.00	5.00	32.00	-	M16
M20 x 1.5	silver	6.00 - 12.00	22.00	22.00	8.00	35.00	-	M20

Ordering data		
Type	Order No.	Pcs. / Pkt.
G-INVEN-M12-M67N-NNES-S	1424538	1
G-INVEN-M16-M67N-NNES-S	1424539	1
G-INVEN-M20-M67N-NNES-S	1424540	1

Plastic pressure compensation elements, metric, EN 60423

Reduces the formation of condensation

- Material: polyamide
- O-ring: NBR
- Ambient temperature: -20°C ... +100°C
- Degree of protection: IP66/IP67/IP69



Plastic pressure compensation elements

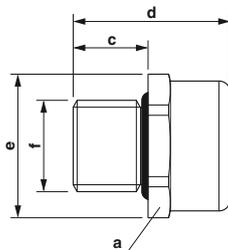
Thread type	Clamping area [mm]	Dimensions [mm]					Thread
		a	b	c	d	e	
M12 x 1.5	-	17.00	-	10.00	17.50	18.50	M12

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
light gray		black	
1415222	5	1415223	5

Stainless steel pressure compensation element, metric, EN 60423

Reduces the formation of condensation

- Material: stainless steel
- O-ring: NBR
- Ambient temperature: -20°C ... +100°C
- Degree of protection: IP66/IP67/IP69



Stainless steel pressure compensation element

Thread type	Color	Clamping area [mm]	Dimensions [mm]					Thread
			a	b	c	d	e	
M12 x 1.5	silver	-	17.00	-	10.00	21.00	18.50	M12

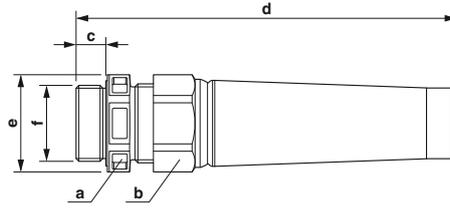
Ordering data		
Type	Order No.	Pcs. / Pkt.
A-INB-M12-69KN-S-S	1415224	5

Installation and mounting material

Cable glands

Plastic cable glands with bend protection, metric, EN 60423

- Material: polyamide
- Flat gasket: EPDM
- Cable seal: EPDM
- O-ring: EPDM
- Ambient temperature: -40°C ... +100°C
- Degree of protection: IP68/IP69



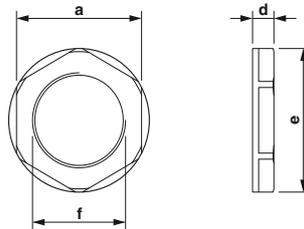
Plastic cable glands with bend protection

Thread type	Clamping area [mm]	Dimensions [mm]					Thread
		a	b	c	d	e	
M12 x 1.5	3.00 - 7.00	16.00	16.00	9.00	72.00	18.00	M12
M16 x 1.5	4.50 - 10.00	20.00	20.00	9.00	82.00	22.00	M16
M20 x 1.5	6.00 - 13.00	24.00	24.00	12.00	103.00	27.00	M20
M25 x 1.5	9.00 - 17.00	29.00	29.00	12.00	113.00	32.00	M25
M32 x 1.5	13.00 - 21.00	36.00	36.00	12.00	138.00	40.00	M32

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
light gray		black	
1415171	10	1415177	10
1415172	10	1415178	10
1415174	10	1415179	10
1415175	10	1415180	10
1415176	5	1415181	5

Plastic counter nuts, metric, EN 60423

- Material: polyamide 6
- Ambient temperature: -20°C ... +100°C



new



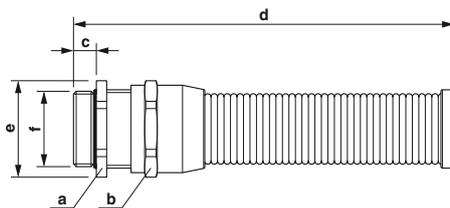
Plastic counter nuts

Thread type	Clamping area [mm]	Dimensions [mm]					Thread
		a	b	c	d	e	
M12	-	18.00	-	-	5.00	19.50	M12
M16	-	22.00	-	-	5.00	24.20	M16
M20	-	26.00	-	-	6.00	28.60	M20
M25	-	32.00	-	-	6.00	35.00	M25
M32	-	41.00	-	-	7.00	46.10	M32

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
light gray		black	
1417659	10	1411213	10
1417660	10	1411214	10
1414570	5	1411215	5
1417661	5	1411216	5
1417662	5	1411217	5

Brass cable glands with bend protection, metric, EN 60423

- Material: brass, nickel-plated
- Cable seal: EPDM
- O-ring: EPDM
- Ambient temperature: -40°C ... +100°C
- Degree of protection: IP68/IP69



Brass cable gland with bend protection

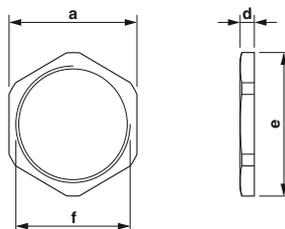
Thread type	Color	Clamping area [mm]
M20 x 1.5	silver	6.00 - 13.00
M25 x 1.5	silver	9.00 - 17.00
M32 x 1.5	silver	13.00 - 21.00
M40 x 1.5	silver	16.00 - 28.00

Dimensions [mm]					Thread
a	b	c	d	e	f
24.00	24.00	6.00	96.00	27.00	M20
29.00	29.00	7.00	120.00	32.00	M25
36.00	36.00	8.00	146.00	40.00	M32
46.00	46.00	8.00	184.00	51.00	M40

Ordering data		
Type	Order No.	Pcs. / Pkt.
G-INB-M20-S68N-NEPDS-S	1415182	5
G-INB-M25-M68N-NEPDS-S	1415183	5
G-INB-M32-M68N-NEPDS-S	1415184	1
G-INB-M40-M68N-NEPDS-S	1415185	1

Brass counter nuts, metric, EN 60423

- Material: brass, nickel-plated
- Ambient temperature: -70°C ... +220°C



Brass counter nut

Thread type	Color	Clamping area [mm]
M20	silver	-
M25	silver	-
M32	silver	-
M40	silver	-

Dimensions [mm]					Thread
a	b	c	d	e	f
24.00	-	-	3.00	27.00	M20
30.00	-	-	3.50	33.50	M25
36.00	-	-	4.00	40.00	M32
46.00	-	-	5.00	50.00	M40

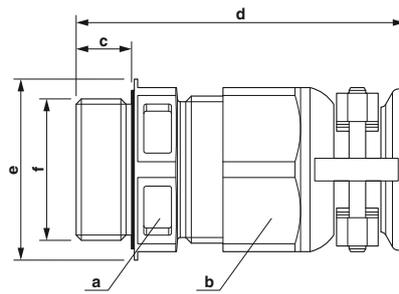
Ordering data		
Type	Order No.	Pcs. / Pkt.
A-INL-M20-N-S	1411242	100
A-INL-M25-N-S	1411243	100
A-INL-M32-N-S	1411244	100
A-INL-M40-N-S	1411246	50

Installation and mounting material

Cable glands

Plastic cable glands with strain relief, metric, EN 60423

- Material: polyamide
- Flat gasket: EPDM
- Cable seal: EPDM
- Ambient temperature: -20°C ... +100°C
- Degree of protection: IP68/IP69



Plastic cable gland with strain relief

Notes:

For counter nuts, see page 694

Thread type	Color	Clamping area [mm]
M20 x 1.5	jet black	6.00 - 13.00
M25 x 1.5	jet black	9.00 - 17.00
M32 x 1.5	jet black	13.00 - 21.00

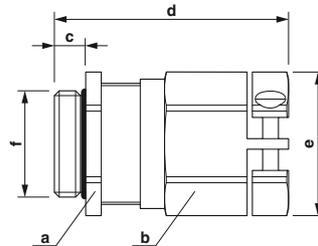
Dimensions [mm]					Thread
a	b	c	d	e	f
24.00	24.00	10.00	49.00	26.50	M20
29.00	29.00	10.00	51.00	32.00	M25
36.00	36.00	12.00	57.00	40.00	M32

Ordering data

Type	Order No.	Pcs. / Pkt.
G-INTRO-M20-S68N-PEPDS-BK	1415189	10
G-INTRO-M25-M68N-PEPDS-BK	1415190	10
G-INTRO-M32-M68N-PEPDS-BK	1415191	5

Brass cable glands with strain relief, metric, EN 60423

- Material: brass, nickel-plated
- Cable seal: EPDM
- O-ring: EPDM
- Ambient temperature: -40°C ... +100°C
- Degree of protection: IP68/IP69



Brass cable gland with strain relief

Notes:

For counter nuts, see page 696

Thread type	Color	Clamping area [mm]
M20 x 1.5	silver	6.00 - 13.00
M25 x 1.5	silver	9.00 - 17.00
M32 x 1.5	silver	13.00 - 21.00
M40 x 1.5	silver	16.00 - 28.00

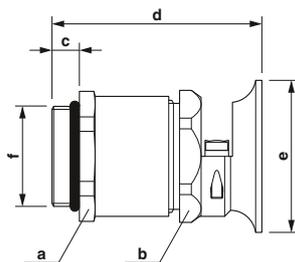
Dimensions [mm]					Thread
a	b	c	d	e	f
24.00	24.00	6.00	37.00	27.00	M20
29.00	29.00	7.00	42.00	32.00	M25
36.00	36.00	8.00	45.00	40.00	M32
46.00	46.00	8.00	54.00	51.00	M40

Ordering data

Type	Order No.	Pcs. / Pkt.
G-INESR-M20-S68N-NEPDS-S	1415192	5
G-INESR-M25-M68N-NEPDS-S	1415193	5
G-INESR-M32-M68N-NEPDS-S	1415194	1
G-INESR-M40-M68N-NEPDS-S	1415195	1

Brass cable glands with bend protection and strain relief, metric, EN 60423

- Material: brass, nickel-plated
- Cable seal: NBR
- O-ring: NBR
- Ambient temperature: -30°C ... +80°C
- Degree of protection: IP65



Brass cable gland with cable bend protection and strain relief

Notes:
For counter nuts, see page 696

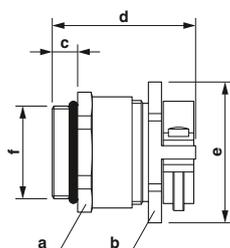
Thread type	Color	Clamping area [mm]
M20 x 1.5	silver	7.50 - 15.00
M25 x 1.5	silver	10.00 - 19.00
M32 x 1.5	silver	18.00 - 27.00

Dimensions [mm]					Thread
a	b	c	d	e	f
24.00	24.00	6.00	40.00	32.00	M20
30.00	30.00	7.00	44.00	38.00	M25
41.00	40.00	8.00	51.00	50.00	M32

Ordering data		
Type	Order No.	Pcs. / Pkt.
HC-M-KV-T-M20	1646188	10
HC-M-KV-T-M25	1646191	10
HC-M-KV-T-M32	1646201	10

Brass cable glands with strain relief clamp, metric, EN 60423

- Material: brass, nickel-plated
- Cable seal: NBR
- O-ring: NBR
- Ambient temperature: -30°C ... +80°C
- Degree of protection: IP65



Brass cable gland with strain relief clamp

Notes:
For counter nuts, see page 696

Thread type	Color	Clamping area [mm]
M20 x 1.5	silver	7.50 - 15.00
M25 x 1.5	silver	10.00 - 19.00
M32 x 1.5	silver	18.00 - 27.00
M40 x 1.5	silver	24.00 - 33.00

Dimensions [mm]					Thread
a	b	c	d	e	f
27.00	24.00	6.00	35.00	30.00	M20
34.00	30.00	7.00	39.00	38.00	M25
42.00	40.00	8.00	43.00	47.00	M32
52.00	50.00	8.00	49.00	56.00	M40

Ordering data		
Type	Order No.	Pcs. / Pkt.
HC-M-KV-Z-M20	1646146	10
HC-M-KV-Z-M25	1646159	10
HC-M-KV-Z-M32	1646162	10
HC-M-KV-Z-M40	1646175	10

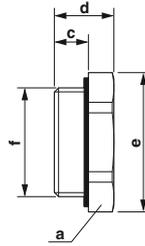
Installation and mounting material

Cable glands

Plastic reducing adapter, metric, EN 60423

new

- Material: polyamide
- Flat gasket: CR
- Ambient temperature: -20°C ... +100°C



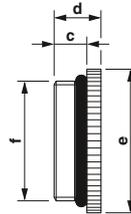
Plastic reducing adapter

Thread type	Color	Clamping area [mm]	Dimensions [mm]					Thread	
			a	b	c	d	e	f	
M25 x 1.5 / M20 x 1.5	black	-	-	-	8.00	14.00	32.00	M25 / M20	
M32 x 1.5 / M20 x 1.5	black	-	-	-	10.00	16.00	40.00	M32 / M20	
M32 x 1.5 / M25 x 1.5	black	-	-	-	10.00	16.00	40.00	M32 / M25	
M40 x 1.5 / M25 x 1.5	black	-	-	-	10.00	16.00	50.50	M40 / M25	
M40 x 1.5 / M32 x 1.5	black	-	-	-	10.00	16.00	50.50	M40 / M32	

Ordering data		
Type	Order No.	Pcs. / Pkt.
REDUC-K-KV-M25/M20 BK	1411232	10
REDUC-K-KV-M32/M20 BK	1410725	10
REDUC-K-KV-M32/M25 BK	1410712	10
REDUC-K-KV-M40/M25 BK	1410741	10
REDUC-K-KV-M40/M32 BK	1410738	10

Brass reducing adapter, metric, EN 60423

- Material: brass, nickel-plated
- O-ring: NBR
- Ambient temperature: -20°C ... +80°C



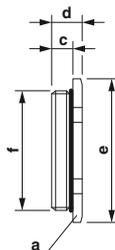
Brass reducing adapter

Thread type	Color	Clamping area [mm]	Dimensions [mm]					Thread	
			a	b	c	d	e	f	
M20 x 1.5 / M16 x 1.5	silver	-	-	-	6.50	9.00	24.00	M20 / M16	
M25 x 1.5 / M20 x 1.5	silver	-	-	-	7.00	10.00	30.00	M25 / M20	
M32 x 1.5 / M25 x 1.5	silver	-	-	-	8.00	11.50	37.00	M32 / M25	
M40 x 1.5 / M32 x 1.5	silver	-	-	-	8.00	11.50	43.00	M40 / M32	

Ordering data		
Type	Order No.	Pcs. / Pkt.
REDUC-M-KV-M20/M16	1647611	10
REDUC-M-KV-M25/M20	1647624	10
REDUC-M-KV-M32/M25	1647637	10
REDUC-M-KV-M40/M32	1647640	10

**Brass reducing adapter,
Pg, EN 40430**

- Material: brass, nickel-plated
- O-ring: NBR
- Ambient temperature:
-20°C ... +80°C



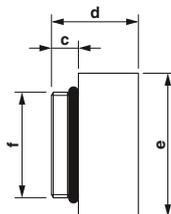
Brass reducing adapter

Thread type	Color	Clamping area [mm]	Dimensions [mm]					Thread
			a	b	c	d	e	
Pg16 / Pg13.5	-	-	-	-	8.00	11.50	44.00	Pg16 / Pg13.5
Pg21 / Pg16	-	-	-	-	7.00	10.00	33.50	Pg21 / Pg16
Pg29 / Pg21	-	-	-	-	6.50	9.50	27.00	Pg29 / Pg21

Ordering data		
Type	Order No.	Pcs. / Pkt.
A-INR-PG16/13-N-NS-S	1415216	10
A-INR-PG21/16-N-NS-S	1415217	10
A-INR-PG29/21-N-NS-S	1415218	10

Metal extensions

- Material: brass, nickel-plated
- O-ring: NBR
- Ambient temperature:
-20°C ... +80°C



Metal extension adapter

Thread type	Color	Clamping area [mm]	Dimensions [mm]					Thread
			a	b	c	d	e	
M16 x 1.5 / M20 x 1.5	silver	-	-	-	6.00	17.50	22.00	M16 / M20
M20 x 1.5 / M25 x 1.5	silver	-	-	-	6.50	19.00	27.00	M20 / M25
M25 x 1.5 / M32 x 1.5	silver	-	-	-	6.50	21.00	34.00	M25 / M32
M32 x 1.5 / M40 x 1.5	silver	-	-	-	7.00	23.00	42.00	M32 / M40
Pg13.5 / Pg16	silver	-	-	-	6.50	19.00	24.00	Pg13.5 / Pg16
Pg16 / Pg21	silver	-	-	-	6.50	21.00	30.00	Pg16 / Pg21
Pg21 / Pg29	silver	-	-	-	7.00	23.00	39.00	Pg21 / Pg29

Ordering data		
Type	Order No.	Pcs. / Pkt.
ENLAR-M-KV-M16/M20	1647653	10
ENLAR-M-KV-M20/M25	1647666	10
ENLAR-M-KV-M25/M32	1647679	10
ENLAR-M-KV-M32/M40	1647682	10
A-INE-PG13/16-N-NS-S	1415219	10
A-INE-PG16/21-N-NS-S	1415220	10
A-INE-PG21/29-N-NS-S	1415221	10

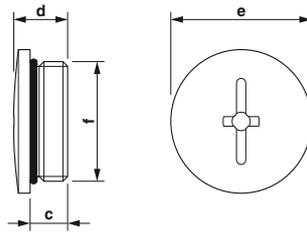
Installation and mounting material

Cable glands

Plastic screw plugs, metric, EN 60423

new

- Material: polyamide, fiberglass-reinforced
- O-ring: EPDM
- Ambient temperature: -40°C ... +100°C
- Degree of protection: IP66/IP68



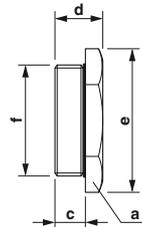
Plastic screw plugs

Thread type	Clamping area [mm]	Dimensions [mm]					Thread
		a	b	c	d	e	
M20 x 1.5	-	-	-	6.00	9.50	24.00	M20
M25 x 1.5	-	-	-	8.00	11.50	30.00	M25
M32 x 1.5	-	-	-	8.00	12.00	37.00	M32
M40 x 1.5	-	-	-	8.00	13.00	46.00	M40

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
light gray		black	
1424519	10	1415206	10
1424520	10	1415207	10
1424521	10	1415208	10
1424522	5	1415210	5

Brass screw plugs, metric, EN 60423

- Material: brass, nickel-plated
- O-ring: NBR
- Ambient temperature: -20°C ... +80°C
- Degree of protection: IP68



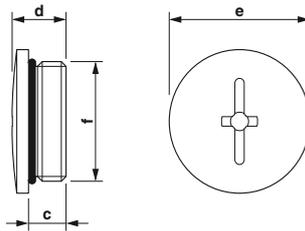
Metal screw plug

Thread type	Color	Clamping area [mm]	Dimensions [mm]					Thread
			a	b	c	d	e	
M16 x 1.5	silver	-	18.00	-	5.00	8.00	20.00	M16
M20 x 1.5	silver	-	22.00	-	6.00	9.00	24.00	M20
M25 x 1.5	silver	-	28.00	-	6.50	10.00	31.50	M25
M32 x 1.5	silver	-	35.00	-	7.00	10.50	39.00	M32
M40 x 1.5	silver	-	44.00	-	8.00	12.00	50.00	M40

Ordering data		
Type	Order No.	Pcs. / Pkt.
HC-M-BS-M16	1646227	10
HC-M-BS-M20	1645846	10
HC-M-BS-M25	1645859	10
HC-M-BS-M32	1645862	10
HC-M-BS-M40	1645875	10

**Plastic screw plugs,
Pg, EN 40430**

- Material: polyamide, fiberglass reinforced
- O-ring: EPDM
- Ambient temperature:
-40°C ... +100°C
- Degree of protection: IP65



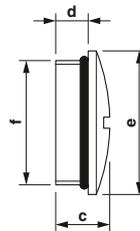
Plastic screw plugs

Thread type	Clamping area [mm]	Dimensions [mm]					Thread
		a	b	c	d	e	
Pg16 x 1.5	-	-	-	6.00	9.50	27.00	Pg16
Pg21 x 1.5	-	-	-	8.00	11.00	33.00	Pg21
Pg29 x 1.5	-	-	-	8.00	12.00	44.00	Pg29

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
light gray		black	
1424523	10	1415213	10
1424524	10	1415214	10
1424525	10	1415215	10

**Brass screw plugs,
Pg, EN 40430**

- Material: brass, nickel-plated
- O-ring: NBR
- Ambient temperature:
-20°C ... +80°C
- Degree of protection: IP68



Metal screw plug

Thread type	Color	Clamping area [mm]	Dimensions [mm]					Thread
			a	b	c	d	e	
Pg11	silver	-	-	-	6.00	9.00	20.00	Pg11
Pg13.5	silver	-	-	-	6.50	9.50	22.00	Pg13.5
Pg16	silver	-	-	-	6.50	9.50	24.00	Pg16
Pg21	silver	-	-	-	7.00	11.00	30.00	Pg21
Pg29	silver	-	-	-	8.00	12.00	39.00	Pg29
Pg36	silver	-	-	-	9.00	15.00	50.00	Pg36

Ordering data		
Type	Order No.	Pcs. / Pkt.
HC-BS-PG11	1674493	10
HC-BS-PG13	1674503	10
HC-BS-PG16	1674516	10
HC-BS-PG21	1674529	10
HC-BS-PG29	1674532	10
HC-BS-PG36	1674545	10

Cable glands

Sealing plugs

new



For sealing unused bore holes in multiple grommets and cable glands.



Sealing plugs

Technical data

General data	
Material	PA
Ambient temperature (operation)	-60°C ... 100°C

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Closing cap				
Ø 3 mm	red	SEALING PLUG 3X12 RD	1400238	10
Ø 5 mm	red	SEALING PLUG 5X12 RD	1400253	10
Ø 6 mm	red	SEALING PLUG 6X16 RD	1400254	10
Ø 7 mm	red	SEALING PLUG 7X16 RD	1400255	10
Ø 8 mm	red	SEALING PLUG 8X16 RD	1400257	10
Ø 9 mm	red	SEALING PLUG 9X16 RD	1400259	10
Ø 10 mm	red	SEALING PLUG 10X16 RD	1400284	10
Ø 12 mm	red	SEALING PLUG 12X22 RD	1400260	10
Ø 13 mm	red	SEALING PLUG 13X22 RD	1400265	10
Ø 14 mm	red	SEALING PLUG 14X22 RD	1400270	10
Ø 17 mm	red	SEALING PLUG 17X17 RD	1421861	10
Ø 20 mm	red	SEALING PLUG 20X22 RD	1421862	10
Ø 25 mm	red	SEALING PLUG 25X30 RD	1421863	10
Ø 28 mm	red	SEALING PLUG 28X30 RD	1421864	10
Ø 35 mm	red	SEALING PLUG 35X35 RD	1421865	10

Installation and mounting material

Service interfaces

Mounting frame

- For one data front plate
- Cover, transparent

Notes:
Control cabinet key with double bit, see page 721



**EMC mounting frame
for one data front plate**



**Mounting frame
for one data front plate**

Technical data
Housing material
Flammability rating according to UL 94
Degree of protection
Ambient temperature (operation)

Zinc alloy
V0
IP65
-10°C ... 60°C

PBT
V0
IP65
-30°C ... 70°C

Description

Mounting frame, with metal frame, matt nickel-plated, electrically conductive, transparent cover for one data front plate

Mounting frame, with plastic frame, black, PC plastic cover, transparent, closure with 3 mm double bit or with enclosed knob

for one data front plate

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-SI-EB-EMV-1	1656482	1

Ordering data

Type	Order No.	Pcs. / Pkt.
SI-M1A	1404493	1

Mounting frame

- For one data front plate
- Silver or gray cover

Notes:
Control cabinet key with double bit, see page 721



**Mounting frame
for one data front plate**



**Mounting frame
for one data front plate**

Technical data
Housing material
Flammability rating according to UL 94
Degree of protection
Ambient temperature (operation)

PBT
V0
IP65
-30°C ... 70°C

PBT
V0
IP65
-30°C ... 70°C

Description

Mounting frame, with plastic frame, black, ABS plastic lid, metallic, closure with 3 mm double bit or with enclosed knob

for one data front plate

Mounting frame, with plastic frame, black, PBT plastic lid, gray, closure with 3 mm double bit or with enclosed knob

for one data front plate

Ordering data

Type	Order No.	Pcs. / Pkt.
SI-M1A-ML	1407588	1

Ordering data

Type	Order No.	Pcs. / Pkt.
SI-M1A-GL	1407592	1

Mounting frame

- For two data front plates
- Cover, transparent

Notes:
Control cabinet key with double bit, see page 721



**EMC mounting frame
for two data front plates**



**Mounting frame
for two data front plates**

Technical data
Housing material
Flammability rating according to UL 94
Degree of protection
Ambient temperature (operation)

Technical data

Zinc alloy
V0
IP65
-10°C ... 60°C

Technical data

PBT
V0
IP65
-30°C ... 70°C

Description
Mounting frame, with metal frame, matt nickel-plated, electrically conductive, transparent cover for two data front plates
Mounting frame, with plastic frame, black, PC plastic cover, transparent, closure with 3 mm double bit or with enclosed knob
for two data front plates

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-SI-EB-EMV-2	1656495	1

Ordering data

Type	Order No.	Pcs. / Pkt.
SI-M1B	1404494	1

Mounting frame

- For two data front plates
- Silver or gray cover

Notes:
Control cabinet key with double bit, see page 721



**Mounting frame
for two data front plates**



**Mounting frame
for two data front plates**

Technical data
Housing material
Flammability rating according to UL 94
Degree of protection
Ambient temperature (operation)

Technical data

PBT
V0
IP65
-30°C ... 70°C

Technical data

PBT
V0
IP65
-30°C ... 70°C

Description
Mounting frame, with plastic frame, black, ABS plastic lid, metallic, closure with 3 mm double bit or with enclosed knob
for two data front plates
Mounting frame, with plastic frame, black, PBT plastic lid, gray, closure with 3 mm double bit or with enclosed knob
for two data front plates

Ordering data

Type	Order No.	Pcs. / Pkt.
SI-M1B-ML	1407589	1

Ordering data

Type	Order No.	Pcs. / Pkt.
SI-M1B-GL	1407593	1

Service interfaces

Data front plates



Front plate



Front plate

Technical data
Housing material
Degree of protection
Ambient temperature (operation)

PBT
IP20
-10°C ... 60°C

PBT
IP20
-10°C ... 60°C

Technical data

Technical data

Ordering data

Ordering data

Description

Data front plate, with the following contact inserts:

1 x RJ45 CAT5, 1 x D-SUB 9 BP

Data front plate, with the following contact inserts:

2 x RJ45 CAT5 (socket to socket)

Data front plate, unequipped, for accommodating the following contact inserts:

2x RJ (with shroud)

Type	Order No.	Pcs. / Pkt.
SI-FP-R1A-D1E	1404500	1

Type	Order No.	Pcs. / Pkt.
VS-SI-FP-2RJ45-5-MOD-BU/BU	1657766	1
VS-SI-FP-2RJ-MOD	1656631	1

Data front plates



Front plate



Front plate

Technical data
Housing material
Degree of protection
Ambient temperature (operation)

PBT
IP20
-10°C ... 60°C

PBT
IP20
-10°C ... 60°C

Technical data

Technical data

Ordering data

Ordering data

Description

Data front plate, with the following contact inserts:

1 x RJ45 CAT5, 1 x D-SUB 9

Data front plate, with the following contact inserts:

1 x RJ45 CAT5, 2 x D-SUB 9

Type	Order No.	Pcs. / Pkt.
SI-FP-R1A-D1A	1404496	1

Type	Order No.	Pcs. / Pkt.
SI-FP-R1A-D1A-D1C	1404507	1

Data front plates



Front plate



Front plate

Technical data
Housing material
Degree of protection
Ambient temperature (operation)

PBT
IP20
-10°C ... 60°C

PBT
-
-10°C ... 60°C

Ordering data

Ordering data

Description

Data front plate, with the following contact inserts:

1 x RJ45 CAT5, 1 x USB A

Data front plate, with the following contact inserts:

2 x RJ45 CAT5, 1 x USB A

Type	Order No.	Pcs. / Pkt.
SI-FP-R1A-U1A	1404499	1

Type	Order No.	Pcs. / Pkt.
SI-FP-2R1A-U1A	1404506	1

Data front plates



Front plate



Front plate

Technical data
Housing material
Degree of protection
Ambient temperature (operation)

PBT
IP20
-10°C ... 60°C

PBT
IP20
-10°C ... 60°C

Ordering data

Ordering data

Description

Data front plate, with the following contact inserts:

1 x RJ45 CAT5, 1 x D-SUB 9, 1 x D-SUB 25

Data front plate, with the following contact inserts:

1 x RJ45 CAT5, 1 x RJ12, 2 x USB A

Type	Order No.	Pcs. / Pkt.
SI-FP-R1A-D1B-D3B	1404502	1

Type	Order No.	Pcs. / Pkt.
SI-FP-R1A-R2A-2U1A	1404503	1

Installation and mounting material

Service interfaces

Data front plates



Front plate



Front plate

Technical data
Housing material
Degree of protection
Ambient temperature (operation)

Technical data
PBT
IP20
-10°C ... 60°C

Technical data
PBT
IP20
-10°C ... 60°C

Description

Data front plate, with the following contact inserts:

1 x RJ45 CAT5, 1 x USB A with 0.7 m cable

Data front plate, with the following contact inserts:

1 x RJ45 CAT5, 1 x USB A with 0.7 m cable, 1 x D-SUB 9

Ordering data		
Type	Order No.	Pcs. / Pkt.
SI-FP-R1A-U1A/0,7	1404512	1

Ordering data		
Type	Order No.	Pcs. / Pkt.
SI-FP-R1A-D1B-U1A/0,7	1404504	1

Data front plates



Front plate



Front plate

Technical data
Housing material
Degree of protection
Ambient temperature (operation)

Technical data
PBT
IP20
-10°C ... 60°C

Technical data
PBT
IP20
-10°C ... 60°C

Description

Data front plate, with the following contact inserts:

1 x RJ45 CAT5 (socket to socket), 1 x USB A (socket to socket), 1 x D-SUB 9 (socket to socket)

Data front plate, with the following contact inserts:

1 x RJ45 CAT5 (socket to socket), 1 x USB A (socket to socket), 1 x D-SUB 9 (socket to pin)

Ordering data		
Type	Order No.	Pcs. / Pkt.
SI-FP-R1A-U1A-D1A	1404497	1

Ordering data		
Type	Order No.	Pcs. / Pkt.
SI-FP-R1A-U1A-D1B	1404495	1

Data front plates



Front plate



Front plate

Technical data
Housing material
Degree of protection
Ambient temperature (operation)

PBT
IP20
-10°C ... 60°C

PBT
IP20
-10°C ... 60°C

Technical data

Technical data

Ordering data

Ordering data

Description

Data front plate, with the following contact inserts:

1 x USB A

Data front plate, with the following contact inserts:

2x D-SUB 9

Type	Order No.	Pcs. / Pkt.
SI-FP-U1A	1404505	1

Type	Order No.	Pcs. / Pkt.
SI-FP-2D1D	1404510	1

Data front plates



Front plate



Front plate

Technical data
Housing material
Degree of protection
Ambient temperature (operation)

PBT
IP20
-10°C ... 60°C

PBT
IP20
-10°C ... 60°C

Technical data

Technical data

Ordering data

Ordering data

Description

Data front plate, with the following contact inserts:

1 x D-SUB 9

Data front plate, with the following contact inserts:

1 x D-SUB 9, 1 x D-SUB 9-BP

Type	Order No.	Pcs. / Pkt.
SI-FP-D1A	1404501	1

Type	Order No.	Pcs. / Pkt.
SI-FP-D1D-D1E	1404509	1

Installation and mounting material

Service interfaces

Data front plates



Front plate



Front plate

Technical data
Housing material
Degree of protection
Ambient temperature (operation)

Technical data		
Housing material	PBT	
Degree of protection	IP20	
Ambient temperature (operation)	-10°C ... 60°C	

Technical data		
Housing material	PBT	
Degree of protection	IP20	
Ambient temperature (operation)	-10°C ... 60°C	

Description
Data front plate , with the following contact inserts:
2x D-SUB 9
Data front plate , unequipped, for accommodating the following contact inserts:
2x D-SUB 9
Data front plate , with the following contact inserts:
1 x D-SUB 9, 1 x D-SUB 25
Data front plate , unequipped, for accommodating the following contact inserts:
1 x D-SUB 9, 1 x D-SUB 25

Ordering data		
Type	Order No.	Pcs. / Pkt.
VS-SI-FP-2DSUB9-GC-BU/ST	1657708	1
VS-SI-FP-2DSUB9	1656563	1

Ordering data		
Type	Order No.	Pcs. / Pkt.
VS-SI-FP-DSUB9-DSUB25-GC-BU/ST	1657724	1
VS-SI-FP-DSUB9-DSUB25	1656589	1

Data front plates



Front plate



Front plate

Technical data
Housing material
Degree of protection
Ambient temperature (operation)

Technical data		
Housing material	PBT	
Degree of protection	IP20	
Ambient temperature (operation)	-10°C ... 60°C	

Technical data		
Housing material	PBT	
Degree of protection	IP20	
Ambient temperature (operation)	-10°C ... 60°C	

Description
Data front plate , with the following contact inserts:
1 x D-SUB 9, 1 x D-SUB 15
Data front plate , unequipped, for accommodating the following contact inserts:
1 x D-SUB 9, 1 x D-SUB 15
Data front plate , with the following contact inserts:
2 x D-SUB 15
Data front plate , unequipped, for accommodating the following contact inserts:
2 x D-SUB 15

Ordering data		
Type	Order No.	Pcs. / Pkt.
VS-SI-FP-DSUB9-DSUB15-GC-BU/ST	1657711	1
VS-SI-FP-DSUB9-DSUB15	1656576	1

Ordering data		
Type	Order No.	Pcs. / Pkt.
VS-SI-FP-2DSUB15-GC-BU/ST	1657737	1
VS-SI-FP-2DSUB15	1656592	1

Data front plates



Front plate



Front plate

Technical data

Technical data
Housing material
Degree of protection
Ambient temperature (operation)

PBT
IP20
-10°C ... 60°C

Technical data

PBT
IP20
-10°C ... 60°C

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-SI-FP-DSUB15DSUB25-GC-BU/ST	1657740	1
VS-SI-FP-DSUB15-DSUB25	1656602	1

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-SI-FP-2DSUB25-GC-BU/ST	1657753	1
VS-SI-FP-2DSUB25	1656615	1

Description
Data front plate , with the following contact inserts: 1 x D-SUB 15, 1 x D-SUB 25
Data front plate , unequipped, for accommodating the following contact inserts: 1 x D-SUB 15, 1 x D-SUB 25
Data front plate , with the following contact inserts: 2 x D-SUB 25
Data front plate , unequipped, for accommodating the following contact inserts: 2 x D-SUB 25

Mounting frame accessories



Control cabinet keys

Ordering data

Type	Order No.	Pcs. / Pkt.
USS 4	1203149	1

Description
Control cabinet key , for all popular control cabinets, closures: 5, 6, 7-8 mm, square, 7-8 mm triangle, 3-5 mm two-way key bit

Service interfaces

Control cabinet sockets



Sockets that can be mounted on DIN rails serve for easy connection of electrical auxiliary devices for assembly, testing, lighting, etc.. They enable worldwide use in switchgear, control cabinets, and in simple sub-distributions. Worldwide use makes it essential to offer the sockets with pin connector patterns that are standard in each country, according to the currently applicable standards and regulations. The mounting holes in the sockets mean that, in addition to mounting on a DIN rail according to EN 60715, there is also the option of direct mounting in the service interface. The EO sockets are offered with both the proven screw connection, as well as the modern Push-in connection. The integrated functions such as LED, fuse, switch, circuit breaker or a combination of the functions with each other, offers a wide area of use.

L1, N, and PE are arranged on one side of the socket depending on the connection. You can select the following pin connector patterns for the sockets:

- Type AB, type CF, type D, type E, type G, type H, type I, type J, type K, type L, and type N
- Type L and type E are also supplied with an integrated shutter system
- The USA versions are offered with integrated circuit breaker in 15 A and 20 A

– Housing color: gray or green

In combination with the EO-SI-FRAME adapter plate, the sockets can also be used in the VS-SI-... / SI-... mounting frames under different IP protection classes.

Notes:

To install a control cabinet socket in a VS-SI-... or SI-... mounting frame, you will need an EO-SI-FRAME adapter plate (see accessories).



new

Individual socket, Germany, Push-in connection

General data	
Nominal voltage	250 V AC
Max. continuous current	16 A
EO...	EO...
Dimensions	
Dimensions	W / H / D 45 mm / 75 mm / 60 mm
Connection data solid/stranded/AWG	0.2 - 4 mm ² / 0.2 - 2.5 mm ² / 24 - 12
Standards/regulations	IP20
Contact material	CuZn37
Ambient temperature range	-20°C ... 60°C
Standards/regulations	VDE 0620-1

Technical data

Description	
Socket for the DIN rail, Push-in connection	
Standard, gray	
Standard, green	
LED display, gray	
LED display, green	
LED display and fuse 5 x 20 mm, 6.3 A, gray	
LED display and fuse 5 x 20 mm, 6.3 A, green	
Switch, gray	
Switch, green	
Fuse 5 x 20 mm, 6.3 A, gray	
Fuse 5 x 20 mm, 6.3 A, green	
Socket for the DIN rail, screw connection	
Standard, gray	
Standard, green	
LED display, gray	
LED display, green	
LED display and fuse 5 x 20 mm, 6.3 A, gray	
LED display and fuse 5 x 20 mm, 6.3 A, green	
Switch, gray	
Switch, green	
Fuse 5 x 20 mm, 6.3 A, gray	
Fuse 5 x 20 mm, 6.3 A, green	

Ordering data

Type	Order No.	Pcs. / Pkt.
EO-CF/PT	0804038	5
EO-CF/PT/GN	0804039	5
EO-CF/PT/LED	0804040	5
EO-CF/PT/LED/GN	0804041	5
EO-CF/PT/LED/F	0804042	5
EO-CF/PT/LED/F/GN	0804043	5
EO-CF/PT/S	0804045	5
EO-CF/PT/LED/S	0804046	5
EO-CF/PT/F	0804047	5
EO-CF/PT/F/GN	0804048	5
EO-CF/UT	0804024	5
EO-CF/UT/GN	0804025	5
EO-CF/UT/LED	0804026	5
EO-CF/UT/LED/GN	0804027	5
EO-CF/UT/LED/F	0804029	5
EO-CF/UT/LED/F/GN	0804030	5
EO-CF/UT/S	0804032	5
EO-CF/UT/LED/S	0804033	5
EO-CF/UT/F	0804034	5
EO-CF/UT/F/GN	0804035	5

Accessories

Adapter plate , for installing a control cabinet socket in a mounting frame, version:	
VS-SI-... or SI-... UniCard, for terminal blocks with a flat marker groove, 64-section, 7 individual labels per strip, for a terminal block width of 8.2 mm	white
UniCard, for terminal blocks with a flat marker groove, 32-section, 4 individual labels per strip, for a terminal block width of 16 mm	white
Zack marker strip, flat, 10-section, without color print	white
Zack marker strip, flat, 5-section, without color print	white

EO-SI-FRAME	0804522	1
UC-TMF 8	0818137	10
UC-TMF 16	0819262	10
ZBF 8:UNBEDRUCKT	0808781	10
ZBF 16:UNPRINTED	0827464	10



new

Individual socket,
USA, Push-in connection



new

Individual socket,
India, Africa, Push-in connection

Technical data
125 V AC
15 A
EO-...
45 mm / 75 mm / 57.5 mm
0.2 - 4 mm ² / 0.2 - 2.5 mm ² / 24 - 12
IP20
CuZn37
-20°C ... 60°C
UL 508

Technical data
250 V AC
10 A
EO-...
45 mm / 75 mm / 57.5 mm
0.2 - 4 mm ² / 0.2 - 2.5 mm ² / 24 - 12
IP20
CuZn37
-20°C ... 60°C
IS 1293

Ordering data		
Type	Order No.	Pcs. / Pkt.
EO-AB/PT/15	0804165	5
EO-AB/PT/LED/15	0804168	5
EO-AB/PT/LED/F	0804171	5
EO-AB/PT/S/15	0804173	5
EO-AB/PT/LED/S/15	0804174	5
EO-AB/PT/F	0804175	5
EO-AB/UT/15	0804152	5
EO-AB/UT/LED/15	0804155	5
EO-AB/UT/LED/F	0804157	5
EO-AB/UT/S/15	0804159	5
EO-AB/UT/LED/S/15	0804160	5
EO-AB/UT/F	0804161	5

Ordering data		
Type	Order No.	Pcs. / Pkt.
EO-D/PT	0804009	5
EO-D/PT/GN	0804010	5
EO-D/PT/LED	0804011	5
EO-D/PT/LED/GN	0804012	5
EO-D/UT	0804000	5
EO-D/UT/GN	0804001	5
EO-D/UT/LED	0804003	5
EO-D/UT/LED/GN	0804004	5
EO-D/UT/F	0804005	5
EO-D/UT/F/GN	0804006	5

Accessories		
Type	Order No.	Pcs. / Pkt.
EO-SI-FRAME	0804522	1
UC-TMF 8	0818137	10
UC-TMF 16	0819262	10
ZBF 8:UNBEDRUCKT	0808781	10
ZBF 16:UNPRINTED	0827464	10

Accessories		
Type	Order No.	Pcs. / Pkt.
EO-SI-FRAME	0804522	1
UC-TMF 8	0818137	10
UC-TMF 16	0819262	10
ZBF 8:UNBEDRUCKT	0808781	10
ZBF 16:UNPRINTED	0827464	10

Service interfaces

Control cabinet sockets



To prevent unwanted contact with current-carrying components, the type E, G, and type L sockets have integrated touch safety (child-proofing). This is established in the CEI 23-50 and NF C61-314 standards.

In combination with the EO-SI-FRAME adapter plate, the sockets can also be used in the VS-SI-... / SI-... mounting frames under different IP protection classes.

Notes:

To install a control cabinet socket in a VS-SI-... or SI-... mounting frame, you will need an EO-SI-FRAME adapter plate (see accessories).

Nominal voltage	250 V AC
Max. continuous current	16 A
General data	EO-...
Dimensions	W / H / D 45 mm / 75 mm / 57.5 mm
Connection data solid/stranded/AWG	0.2 - 4 mm ² / 0.2 - 2.5 mm ² / 24 - 12
Standards/regulations	IP20
Contact material	CuZn37
Ambient temperature range	-20°C ... 60°C
Standards/regulations	CEI 23-50

Description	Color
Socket for the DIN rail, Push-in connection	
Standard, gray	
Standard, green	
LED display, gray	
LED display, green	
Switch, gray	
Switch, green	
Socket for the DIN rail, screw connection	
Standard, gray	
Standard, green	
LED display, gray	
LED display, green	
Switch, gray	
Switch, green	

Adapter plate, for installing a control cabinet socket in a mounting frame, version:

VS-SI-... or SI-...

UniCard, for terminal blocks with a flat marker groove, 64-section, 7 individual labels per strip, for a terminal block width of 8.2 mm

UniCard, for terminal blocks with a flat marker groove, 32-section, 4 individual labels per strip, for a terminal block width of 16 mm

Zack marker strip, flat, 10-section, without color print

Zack marker strip, flat, 5-section, without color print



Individual socket, Italy, Push-in connection with shutter

Technical data

Nominal voltage	250 V AC
Max. continuous current	16 A
General data	EO-...
Dimensions	W / H / D 45 mm / 75 mm / 57.5 mm
Connection data solid/stranded/AWG	0.2 - 4 mm ² / 0.2 - 2.5 mm ² / 24 - 12
Standards/regulations	IP20
Contact material	CuZn37
Ambient temperature range	-20°C ... 60°C
Standards/regulations	CEI 23-50

Ordering data

Type	Order No.	Pcs. / Pkt.
EO-L/PT/SH	0804132	5
EO-L/PT/SH/GN	0804133	5
EO-L/PT/SH/LED	0804134	5
EO-L/PT/SH/LED/GN	0804135	5
EO-L/UT/SH	0804126	5
EO-L/UT/SH/GN	0804127	5
EO-L/UT/SH/LED	0804128	5
EO-L/UT/SH/LED/GN	0804129	5

Accessories

Accessories	Order No.	Pcs. / Pkt.
EO-SI-FRAME	0804522	1
UC-TMF 8	0818137	10
UC-TMF 16	0819262	10
ZBF 8:UNBEDRUCKT	0808781	10
ZBF 16:UNPRINTED	0827464	10

new



Individual socket,
France, Push-in connection with shutter

new



Individual socket,
Great Britain, Push-in connection with shutter

new



Individual socket,
Israel, Push-in connection

Technical data
250 V AC
16 A
EO-...
45 mm / 75 mm / 57.5 mm
0.2 - 4 mm ² / 0.2 - 2.5 mm ² / 24 - 12
IP20
CuZn37
-20°C ... 60°C
NF C61-314

Technical data
250 V AC
13 A
EO-...
45 mm / 75 mm / 57.5 mm
0.2 - 4 mm ² / 0.2 - 2.5 mm ² / 24 - 12
IP20
CuZn37
-20°C ... 60°C
BS 1363-1/-2

Technical data
250 V AC
16 A
EO-...
45 mm / 75 mm / 57.5 mm
0.2 - 4 mm ² / 0.2 - 2.5 mm ² / 24 - 12
IP20
CuZn37
-20°C ... 60°C
SI-32

Ordering data		
Type	Order No.	Pcs. / Pkt.
EO-E/PT/SH	0804020	5
EO-E/PT/SH/GN	0804021	5
EO-E/PT/SH/LED	0804022	5
EO-E/PT/SH/LED/GN	0804023	5
EO-E/UT/SH	0804016	5
EO-E/UT/SH/GN	0804017	5
EO-E/UT/SH/LED	0804018	5
EO-E/UT/SH/LED/GN	0804019	5

Ordering data		
Type	Order No.	Pcs. / Pkt.
EO-G/PT/SH	0804063	5
EO-G/PT/SH/GN	0804064	5
EO-G/PT/SH/LED	0804065	5
EO-G/PT/SH/LED/GN	0804066	5
EO-G/PT/SH/S	0804069	5
EO-G/PT/SH/LED/S	0804070	5
EO-G/UT/SH	0804051	5
EO-G/UT/SH/GN	0804052	5
EO-G/UT/SH/LED	0804053	5
EO-G/UT/SH/LED/GN	0804054	5
EO-G/UT/SH/S	0804058	5
EO-G/UT/SH/LED/S	0804059	5

Ordering data		
Type	Order No.	Pcs. / Pkt.
EO-H/PT	0804080	5
EO-H/PT/GN	0804081	5
EO-H/PT/LED	0804082	5
EO-H/PT/LED/GN	0804083	5
EO-H/UT	0804074	5
EO-H/UT/GN	0804075	5
EO-H/UT/LED	0804076	5
EO-H/UT/LED/GN	0804077	5

Accessories		
Type	Order No.	Pcs. / Pkt.
EO-SI-FRAME	0804522	1
UC-TMF 8	0818137	10
UC-TMF 16	0819262	10
ZBF 8:UNBEDRUCKT	0808781	10
ZBF 16:UNPRINTED	0827464	10

Accessories		
Type	Order No.	Pcs. / Pkt.
EO-SI-FRAME	0804522	1
UC-TMF 8	0818137	10
UC-TMF 16	0819262	10
ZBF 8:UNBEDRUCKT	0808781	10
ZBF 16:UNPRINTED	0827464	10

Accessories		
Type	Order No.	Pcs. / Pkt.
EO-SI-FRAME	0804522	1
UC-TMF 8	0818137	10
UC-TMF 16	0819262	10
ZBF 8:UNBEDRUCKT	0808781	10
ZBF 16:UNPRINTED	0827464	10

Service interfaces

Control cabinet sockets



The socket can be operated independently of the control cabinet circuit. In the event of an error, this enables the use of current-operated external measurement devices, which are used for fault analysis. An LED display advises of the voltage connected to the socket.

In combination with the EO-SI-FRAME adapter plate, the sockets can also be used in the VS-SI-... / SI-... mounting frames under different IP protection classes.

Notes:

To install a control cabinet socket in a VS-SI-... or SI-... mounting frame, you will need an EO-SI-FRAME adapter plate (see accessories).

new



Individual socket, Brazil, South Africa, Push-in connection

General data	
Nominal voltage	250 V AC
Max. continuous current	20 A
EO-...	EO-...
Dimensions	W / H / D 45 mm / 75 mm / 57.5 mm
Connection data solid/stranded/AWG	0.2 - 4 mm ² / 0.2 - 2.5 mm ² / 24 - 12
Standards/regulations	IP20
Contact material	CuZn37
Ambient temperature range	-20°C ... 60°C
Standards/regulations	NBR 14136

Technical data

Description	Color
Socket for the DIN rail, Push-in connection	
Standard, gray	
Standard, green	
LED display, gray	
LED display, green	
Socket for the DIN rail, screw connection	
Standard, gray	
Standard, green	
LED display, gray	
LED display, green	

Ordering data

Type	Order No.	Pcs. / Pkt.
EO-N/PT	0804146	5
EO-N/PT/GN	0804147	5
EO-N/PT/LED	0804148	5
EO-N/PT/LED/GN	0804149	5
EO-N/UT	0804139	5
EO-N/UT/GN	0804140	5
EO-N/UT/LED	0804142	5
EO-N/UT/LED/GN	0804143	5

Adapter plate, for installing a control cabinet socket in a mounting frame, version:

VS-SI-... or SI-...

UniCard, for terminal blocks with a flat marker groove, 64-section, 7 individual labels per strip, for a terminal block width of 8.2 mm

white

UniCard, for terminal blocks with a flat marker groove, 32-section, 4 individual labels per strip, for a terminal block width of 16 mm

white

Zack marker strip, flat, 10-section, without color print

white

Zack marker strip, flat, 5-section, without color print

white

Accessories

Accessories	Order No.	Pcs. / Pkt.
EO-SI-FRAME	0804522	1
UC-TMF 8	0818137	10
UC-TMF 16	0819262	10
ZBF 8:UNBEDRUCKT	0808781	10
ZBF 16:UNPRINTED	0827464	10

new



Individual socket,
China, Australia, Push-in connection

new



Individual socket,
Switzerland, Push-in connection

new



Individual socket,
Denmark, Push-in connection

Technical data
250 V AC
16 A
EO-...
45 mm / 75 mm / 57.5 mm
0.2 - 4 mm ² / 0.2 - 2.5 mm ² / 24 - 12
IP20
CuZn37
-20°C ... 60°C
GB2009.1 and GB2099.4

Ordering data		
Type	Order No.	Pcs. / Pkt.
EO-I/PT	0804093	5
EO-I/PT/GN	0804094	5
EO-I/PT/LED	0804095	5
EO-I/PT/LED/GN	0804096	5
EO-I/UT	0804087	5
EO-I/UT/GN	0804088	5
EO-I/UT/LED	0804089	5
EO-I/UT/LED/GN	0804090	5

Accessories		
EO-SI-FRAME	0804522	1
UC-TMF 8	0818137	10
UC-TMF 16	0819262	10
ZBF 8:UNBEDRUCKT	0808781	10
ZBF 16:UNPRINTED	0827464	10

Technical data
250 V AC
16 A
EO-...
45 mm / 75 mm / 57.5 mm
0.2 - 4 mm ² / 0.2 - 2.5 mm ² / 24 - 12
IP20
CuZn37
-20°C ... 60°C
SEV 1011

Ordering data		
Type	Order No.	Pcs. / Pkt.
EO-J/PT	0804105	5
EO-J/PT/GN	0804106	5
EO-J/PT/LED	0804107	5
EO-J/PT/LED/GN	0804108	5
EO-J/UT	0804099	5
EO-J/UT/GN	0804100	5
EO-J/UT/LED	0804101	5
EO-J/UT/LED/GN	0804102	5

Accessories		
EO-SI-FRAME	0804522	1
UC-TMF 8	0818137	10
UC-TMF 16	0819262	10
ZBF 8:UNBEDRUCKT	0808781	10
ZBF 16:UNPRINTED	0827464	10

Technical data
250 V AC
13 A
EO-...
45 mm / 75 mm / 57.5 mm
0.2 - 4 mm ² / 0.2 - 2.5 mm ² / 24 - 12
IP20
CuZn37
-20°C ... 60°C
SR 107-2-D1

Ordering data		
Type	Order No.	Pcs. / Pkt.
EO-K/PT	0804119	5
EO-K/PT/GN	0804120	5
EO-K/PT/LED	0804121	5
EO-K/PT/LED/GN	0804122	5
EO-K/UT	0804113	5
EO-K/UT/GN	0804114	5
EO-K/UT/LED	0804115	5
EO-K/UT/LED/GN	0804116	5

Accessories		
EO-SI-FRAME	0804522	1
UC-TMF 8	0818137	10
UC-TMF 16	0819262	10
ZBF 8:UNBEDRUCKT	0808781	10
ZBF 16:UNPRINTED	0827464	10

Installation and mounting material

Service interfaces

Data front plate and socket insert



Data front plate with two slots



RJ45 socket insert, Freenet system

Technical data
Housing material
Degree of protection
Ambient temperature (operation)

PBT
IP20
-10°C ... 60°C

Copper alloy
IP20
-10°C ... 60°C

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-SI-FP-2F	1658532	1

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-08-BU-RJ45/10G-F	1424009	1

Description

Data front plate, for socket inserts with two slots
RJ45 Freenet socket insert, 8-pos., shielded, with cable connection
10 Gbps, CAT6_A

Socket inserts

Ethernet



RJ45 socket insert, Freenet system



RJ45 socket insert, Freenet system

Technical data
Housing material
Degree of protection
Ambient temperature (operation)

Copper alloy
IP20
-

Copper alloy
IP20
-20°C ... 70°C

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-08-BU/BU-RJ45-F	1405617	1

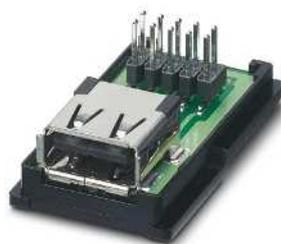
Ordering data

Type	Order No.	Pcs. / Pkt.
VS-08-BU-RJ45-5-F/PK	1652936	1

Description

RJ45 Freenet socket insert, 8-pos., shielded, socket to socket
1 Gbps, CAT5
RJ45 Freenet socket insert, 8-pos., shielded, with cable connection
1 Gbps, CAT5

Socket inserts



USB socket insert, Freenet system



USB socket insert, type B, on flat-ribbon cable terminal strip, two-row

Technical data
Housing material
Degree of protection
Ambient temperature (operation)

PC
IP20
-15°C ... 65°C

PC
IP20
-15°C ... 65°C

Description
USB socket insert , 4-pos., USB socket to flat-ribbon cable terminal strip, 2.54 pitch, socket, type A
USB socket insert , 4-pos., USB socket to flat-ribbon cable terminal strip, 2.54 pitch, socket, type B

Technical data

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-04-BUA-FK-F/IP67	1653854	1

Technical data

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-04-BUB-FK-F/IP67	1653867	1

Socket inserts

Ethernet



SC-RJ coupling

Ethernet



SC-RJ socket insert

Technical data
Housing material
Degree of protection
Ambient temperature (operation)

PBT
IP20
-25°C ... 70°C

PBT
IP20
-25°C ... 70°C

Description
SC-RJ coupling , for terminal outlets VS-TO-... and 19" patch panels VS-PP-19-1HE-16-F and front plate VS-SI-FP-2F
1x SC-RJ (duplex) SC-RJ socket insert , duplex, for VARIOSUB IP67 panel mounting frame, can be used for GOF multimode, GOF single mode, PCF, and POF fiber types 1x SC-RJ/SC-RJ (duplex)

Technical data

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-SCRJ-GOF-KU	1654358	1

Technical data

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-SCRJ-GOF-BU/BU	1652978	1

Service interfaces

Service sockets



Service sockets



Service sockets

Technical data
Housing material
Ambient temperature (operation)

PA
-25°C ... 70°C

-
-5°C ... 70°C

Ordering data

Description

Service socket, with the following contact inserts:

RJ45

Service socket, with the following contact inserts:

USB with 0.6 m cable

Service socket, with the following contact inserts:

USB with 1.0 m cable

Type	Order No.	Pcs./ Pkt.
SI-SES-R1A	1404513	1

Ordering data

Type	Order No.	Pcs./ Pkt.
SI-SES-U1A/0,6	1404514	1
SI-SES-U1A/1	1404515	1

RJ45 patch cables

Notes:

For accessories, refer to page: 392

Ethernet



RJ45 patch cables for IP20 applications

ERIC

Cable, properties	
External diameter	
Single wire, material	
Individual wires per module	
Single wire, cross section	
Outer sheath, material	
Smallest bending radius, fixed installation	
Shielding	
Connector	
Contact resistance	
General data	
Ambient temperature (operation)	

Technical data		
	FL CAT5 PATCH 0,3	FL CAT6 PATCH 0,3
External diameter	5.5 mm	5.5 mm
Single wire, material	Cu litz wire	Cu litz wire
Individual wires per module	8	8
Single wire, cross section	0.14 mm ²	0.14 mm ²
Outer sheath, material	LSFROH	LSFROH
Smallest bending radius, fixed installation	30 mm	30 mm
Shielding	SF/UTP	S/FTP
Contact resistance	≤ 0.003 Ω (IEC 60603-7)	≤ 0.003 Ω (IEC 60603-7)
Ambient temperature (operation)	-10°C ... 60°C	-10°C ... 60°C

Description	Length of cable
Patch cable, CAT5, preassembled	
	0.3 m
	0.5 m
	1 m
	1.5 m
	2 m
	3 m
	5 m
	7.5 m
	10 m
Patch cable, CAT6, preassembled	
	0.3 m
	0.5 m
	1 m
	1.5 m
	2 m
	3 m
	5 m
	7.5 m
	10 m
	12.5 m
	15 m
	20 m

Ordering data			
Type	Order No.	Pcs./Pkt.	
FL CAT5 PATCH 0,3	2832250	10	
FL CAT5 PATCH 0,5	2832263	10	
FL CAT5 PATCH 1,0	2832276	10	
FL CAT5 PATCH 1,5	2832221	10	
FL CAT5 PATCH 2,0	2832289	10	
FL CAT5 PATCH 3,0	2832292	10	
FL CAT5 PATCH 5,0	2832580	10	
FL CAT5 PATCH 7,5	2832616	10	
FL CAT5 PATCH 10,0	2832629	10	
FL CAT6 PATCH 0,3	2891181	10	
FL CAT6 PATCH 0,5	2891288	10	
FL CAT6 PATCH 1,0	2891385	10	
FL CAT6 PATCH 1,5	2891482	10	
FL CAT6 PATCH 2,0	2891589	10	
FL CAT6 PATCH 3,0	2891686	10	
FL CAT6 PATCH 5,0	2891783	10	
FL CAT6 PATCH 7,5	2891880	10	
FL CAT6 PATCH 10	2891877	10	
FL CAT6 PATCH 12,5	2891369	5	
FL CAT6 PATCH 15,0	2891372	5	
FL CAT6 PATCH 20,0	2891576	5	



Cable marking

The cables are supplied with marking collars. The marking is implemented by means of insert strips that can be marked and is protected by the carrier. Subsequent marking is therefore possible.



Distributor box marking

High-quality marking materials are available for the individual marking of distributor boxes.



Connector marking

Marking materials ranging from adhesive labels to high-quality engraved labels are available for marking heavy-duty connectors.



Cable markers

Markers can be fitted using cable binders almost regardless of cable diameter. The large marking area provides enough space for comprehensive marking.



Cable marker labels

Cable marker labels consist of a marking field and a transparent film that protects the marking against abrasion and dirt.



Plastic cable markers

Plastic cable markers are suitable for bundling and marking cables. The marking is protected against dirt and can be replaced.



Cable protection systems

We have the right solution for your application. Select from our comprehensive range of plastic and metal protective hoses. Protective hose screw connections with tool-free quick mounting function and various IP protection classes round off the range of products.

i Your web code: #0572

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.





Charging technology for E-Mobility

Phoenix Contact E-Mobility offers a product and technology portfolio that enables the flexible, modular, and efficient implementation of various concepts for the charging infrastructure for different business models. Whether charging on an AC power grid or fast DC charging, the AC and DC charging systems from Phoenix Contact are safe, reliable, and user-friendly.

The charging controllers from Phoenix Contact enable charging stations to be set up in accordance with current norms and standards. These can be used to establish autonomous charging stations as well as intelligently networked charging infrastructures.

 **Your web code: #1406**

DC charging systems

CCS Type 1 and Type 2 DC charging cable with open cable end (US, EU) **738**

GB/T DC charging cable and open cable end (CN) **739**

AC charging systems

Type 1 AC charging cable with open cable end (US, JP, EU) **742**

Type 1 mobile AC charging cable (EU) **744**

Type 2 AC charging cable with open cable end (EU) **746**

Type 2 mobile AC charging cable (EU) **748**

Type 2 Infrastructure Socket Outlets (EU) **750**

GB/T AC charging cable with open cable end (CN) **752**

GB/T mobile AC charging cable (CN) **754**

GB/T Infrastructure Socket Outlets (CN) **756**

Holders for Vehicle Connectors **758**

AC charging controllers

AC charging controller for commercial applications (EU) **762**

AC charging controller for private applications (EU/CN) **763**

AC charging controller for private applications (US) **766**

Residual current monitoring (RCM) modules for charging controllers (EU/CN) **767**

AC set solutions

Charging technology sets for private applications (EU) **768**

Charging technology sets for commercial applications (EU) **769**



The development of a widespread charging infrastructure for E-Mobility in conjunction with the use of renewable sources of energy is an important step toward a mobile future. The focus here is on integrating the charging process for electric vehicles into everyday life. In particular, situations involving short stops to charge, e.g., at rest stops en route, require the appropriate charging infrastructure for high power transmission with reliable safety mechanisms.

With DC fast charging technology from Phoenix Contact, charging stations will be equipped to handle applications requiring short charging times. A wide range of DC charging cables, consisting of Vehicle Connectors with temperature sensors and open cable end, is available. The Vehicle Connector is inserted into the Vehicle Inlet. For further information on Vehicle Inlets, visit www.phoenixcontact-emobility.com.

Phoenix Contact is working in cooperation with major automobile manufacturers to develop the Combined Charging System (CCS) according to IEC 62196-3 as the reliable solution for a universal charging interface in all applications. The electric vehicle can be charged conventionally with AC at home, for example. In addition, the Vehicle Inlet is designed for fast DC charging with the following DC charging cables.



CCS Type 1 DC charging cables according to SAE J1772/IEC 62196-3

CCS Type 1 charging cables enable fast DC charging in North American and other AWG charging infrastructures. They are equipped with UL-certified AWG cables and a lever mechanism for locking. If the lever is actuated during the charging process, communication takes place to interrupt the power between the vehicle and charging station.



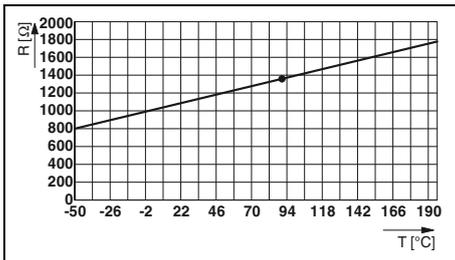
CCS Type 2 DC charging cables according to IEC 62196-3

In 2013, CCS Type 2 charging cables marked an important milestone in European fast charging technology. During the charging process, the charging cables interlock electromechanically with a bolt that withstands high pull-out forces by means of a locking actuator integrated in the Vehicle Inlet. The cables are metric and VDE-certified.



GB/T DC charging cables according to GB/T 20234.3-2015

GB/T DC charging cables are used for fast charging in the Chinese charging infrastructure. In addition to metric cables, they include a unique locking mechanism developed by Phoenix Contact which is integrated in the Vehicle Connector. The locking mechanism, which is controlled by the charging station, prevents the lever being actuated on the Vehicle Connector during the charging process.



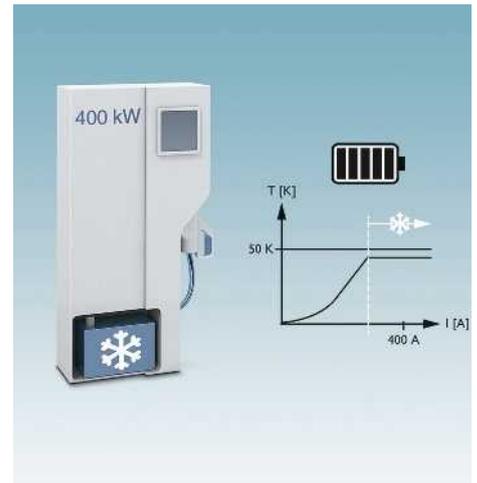
Temperature sensors

The integrated Pt 1000 temperature sensors in the Vehicle Connector send a pulse to the charging station in a timely manner to switch off the charging current in the event of a fault (e.g., in the case of contamination).



Secure locking

Fast charging technology involves the transmission of high charging currents. It is therefore essential to safeguard against disconnection under load during the charging process. The Vehicle Connectors are protected with highly efficient locking mechanisms.



Looking ahead - CCSplus - High Power Charging

Always one step ahead: Phoenix Contact is developing the next expansion stage of fast charging, namely charging cables with integrated cooling system. With the same geometries as the already established CCS and ergonomically flexible cables, charging times will be further minimized. A charging current of up to 400 A/1000 V DC will be achieved.

DC charging systems

CCS Type 1 and Type 2 DC charging cable and open cable end (US, EU)

- Charging in just a few minutes
- Charging cable for North American charging infrastructure (CCS Type 1)
- Charging cable for European charging infrastructure (CCS Type 2)



CCS Type 1 Vehicle Connector, with AWG cable



CCS Type 2 DC Vehicle Connector, with metric cable

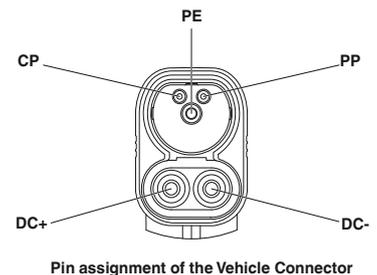
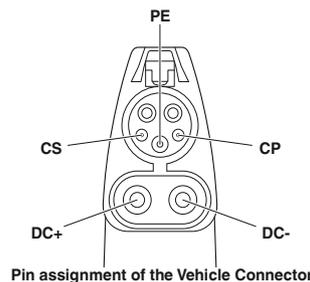
Notes:
Further cable types and lengths are available on request.
Color variants for housing, cables, and customer-specific labels available on request.
Vehicle Connector without protective cap.



	Technical data		Technical data		
	60 A	125 A	60 A	125 A	200 A
Rated current	60 A	125 A	60 A	125 A	200 A
Rated voltage	600 V DC	1000 V DC	1000 V DC	1000 V DC	1000 V DC
Approvals					-
Standards	SAE J1772	SAE J1772	IEC 62196-3	IEC 62196-3	IEC 62196-3
Charging mode	Mode 4	Mode 4	Mode 4	Mode 4	Mode 4
Resistor coding	480 Ω (Lever actuated) 150 Ω (Lever not actuated)	480 Ω (Lever actuated) 150 Ω (Lever not actuated)	1500 Ω (between PE and PP)	1500 Ω (between PE and PP)	1500 Ω (between PE and PP)
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (PE, DC+, DC-)	3 (PE, DC+, DC-)	3 (PE, DC+, DC-)	3 (PE, DC+, DC-)	3 (PE, DC+, DC-)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000	> 10000	> 10000
Insertion/withdrawal force	< 75 N	< 75 N	< 100 N	< 100 N	< 100 N
Temperature sensor	Pt 1000	Pt 1000	Pt 1000	Pt 1000	-
Type of protection (when plugged in)	-	-	IP44	IP44	IP44
Degree of protection (when not plugged in)	-	-	IP20	IP20	IP20
Degree of protection (NEMA)	3R	3R	-	-	-
Cable data					
Cable type	straight	straight	straight	straight	straight
Cable length	5 m	5 m	5 m	5 m	5 m
Cable diameter	27 mm ±0.4 mm	35.3 mm ±0.5 mm	20 mm ±0.2 mm	28.2 mm ±0.2 mm	32 mm ±0.2 mm
Cable structure	3 x 6 AWG + 3 x 2 x 18 AWG	2 x 1 AWG + 1 x 3 AWG + 3 x 2 x 18 AWG	3 x 16 mm ² + 3 x 2 x 0.75 mm ² (EN 60228 class 6)	2 x 50 mm ² + 1 x 25 mm ² + 3 x 2 x 0.75 mm ² (EN 60228 class 6)	2 x 70 mm ² + 1 x 35 mm ² + 3 x 2 x 0.75 mm ² (EN 60228 class 6)
Sheath color	black	black	black	black	black
	Ordering data		Ordering data		
Description	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.
	60 A		125 A		200 A

DC charging cable with Vehicle Connector and open cable end, Combined Charging System (CCS)

Description	Accessories			Accessories		
	Type	Order No.	Pcs./ Pkt.	Type	Order No.	Pcs./ Pkt.
Holder	EV-T1CCS-PARK	1624143	1	EV-T2CCS-PARK	1624153	1



GB/T DC charging cable and open cable end (CN)

- Charging in just a few minutes
- Charging cable for Chinese charging infrastructure (GB/T)
- Vehicle Connector with integrated locking



GB/T DC Vehicle Connector, with metric cable

Notes:
Further cable types and lengths are available on request.
Color variants for housing, cables, and customer-specific labels available on request.
Vehicle Connector with protective cap.

Technical data

125 A

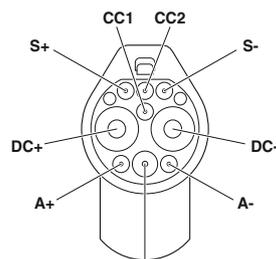
Rated current	125 A
Rated voltage	750 V DC
Approvals	-
Standards	GB/T 20234.3
Charging mode	Mode 4
Resistor coding	1000 Ω (between PE and CCS1 / PE and CCS2)
Ambient temperature (operation)	-30°C ... 50°C
Number of power contacts	3 (PE, DC+, DC-)
Insertion/withdrawal cycles	> 10000
Insertion/withdrawal force	< 100 N
Temperature sensor	Pt 1000
Type of protection (when plugged in)	IP55
Degree of protection (when not plugged in)	-
Cable data	
Cable type	straight
Cable length	5 m
Cable diameter	28 mm ±0.2 mm
Cable structure	2 x 50 mm ² + 1 x 16 mm ² + 2 x 2.5 mm ² + 9 x 0.5 mm ² (IEC 60228 class 5)
Sheath color	black

Ordering data

Description	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
	DC charging cable with Vehicle Connector and open cable end, GB/T	125 A				
	1622119	1				

Accessories

Description	Type	Order No.	Pcs./ Pkt.
Holder			
without detection of the Vehicle Connector	EV-GBDC-PARK	1623770	1
with detection of the Vehicle Connector	EV-GBDC-PARK-SW	1623497	1
Fixing with hexagonal head screws	EV-GBDC-PARK-R	1623496	1



Pin assignment of the Vehicle Connector



AC charging in private and commercial applications also plays an important role in establishing E-Mobility. The focus here is not just on the short charging time, but above all on cost and space savings as well as the installation options.

Phoenix Contact has a comprehensive range of VDE- and UL-certified AC charging cables with Vehicle Connectors and Infrastructure Plugs or open cable ends and AC Infrastructure Socket Outlets with international charging standards:

- Type 1 according to SAE J1772 and IEC 62196 (USA, Japan)
- Type 2 according to IEC 62196 (Europe)
- GB/T 20.234 standard (China)

Choose from AC charging cables in C line or D line design, with or without locking option for U-lock. The park positions are suitable for attaching Vehicle Connectors to or next to charging stations. AC Infrastructure Socket Outlets are often used in small charging stations. Depending on the installation space available, an optional hinged cover can be screwed on from the back or from the front. For the Type 1 charging standard, no provision is made for a plug-in connection on the infrastructure side.



D line Type 1 AC charging cables

Type 1 AC charging cables according to SAE J1772/IEC 62196-2 are primarily used in the USA and Japan. Locking is by means of a lever mechanism which interrupts the power when actuated.



D line Type 2 AC charging cables

Type 2 AC charging cables according to IEC 62196-2 support single- and three-phase charging in Europe. An electromechanical actuator locking mechanism safeguards the charging process.



D line GB/T AC charging cables

Chinese standard GB/T 2023.4.2 describes single- and three-phase charging in China. A special lever system provides the locking mechanism between the Vehicle Inlet and Vehicle Connector.



C line Type 1 AC charging cables

Type 1 AC charging cables in C line design can be locked with a U-lock as an option.



C line Type 2 AC charging cables

C line Type 2 AC charging cables can also be ordered in other colors and logos on request.



C line GB/T AC charging cables

C line GB/T AC charging cables can be locked with a U-lock as an option.



Additional locking option

As an option, charging cables in C line design can be locked with a U-lock (diameter: 4 mm). The locking lever can no longer be actuated when inserted.



AC Infrastructure Socket Outlets

Mobile charging cables are connected to an Infrastructure Socket Outlet with locking actuator in the charging station. A drainage tube or hinged cover can be fitted as an option.



Hinged covers for AC Infrastructure Socket Outlets

The hinged covers for IP54 protection can be mounted on the rear or front of Infrastructure Socket Outlets.

AC charging systems

Type 1 AC charging cable with Vehicle Connector and open cable end (US, JP, EU)

- Locking on the vehicle side with lever mechanism
- Charging cable for North American, Japanese, and European charging infrastructure

Notes:
Further cable types and lengths are available on request.
Color variants for housing, cables, and customer-specific labels available on request.
Vehicle Connector with protective cap.



Type 1 AC Vehicle Connector, with spiraled metric cable, D line



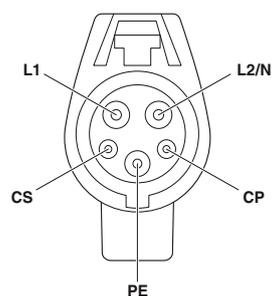
Type 1 AC Vehicle Connector, with straight metric cable, D line



	Technical data		Technical data	
	20 A	32 A	20 A	32 A
Rated current	20 A	32 A	20 A	32 A
Number of phases	1	1	1	1
Rated voltage	250 V AC	250 V AC	250 V AC	250 V AC
Standards	IEC 62196-2	IEC 62196-2	IEC 62196-2	IEC 62196-2
Charging mode	Mode 3, Case C	Mode 3, Case C	Mode 3, Case C	Mode 3, Case C
Resistor coding	480 Ω (Lever actuated) 150 Ω (Lever not actuated)	480 Ω (Lever actuated) 150 Ω (Lever not actuated)	480 Ω (Lever actuated) 150 Ω (Lever not actuated)	480 Ω (Lever actuated) 150 Ω (Lever not actuated)
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (L1, N, PE)	3 (L1, N, PE)	3 (L1, N, PE)	3 (L1, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000	> 10000
Insertion/withdrawal force	< 75 N	< 75 N	< 75 N	< 75 N
Type of protection (when plugged in)	IP44	IP44	IP44	IP44
Degree of protection (with protective cap)	IP54	IP54	IP54	IP54
Degree of protection (NEMA)	-	-	-	-
Cable data				
Cable length	4 m	4 m	5 m	5 m
Cable diameter	10.2 mm ±0.3 mm	13.9 mm ±0.5 mm	10.2 mm ±0.3 mm	12.8 mm ±0.4 mm
Cable structure	3 x 2.5 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm ² + 1 x 0.5 mm ² (DIN EN 13602, VDE 0295 class 5)	3 x 2.5 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)
Sheath color	black	black	black	black

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.						
AC charging cable with Type 1 Vehicle Connector and open cable end without additional locking option with U-lock								
	1621670	1	1621794	1	1622045	1	1623389	1
AC charging cable with Type 1 Vehicle Connector and open cable end with additional locking option with U-lock								

Description	Accessories			Accessories		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Holder	EV-T1AC-PARK	1624139	1	EV-T1AC-PARK	1624139	1



Pin assignment of the Vehicle Connector

new



Type 1 AC Vehicle Connector, with spiraled metric cable, C line

new



Type 1 AC Vehicle Connector, with straight metric cable, C line

new



Type 1 AC Vehicle Connector, with straight AWG cable, C line



Technical data	
20 A	32 A
20 A	32 A
1	1
250 V AC	250 V AC
IEC 62196-2	IEC 62196-2
Mode 3, Case C	Mode 3, Case C
480 Ω (Lever actuated)	480 Ω (Lever actuated)
150 Ω (Lever not actuated)	150 Ω (Lever not actuated)
-30°C ... 50°C	-30°C ... 50°C
3 (L1, N, PE)	3 (L1, N, PE)
> 10000	> 10000
< 75 N	< 75 N
IP44	IP44
IP54	IP54
-	-
4 m	4 m
10.2 mm ±0.3 mm	12.8 mm ±0.4 mm
3 x 2.5 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)
black	black

Technical data	
20 A	32 A
20 A	32 A
1	1
250 V AC	250 V AC
IEC 62196-2	IEC 62196-2
Mode 3, Case C	Mode 3, Case C
480 Ω (Lever actuated)	480 Ω (Lever actuated)
150 Ω (Lever not actuated)	150 Ω (Lever not actuated)
-30°C ... 50°C	-30°C ... 50°C
3 (L1, N, PE)	3 (L1, N, PE)
> 10000	> 10000
< 75 N	< 75 N
IP44	IP44
IP54	IP54
-	-
5 m	5 m
10.2 mm ±0.3 mm	12.8 mm ±0.4 mm
3 x 2.5 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)
black	black

Technical data	
15 A	32 A
15 A	32 A
1	1
250 V AC	250 V AC
SAE J1772	SAE J1772
Level 2	Level 2
480 Ω (Lever actuated)	480 Ω (Lever actuated)
150 Ω (Lever not actuated)	150 Ω (Lever not actuated)
-30°C ... 50°C	-30°C ... 50°C
3 (L1, N, PE)	3 (L1, N, PE)
> 10000	> 10000
< 75 N	< 75 N
IP44	IP44
IP54	IP54
3R	3R
5 m	5 m
10.5 mm ±0.3 mm	17 mm ±0.4 mm
3 x 14 AWG + 1 x 20 AWG (UL 62)	3 x 10 AWG + 1 x 18 AWG (UL 62)
black	black

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
20 A		32 A	
1627345	1	1627344	1
1623238	1	1623239	1

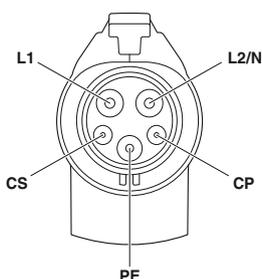
Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
20 A		32 A	
1628013	1	1628096	1
1627362	1	1627356	1

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
15 A		32 A	
1628014	1	1628422	1
1627757	1	1628419	1

Accessories		
Type	Order No.	Pcs. / Pkt.
EV-T1AC-PARK	1624139	1

Accessories		
Type	Order No.	Pcs. / Pkt.
EV-T1AC-PARK	1624139	1

Accessories		
Type	Order No.	Pcs. / Pkt.
EV-T1AC-PARK	1624139	1



Pin assignment of the Vehicle Connector

new



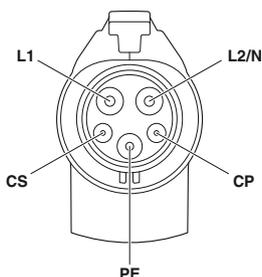
Type 1 AC Vehicle Connector with Type 2 Infrastructure Plug and spiraled metric cable, C line

new

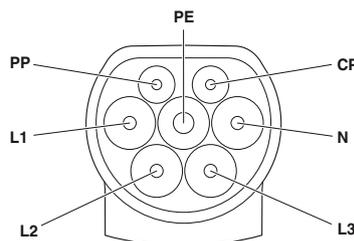


Type 1 AC Vehicle Connector with Type 2 Infrastructure Plug and straight metric cable, C line

Technical data				Technical data			
20 A		32 A		20 A		32 A	
20 A		32 A		20 A		32 A	
1		1		1		1	
250 V AC		250 V AC		250 V AC		250 V AC	
IEC 62196-2		IEC 62196-2		IEC 62196-2		IEC 62196-2	
Mode 3, Case B		Mode 3, Case B		Mode 3, Case B		Mode 3, Case B	
-30°C ... 50°C		-30°C ... 50°C		-30°C ... 50°C		-30°C ... 50°C	
3 (L1, N, PE)		3 (L1, N, PE)		3 (L1, N, PE)		3 (L1, N, PE)	
> 10000		> 10000		> 10000		> 10000	
< 75 N		< 75 N		< 75 N		< 75 N	
IP44		IP44		IP44		IP44	
IP54		IP54		IP54		IP54	
spiraled		spiraled		spiraled		spiraled	
4 m		4 m		5 m		5 m	
10.2 mm ±0.3 mm		12.8 mm ±0.4 mm		10.2 mm ±0.3 mm		12.8 mm ±0.4 mm	
3 x 2.5 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)		3 x 6.0 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)		3 x 2.5 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)		3 x 6.0 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)	
black		black		black		black	
Ordering data				Ordering data			
Order No.	Pcs. / Pkt.						
	20 A		32 A		20 A		32 A
1628025	1	1628026	1	1628027	1	1628028	1
1628020	1	1628021	1	1628022	1	1628023	1
Accessories				Accessories			
Type	Order No.	Pcs. / Pkt.		Type	Order No.	Pcs. / Pkt.	
EV-T2M3SE12-3AC32A-0,7M6,0E10	1405214	1		EV-T2M3SE12-3AC32A-0,7M6,0E10	1405214	1	



Pin assignment of the Vehicle Connector



Pin assignment of Infrastructure Plug

AC charging systems

Type 2 AC charging cable with Vehicle Connector and open cable end (EU)

- Charging cable for European charging infrastructure
- Locking on the vehicle side with electromechanical locking actuator

Notes:
Further cable types and lengths are available on request.
Color variants for housing and cables are available on request.
For further performance variants, visit phoenixcontact.net/products
Vehicle Connector with protective cap.



Type 2 AC Vehicle Connector, with spiraled cable, D line



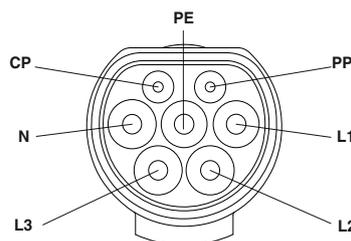
Type 2 AC Vehicle Connector, with straight cable, D line



	Technical data			Technical data		
	20 A, 1-phase	32 A, 1-phase	32 A, 3-phase	20 A, 1-phase	32 A, 1-phase	32 A, 3-phase
Rated current	20 A	32 A	32 A	20 A	32 A	32 A
Number of phases	1	1	3	1	1	3
Rated voltage	250 V AC	250 V AC	480 V AC	250 V AC	250 V AC	480 V AC
Standards	IEC 62196-2	IEC 62196-2	IEC 62196-2	IEC 62196-2	IEC 62196-2	IEC 62196-2
Charging mode	Mode 3, Case C	Mode 3, Case C	Mode 3, Case C	Mode 3, Case C	Mode 3, Case C	Mode 3, Case C
Resistor coding	680 Ω (between PE and PP)	220 Ω (between PE and PP)	220 Ω (between PE and PP)	680 Ω (between PE and PP)	220 Ω (between PE and PP)	220 Ω (between PE and PP)
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (L1, N, PE)	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)	3 (L1, N, PE)	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000	> 10000	> 10000	> 10000
Insertion/withdrawal force	< 100 N	< 100 N	< 100 N	< 100 N	< 100 N	< 100 N
Type of protection (when plugged in)	IP44	IP44	IP44	IP44	IP44	IP44
Degree of protection (with protective cap)	IP44	IP44	IP44	IP44	IP44	IP44
Cable data						
Cable length	4 m	4 m	4 m	5 m	5 m	5 m
Cable diameter	10.2 mm ±0,3 mm	13.9 mm ±0,5 mm	17 mm ±0,4 mm	10.2 mm ±0,3 mm	12.8 mm ±0,4 mm	17 mm ±0,4 mm
Cable structure	3 x 2.5 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5) black	3 x 6.0 mm ² + 1 x 0.5 mm ² (DIN EN 13602, VDE 0295 class 5) black	5 x 6.0 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5) black	3 x 2.5 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5) black	3 x 6.0 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5) black	5 x 6.0 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5) black
Sheath color						

Description	Ordering data					
	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
AC charging cable with Type 2 Vehicle Connector and open cable end without locking						
	20 A, 1-phase		32 A, 1-phase		32 A, 3-phase	
	1405195	1	1622042	1	1410088	1
	1621804	1	1622041	1	1622043	1

Description	Accessories			Accessories		
	Type	Order No.	Pcs./Pkt.	Type	Order No.	Pcs./Pkt.
Holder	EV-T2AC-PARK	1624148	1	EV-T2AC-PARK	1624148	1



Pin assignment of the Vehicle Connector

new



Type 2 AC Vehicle Connector, with spiraled cable, C line

new



Type 2 AC Vehicle Connector, with straight cable, C line

new



Type 2 AC Vehicle Connector, with straight cable, C line

Technical data		
20 A, 1-phase	32 A, 1-phase	32 A, 3-phase
20 A	32 A	32 A
1	1	3
250 V AC	250 V AC	480 V AC
IEC 62196-2	IEC 62196-2	IEC 62196-2
Mode 3, Case C	Mode 3, Case C	Mode 3, Case C
680 Ω (between PE and PP)	220 Ω (between PE and PP)	220 Ω (between PE and PP)
-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
3 (L1, N, PE)	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)
> 10000	> 10000	> 10000
< 100 N	< 100 N	< 100 N
IP44	IP44	IP44
IP54	IP54	IP54
4 m	4 m	4 m
10.2 mm ±0.3 mm	12.8 mm ±0.4 mm	17 mm ±0.4 mm
3 x 2.5 mm ² + 1 x 0.5 mm ²	3 x 6.0 mm ² + 1 x 0.5 mm ²	5 x 6.0 mm ² + 1 x 0.5 mm ²
(prEN 50620, VDE Reg. 8789 class 5) black	(prEN 50620, VDE Reg. 8789 class 5) black	(prEN 50620, VDE Reg. 8789 class 5) black

Technical data	
20 A, 1-phase	32 A, 1-phase
20 A	32 A
1	1
250 V AC	250 V AC
IEC 62196-2	IEC 62196-2
Mode 3, Case C	Mode 3, Case C
680 Ω (between PE and PP)	220 Ω (between PE and PP)
-30°C ... 50°C	-30°C ... 50°C
3 (L1, N, PE)	3 (L1, N, PE)
> 10000	> 10000
< 100 N	< 100 N
IP44	IP44
IP54	IP54
5 m	5 m
10.2 mm ±0.3 mm	12.8 mm ±0.4 mm
3 x 2.5 mm ² + 1 x 0.5 mm ²	3 x 6.0 mm ² + 1 x 0.5 mm ²
(prEN 50620, VDE Reg. 8789 class 5) black	(prEN 50620, VDE Reg. 8789 class 5) black

Technical data	
20 A, 3-phase	32 A, 3-phase
20 A	32 A
3	3
480 V AC	480 V AC
IEC 62196-2	IEC 62196-2
Mode 3, Case C	Mode 3, Case C
680 Ω (between PE and PP)	220 Ω (between PE and PP)
-30°C ... 50°C	-30°C ... 50°C
5 (L1, L2, L3, N, PE)	5 (L1, L2, L3, N, PE)
> 10000	> 10000
< 100 N	< 100 N
IP44	IP44
IP54	IP54
5 m	5 m
12.8 mm ±0.4 mm	17 mm ±0.4 mm
5 x 2.5 mm ² + 1 x 0.5 mm ²	5 x 6.0 mm ² + 1 x 0.5 mm ²
(prEN 50620, VDE Reg. 8789 class 5) black	(prEN 50620, VDE Reg. 8789 class 5) black

Ordering data		
Order No.	Pcs./Pkt.	Order No.
1627126	1	1627127
		1627130

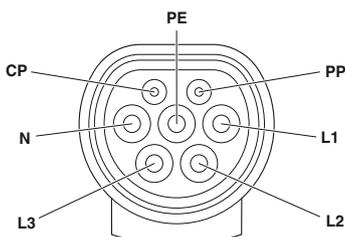
Ordering data		
Order No.	Pcs./Pkt.	Order No.
1627354	1	1627366

Ordering data		
Order No.	Pcs./Pkt.	Order No.
1627365	1	1627355

Accessories		
Type	Order No.	Pcs./Pkt.
EV-T2AC-PARK	1624148	1

Accessories		
Type	Order No.	Pcs./Pkt.
EV-T2AC-PARK	1624148	1

Accessories		
Type	Order No.	Pcs./Pkt.
EV-T2AC-PARK	1624148	1



Pin assignment of the Vehicle Connector

AC charging systems

Type 2 mobile AC charging cable with Vehicle Connector and Infrastructure Plug (EU)

- For electric vehicle with Type 2 Vehicle Inlet
- For charging at European Type 2 charging stations
- Locking on the vehicle side with locking actuator
- Locking on the infrastructure side with locking actuator

Notes:
Further cable types and lengths are available on request.
Color variants for housing and cables are available on request.
Vehicle Connector and Infrastructure Plug with protective cap.
For further performance variants, visit phoenixcontact.net/products



Type 2 AC Vehicle Connector with Type 2 Infrastructure Plug and spiraled metric cable, D line



Type 2 AC Vehicle Connector with Type 2 Infrastructure Plug and straight metric cable, D line



Rated current	20 A
Number of phases	1
Rated voltage	250 V AC
Standards	IEC 62196-2
Charging mode	Mode 3, Case B
Ambient temperature (operation)	-30°C ... 50°C
Number of power contacts	3 (L1, N, PE)
Insertion/withdrawal cycles	> 10000
Insertion/withdrawal force	< 100 N
Type of protection (when plugged in)	IP44
Degree of protection (with protective cap)	IP44
Cable data	
Cable type	spiraled
Cable length	4 m
Cable diameter	10.2 mm ±0,3 mm
Cable structure	3 x 2.5 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)
Sheath color	black

Technical data		
20 A, 1-phase	32 A, 1-phase	32 A, 3-phase
20 A	32 A	32 A
1	1	3
250 V AC	250 V AC	480 V AC
IEC 62196-2	IEC 62196-2	IEC 62196-2
Mode 3, Case B	Mode 3, Case B	Mode 3, Case B
-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
3 (L1, N, PE)	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)
> 10000	> 10000	> 10000
< 100 N	< 100 N	< 100 N
IP44	IP44	IP44
IP44	IP44	IP44
spiraled	spiraled	spiraled
4 m	4 m	4 m
10.2 mm ±0,3 mm	12.8 mm ±0.4 mm	17 mm ±0.4 mm
3 x 2.5 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)	5 x 6.0 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)
black	black	black

Technical data		
20 A, 1-phase	32 A, 1-phase	32 A, 3-phase
20 A	32 A	32 A
1	1	3
250 V AC	250 V AC	480 V AC
IEC 62196-2	IEC 62196-2	IEC 62196-2
Mode 3, Case B	Mode 3, Case B	Mode 3, Case B
-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
3 (L1, N, PE)	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)
> 10000	> 10000	> 10000
< 100 N	< 100 N	< 100 N
IP44	IP44	IP44
IP44	IP44	IP44
straight	straight	straight
5 m	5 m	5 m
10.2 mm ±0,3 mm	12.8 mm ±0.4 mm	17 mm ±0.4 mm
3 x 2.5 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)	5 x 6.0 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)
black	black	black

Description	
Mobile AC charging cable with Type 2 Vehicle Connector and Type 2 Infrastructure Plug without locking	

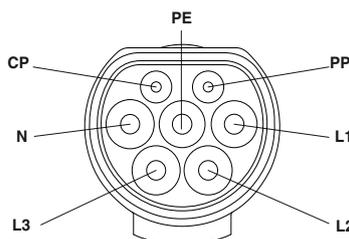
Ordering data					
Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
20 A, 1-phase		32 A, 1-phase		32 A, 3-phase	
1405192	1	1627984	1	1622495	1

Ordering data					
Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
20 A, 1-phase		32 A, 1-phase		32 A, 3-phase	
1622118	1	1627983	1	1622044	1

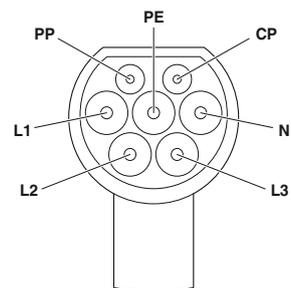
Description	
Type 2 AC Infrastructure Socket Outlet with locking actuator (12 V operating voltage)	

Accessories			
Type	Order No.	Pcs./Pkt.	
EV-T2M3SE12-3AC32A-0,7M6,0E10	1405214	1	

Accessories			
Type	Order No.	Pcs./Pkt.	
EV-T2M3SE12-3AC32A-0,7M6,0E10	1405214	1	



Pin assignment of the Vehicle Connector



Pin assignment of Infrastructure Plug

new



Type 2 AC Vehicle Connector with Type 2 Infrastructure Plug and spiraled metric cable, C line

new



Type 2 AC Vehicle Connector with Type 2 Infrastructure Plug and straight metric cable, C line

new



Type 2 AC Vehicle Connector with Type 2 Infrastructure Plug and straight metric cable, C line

Technical data		
20 A, 1-phase	32 A, 1-phase	32 A, 3-phase
20 A	32 A	32 A
1	1	3
250 V AC	250 V AC	480 V AC
IEC 62196-2	IEC 62196-2	IEC 62196-2
Mode 3, Case B	Mode 3, Case B	Mode 3, Case B
-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
3 (L1, N, PE)	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)
> 10000	> 10000	> 10000
< 100 N	< 100 N	< 100 N
IP44	IP44	IP44
IP54	IP54	IP54
spiraled	spiraled	spiraled
4 m	4 m	4 m
10.2 mm ±0.3 mm	12.8 mm ±0.4 mm	17 mm ±0.4 mm
3 x 2.5 mm ² + 1 x 0.5 mm ²	3 x 6.0 mm ² + 1 x 0.5 mm ²	5 x 6.0 mm ² + 1 x 0.5 mm ²
(prEN 50620, VDE Reg. 8789 class 5)	(prEN 50620, VDE Reg. 8789 class 5)	(prEN 50620, VDE Reg. 8789 class 5)
black	black	black

Technical data	
20 A, 1-phase	32 A, 1-phase
20 A	32 A
1	1
250 V AC	250 V AC
IEC 62196-2	IEC 62196-2
Mode 3, Case B	Mode 3, Case B
-30°C ... 50°C	-30°C ... 50°C
3 (L1, N, PE)	3 (L1, N, PE)
> 10000	> 10000
< 100 N	< 100 N
IP44	IP44
IP54	IP54
straight	straight
5 m	5 m
10.2 mm ±0.3 mm	12.8 mm ±0.4 mm
3 x 2.5 mm ² + 1 x 0.5 mm ²	3 x 6.0 mm ² + 1 x 0.5 mm ²
(prEN 50620, VDE Reg. 8789 class 5)	(prEN 50620, VDE Reg. 8789 class 5)
black	black

Technical data	
20 A, 1-phase	32 A, 1-phase
20 A	32 A
3	3
480 V AC	480 V AC
IEC 62196-2	IEC 62196-2
Mode 3, Case B	Mode 3, Case B
-30°C ... 50°C	-30°C ... 50°C
5 (L1, L2, L3, N, PE)	5 (L1, L2, L3, N, PE)
> 10000	> 10000
< 100 N	< 100 N
IP44	IP44
IP54	IP54
straight	straight
4 m	5 m
12.8 mm ±0.4 mm	17 mm ±0.4 mm
5 x 2.5 mm ² + 1 x 0.5 mm ²	5 x 6.0 mm ² + 1 x 0.5 mm ²
(prEN 50620, VDE Reg. 8789 class 5)	(prEN 50620, VDE Reg. 8789 class 5)
black	black

Ordering data		
Order No.	Pcs./Pkt.	Order No.
20 A, 1-phase	32 A, 1-phase	32 A, 3-phase

Ordering data		
Order No.	Pcs./Pkt.	Order No.
20 A, 1-phase	32 A, 1-phase	

Ordering data		
Order No.	Pcs./Pkt.	Order No.
20 A, 1-phase	32 A, 1-phase	

1627131 1 1627133 1 1627136 1

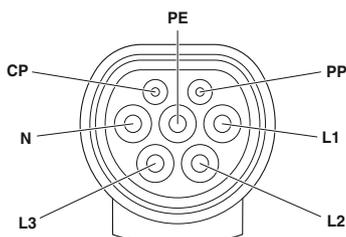
1627982 1 1627801 1

1623508 1 1627692 5

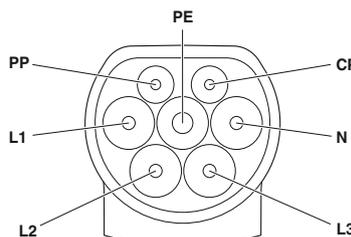
Accessories		
Type	Order No.	Pcs./Pkt.
EV-T2M3SE12-3AC32A-0,7M6,0E10	1405214	1

Accessories		
Type	Order No.	Pcs./Pkt.
EV-T2M3SE12-3AC32A-0,7M6,0E10	1405214	1

Accessories		
Type	Order No.	Pcs./Pkt.



Pin assignment of the Vehicle Connector



Pin assignment of Infrastructure Plug

AC charging systems

Type 2 AC Infrastructure Socket Outlets with locking actuator (EU)

- For installation in European charging stations
- Locking by means of electromechanical locking actuator

Notes:
Further cable lengths available on request.
Color variants for housing and cables are available on request.
For further performance variants, visit phoenixcontact.net/products



Type 2 AC Infrastructure Socket Outlet, for hinged cover that can be screwed on the back



Type 2 AC Infrastructure Socket Outlet, for hinged cover that can be screwed on the front

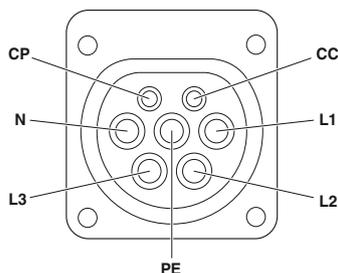
new



	Technical data		Technical data	
	20 A, 3-phase	32 A, 3-phase	20 A, 3-phase	32 A, 3-phase
Rated current	20 A	32 A	20 A	32 A
Number of phases	3	3	3	3
Rated voltage	480 V AC	480 V AC	480 V AC	480 V AC
Standards	IEC 62196-2	IEC 62196-2	IEC 62196-2	IEC 62196-2
Charging mode	Mode 3, Case B			
Dimensions (H x W x D)	75 mm x 96 mm x 76.2 mm	75 mm x 96 mm x 76.2 mm	75 mm x 96 mm x 76.2 mm	75 mm x 96 mm x 76.2 mm
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	5 (L1, L2, L3, N, PE)			
Insertion/withdrawal cycles	> 10000	> 10000	> 10000	> 10000
Type of protection (when plugged in)	IP44	IP44	IP44	IP44
Degree of protection (with hinged cover)	IP54	IP54	IP54	IP54
Cable data				
Cable type	Single wires	Single wires	Single wires	Single wires
Cable length	0.70 m	0.70 m	0.70 m	0.70 m
Cable structure	5x 2.5 mm ² + 2x 0.5 mm ²	5x 6.0 mm ² + 2x 0.5 mm ²	5x 2.5 mm ² + 2x 0.5 mm ²	5x 6.0 mm ² + 2x 0.5 mm ²
Locking actuator data				
Mechanical emergency release	available	available	available	available
Lock recognition	available	available	available	available

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.						
Type 2 AC Infrastructure Socket Outlet with locking actuator (12 V operating voltage)	20 A, 3-phase		32 A, 3-phase		20 A, 3-phase		32 A, 3-phase	
	1405213	1	1405214	1	1627985	1	1627693	1
Type 2 AC Infrastructure Socket Outlet with locking actuator (24 V operating voltage)	20 A, 3-phase		32 A, 3-phase		20 A, 3-phase		32 A, 3-phase	
	1405215	1	1405216	1	1627986	1	1627987	1

Description	Accessories			Accessories		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Hinged cover , can be screwed on the back self-closing	EV-T2SC	1405217	1			
Panel mounting frame , can be screwed on the back as an alternative to the hinged cover	EV-T2SF	1405218	1			
Hinged cover , can be screwed on the front self-closing				EV-T2SC-EM	1627635	1
Fixing frame , can be screwed on the front required for hinged cover with front screw connection				EV-T2SF-EM	1627637	1



Pin assignment of Infrastructure Socket Outlet

new

Hinged cover for Type 2 AC Infrastructure Socket Outlets

- 2 versions are available for protection against environmental influences:
- Hinged cover with rear screw connection
 - Hinged cover with front screw connection, can be easily replaced

Notes:
In the case of the hinged cover with front screw connection, fixing frame 1627637 must be mounted.



Hinged cover that can be screwed on the back and alternative panel mounting frame



Hinged cover that can be screwed on the front with fixing frame

Standards	IEC 62196-2
Charging mode	Mode 3, Case B
Color	black
Dimensions (H x W x D)	85 mm x 93.7 mm x 32.5 mm
Ambient temperature (operation)	-30°C ... 50°C
Degree of protection	IP54

Technical data

Standards	IEC 62196-2
Charging mode	Mode 3, Case B
Color	black
Dimensions (H x W x D)	85 mm x 93.7 mm x 32.5 mm
Ambient temperature (operation)	-30°C ... 50°C
Degree of protection	IP54

Technical data

Standards	IEC 62196-2
Charging mode	Mode 3, Case B
Color	black
Dimensions (H x W x D)	85 mm x 93.7 mm x 32.5 mm
Ambient temperature (operation)	-30°C ... 50°C
Degree of protection	IP54

Description	
Hinged cover , can be screwed on the back self-closing	
Panel mounting frame , can be screwed on the back as an alternative to the hinged cover	
Hinged cover , can be screwed on the front self-closing	

Ordering data

Type	Order No.	Pcs. / Pkt.
EV-T2SC	1405217	1
EV-T2SF	1405218	1

Ordering data

Type	Order No.	Pcs. / Pkt.
EV-T2SC-EM	1627635	1

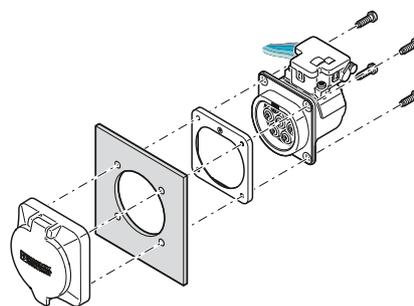
Description	
Fixing frame , can be screwed on the front required for hinged cover with front screw connection	

Accessories

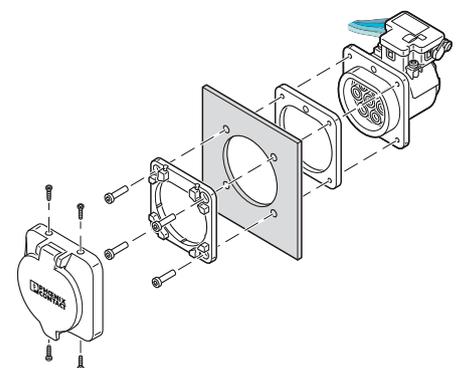
Type	Order No.	Pcs. / Pkt.

Accessories

Type	Order No.	Pcs. / Pkt.
EV-T2SF-EM	1627637	1



Rear mounting of the Infrastructure Socket Outlet, Hinged cover screwed on the back



Rear mounting of the Infrastructure Socket Outlet, Hinged cover screwed on the front

AC charging systems

GB/T AC charging cable with Vehicle Connector and open cable end (CN), D line

- Locking on the vehicle side with lever mechanism
- Charging cable for Chinese charging infrastructure (GB/T)

Notes:
Further cable types and lengths are available on request.
Color variants for housing, cables, and customer-specific labels available on request.
Vehicle Connector with protective cap.



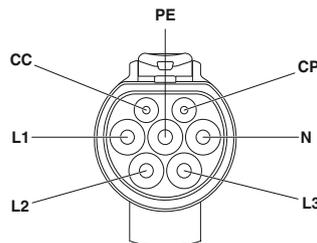
GB/T AC Vehicle Connector with straight cable in orange, D line



GB/T AC Vehicle Connector with straight cable in black, D line

CQC

	Technical data			Technical data		
	16 A, 1-phase	32 A, 1-phase	32 A, 3-phase	32 A, 1-phase		
Rated current	16 A	32 A	32 A	32 A		
Number of phases	1	1	3	1		
Rated voltage	250 V	250 V	440 V	250 V		
Standards	GB/T 20234.2	GB/T 20234.2	GB/T 20234.2	GB/T 20234.2		
Charging mode	Mode 3, Case C	Mode 3, Case C	Mode 3, Case C	Mode 3, Case C		
Resistor coding	680 Ω (between PE and CC)	220 Ω (between PE and CC)	220 Ω (between PE and CC)	220 Ω (between PE and CC)		
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C		
Number of power contacts	3 (L, N, PE)	3 (L, N, PE)	5 (L, NC1, NC2, N, PE)	3 (L, N, PE)		
Insertion/withdrawal cycles	> 10000	> 10000	> 10000	> 10000		
Insertion/withdrawal force	< 100 N	< 100 N	< 100 N	< 100 N		
Type of protection (when plugged in)	IP55	IP55	IP55	IP55		
Degree of protection (with protective cap)	IP54	IP54	IP54	IP54		
Cable data						
Cable length	5 m	5 m	5 m	5 m		
Cable diameter	10,5 mm ±0,5 mm	13,9 mm ±0,5 mm	17,1 mm ±0,5 mm	12,8 mm ±0,4 mm		
Cable structure	3 x 2,5 mm ² + 1 x 0,5 mm ² (GB/T 25087-2010, ISO 14572)	3 x 6 mm ² + 1 x 0,5 mm ² (GB/T 25087-2010, ISO 14572)	5 x 6 mm ² + 1 x 0,5 mm ² (GB/T 25087-2010, ISO 14572)	3 x 6,0 mm ² + 1 x 0,5 mm ² (prEN 50620, VDE Reg. 8789 class 5)		
Sheath color	orange	orange	orange	black		
	Ordering data			Ordering data		
Description	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
AC charging cable with GB/T Vehicle Connector and open cable end without locking	16 A, 1-phase		32 A, 1-phase		32 A, 3-phase	
	1408166	1	1408167	1	1408168	1
					32 A, 1-phase	
					1623467	1
	Accessories			Accessories		
Description	Type	Order No.	Pcs./ Pkt.	Type	Order No.	Pcs./ Pkt.
Holder	EV-GBAC-PARK	1624142	1	EV-GBAC-PARK	1624142	1



Pin assignment of the Vehicle Connector

GB/T AC charging cable with Vehicle Connector and open cable end (CN), C line

- Locking on the vehicle side with lever mechanism
- Additional locking option with U-lock
- Charging cable for Chinese charging infrastructure (GB/T)

Notes:
Further cable types and lengths are available on request.
Color variants for housing, cables, and customer-specific labels available on request.
Vehicle Connector with protective cap.

new

new



GB/T AC Vehicle Connector with straight cable in black, C line



GB/T AC Vehicle Connector with straight cable in black, C line

Rated current	16 A	32 A
Number of phases	1	1
Rated voltage	250 V	250 V
Standards	GB/T 20234.2-2015	GB/T 20234.2-2015
Charging mode	Mode 3, Case C	Mode 3, Case C
Resistor coding	680 Ω + 2.7 kΩ (Lever actuated) 680 Ω (Lever not actuated)	220 Ω + 3.3 kΩ (Lever actuated) 220 Ω (Lever not actuated)
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (L, N, PE)	3 (L, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000
Insertion/withdrawal force	< 100 N	< 100 N
Type of protection (when plugged in)	IP55	IP55
Degree of protection (with protective cap)	IP54	IP54
Cable data		
Cable length	5 m	5 m
Cable diameter	10.2 mm ±0.3 mm	12.8 mm ±0.4 mm
Cable structure	3 x 2.5 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)
Sheath color	black	black

Technical data			
16 A, 1-phase		32 A, 1-phase	
Rated current	16 A	32 A	
Number of phases	1	1	
Rated voltage	250 V	250 V	
Standards	GB/T 20234.2-2015	GB/T 20234.2-2015	
Charging mode	Mode 3, Case C	Mode 3, Case C	
Resistor coding	680 Ω + 2.7 kΩ (Lever actuated) 680 Ω (Lever not actuated)	220 Ω + 3.3 kΩ (Lever actuated) 220 Ω (Lever not actuated)	
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C	
Number of power contacts	3 (L, N, PE)	3 (L, N, PE)	
Insertion/withdrawal cycles	> 10000	> 10000	
Insertion/withdrawal force	< 100 N	< 100 N	
Type of protection (when plugged in)	IP55	IP55	
Degree of protection (with protective cap)	IP54	IP54	
Cable data			
Cable length	5 m	5 m	
Cable diameter	10.2 mm ±0.3 mm	12.8 mm ±0.4 mm	
Cable structure	3 x 2.5 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)	
Sheath color	black	black	

Technical data			
16 A, 3-phase		32 A, 3-phase	
Rated current	16 A	32 A	
Number of phases	3	3	
Rated voltage	440 V	440 V	
Standards	GB/T 20234.2-2015	GB/T 20234.2-2015	
Charging mode	Mode 3, Case C	Mode 3, Case C	
Resistor coding	680 Ω + 2.7 kΩ (Lever actuated) 680 Ω (Lever not actuated)	220 Ω + 3.3 kΩ (Lever actuated) 220 Ω (Lever not actuated)	
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C	
Number of power contacts	5 (L, NC1, NC2, N, PE)	5 (L, NC1, NC2, N, PE)	
Insertion/withdrawal cycles	> 10000	> 10000	
Insertion/withdrawal force	< 100 N	< 100 N	
Type of protection (when plugged in)	IP55	IP55	
Degree of protection (with protective cap)	IP54	IP54	
Cable data			
Cable length	5 m	5 m	
Cable diameter	12.8 mm ±0.4 mm	17 mm ±0.4 mm	
Cable structure	5 x 2.5 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)	5 x 6.0 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)	
Sheath color	black	black	

Description	Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
AC charging cable with GB/T Vehicle Connector and open cable end without locking				
	1627599	1	1627601	1
AC charging cable with GB/T Vehicle Connector and open cable end with locking				
	1623510	1	1623511	1

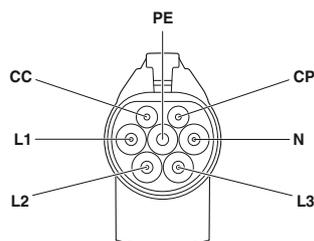
Ordering data			
16 A, 1-phase		32 A, 1-phase	
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	1627599	1627601	1
	1623510	1623511	1

Ordering data			
16 A, 3-phase		32 A, 3-phase	
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	1627600	1627602	1
	1623512	1624137	1

Description	Accessories		
	Type	Order No.	Pcs. / Pkt.
Holder	EV-GBAC-PARK	1624142	1

Accessories			
Type	Order No.	Pcs. / Pkt.	
EV-GBAC-PARK	1624142	1	

Description	Accessories		
	Type	Order No.	Pcs. / Pkt.
Holder	EV-GBAC-PARK	1624142	1



Pin assignment of the Vehicle Connector

Charging technology for E-Mobility

AC charging systems

GB/T mobile AC charging cable with Vehicle Connector and Infrastructure Plug (CN)

- For electric vehicle with GB/T Vehicle Inlet
- For charging at Chinese GB/T charging stations
- Locking on the vehicle side with lever mechanism



GB/T AC Vehicle Connector with GB/T Infrastructure Plug and straight cable in orange, D line



GB/T AC Vehicle Connector with GB/T Infrastructure Plug and straight cable in black, D line

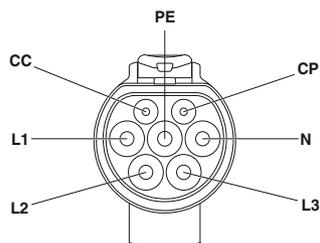
Notes:
Further cable types and lengths are available on request.
Color variants for housing, cables, and customer-specific labels available on request.
Vehicle Connector and Infrastructure Plug with protective cap.

CQC

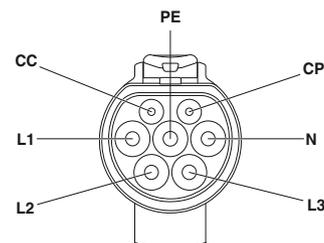
	Technical data			Technical data		
	16 A, 1-phase	32 A, 1-phase	32 A, 3-phase	16 A, 1-phase		
Rated current	16 A	32 A	32 A	16 A		
Number of phases	1	1	3	1		
Rated voltage	250 V	250 V	440 V	250 V		
Standards	GB/T 20234.2	GB/T 20234.2	GB/T 20234.2	IEC 62196-2		
Charging mode	Mode 3, Case B	Mode 3, Case B	Mode 3, Case B	Mode 3, Case B		
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C		
Number of power contacts	3 (L, N, PE)	3 (L, N, PE)	5 (L, NC1, NC2, N, PE)	3 (L, N, PE)		
Insertion/withdrawal cycles	> 10000	> 10000	> 10000	> 10000		
Insertion/withdrawal force	< 100 N	< 100 N	< 100 N	< 100 N		
Type of protection (when plugged in)	IP55	IP55	IP55	IP55		
Degree of protection (with protective cap)	IP54	IP54	IP54	IP54		
Cable data						
Cable type	straight	straight	straight	straight		
Cable length	5 m	5 m	5 m	4 m		
Cable diameter	10.5 mm ±0.5 mm	13.9 mm ±0.5 mm	17.1 mm ±0.5 mm	10.2 mm ±0.3 mm		
Cable structure	3 x 2.5 mm ² + 1 x 0.5 mm ² (GB/T 25087-2010, ISO 14572)	3 x 6 mm ² + 1 x 0.5 mm ² (GB/T 25087-2010, ISO 14572)	5 x 6 mm ² + 1 x 0.5 mm ² (GB/T 25087-2010, ISO 14572)	3 x 2.5 mm ² + 1 x 0.5 mm ² (prEN 50620, VDE Reg. 8789 class 5)		
Sheath color	orange	orange	orange	black		

Description	Ordering data						Ordering data					
	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.						
Mobile AC charging cable with GB/T Vehicle Connector and GB/T Infrastructure Plug without locking	16 A, 1-phase		32 A, 1-phase		32 A, 3-phase		16 A, 1-phase					
	1408161	1	1408163	1	1408165	1	1628127	1				
Mobile AC charging cable with GB/T Vehicle Connector and GB/T Infrastructure Plug with locking												

Description	Accessories				Accessories			
	Type	Order No.	Pcs./Pkt.		Type	Order No.	Pcs./Pkt.	
GB/T AC Infrastructure Socket Outlet with locking actuator (12 V operating voltage)	EV-GBM3SE12-3AC32A-0,7M6,0E10	1408172	1		EV-GBM3SE12-3AC32A-0,7M6,0E10	1408172	1	



Pin assignment of the Vehicle Connector



Pin assignment of Infrastructure Plug

new

new



GB/T AC Vehicle Connector with GB/T Infrastructure Plug and straight cable in black, C line



GB/T AC Vehicle Connector with GB/T Infrastructure Plug and straight cable in black, C line

Technical data	
16 A, 1-phase	32 A, 1-phase
16 A	32 A
1	1
250 V	250 V
GB/T 20234.2-2015	GB/T 20234.2-2015
Mode 3, Case B	Mode 3, Case B
-30°C ... 50°C	-30°C ... 50°C
3 (L, N, PE)	3 (L, N, PE)
> 10000	> 10000
< 100 N	< 100 N
IP55	IP55
IP54	IP54
straight	straight
5 m	5 m
10.2 mm ±0.3 mm	12.8 mm ±0.4 mm
3 x 2.5 mm ² +	3 x 6.0 mm ² +
1 x 0.5 mm ²	1 x 0.5 mm ²
(prEN 50620, VDE Reg. 8789 class 5)	(prEN 50620, VDE Reg. 8789 class 5)
black	black

Technical data	
16 A, 3-phase	32 A, 3-phase
16 A	32 A
3	3
440 V	440 V
GB/T 20234.2-2015	GB/T 20234.2-2015
Mode 3, Case B	Mode 3, Case B
-30°C ... 50°C	-30°C ... 50°C
5 (L, NC1, NC2, N, PE)	5 (L, NC1, NC2, N, PE)
> 10000	> 10000
< 100 N	< 100 N
IP55	IP55
IP54	IP54
straight	straight
5 m	5 m
12.8 mm ±0.4 mm	17 mm ±0.4 mm
5 x 2.5 mm ² +	5 x 6.0 mm ² +
1 x 0.5 mm ²	1 x 0.5 mm ²
(prEN 50620, VDE Reg. 8789 class 5)	(prEN 50620, VDE Reg. 8789 class 5)
black	black

Ordering data			
Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
16 A, 1-phase		32 A, 1-phase	

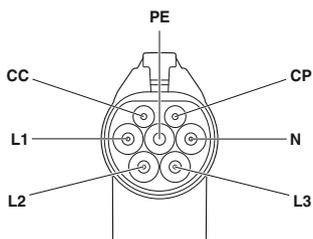
Ordering data			
Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
16 A, 3-phase		32 A, 3-phase	

1627603	1	1627605	1
1623515	1	1623516	1

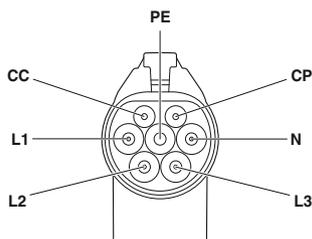
1627604	1	1627606	1
1623517	1	1624138	1

Accessories		
Type	Order No.	Pcs./Pkt.
EV-GBM3SE12-3AC32A-0,7M6,0E10	1408172	1

Accessories		
Type	Order No.	Pcs./Pkt.
EV-GBM3SE12-3AC32A-0,7M6,0E10	1408172	1



Pin assignment of the Vehicle Connector



Pin assignment of Infrastructure Plug

AC charging systems

GB/T AC Infrastructure Socket Outlets with and without locking actuator (CN)

- For installation in Chinese charging stations
- With and without electromechanical locking actuator

Notes:
Further cable lengths available on request.
Color variants for housing and cables are available on request.
For further performance variants, visit phoenixcontact.net/products



GB/T AC Infrastructure Socket Outlet, with locking actuator

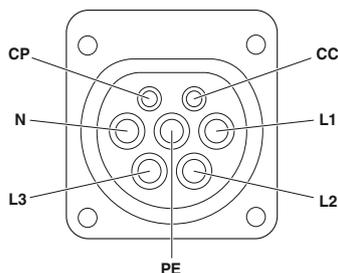


GB/T AC Infrastructure Socket Outlet, without locking actuator

	Technical data		Technical data	
	32 A, 1-phase	32 A, 3-phase	32 A, 1-phase	32 A, 3-phase
Rated current	32 A	32 A	32 A	32 A
Number of phases	1	3	1	3
Rated voltage	250 V AC	440 V AC	250 V AC	440 V AC
Standards	GB/T 20234.2-2015	GB/T 20234.2-2015	GB/T 20234.2-2015	GB/T 20234.2-2015
Charging mode	Mode 3, Case B			
Dimensions (H x W x D)	75 mm x 96 mm x 76.2 mm	75 mm x 96 mm x 76.2 mm	75 mm x 79.5 mm x 70.8 mm	75 mm x 79.5 mm x 70.8 mm
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000	> 10000
Type of protection (when plugged in)	IP55	IP55	IP55	IP55
Degree of protection (with hinged cover)	IP55	IP55	IP55	IP55
Cable data				
Cable type	Single wires	Single wires	Single wires	Single wires
Cable length	0.70 m	0.70 m	0.70 m	0.70 m
Cable structure	3x 6.0 mm ² + 2x 0.5 mm ²	5x 6.0 mm ² + 2x 0.5 mm ²	3x 6.0 mm ² + 2x 0.5 mm ²	5x 6.0 mm ² + 2x 0.5 mm ²
Locking actuator data				
Mechanical emergency release	available	available	-	-
Lock recognition	available	available	-	-

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.						
GB/T AC Infrastructure Socket Outlet with locking actuator (12 V operating voltage)	1408171	1	1408172	1				
GB/T AC Infrastructure Socket Outlet with locking actuator and temperature monitoring (12 V operating voltage)	1627347	1	1627558	1				
GB/T AC Infrastructure Socket Outlet without locking actuator					1408169	1	1408170	1

Description	Accessories			Accessories		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Hinged cover						
self-opening	EV-GBSCO	1623415	1	EV-GBSCO	1623415	1
self-closing	EV-GBSC	1623416	1	EV-GBSC	1623416	1



Pin assignment of Infrastructure Socket Outlet

**Hinged cover
for GB/T AC Infrastructure
Socket Outlets**

2 versions are available for protection against environmental influences:
 – Self-opening hinged cover
 – Self-closing hinged cover

Notes:
Hinged cover for AC Infrastructure Socket Outlets with front mounting.
The hinged cover screw connection is on the back.



Hinged cover that can be screwed on the back, self-opening



Hinged cover that can be screwed on the back, self-closing

Standards	GB/T 20234.2
Charging mode	Mode 3, Case B
Color	black
Dimensions (H x W x D)	76.6 mm x 90.5 mm x 24.7 mm
Ambient temperature (operation)	-30°C ... 50°C
Degree of protection	IP54

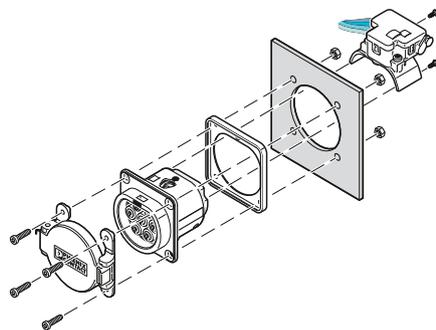
Technical data		
Standards	GB/T 20234.2	
Charging mode	Mode 3, Case B	
Color	black	
Dimensions (H x W x D)	76.6 mm x 90.5 mm x 24.7 mm	
Ambient temperature (operation)	-30°C ... 50°C	
Degree of protection	IP54	

Technical data		
Standards	GB/T 20234.2	
Charging mode	Mode 3, Case B	
Color	black	
Dimensions (H x W x D)	76.6 mm x 76.6 mm x 24.7 mm	
Ambient temperature (operation)	-30°C ... 50°C	
Degree of protection	IP54	

Description
Hinged cover
self-opening
self-closing

Ordering data		
Type	Order No.	Pcs. / Pkt.
EV-GBSCO	1623415	1

Ordering data		
Type	Order No.	Pcs. / Pkt.
EV-GBSC	1623416	1



Front mounting of the Infrastructure Socket Outlet with locking actuator removed

Holders

Type 2 holders for Vehicle Connectors

- Park position for Vehicle Connector
- For installation at European charging stations
- Stable attachment of the Vehicle Connector by means of locking clip

Notes:
 The screw connection positions of AC versions are identical and correspond to those of the Infrastructure Socket Outlet.
 The screw connection positions of CCS DC versions are identical.

new

new



Type 2 holder for AC Vehicle Connector



Type 2 holder for CSS DC Vehicle Connector

Standards
 Charging mode
 Color
 Dimensions (H x W x D)
 Mounting
 Fixing of Vehicle Connector
 Removal of Vehicle Connector
 Detection of Vehicle Connector
 Ambient temperature (operation)
 Type of protection (when plugged in)

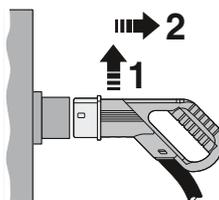
Technical data		
Standards	IEC 62196-2	
Charging mode	Mode 3	
Color	black	
Dimensions (H x W x D)	75 mm x 75 mm x 44.7 mm	
Mounting	Front mounting	
Fixing of Vehicle Connector	With locking clips for locking contour	
Removal of Vehicle Connector	Lifting and removal	
Detection of Vehicle Connector	On request	
Ambient temperature (operation)	-30°C ... 50°C	
Type of protection (when plugged in)	IP54	

Technical data		
Standards	IEC 62196-3	
Charging mode	Mode 4	
Color	black	
Dimensions (H x W x D)	75 mm x 118 mm x 54 mm	
Mounting	Front mounting	
Fixing of Vehicle Connector	With locking clips for locking contour	
Removal of Vehicle Connector	Lifting and removal	
Detection of Vehicle Connector	On request	
Ambient temperature (operation)	-30°C ... 50°C	
Type of protection (when plugged in)	IP54	

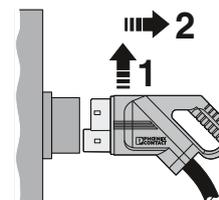
Description
Holder

Ordering data		
Type	Order No.	Pcs. / Pkt.
EV-T2AC-PARK	1624148	1

Ordering data		
Type	Order No.	Pcs. / Pkt.
EV-T2CCS-PARK	1624153	1



Raise AC Vehicle Connector in the holder and remove



Raise DC Vehicle Connector in the holder and remove

Type 1 and GB/T holders for Vehicle Connectors

- Park position for Vehicle Connector
- For installation at North American or Chinese charging stations
- Stable attachment of the Vehicle Connector by means of lever actuation

Notes:
 The screw connection positions of AC versions are identical and correspond to those of the Infrastructure Socket Outlet.
 The screw connection positions of CCS DC versions are identical.

new

new



Type 1 holder for AC and CCS DC Vehicle Connectors



GB/T holder for AC and DC Vehicle Connectors

	Technical data		Technical data	
	AC	DC	AC	DC
Standards	SAE J1772	SAE J1772	GB/T 20234.2	GB/T 20234.3
Charging mode	Mode 3	Mode 4	Mode 3	Mode 4
Color	black	black	black	black
Dimensions (H x W x D)	75 mm x 75 mm x 37.5 mm	75 mm x 118 mm x 37.5 mm	76.6 mm x 76.6 mm x 40 mm	91 mm x 91 mm x 51 mm
Mounting	Front mounting	Front mounting	Front mounting	Front mounting
Fixing of Vehicle Connector	With actuation lever	With actuation lever	With actuation lever	With actuation lever
Removal of Vehicle Connector	Lever actuation and removal			
Detection of Vehicle Connector	On request	On request	On request	On request
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
Type of protection (when plugged in)	IP54	IP54	IP54	IP54

	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	AC		DC		AC		DC	
Holder without detection of the Vehicle Connector	1624139	1	1624143	1	1624142	1	1623770	1
Holder with detection of the Vehicle Connector							1623497	1
Holder Fixing with hexagonal head screws							1623496	1



Control and monitor the charging process of electric vehicles

Sustainable E-Mobility requires safe and reliable charging infrastructure functions that can be intelligently integrated into energy systems if required. The controller and monitoring components from Phoenix Contact allow the setup of charging stations according to current standards and therefore ensure a high degree of safety and interoperability with electric vehicles.

Charging controllers for AC charging

Charge electric vehicles according to IEC 61851-1 using the Basic and Advanced AC charging controllers. The portfolio addresses the entire spectrum of charging stations, from simple autonomous charging points to networked stations – everything for charging mode 3:

- Charging case B: charging with Infrastructure Socket Outlet
- Charging case C: charging with attached charging cable

Comprehensive configuration options are provided in the devices for the specific requirements of our customers.

From the charging point to the networked charging infrastructure

Phoenix Contact charging controllers are operated both autonomously and in networks. Status data is acquired via the integrated communication interfaces and controlled intervention in the charging process is supported. Here we rely on standardized communication interfaces and protocols and therefore offer easy connection options to various automation systems.

Smart charging

Operating a charging infrastructure requires more than just the charging technology in the charging station. Intelligent charging infrastructures are integrated in management systems and communicate with billing and operator systems. Based on Phoenix Contact products, software function blocks for implementing charging and energy management, authorization routines and interfaces to back-end systems are available, for example, via the Open Charge Point Protocol (OCPP).

Residual current detection in the charging station

Residual currents that occur when charging electric vehicles are monitored using Phoenix Contact RCM (residual current monitoring) modules. Both AC and DC residual currents are detected. In combination with existing residual current protection devices, these modules increase the voltage protection level required according to DIN VDE 0100-722 when charging electric vehicles. As per IEC 62752, residual current protective devices (e.g., RCD type A) are protected against DC components and can continue to be operated.



Basic NAR AC charging controller

This compact AC charging controller is specifically designed for level 2 charging stations in the North American market according to SAE J1772. With Control Pilot, integrated circuit breakers, residual current detection, and certification according to UL 2231 and UL 2594, it satisfies all the requirements for a turnkey E-Mobility solution.



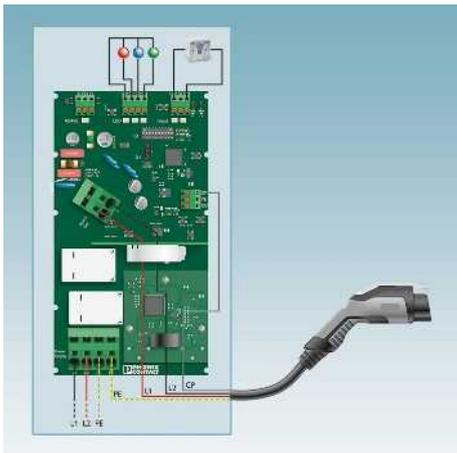
Basic AC charging controller

The Basic AC charging controller is equipped with the essential functions for charging electric vehicles for the European and Chinese market. The integrated power supply for locking the Infrastructure Plug can be used to control a locking actuator of an Infrastructure Socket Outlet (charging case B).



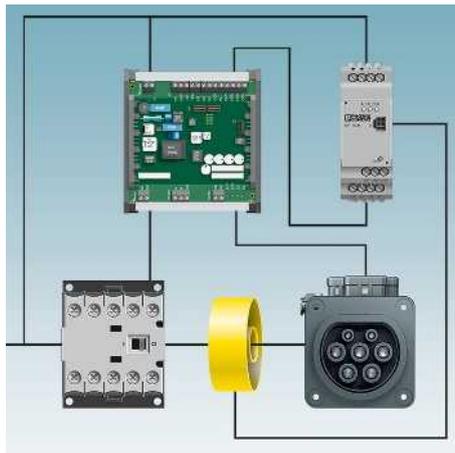
Advanced AC charging controller

The Advanced AC charging controller integrates all the necessary control functions for commercial charging points in Europe and offers comprehensive configuration options. In addition, it supports load and energy management on company premises and in parking lots.



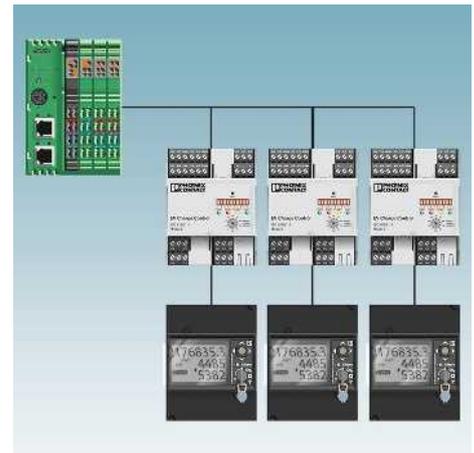
Compact solution

Charging stations can be assembled quickly and easily, thanks to the Basic NAR AC charging controller. The integrated functions minimize wiring effort and enable space-saving installation. The need for external components is minimal. The RS-485 communication interface enables easy integration on higher-level controllers. This networking can be connected to a higher-level control system.



Simple charging points

The Basic AC charging controller can be used to install simple charging stations with just a few components quickly – whether at home or in a commercial environment. Thanks to the optional connection of RCM modules for residual current detection, you can increase the voltage protection level of the charging station in accordance with normative specifications. Maximum system availability is thereby achieved.



Networked charging points

The configurable RS-485 interface can be used to connect various power meters to the Advanced AC charging controller, enabling the performance data of the charging point to be recorded. Using the integrated Ethernet interface, you can configure the charging controller as well as establish an intelligent connection to higher-level control systems.

AC charging controllers

Advanced AC charging controller for commercial applications (EU)

- Charging case B and C
- For charging point in European charging infrastructure
- Comprehensive configuration options
- Ethernet interface for charging and energy management
- RS-485 interface for connection to power meters



Advanced AC charging controller, DIN rail housing, charging case B and C



Locking release module in the event of mains failure for AC charging controllers, charging case B

Width 71.6 mm

Technical data

Digital inputs	
Number of inputs	4
Nominal input current I_N	≤ 8 mA
Nominal input voltage U_N	24 V
Input voltage range U1	-3 V ... 5 V (Off)
Input voltage range U2	15 V ... 30 V (On)
Input voltage range U3	-
Switching outputs	
Control of charging contactor	Relay output $C_{1,2}$
Minimum switching capacity	1500 VA
Maximum switching current	6 A
Maximum switching voltage	250 V AC (External supply)
Control of locking actuator	Relay output $R_{1,3}$ and $R_{2,4}$
Minimum switching capacity	180 VA
Maximum switching current	6 A
Maximum switching voltage	30 V AC/DC (External supply)
Digital outputs	
Control of additional switching functions	Relay output $V_{1,2}$
Maximum switching current	6 A
Maximum switching voltage	250 V AC
Control of additional functions	4 digital outputs
Maximum output current	0.1 A (Total current for all outputs; internally supplied) 0.6 A (Per output; externally supplied)
Output voltage range	12 V ... 30 V
Data interfaces	
Ethernet interface	Ethernet 10Base-T/100Base-TX
Connection method	RJ45 socket
Number of interfaces	1
Transmission speed	10/100 Mbps
Transmission length	max. 100 m (with shielded, twisted-pair data cable)
RS-485 interface	RS-485 2-wire
Connection method	Screw connection
Number of interfaces	1
Transmission speed	9.6 kbps (Standard) 2.4 kbps ... 19.2 kbps (adjustable)
Protocols	Modbus/RTU (slave)
Device supply	
Supply voltage range	110 V AC ... 240 V AC (nominal voltage range)
Nominal power consumption	< 1 W (No-load)
Frequency range	45 Hz ... 65 Hz
General data	
Degree of protection	IP20
Locking release in the event of mains failure	With EM-EV-CLR-12V locking release module (Order No. 2903246) as an option
Ambient temperature (operation)	-25°C ... 60°C
Standards/regulations	IEC 61851-1
Dimensions W/H/D	71.6 / 90 / 61 mm
Conformance/Approvals	
Conformance	CE-compliant

Width 35.6 mm

Technical data

Digital inputs	
Number of inputs	1
Nominal input current I_N	approx. 5 mA
Nominal input voltage U_N	12 V
Input voltage range U1	-3 V ... 3 V (Off)
Input voltage range U2	-30 V ... -10 V (Locking ON)
Input voltage range U3	10 V ... 30 V (Unlocking ON)
Switching outputs	
Control of charging contactor	-
Minimum switching capacity	-
Maximum switching current	-
Maximum switching voltage	-
Control of locking actuator	Relay output OUT+/-
Minimum switching capacity	46 VA
Maximum switching current	4 A
Maximum switching voltage	approx. 11.5 V (Operating/capacitor voltage minus the diode voltage of ~ 0.5 V)
Digital outputs	
Control of additional switching functions	-
Maximum switching current	-
Maximum switching voltage	-
Control of additional functions	-
Maximum output current	-
Output voltage range	-
Data interfaces	
Ethernet interface	-
Connection method	-
Number of interfaces	-
Transmission speed	-
Transmission length	-
RS-485 interface	-
Connection method	-
Number of interfaces	-
Transmission speed	-
Protocols	-
Device supply	
Supply voltage range	12 V DC $\pm 5\%$
Nominal power consumption	-
Frequency range	-
General data	
Degree of protection	IP20
Locking release in the event of mains failure	Integrated release function of the locking actuator for disconnection of Infrastructure Plug and Infrastructure Socket Outlet
Ambient temperature (operation)	-25°C ... 60°C
Standards/regulations	IEC 61851-1 / EN 61000-6-2 / EN 61000-6-3
Dimensions W/H/D	35.6 / 90 / 61 mm
Conformance/Approvals	
Conformance	CE-compliant

Ordering data

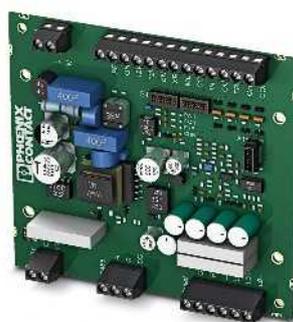
Description	Type	Order No.	Pcs. / Pkt.
AC charging controller, DIN rail housing	EM-CP-PP-ETH	2902802	1
Locking release module			

Ordering data

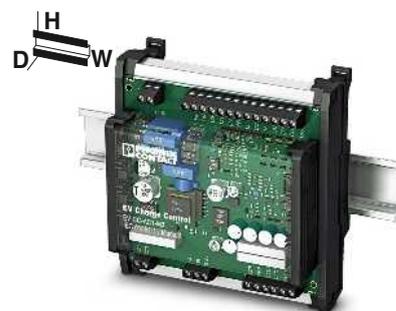
Description	Type	Order No.	Pcs. / Pkt.
Locking release module	EM-EV-CLR-12V	2903246	1

Basic AC charging controller for private applications (EU/CN)

- Charging case B
- For charging point in European or Chinese charging infrastructure
- Comprehensive configuration options
- Adjustable amperage
- RS-485 interface



Basic AC charging controller, PCB, charging case B



Basic AC charging controller, DIN rail housing, charging case B

Width 120 mm

Technical data

Digital inputs	
Number of inputs	5
Nominal input current I_N	≤ 1 mA
Nominal input voltage U_N	12 V
Input voltage range U1	0 V ... 3 V (Off)
Input voltage range U2	9 V ... 15 V (On)
Switching outputs	
Control of charging contactor	Relay output C _{1,2}
Minimum switching capacity	1500 VA
Maximum switching current	6 A
Maximum switching voltage	250 V AC (External supply)
Control of locking actuator	Relay output LO+/-
Minimum switching capacity	24 VA
Maximum switching current	2 A
Maximum switching voltage	12 V (Internal supply)
Digital outputs	
Control of additional functions	4 digital outputs
Maximum output current	0.5 A (Total current for all outputs; internally supplied) 0.6 A (Per output; externally supplied)
Output voltage range	5 V ... 30 V
Data interfaces	
RS-485 interface	RS-485 2-wire
Connection method	Screw connection
Number of interfaces	1
Transmission speed	9.6 kbps (Standard) 9.6 kbps ... 19.2 kbps (adjustable) Modbus/RTU (slave)
Protocols	
Device supply	
Supply voltage range	100 V AC ... 240 V AC (nominal voltage range)
Nominal power consumption	< 1 W (No-load)
Frequency range	50 Hz ... 60 Hz
General data	
Degree of protection	IP00
Locking release in the event of mains failure	Integrated release function of the locking actuator for disconnection of Infrastructure Plug and Infrastructure Socket Outlet
Ambient temperature (operation)	-35°C ... 70°C
Standards/regulations	IEC 61851-1 / GB/T 18487.1-2015 / SAE J1772
Dimensions W/H/D	120 / 108 / 20 mm
Conformance/Approvals	
Conformance	CE-compliant

Width 124 mm

Technical data

Digital inputs	
Number of inputs	5
Nominal input current I_N	≤ 1 mA
Nominal input voltage U_N	12 V
Input voltage range U1	0 V ... 3 V (Off)
Input voltage range U2	9 V ... 15 V (On)
Switching outputs	
Control of charging contactor	Relay output C _{1,2}
Minimum switching capacity	1500 VA
Maximum switching current	6 A
Maximum switching voltage	250 V AC (External supply)
Control of locking actuator	Relay output LO+/-
Minimum switching capacity	24 VA
Maximum switching current	2 A
Maximum switching voltage	12 V (Internal supply)
Digital outputs	
Control of additional functions	4 digital outputs
Maximum output current	0.5 A (Total current for all outputs; internally supplied) 0.6 A (Per output; externally supplied)
Output voltage range	5 V ... 30 V
Data interfaces	
RS-485 interface	RS-485 2-wire
Connection method	Screw connection
Number of interfaces	1
Transmission speed	9.6 kbps (Standard) 9.6 kbps ... 19.2 kbps (adjustable) Modbus/RTU (slave)
Protocols	
Device supply	
Supply voltage range	100 V AC ... 240 V AC (nominal voltage range)
Nominal power consumption	< 1 W (No-load)
Frequency range	50 Hz ... 60 Hz
General data	
Degree of protection	IP20
Locking release in the event of mains failure	Integrated release function of the locking actuator for disconnection of Infrastructure Plug and Infrastructure Socket Outlet
Ambient temperature (operation)	-35°C ... 70°C
Standards/regulations	IEC 61851-1 / GB/T 18487.1-2015 / SAE J1772
Dimensions W/H/D	124 / 128 / 64 mm
Conformance/Approvals	
Conformance	CE-compliant

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
AC charging controller, uncoated PCB	EV-CC-AC1-M3-CBC-SER-PCB	1622453	1
AC charging controller, coated PCB	EV-CC-AC1-M3-CBC-SER-PCB-XC-25	1627743	25
AC charging controller, DIN rail housing			

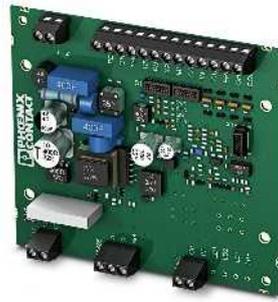
Ordering data

Description	Type	Order No.	Pcs. / Pkt.
AC charging controller, DIN rail housing	EV-CC-AC1-M3-CBC-SER-HS	1622452	1

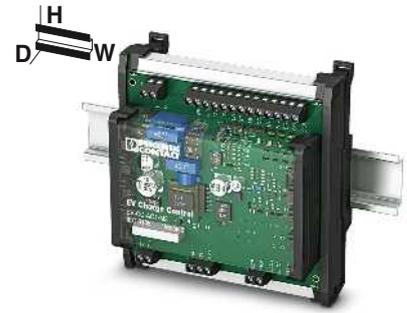
AC charging controllers

Basic AC charging controller for private applications (EU/CN)

- Charging case C
- Optimized for charging stations with Vehicle Connector
- For charging point in European or Chinese charging infrastructure
- Comprehensive configuration options
- Adjustable amperage
- RS-485 interface



Basic AC charging controller, PCB, charging case C



Basic AC charging controller, DIN rail housing, charging case C

Width 120 mm

Technical data

Digital inputs	
Number of inputs	5
Nominal input current I_N	≤ 1 mA
Nominal input voltage U_N	12 V
Input voltage range U1	0 V ... 3 V (Off)
Input voltage range U2	9 V ... 15 V (On)
Switching outputs	
Control of charging contactor	Relay output C _{1,2}
Minimum switching capacity	1500 VA
Maximum switching current	6 A
Maximum switching voltage	250 V AC (External supply)
Digital outputs	
Control of additional functions	4 digital outputs
Maximum output current	0.5 A (Total current for all outputs; internally supplied) 0.6 A (Per output; externally supplied)
Output voltage range	5 V ... 30 V
Data interfaces	
RS-485 interface	RS-485 2-wire
Connection method	Screw connection
Number of interfaces	1
Transmission speed	9.6 kbps (Standard) 9.6 kbps ... 19.2 kbps (adjustable) Modbus/RTU (slave)
Protocols	
Device supply	
Supply voltage range	100 V AC ... 240 V AC (nominal voltage range)
Nominal power consumption	< 1 W (No-load)
Frequency range	50 Hz ... 60 Hz
General data	
Degree of protection	IP00
Locking release in the event of mains failure	-
Ambient temperature (operation)	-35°C ... 70°C
Standards/regulations	IEC 61851-1 / GB/T 18487.1-2015 / SAE J1772
Dimensions W/H/D	120 / 108 / 20 mm
Conformance/Approvals	
Conformance	CE-compliant

Ordering data

Description	
AC charging controller, uncoated PCB	
AC charging controller, coated PCB	
AC charging controller, DIN rail housing	

Type	Order No.	Pcs. / Pkt.
EV-CC-AC1-M3-CC-SER-PCB	1622460	1
EV-CC-AC1-M3-CC-SER-PCB-XC-25X	1627742	25

Width 124 mm

Technical data

Digital inputs	
Number of inputs	5
Nominal input current I_N	≤ 1 mA
Nominal input voltage U_N	12 V
Input voltage range U1	0 V ... 3 V (Off)
Input voltage range U2	9 V ... 15 V (On)
Switching outputs	
Control of charging contactor	Relay output C _{1,2}
Minimum switching capacity	1500 VA
Maximum switching current	6 A
Maximum switching voltage	250 V AC (External supply)
Digital outputs	
Control of additional functions	4 digital outputs
Maximum output current	0.5 A (Total current for all outputs; internally supplied) 0.6 A (Per output; externally supplied)
Output voltage range	5 V ... 30 V
Data interfaces	
RS-485 interface	RS-485 2-wire
Connection method	Screw connection
Number of interfaces	1
Transmission speed	9.6 kbps (Standard) 9.6 kbps ... 19.2 kbps (adjustable) Modbus/RTU (slave)
Protocols	
Device supply	
Supply voltage range	100 V AC ... 240 V AC (nominal voltage range)
Nominal power consumption	< 1 W (No-load)
Frequency range	50 Hz ... 60 Hz
General data	
Degree of protection	IP20
Locking release in the event of mains failure	-
Ambient temperature (operation)	-35°C ... 70°C
Standards/regulations	IEC 61851-1 / GB/T 18487.1-2015 / SAE J1772
Dimensions W/H/D	124 / 128 / 64 mm
Conformance/Approvals	
Conformance	CE-compliant

Ordering data

Type	Order No.	Pcs. / Pkt.
EV-CC-AC1-M3-CC-SER-HS	1622459	1

Basic AC charging controller for private applications (EU/CN)

- Charging case B and C
- Connection with practical MSTB connector
- For charging point in European or Chinese charging infrastructure
- Comprehensive configuration options
- Adjustable amperage
- RS-485 interface



Basic AC charging controller, PCB, charging case B, with MSTB connection



Basic AC charging controller, PCB, charging case C, with MSTB connection

	Technical data	Technical data
Digital inputs		
Number of inputs	5	5
Nominal input current I_N	≤ 1 mA	≤ 1 mA
Nominal input voltage U_N	12 V	12 V
Input voltage range U1	0 V ... 3 V (Off)	0 V ... 3 V (Off)
Input voltage range U2	9 V ... 15 V (On)	9 V ... 15 V (On)
Switching outputs		
Control of charging contactor	Relay output C _{1,2}	Relay output C _{1,2}
Minimum switching capacity	1500 VA	1500 VA
Maximum switching current	6 A	6 A
Maximum switching voltage	250 V AC (External supply)	250 V AC (External supply)
Control of locking actuator	Relay output LO+/-	-
Minimum switching capacity	24 VA	-
Maximum switching current	2 A	-
Maximum switching voltage	12 V (Internal supply)	-
Digital outputs		
Control of additional functions	4 digital outputs	4 digital outputs
Maximum output current	0.5 A (Total current for all outputs; internally supplied) 0.6 A (Per output; externally supplied)	0.5 A (Total current for all outputs; internally supplied) 0.6 A (Per output; externally supplied)
Output voltage range	5 V ... 30 V	5 V ... 30 V
Data interfaces		
RS-485 interface	RS-485 2-wire	RS-485 2-wire
Connection method	Plug-in spring-cage terminal blocks	Plug-in spring-cage terminal blocks
Number of interfaces	1	1
Transmission speed	9.6 kbps (Standard) 9.6 kbps ... 19.2 kbps (adjustable) Modbus/RTU (slave)	9.6 kbps (Standard) 9.6 kbps ... 19.2 kbps (adjustable) Modbus/RTU (slave)
Protocols		
Device supply		
Supply voltage range	100 V AC ... 240 V AC (nominal voltage range)	100 V AC ... 240 V AC (nominal voltage range)
Nominal power consumption	< 1 W (No-load)	< 1 W (No-load)
Frequency range	50 Hz ... 60 Hz	50 Hz ... 60 Hz
General data		
Degree of protection	IP00	IP00
Locking release in the event of mains failure	Integrated release function of the locking actuator for disconnection of Infrastructure Plug and Infrastructure Socket Outlet	-
Ambient temperature (operation)	-35°C ... 70°C	-35°C ... 70°C
Standards/regulations	IEC 61851-1 / GB/T 18487.1-2015 / SAE J1772	IEC 61851-1 / GB/T 18487.1-2015 / SAE J1772
Dimensions W/H/D	120 / 108 / 34 mm	120 / 108 / 34 mm
Conformance/Approvals		
Conformance	CE-compliant	CE-compliant

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
AC charging controller, uncoated PCB	EV-CC-AC1-M3-CBC-SER-PCB-MSTB	1627353	1	EV-CC-AC1-M3-CC-SER-PCB-MSTB	1627367	1

AC charging controllers

Basic NAR AC charging controller for private applications (US)

- Charging case C
- Turnkey compact solution with Control Pilot, integrated, redundant circuit breakers, and residual current detection
- For charging point in North American charging infrastructure
- Comprehensive configuration options
- Adjustable amperage
- RS-485 interface



Basic NAR AC charging controller, PCB, charging case C, level 2



Basic NAR AC charging controller, DIN rail housing, charging case C, level 2

Digital inputs	
Number of inputs	2
Nominal input current I_N	≤ 1 mA
Nominal input voltage U_N	12 V
Input voltage range U1	0 V ... 3 V (Off)
Input voltage range U2	9 V ... 15 V (On)
Switching outputs	
Control of charging contactor	Integrated load relays
Minimum switching capacity	9600 VA
Maximum switching current	40 A
Maximum switching voltage	240 V (Internal supply)
Digital outputs	
Control of additional functions	3 digital outputs, open collector
Maximum output current	30 mA
Output voltage range	12 V
Residual current measuring range	
Rated frequency	≤ 500 Hz
Current measuring range	50 A (45 Hz ... 50 Hz)
Residual current $I_{\Delta n1}$	20 mA AC (UL2231-2, CCID20)
Residual current $I_{\Delta n2}$	20 mA DC (UL2231-2, CCID20)
Response time at 1 x $I_{\Delta n}$	< 10 ms
Data interfaces	
RS-485 interface	RS-485 2-wire
Connection method	Push-in connection
Number of interfaces	1
Transmission speed	19200 kbps
Protocols	Modbus/RTU (slave)
Device supply	
Supply voltage range	100 V AC ... 240 V AC (nominal voltage range)
Power consumption	max. 9.6 kW
Nominal power consumption	< 0.5 W (No-load)
Frequency range	50 Hz ... 60 Hz
General data	
Degree of protection	IP00
Locking release in the event of mains failure	-
Ambient temperature (operation)	-25°C ... 50°C
Standards/regulations	UL 2231 / UL 2594
Dimensions W/H/D	122 / 227 / 63 mm
Conformance/Approvals	
Conformance	CE-compliant
Approvals	ETL-certified

Width 122 mm		
Technical data		
Digital inputs		
Number of inputs	2	
Nominal input current I_N	≤ 1 mA	
Nominal input voltage U_N	12 V	
Input voltage range U1	0 V ... 3 V (Off)	
Input voltage range U2	9 V ... 15 V (On)	
Switching outputs		
Control of charging contactor	Integrated load relays	
Minimum switching capacity	9600 VA	
Maximum switching current	40 A	
Maximum switching voltage	240 V (Internal supply)	
Digital outputs		
Control of additional functions	3 digital outputs, open collector	
Maximum output current	30 mA	
Output voltage range	12 V	
Residual current measuring range		
Rated frequency	≤ 500 Hz	
Current measuring range	50 A (45 Hz ... 50 Hz)	
Residual current $I_{\Delta n1}$	20 mA AC (UL2231-2, CCID20)	
Residual current $I_{\Delta n2}$	20 mA DC (UL2231-2, CCID20)	
Response time at 1 x $I_{\Delta n}$	< 10 ms	
Data interfaces		
RS-485 interface	RS-485 2-wire	
Connection method	Push-in connection	
Number of interfaces	1	
Transmission speed	19200 kbps	
Protocols	Modbus/RTU (slave)	
Device supply		
Supply voltage range	100 V AC ... 240 V AC (nominal voltage range)	
Power consumption	max. 9.6 kW	
Nominal power consumption	< 0.5 W (No-load)	
Frequency range	50 Hz ... 60 Hz	
General data		
Degree of protection	IP00	
Locking release in the event of mains failure	-	
Ambient temperature (operation)	-25°C ... 50°C	
Standards/regulations	UL 2231 / UL 2594	
Dimensions W/H/D	122 / 227 / 63 mm	
Conformance/Approvals		
Conformance	CE-compliant	
Approvals	ETL-certified	

Width 143 mm		
Technical data		
Digital inputs		
Number of inputs	2	
Nominal input current I_N	≤ 1 mA	
Nominal input voltage U_N	12 V	
Input voltage range U1	0 V ... 3 V (Off)	
Input voltage range U2	9 V ... 15 V (On)	
Switching outputs		
Control of charging contactor	Integrated load relays	
Minimum switching capacity	9600 VA	
Maximum switching current	40 A	
Maximum switching voltage	240 V (Internal supply)	
Digital outputs		
Control of additional functions	3 digital outputs, open collector	
Maximum output current	30 mA	
Output voltage range	12 V	
Residual current measuring range		
Rated frequency	≤ 500 Hz	
Current measuring range	50 A (45 Hz ... 50 Hz)	
Residual current $I_{\Delta n1}$	20 mA AC (UL2231-2, CCID20)	
Residual current $I_{\Delta n2}$	20 mA DC (UL2231-2, CCID20)	
Response time at 1 x $I_{\Delta n}$	< 10 ms	
Data interfaces		
RS-485 interface	RS-485 2-wire	
Connection method	Push-in connection	
Number of interfaces	1	
Transmission speed	19200 kbps	
Protocols	Modbus/RTU (slave)	
Device supply		
Supply voltage range	100 V AC ... 240 V AC (nominal voltage range)	
Power consumption	max. 9.6 kW	
Nominal power consumption	< 0.5 W (No-load)	
Frequency range	50 Hz ... 60 Hz	
General data		
Degree of protection	IP00	
Locking release in the event of mains failure	-	
Ambient temperature (operation)	-25°C ... 50°C	
Standards/regulations	UL 2231 / UL 2594	
Dimensions W/H/D	143 / 237 / 95 mm	
Conformance/Approvals		
Conformance	CE-compliant	
Approvals	ETL-certified	

Ordering data	
Description	
AC charging controller, coated PCB	
AC charging controller, DIN rail housing	

Ordering data		
Type	Order No.	Pcs. / Pkt.
EV-CC-AC1-L2-NAR-SER-PCB	1623656	1

Ordering data		
Type	Order No.	Pcs. / Pkt.
EV-CC-AC1-L2-NAR-SER-HS	1627215	1

Residual current monitoring (RCM) module for AC charging controllers for private and commercial applications (EU/CN)

- Universal residual current monitoring for AC and DC residual current detection
- Operate values DC 6 mA and AC 30 mA
- Protection of higher-level safety equipment, such as type A residual current circuit breakers, against DC residual currents



1-channel RCM module for one charging point



2-channel RCM module for two separate charging points

Width 36 mm

Technical data	
Input	Plug-in; front
Measuring transducer input	Plug-in; front
Switching outputs	
Alarm relay	Alarm relay 1 I _{Δn} : DC residual currents Alarm relay 2 I _{Δn} : AC residual currents
Maximum switching voltage	250 V
Maximum switching current	5 A (1 N/O contact each)
Method of operation	Quiescent current
Residual current measuring range	
Rated frequency	≤ 2000 Hz
Number of channels	1
Measuring range	± 300 mA (Peak)
Current measuring range	50 A (45 Hz ... 50 Hz)
Residual current I _{Δn1}	30 mA
Residual current I _{Δn2}	6 mA
Load current	32 A
Response time at 1 x I _{Δn}	< 180 ms
Response time at 2 x I _{Δn}	< 70 ms
Response time at 5 x I _{Δn}	< 20 ms
Response time at I _N	< 500 ms
Reload function	3 switch-on attempts at intervals of 15 min.
Measuring current transducer	
Cable feed-through diameter	15 mm
Supply	via RCM module
Connection method	Connector
Signal interfaces	
Number of interfaces	1 (Measuring transducer)
Device supply	
Supply voltage range	100 V AC ... 240 V AC (nominal voltage range)
Nominal power consumption	< 0.5 W (No-load)
Frequency range	45 Hz ... 60 Hz
General data	
Degree of protection	IP20 (Terminal blocks)
Operating elements	Test/reset button; 2 status LEDs
Ambient temperature (operation)	-25°C ... 80°C
Dimensions W/H/D	36 / 90 / 70.5 mm
Conformance/Approvals	
Conformance	CE-compliant

Ordering data			
Description	Type	Order No.	Pcs. / Pkt.
RCM module	EV-RCM-C1-AC30-DC6	1622450	1

Width 36 mm

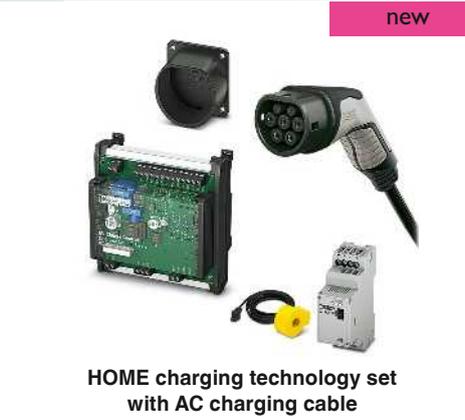
Technical data	
Input	Plug-in; front
Measuring transducer input	Plug-in; front
Switching outputs	
Alarm relay	Alarm relay 1 I _{Δn} : AC and DC residual currents Alarm relay 2 I _{Δn} : AC and DC residual currents
Maximum switching voltage	250 V
Maximum switching current	5 A (1 N/O contact each)
Method of operation	Quiescent current
Residual current measuring range	
Rated frequency	≤ 2000 Hz
Number of channels	2
Measuring range	± 300 mA (Peak)
Current measuring range	50 A (45 Hz ... 50 Hz)
Residual current I _{Δn1}	30 mA
Residual current I _{Δn2}	6 mA
Load current	32 A
Response time at 1 x I _{Δn}	< 180 ms
Response time at 2 x I _{Δn}	< 70 ms
Response time at 5 x I _{Δn}	< 20 ms
Response time at I _N	< 500 ms
Reload function	3 switch-on attempts at intervals of 15 min.
Measuring current transducer	
Cable feed-through diameter	15 mm
Supply	via RCM module
Connection method	Connector
Signal interfaces	
Number of interfaces	2 (Measuring transducer)
Device supply	
Supply voltage range	100 V AC ... 240 V AC (nominal voltage range)
Nominal power consumption	< 0.5 W (No-load)
Frequency range	45 Hz ... 60 Hz
General data	
Degree of protection	IP20 (Terminal blocks)
Operating elements	Test/reset button; 2 status LEDs
Ambient temperature (operation)	-25°C ... 80°C
Dimensions W/H/D	36 / 90 / 70.5 mm
Conformance/Approvals	
Conformance	CE-compliant

Ordering data			
Description	Type	Order No.	Pcs. / Pkt.
RCM module	EV-RCM-C2-AC30-DC6	1622451	1

AC set solutions

Charging technology sets for private applications (EU)

- Consisting of components for charging stations
- With one charging point
- For private applications
- Stand-alone structure according to a wiring diagram
- Assembly instructions for a charging station with recommendations for further components required (charging contactor, safety equipment)



Number of charging points
Type of charging point

Standards
Charging standard
Charging mode
Charging power
Supply voltage
Connected current
Type of charging current
Charging controller
Locking release in the event of mains failure

Residual current monitoring module
Real power measurement module
Wiring diagram
Cable length
Cable length actuator
Cable type
Cable color

Technical data	
Number of charging points	1
Type of charging point	AC charging cable with Vehicle Connector, open cable end, protective cap, holder (park position)
Standards	IEC 62196-2 / IEC 61851-1
Charging standard	Type 2
Charging mode	Mode 3, Case B
Charging power	3.7 kW
Supply voltage	230 V AC
Connected current	16 A
Type of charging current	AC single-phase
Charging controller	Basic AC charging controller, preconfigured
Locking release in the event of mains failure	-
Residual current monitoring module	1-channel RCM
Real power measurement module	Not included
Wiring diagram	Including E-Plan
Cable length	5.00 m
Cable length actuator	-
Cable type	straight
Cable color	black

Technical data	
Number of charging points	1
Type of charging point	AC Infrastructure Socket Outlet, 12 V locking actuator, self-closing IP54 hinged cover
Standards	IEC 62196-2 / IEC 61851-1
Charging standard	Type 2
Charging mode	Mode 3, Case C
Charging power	11 kW
Supply voltage	400 V AC
Connected current	16 A
Type of charging current	AC 3-phase
Charging controller	Basic AC charging controller, preconfigured
Locking release in the event of mains failure	Integrated release function of the locking actuator for disconnection of Infrastructure Plug and Infrastructure Socket Outlet
Residual current monitoring module	1-channel RCM
Real power measurement module	Not included
Wiring diagram	Including E-Plan
Cable length	0.70 m
Cable length actuator	0.50 m
Cable type	Single wires
Cable color	-

Description
Home charging technology set with AC charging cable
with AC Infrastructure Socket Outlet

Ordering data		
Type	Order No.	Pcs. / Pkt.
EV-SET-T2AC-BAS-RCM1-20AC5MES	1628077	1

Ordering data		
Type	Order No.	Pcs. / Pkt.
EV-SET-T2AC-BAS-RCM1-20ASE12	1628080	1

Charging technology sets for commercial applications (EU)

- Consisting of components for charging stations
- With two charging points
- For commercial applications
- Stand-alone structure according to a wiring diagram
- Assembly instructions for a charging station with recommendations for further components required (charging contactor, safety equipment)



TWIN charging technology set with AC charging cable

new



TWIN charging technology set with AC Infrastructure Socket Outlets

new

Number of charging points
Type of charging point

Standards
Charging standard
Charging mode
Charging power
Supply voltage
Connected current
Type of charging current
Charging controller
Locking release in the event of mains failure

Residual current monitoring module
Real power measurement module
Wiring diagram
Cable length
Cable length actuator
Cable type
Cable color

Technical data	
Number of charging points	2
Type of charging point	AC charging cable with Vehicle Connector, open cable ends, protective caps, holders (park positions)
Standards	IEC 62196-2 / IEC 61851-1
Charging standard	Type 2
Charging mode	Mode 3, Case B
Charging power	22 kW
Supply voltage	400 V AC
Connected current	32 A
Type of charging current	AC 3-phase
Charging controller	Advanced AC charging controller
Locking release in the event of mains failure	-
Residual current monitoring module	2-channel RCM
Real power measurement module	Not included
Wiring diagram	Including E-Plan
Cable length	5.00 m
Cable length actuator	-
Cable type	straight
Cable color	black

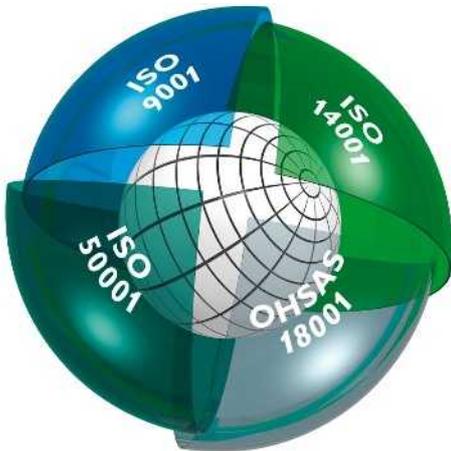
Ordering data		
Type	Order No.	Pcs. / Pkt.
EV-SET-T2AC-ADV-RCM2-32AC5MES	1628081	1

Description
TWIN charging technology set with AC charging cable with AC Infrastructure Socket Outlet

Technical data	
Number of charging points	2
Type of charging point	AC Infrastructure Socket Outlets, 12 V locking actuators, self-closing IP54 hinged covers
Standards	IEC 62196-2 / IEC 61851-1
Charging standard	Type 2
Charging mode	Mode 3, Case C
Charging power	22 kW
Supply voltage	400 V AC
Connected current	32 A
Type of charging current	AC 3-phase
Charging controller	Advanced AC charging controller
Locking release in the event of mains failure	Separate module with release function of the locking actuator for disconnection of Infrastructure Plug and Infrastructure Socket Outlet
Residual current monitoring module	2-channel RCM
Real power measurement module	Energy meters
Wiring diagram	Including E-Plan
Cable length	0.70 m
Cable length actuator	0.50 m
Cable type	Single wires
Cable color	-

Ordering data		
Type	Order No.	Pcs. / Pkt.
EV-SET-T2AC-ADV-RCM2-32ASE12	1628082	1

Quality in quantity



Integrated management system

The objective of the Phoenix Contact integrated management system is to integrate all requirements pertaining to products, processes, and the organization.

Statutory and regulatory requirements, as well as those of international standards and our customers, are met and, in some cases, even exceeded in all phases of the product lifecycle.

The Phoenix Contact management system is monitored by internationally recognized independent bodies each year to ensure that quality, environmental protection, energy efficiency, and occupational safety have been integrated in conformance with the relevant requirements. Certification in accordance with international standards ISO 9001, ISO 14001, ISO 50001, and BS OHSAS 18001 is the result of our corporate philosophy of meeting the needs of our customers, staff, and environment as best as possible. They serve as the basis for innovative products with the familiar high Phoenix quality standard, actively practiced environmental protection through efficient production and products that conserve resources, and responsibility in the field of occupational health and safety. It goes without saying that we integrate all further requirements of standards, international approvals or special customer requirements into our company processes.

The result of this system is a building block for the success of the Phoenix Contact Group as well as its products and services.

CE marking

CE marking was introduced as an important instrument for the free movement of goods within the European single market. By applying the mark to a product, the manufacturer confirms its compliance with all EU directives applicable to this product. The EU directives describe the product characteristics with regard to device safety and the avoidance of risks. These are legally binding regulations of the European Union (EU), which means that the fulfillment of these requirements is a **legal prerequisite for the marketing of these products within the EU**.

Where applicable, our products currently fall within the scope of the following directives:

- 2014/35/EU
Electrical equipment designed for use within certain voltage limits (Low Voltage Directive)
- 2014/30/EU
Electromagnetic compatibility (EMC Directive)
- 2014/32/EU
Measuring instruments
- 2006/42/EC
Safety of machinery (Machinery Directive)
- 2014/34/EU
Equipment and protective systems intended for use in potentially explosive atmospheres (ATEX Directive)
- 1999/5/EC
Radio Equipment and Telecommunications Terminal Equipment Directive (R&TTE)
- 2014/53/EU
Radio equipment (RED)
- 2011/65/EU
RoHS Directive

The standards used as the basis for the aforementioned directives have been at the heart of our development standard for some time as a way of ensuring compliance with European directives. The numbers of the directives indicate their version at the time of publication. In the event of changes to directives and/or standards, our products will undergo conformity assessment again in good time and a new declaration of conformity will be issued promptly. The current declarations for each product can also be found in our download area.

Among the aforementioned European directives, the EMC Directive plays a particularly important role. It uses a legally binding directive as the basis for defining electromagnetic compatibility as a fundamental device property. European legislation therefore places great emphasis on the electromagnetic compatibility of devices and systems as a basic prerequisite for the error-free operation of machines and systems. As an international leader in the field of surge protection, Phoenix Contact has extensive expertise in EMC. This expertise and the experience gained over many years in the development and application of industrial interface and communication technology have resulted in an

extremely high standard of quality for our products when it comes to electromagnetic compatibility. Our sister company, Phoenix Testlab, was founded in order to share this expertise with other companies. Phoenix Testlab GmbH is an independent, accredited service company, which carries out EMC testing in compliance with the European

standards. At Phoenix Testlab, devices are also tested with regard to their electrical safety, mechanical influences, and their behavior in relation to environmental influences. Phoenix Testlab is also a notified body according to EMC Directive 2014/30/EU, R&TTE Directive 1999/5/EC for radio equipment and telecommunications terminal equipment, and Radio Equipment Directive (RED) 2014/53/EU. As a certification body (TCB, FCB, and RCB), Phoenix Testlab is also able to approve these products for the markets in the USA, Canada, and Japan.

Standards and regulations

All relevant standards and regulations are used as the basis for the development and maintenance of our products.

International standards are subject to continuous changes as a result of harmonization and new developments. In line with this process, the current version of all standards that are relevant to our products is documented in the product area on our website at phoenixcontact.net/products.

Online product information service on the world wide web

Phoenix Contact is continuously extending its product range.

Within the scope of our product monitoring obligation, all products are subject to an improvement process.

The Internet is an ideal platform to quickly communicate new product developments and improvements to the market.

You can quickly access the relevant Phoenix Contact website for your region via phoenixcontact.com. There you will always find an up-to-date overview of products, solutions, and services from Phoenix Contact. This includes technical documents such as data sheets and user manuals, current driver and demo software, and a direct link to the relevant contact person.

Connection cross section

IEC 60947-7-1/-2

The connection capacity for connectors and PCB terminal blocks is documented in the technical data. The connection capacity defines the conductor cross section which can be connected for conductors in solid (single- and multi-stranded) or stranded (fine-stranded) versions. Cross section ranges are also specified for the use of ferrules. In addition, ranges where two conductors in solid and stranded versions are to be simultaneously connected are also mentioned.

Phoenix Contact PCB terminal blocks and PCB connectors are designed to allow copper wires to be connected to them untreated. "Special treatment" or the use of ferrules is not required. "Special treatment"

includes tin-plating the litz wires of a conductor, using cable lugs, bending the eyes, etc. However, it does not include straightening the conductor before inserting it into the terminal block or twisting a multi-stranded conductor in order to consolidate its ends.

If ferrules are nevertheless used as splicing protection for stranded conductors, the connection capacity of the stranded conductor is reduced by around one level. Conductors must not be soldered ("soldering all litz wires of a conductor together").

It is always recommended that you use Phoenix Contact CRIMPFOX crimping tools to crimp ferrules.

Structure and dimensions of connecting cables

Cross section [mm²]	Single-stranded		Multi-stranded		Fine-stranded		American Wire Gauge [AWG]						
	Diameter max. dimension	Number of wires	Diameter max. dimension	Number of wires (minimum number)	Diameter max. dimension	Number of wires (guide value)	Gauge No.	Solid wires*			Stranded wires*		
								AWG	[Ø mm]	[circ. mils]	[mm²]	[Ø mm]	[circ. mils]
0.2	0.5	1	-	-	-	-	24	0.51	404	0.21	-	-	-
0.5	0.9	1	1.1	7	1.1	16	20	0.81	1022	0.52	0.97	1111	0.56
0.75	1.0	1	1.2	7	1.3	24	18	1.02	1620	0.82	1.16	1600	0.82
1	1.2	1	1.4	7	1.5	32	(17)	1.15	2050	1.04	-	-	-
-	-	-	-	-	-	-	16	1.29	2580	1.31	1.50	2580	1.32
1.5	1.5	1	1.7	7	1.8	30	(15)	1.45	3260	1.65	-	-	-
-	-	-	-	-	-	-	14	1.63	4110	2.08	1.85	4100	2.09
2.5	1.9	1	2.2	7	2.3	50	(13)	1.83	5180	2.63	-	-	-
-	-	-	-	-	-	-	12	2.05	6530	3.31	2.41	6500	3.32
4	2.4	1	2.7	7	2.9	56	(11)	2.30	8230	4.17	-	-	-
-	-	-	-	-	-	-	10	2.59	10380	5.26	2.95	10530	5.37
6	2.9	1	3.3	7	3.9	84	(9)	2.91	13100	6.63	-	-	-
-	-	-	-	-	-	-	8	3.26	16510	8.37	3.73	16625	8.48
10	3.7	1	4.2	7	5.1	80	(7)	3.67	20800	10.56	4.15	20820	10.55
-	-	-	-	-	-	-	6	4.12	26240	13.30	4.67	26250	13.39
16	4.6	1	5.3	7	6.3	126	(5)	4.62	33100	16.77	5.24	33100	16.77
-	-	-	-	-	-	-	4	5.19	41740	21.15	5.90	41650	21.24
25	-	-	6.6	7	7.8	196	3	5.83	52600	26.67	6.61	52630	26.67
35	-	-	7.9	7	9.2	276	2	6.54	66360	33.62	7.42	66150	33.74
-	-	-	-	-	-	-	1	7.35	83690	42.41	8.33	83706	42.69
50	-	-	9.1	19	11	396	1/0	8.25	105600	53.51	9.35	104640	53.36
70	-	-	11	19	13.1	360	2/0	9.27	133100	67.44	10.52	132300	67.47

Tightening torque of terminal block screws

DIN EN 60947-1

Table 4 of the standard specifies the tightening torque to demonstrate the mechanical strength of screw connections/screw terminal blocks.

These torques are sufficient for connecting conductors with Phoenix Contact terminal blocks.

The table opposite lists recommended tightening torques which differ from those in this standard and will ensure gas-tight connections that remain stable in the long term.

Phoenix Contact torque screwdrivers can be set to the corresponding torques.

Extract from DIN EN 60947-1/ EN 60947-1, Table 4

The torque according to IEC/EN and the recommended tightening torque for Phoenix Contact terminal blocks are specified.

Head screw with slot	
Thread	Torque
	[Nm]
M1.6	0.1*
M2.0	0.2*
M2.5 (M2.6)	0.4*
M3	0.5*
M4	1.2*
M4.5	1.8*
M5	2.0*
M6	2.5*
M8	3.5*
M10	4.0* / 10**
M12	14**
M14	19**
M16	25**
M20	36**
M24	50**

* Valid for nuts and screws tightened with screwdrivers.

**Valid for nuts and screws that can be tightened with tools other than screwdrivers.

Note:

Subject to changes that serve the purpose of technical progress.

Current carrying capacity

Standard IEC 60947-7-1/
EN 60947-7-1/DIN VDE 0611-1 specifies the test currents for the individual conductor cross sections listed in the adjacent table. The corresponding currents are listed with the connection data for the individual terminal blocks. The type tests of terminal blocks are based on this data.

Test currents according to IEC 60947-7-1/EN 60947-7-1, Table 5

Rated cross section	[mm ²]	0.2	0.5	0.75	1.0	1.5	2.5	4	6	10	16
Test current	[A]	4	6	9	13.5	17.5	24	32	41	57	76

Rated cross section	[mm ²]	25	35	50	70	95	120	150	185	240	300
Test current	[A]	101	125	150	192	232	269	309	353	415	520

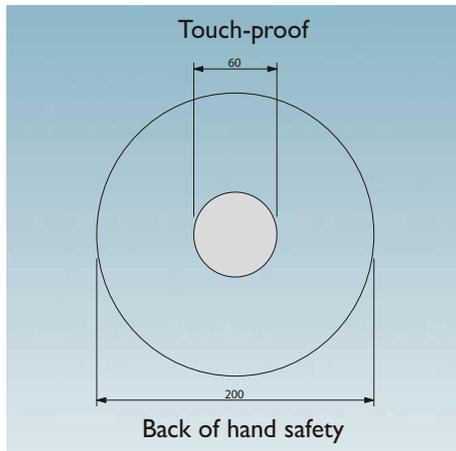
Color designations

Color	Code
White	WH
Red	RD
Blue	BU
Green	GN
Yellow	YE
Gray	GY
Brown	BN
Orange	OG
Black	BK
Turquoise	TQ
Ivory	IV
Beige	BE
Olive	OL

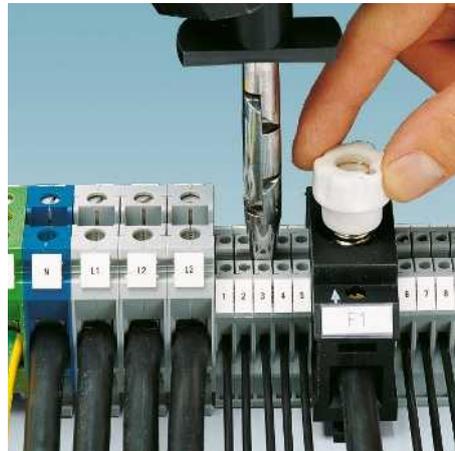
EMC: Class A product:

In accordance with statutory regulations, our products are indicated with this footnote if they are intended for use in industrial environments. This means that the permitted limit values for residential applications may be exceeded in the event of conducted and emitted disturbance variables. In such cases, the operator may have to take additional safety measures in order to ensure electromagnetic compatibility in residential applications.

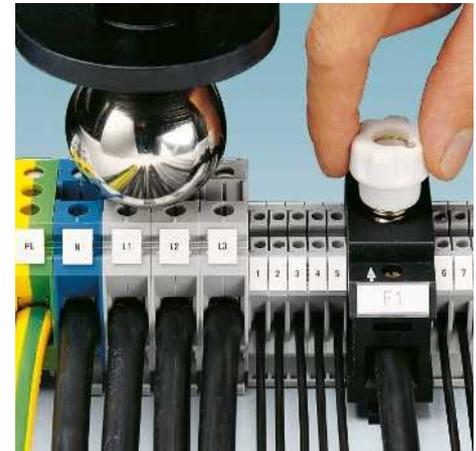
Touch proofness



Example: pressure actuation



Finger safety



Back of hand safety

The accident prevention regulations BGV A 2 issued by the German employer's liability insurance association for precision mechanics and electrical engineering apply to the operators of electrical systems and are aimed at the prevention of electrical accidents by means of special safety requirements.

These regulations contain specifications regarding the safety distances for work, operation, and occasional handling in the proximity of "live parts" in low-voltage systems up to 1000 V ~ or 1500 V –.

- Work with live parts is only permitted once they have been de-energized.

Operational activities are only permitted in the vicinity of live parts if these parts are de-energized or are protected against direct contact (§ 6). The following safety measures apply when working in the vicinity of live parts:

- Provision of the de-energized state for the duration of the work
- Ensure touch-proofness is in place in the form of covers or barriers during the work
- Assurance that proximity limits will not be violated (§ 7)

The term "occasional handling" has been introduced for the operation of elements such as pushbuttons, rocker arms or rotary buttons in the proximity of live parts.

According to VDE 0105-1, this is covered by "operation with partial protection against direct contact".

Detailed specifications for "occasional handling" can be found in DIN VDE 0106-100. This specifies to what degree live parts in the proximity of operating elements are to be protected against contact. The basis for this is the definition of a "protection area for occasional handling"; this is the area into which the user must reach in order to

handle the machine.

The most important thing is that an area formed by an even envelope curve 30 mm in radius must surround the live parts. This area must be **touch-proof**, i.e., the live parts of the electrical device must not be within reach of the VDE test finger according to IEC 60529/DIN VDE 0470-1 (test finger).

Back of hand safety is specified for the "rest of the area" up to 100 mm around the operating element. **Back of hand safety** means that when a force of 50 N is applied to a ball with a diameter of 50 mm, this does not come into contact with the live parts of the equipment. No special measures for ensuring contact safety are stipulated outside this area.

Note: systems and equipment that are operated with SELV up to 25 V ~ or 60 V – are considered to be protected against "direct contact".

According to § 5, Subsection 4 of the BGV A 2 regulations, there is no need to test the condition of the system prior to initial startup if the company has confirmation from the manufacturer or installer that the electrical systems and equipment conform to BGV A 2. The confirmation required relates to systems and equipment that have been installed and are ready for operation and can only be issued by the installer or installation company. The manufacturer of the electrical equipment can only issue a confirmation that products have been produced in accordance with the relevant electrotechnical DIN VDE regulations stipulated in BGV A 2. The installer must bear this in mind when selecting the equipment to be used.

In the field of connection technology, Phoenix Contact offers a wide range of products which are touch-proof or can be protected against contact by means of

covers. Depending on the conditions, all of this must be taken into account when selecting the individual types of terminal blocks and accessories.

Degrees of protection according to DIN EN 60529

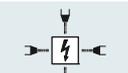
Definition:

IP (Ingress Protection) protection according to DIN EN 60529 is defined by two digits (e.g., IP54), the meaning of which is explained in the following tables.

Degree of protection against access to dangerous parts and against solid foreign objects

First digit	Short description	Example	Definition
0	Not protected		
1	Protected against solid foreign objects		Protected against touching dangerous parts with the back of the hand. Protection against ingress of solid foreign objects with $\varnothing > 50$ mm.
2	Protected against solid foreign objects with $\varnothing 12.5$ mm or more		Protected against touching dangerous parts with a finger. Protection against ingress of solid foreign objects with $\varnothing > 12.5$ mm.
3	Protected against solid foreign objects with $\varnothing 2.5$ mm or more		Protected against touching dangerous parts with a tool. Protection against ingress of solid foreign objects with $\varnothing > 2.5$ mm.
4	Protected against solid foreign objects with $\varnothing 1$ mm or more		Protected against touching dangerous parts with a wire. Protection against ingress of solid foreign objects with $\varnothing > 1$ mm.
5	Protected against dust		Protected against touching dangerous parts with a wire. The ingress of dust is not completely prevented, but dust may not enter in such an amount that the satisfactory operation of the device or its safety is impaired.
6	Dust-proof		Protected against touching dangerous parts with a wire. No ingress of dust.

Degree of protection against water

Second digit	Short description	Example	Definition
0	Not protected		
1	Protected against dripping water		Vertically falling drops shall have no effect.
2	Protected against dripping water if the housing is inclined at an angle of up to 15°		Vertically falling drops shall have no effect if the housing is inclined at an angle of up to 15° either side of the perpendicular.
3	Protected against spray water		Water that is sprayed at an angle of up to 60° either side of the perpendicular shall have no harmful effect.
4	Protected against splash water		Water that splashes against the housing from any direction shall have no harmful effect.
5	Protected against jet water		Water that is directed as a jet against the housing from every direction shall have no harmful effect.
6	Protected against powerful jet water		Water that is directed as a strong jet against the housing from every direction shall have no harmful effect.
7	Protected against the effect of temporary submersion in water		Water may not penetrate in a harmful quantity when the housing is temporarily submerged in water under standard pressure and time conditions.
8	Protected against the effect of continuous submersion in water		Water may not penetrate in a harmful quantity when the housing is submerged in water continuously under conditions to be agreed between the manufacturer and user.
9K	Protected against water during high-pressure and jet-stream cleaning		Water that is directed against the housing under extremely high pressure from every direction shall have no harmful effect. (Example: IP69K according to DIN 40050 Part 9)

For safety reasons, electrical equipment must be protected against external influences. This is the job of the housing, which protects electrical equipment against contact, ingress of solid objects, dust, and moisture.

The following table contains possible combinations of degrees of protection according to DIN EN 60529 which can be practically applied to housing.

		Protection against water										
		No protection	Protection against vertically falling dripping water	Protection against dripping water if the housing is inclined at an angle of up to 15°	Protection against spray water from all directions, even when inclined at an angle of up to 60°	Protection against splash water from all directions	Protection against jet water from all directions	Protection against powerful jet water from all directions	Protection against temporary submersion	Protection against the effects of continuous submersion in water	Protected against water during high-pressure and jet-stream cleaning (DIN 40050-9)	
Touch proofness	Foreign object protection	IP0x	IPx0	IPx1	IPx2	IPx3	IPx4	IPx5	IPx6	IPx7	IPx8	IPx9K
No touch-proofness	No protection against solid foreign objects	IP0x	IP00									
Back of hand safety	Protection against solid foreign objects > 50 mm Ø	IP1x	IP10	IP11	IP12							
Touch-proof	Protection against solid foreign objects > 12.5 mm Ø	IP2x	IP20	IP21	IP22	IP23						
Protection against touching with tools, wires, etc. > 2.5 mm Ø	Protection against solid foreign objects > 2.5 mm Ø	IP3x	IP30	IP31	IP32	IP33						
Protection against touching with tools, wires, etc. > 1 mm Ø	Protection against solid foreign objects > 1.5 mm Ø	IP4x	IP40	IP41	IP42	IP43	IP44					
Protection against touching with tools, wires, etc. > 1 mm Ø	Protection against harmful dust accumulations inside the device	IP5x	IP50				IP54	IP55				
Protection against touching with tools, wires, etc. > 1 mm Ø	No ingress of dust	IP6x	IP60					IP65	IP66	IP67	IP68	IP69K

Example: DUPLICON power distribution with IP67 protection according to DIN EN 60529

Dust-proof (IP6x)

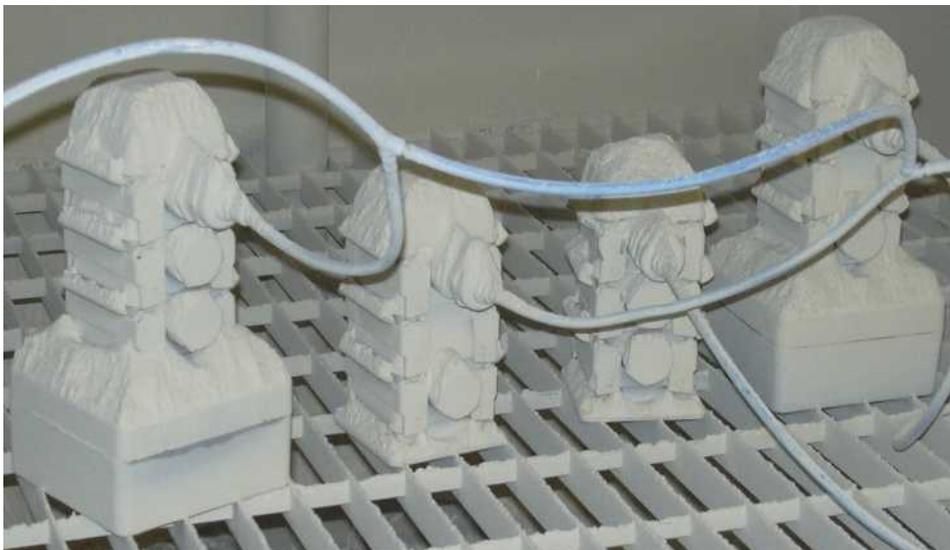


Photo shows DUPLICON test sample during the IP6x dust test

Protected against temporary submersion (IPx7)



Quality features of insulation material

Our insulating housings are made from various thermoplastic materials. Depending on the application, the best-suited material is selected based on its electrical and mechanical properties.

All plastics used by Phoenix Contact are RoHS-compliant.

All plastics used at Phoenix Contact have been listed with UL (Underwriters Laboratories Inc.) in the USA.

Behavior of plastics under the influence of temperature (operating temperatures)

All plastics undergo thermal aging when they are subjected to heat over long periods. This process causes changes in the mechanical and electrical properties of the material. External influences, e.g., radiation, additional mechanical, chemical or electrical stresses, amplify this effect. All characteristics included in the table have been determined based on samples, which provides a good means of drawing comparisons between different materials. However, applying these characteristics to an evaluation of molded plastic parts is only possible to a limited extent, and can only give the designer a rough guide when it comes to selecting a plastic material. This catalog uses RTI Elec. according to UL 746B as an assessment criterion for temperature resistance.

Insulation materials

Polyamide: PA and PA-GF

Polyamide has excellent electrical, mechanical, and chemical properties even at high operating temperatures. Brief peak temperatures of up to approximately 200°C are permitted as a result of heat aging stabilization. The absorption of water makes the plastic flexible and resistant to breakage, even at low temperatures.

Fiber-reinforced polyamides feature greater rigidity and hardness as well as operating temperatures higher than those of non-reinforced materials.

Polyamide for high-temperature applications: PA HT and PA-GF HT

Special high-temperature-resistant types of polyamide are used in non-reinforced or fiberglass-reinforced versions for reflow applications. These high-temperature polyamides combine the excellent electrical properties of polyamide and the requirements of the reflow soldering process for temperature resistance.

Liquid crystal polymers: LCP GF

LCP combines high temperature stability with excellent dimensional stability and creepage resistance for products used in reflow processes. LCP has exceptional mechanical properties across a wide temperature range and a very low thermal expansion.

Polyester: PBT and PBT-GF

We use thermoplastic polyester in non-reinforced and fiberglass-reinforced versions for special applications which require increased dimensional and form stability.

In addition to the high operating temperature, the material is characterized by excellent mechanical stability, hardness, and excellent notched impact strength. PBT does not absorb moisture from its surroundings. PBT is therefore particularly suitable for strips, for example, which are soldered onto PCBs.

Polycarbonate: PC

Polycarbonate combines many advantages such as rigidity, impact strength, transparency, dimensional stability, good insulation properties, and resistance to heat.

The amorphous material only absorbs moisture to a very limited degree, and is used for items such as large, rigid electronic component housing.

In its transparent form, polycarbonate is particularly suitable for use as a material for cover profiles or marking materials.

Acrylonitrile butadiene styrene: ABS

We use ABS for products which must have good impact and notched impact properties in addition to high mechanical stability and rigidity. The products are also characterized by their special surface quality and hardness.

ABS is suitable for coating metal surfaces, e.g., nickel.

Polyvinyl chloride: PVC

While most thermoplastic materials are processed with injection molding using ready-to-use molding and extrusion material, PVC is processed as a powder in the extruder. This is why it is used in our profile products. PVC is also self-extinguishing without flame protection and has high mechanical strength but is notch-sensitive.

Polyoxymethylene: POM

Polyoxymethylene is a technical material that combines high rigidity with mechanical stability, excellent elastic properties, high tenacity, dimensional accuracy, and exceptional sliding friction behavior.

Polyethylene: PE

Polyethylene is characterized by excellent chemical resistance and electrical insulation properties. PE is thermoplastic and can therefore be processed using almost all procedures. Furthermore, PE has excellent tenacity even at low temperatures and a good elongation at break.

Polypropylene: PP

PP has higher rigidity, hardness, and stability and is more heat-resistant than PE. PP is not as tough at low temperatures, however.

Thermoplastic polyurethane: TPU and TPU-GF

TPU is characterized by excellent electrical properties, a good surface feel, a high degree of flexibility over a wide temperature range, and high resistance to wear. Thermoplastic polyurethanes are also elastic and low-temperature impact resistant.

In contrast to non-reinforced materials, fiberglass-reinforced TPU is characterized by high rigidity and hardness.

Cross-linked ethylene-propylene-diene polymer/polypropylene: EPDM-PP

EPDM-PP is a polymer blend of PP and cross-linked EPDM. EPDM-PP is a rubber-like material which can be processed using thermoplastic procedures. EPDM-PP combines high temperature resistance, a low compression set, and excellent resistance to abrasion and chemicals.

Acrylonitrile butadiene styrene rubber: NBR

NBR is a rubber with excellent resistance to aging. It also features excellent resistance to abrasion and low plastic flow. Its elasticity is lower than other rubbers.

Fluorinated rubber: FPM

FPM rubbers are characterized by very high temperature resistance, but behave less favorably at low temperatures than other rubbers.

Chlorine-butadiene rubber: CR

CR rubber stands out against other rubbers with its excellent resistance to weather and ozone.

Properties	Standard	Unit	PA	PA GF	PA HT	PA GF HT	PBT	PBT GF	LCP GF	PC	ABS	PVC	POM	PP	PE
RTI Elec ¹⁾	UL 746B	°C	≥ 105	≥ 105	≥ 105	≥ 105	≥ 105	≥ 105	≥ 130	≥ 105	≥ 80	≥ 50	≥ 105	65	50
Minimum temperature for use (without mechanical load)		°C	-40	-40	-40	-40	-40	-40	-40	-40	-40	-15	-40	-40	-40
Electric strength	IEC 60243-1/ DIN VDE 0303-21	kV/cm	600	400		> 200	400	400		> 300	850		850		
Resistance to creepage CTI...	IEC 60112/ DIN VDE 0303-1		600	400	≥ 250	225	600	225	175	175	600	600	600		
Resistance to creepage CTI...M	IEC 60112/ DIN VDE 0303-1		550	250			600	225		175	600	600	600		
Flammability rating	UL 94	HB – V0	V2, V0	HB, V0	V0	V0	V0	V0	V0	V2, V0		V0	HB	HB	HB
Tropical and termite resistance			Good	Good			Good			Good					

¹⁾ Possible at "≥" higher temperatures, but not recommended due to increased aging of plastics and insufficient current carrying capacity.

Properties	Standard	Unit	TPU	TPU GF	EPDM/PP	Properties	Standard	Unit	NBR	FPM	CR
RTI Elec.	UL 746B	°C	50	50	100	Operating temperature		°C	≤ 100	≤ 200	≤ 100
Minimum temperature for use (without mechanical load)		°C	-40	-40	-40	Minimum temperature for use (without mechanical load)		°C	-40	-25	-40
Electric strength	IEC 60243-1/ DIN VDE 0303-21	kV/cm	35	35		Electric strength	IEC 60243-1/ DIN VDE 0303-21	kV/cm	Not relevant as these are sealing materials		
Resistance to creepage CTI...	IEC 60112/ DIN VDE 0303-1		600	600	600	Resistance to creepage CTI...	IEC 60112/ DIN VDE 0303-1				
Resistance to creepage CTI...M	IEC 60112/ DIN VDE 0303-1		600			Resistance to creepage CTI...M	IEC 60112/ DIN VDE 0303-1				
Flammability rating	UL 94	HB – V0	V2	HB	HB	Flammability rating	UL 94	HB – V0			
Chemical resistance	See table for resistance to chemicals										

Resistance to chemicals

- Not resistant
- 0 Moderately resistant
- + Good resistance

Chemicals	Plastics																	
	Concentration in %	Temperature in °C	PA 66 / PA 6	PA 66 GF	PA 46 GF	PC GF	POM	NBR	PP	EPDM	PBT	PUR	PUR irradiated*	PVC-P (soft)	PE-LD	TPU	FPM (Viton)	CR (neoprene)
Acetaldehyde			0	0	0	-	0	-	+	0	0	+	+	+	0	0	-	0
Acetone		20	+	+	+	0	+	-	+	+	0	0	+	+	+	-	-	0
Acetate			+	+	+	0	0	-	+	0	0	+	+	-	-	-	-	-
Acetophenone			+	+	+	0	0	-	+	0	0	+	+	-	-	-	-	-
Aldehyde			0	0	0	-	0	-	-	0	+	+	+	+	0	-	0	0
Formic acid			-	-	0	0	+	-	+	+	+	0	0	-	+	0	0	+
Amines			+	+	+	-	0	-	+	0	+	+	+	+	0	-	-	-
Alcohols			0	0	0	0	+	0	+	+	+	+	+	-	+	+	0	+
Ammonia	10	20	+				+	0	+	+	+	+	+	0	+	0	-	+
Benzaldehyde			0	0	0	-	0	-	-	0		+	+	+	0	0	-	0
Gasoline		20	+	+	+	0	+	0	0	-	+	+	+	-	-	-	+	-
Benzol		50	+	+	+	+	0	-	0	-	+	0	0	-	0	-	0	-
Benzophenone		20	+	+	+	0	0	-	+	0	0	+	+	-	-	-	+	-
Boric acid	100	20	0				0	+		+	+	0	0	0	+	+	+	+
Brake fluid		100	+				+	-		+	+	-	-	0	+	-	-	-
Butyric acid			-	-	0	0	+	0	+	+	+	0	0	+	+	-	0	0
Cyclohexanone			+	+	+	0	0	-	+	0	0	+	+	-	-	-	-	-
Diesel oil			+				+	+	-	+	+	+	+	-	-	-	+	-
Diethylamine			+	+	+	-	0	-	-	0	+	+	+	+	-	-	-	-
Dimethylamine			+	+	+	-	0	-	-	0	+	+	+	+	0		-	-
Glacial acetic acid		50	-	-	-	-	-	-	0	+	-	-	-	-	+	-	-	-
Acetic acid	20		-	-	0	0	+	-	+	+	0	0	0	0	+	-	-	0
Esters			+	+	+	0	-	-	-	0	+			-	+	-	-	-
Ethanol			0	0	0	0	+	0	+	+	+	+	+	-	+	+	+	+
Ether			+	+	+	-	0	-	0	0	+	+	+	-	0	+	-	-
Greases			+	+	+	+	+	+	0	0				0	+	-	+	0
Formaldehyde			0	0	0	-	0	-	-	0		+	+	+	0	0	+	0
Gear oil		100	+				+	+		-	+	+	+	+	+	-	+	-
Halogens (fluorine, chlorine, bromine, iodine)			-	-	-	+	-	-	-	-	-	-	-	-	-	-	+	-
Hydraulic oil		20	+				0	+		-	+	+	+	-	+	-	+	-
Potassium hydroxide solution			+	+	+	-	+	0	+		-	+	+	+	+	0	+	-
Kerosene		20	+				+				+	+	+	-	0	-	+	-
Ketones			+	+	+	0	0	-	+	0	0	+	+	-	-	-	-	-
Hydrocarbons, aliphatic			+	+	+	+	+	+	0	0	+	+	+	-	+	+	+	-
Hydrocarbons, aromatic			+	+	+	-	0	-	0	0	+	+	+	-	-	-	+	-
Hydrocarbons, chlorinated			0	0	0	-	+	-	-	-	0	-	-	-	-	-	+	-
Hydrocarbons, unsaturated chlorinated			0	0	0	-	+	-	-	-	0	0	0	-	-	-	+	-
Fuels			+	+	+	0	+	0	0	-	+	+	+	-	-	-	+	-
Alkalis, weak			+	+	+	-	+	0	+	+	+	+	+	+	+	0	+	0
Alkalis, strong			0	-	-	-	+	-	+		+	-	-	+	0	0	-	-
Inorganic salt solutions			+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+
Machine oil			+				+				+	+	+	0	+	-	+	-
Metal chloride			+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+
Metal sulfate			+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+
Metal nitrate			+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+
Methanol			0	0	0	0	+	0	+	+	+	+	+	-	+	+	-	+
Methylamine			+	+	+	-	0	-	-	0	+	+	+	+	+	0	0	-
Lactic acid	10	20	+				+	+	+	+	+	+	+	-	+	+	+	+
Mineral oil			+	+	+		+	+	+	-	+	+	+	-	+	-	+	-
Motor oil		120	+	+	+	0	+	+	+	-	+	+	+	-	+	-	+	-
Sodium hydroxide solution		50	0	0	+	-	+	+	+	+	-	+	+	+	+	0	0	0
Nitrobenzene			0				0	-		0	+	-	-	-	0	+	0	-
Ozone			0	0	0	-	0	-	+	+	0	0	+	+	+	0	+	-
Propyl alcohol			0	0	0	0	+	0	+	+	+	+	+	-	+	+	+	+
Nitric acid	30	20	-	0	-	0	-	-	+	0	0	0	0	-	+	-	+	-
Hydrochloric acid		20	-				-	0	+	0	0	-	-	-	+	0	+	0
Sulfuric acid	50	50	-	0	-	0	-	-	+	+	-	0	0	+	+	0	+	-
Salt water		20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Turpentine			0	0	0	+	-	+	-	-	+	0	0	-	-	-	+	-
UV resistance			+	+	+	0	0	-	-	-	+	+	+	0	0	+	+	+
Detergent alkalis	2	100	0				+	+		+	+	+	+	-	+	+	+	0
Water (dist.)		20												+				
Water, cold			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Water, hot			-	-	-	-	+	+	+	+	-	+	+	+	+	0	+	0
Citric acid	10		+				+	+	+	+	+			+	+	+	+	+

* The irradiated PUR version is generally more resistant than the non-irradiated version. This cannot be quantified and must be checked in individual cases.

The information in the table has been gathered from the recommendations of our plastic suppliers.

Since individual operating conditions can also affect the usability of each product, this information should be used as a guide only.

For applications where no prior experience exists, we recommend that the user carries out preliminary tests.

Insulation coordination for electrical equipment within low-voltage systems

Dimensioning air clearances and creepage distances according to DIN EN 60664-1/VDE 0110-1.

This part of the standard is based on IEC 60664. It contains specifications for insulation coordination for equipment within low-voltage systems. This part applies to equipment to be used up to 2000 m above sea level. This safety standard is primarily aimed at technical committees. If there are no applicable product provisions for a piece of equipment you may apply the standard at your discretion. International and European product standards are cited in this catalog. These standards include the specifications on insulation coordination in accordance with DIN EN 60664 /VDE 0110-1.

Insulation coordination

Insulation coordination includes the selection of electrical insulation properties for equipment as regards intended applications and ambient conditions. Separate requirements must be applied for air clearances and creepage distances and for solid insulation. The surge voltages to be expected, characteristics of surge protective devices, and pollution at the intended site must be considered when dimensioning clearances. Clearances are then dimensioned according to the external or internal surge voltages to be expected. The different surge voltages directly determine the required clearance. They are grouped into categories with a numerical value which defines a rated impulse voltage. These overvoltage categories (I to IV) are used for equipment that is directly supplied by low-voltage networks. They are primarily based on statistical observations. You will find the definition of the individual categories in the extract from DIN EN 60664 /VDE 0110-1 below.

The clearances can be calculated according to Table 2 (minimum clearances) depending on the homogeneity level of the field between the electrodes (case A – non-homogeneous field, case B – homogeneous field).

Clearances according to case A withstand the assigned impact voltages under all conditions. You can use equipment dimensioned according to case A without further testing. Clearance values according to case B are based on ideal conditions. Clearance values which fall between case A and case B must be proven by means of an impulse voltage test.

Prevailing voltages, the properties of insulation materials, the pollution to be

expected, and safety measures against pollution are considered when dimensioning creepage distances.

When determining the air clearances and creepage distances, the effect of pollution is considered according to three intensity levels (pollution degree 1 to 3).

The creepage distance is based on the rated voltage that is derived from the working voltage or nominal mains voltage. The minimum creepage distances are assigned to the rated voltages according to the degree of pollution in Table 4.

If the respective product descriptions do not contain any additional specifications, the products presented in this catalog are rated for overvoltage category III and pollution degree 3 according to this regulation (DIN EN 60664-1/VDE 0110-1).

Overvoltage categories I to IV

– Equipment in **overvoltage category IV** can be used at the terminal point of the installation.

Note: Examples of such equipment include electricity meters and primary protective devices for overcurrent protection.

– Items in **overvoltage category III** can be used in fixed installations and are intended for such cases where there are special requirements for the reliability and availability of the items.

Note: Examples of such equipment include switches in fixed installations. In addition, equipment for industrial use with long-term connection to the fixed installation.

– Equipment in **overvoltage category II** includes power-consuming items that are fed from the fixed installation.

Note: Examples of such equipment include household appliances, portable tools, other domestic appliances, and similar devices.

– Equipment in **overvoltage category I** can be connected to circuits where measures have been taken to limit the surge voltages to a suitable lower value.

Pollution degrees 1 to 4

The following four pollution degrees have been defined for the micro-environment in order to determine air clearances and creepage distances:

– Pollution degree 1

No pollution or only dry, non-conductive pollution occurs. The pollution has no effect.

– Pollution degree 2

Only non-conductive pollution occurs. However, temporary conductivity due to condensation must occasionally be taken into consideration.

– Pollution degree 3

Conductive pollution occurs or dry, non-conductive pollution which becomes conductive, since condensation is to be expected.

– Pollution degree 4

Permanent conductivity occurs, caused by conductive dust, rain or moisture.

Insulation material

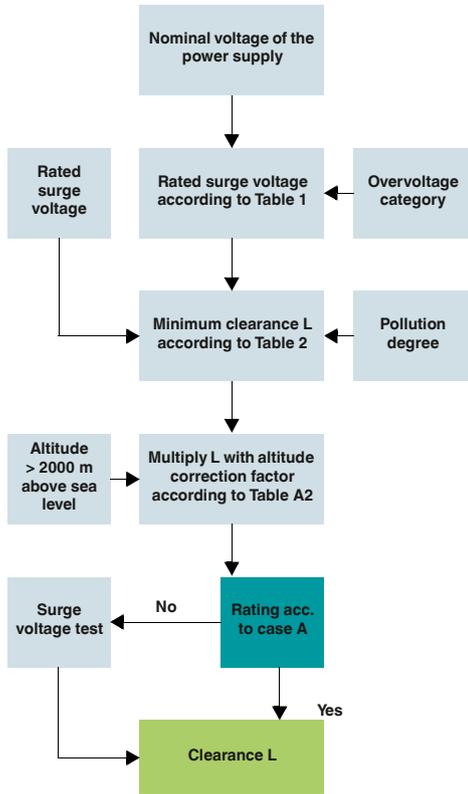
DIN EN 60664/VDE 0110-1 classifies insulation materials into four groups depending on their CTI values that were obtained using solution A as per IEC 60112. Insulation material group I: $600 \leq CTI$
Insulation material group II: $400 \leq CTI \leq 600$
Insulation material group III a: $175 \leq CTI < 400$
Insulation material group III b: $100 \leq CTI < 175$.

The comparative tracking index of the creepage distance formation must have been determined based on suitable samples using test solution A as specified in DIN IEC 60112.

The proof tracking index of the creepage distance formation (PTI) is used as proof of the creepage current properties of insulation materials.

Dimensioning of clearances

Schematic for determining clearances



Rated surge voltages for equipment that is directly supplied by the low-voltage network (extract from Table 1)

Nominal voltage of the power supply system ¹⁾ (mains) as per IEC 60038 ³⁾		Conductor-neutral conductor voltage derived from the total nominal AC voltage or nominal DC voltage	Rated surge voltage ²⁾ [V]			
Three-phase [V]	Single-phase [V]		Overvoltage category ⁴⁾			
			I	II	III	IV
		50	330	500	800	1500
		100	500	800	1500	2500
		150	800	1500	2500	4000
230/400	277/480	300	1500	2500	4000	6000
	400/690	600	2500	4000	6000	8000
	1000	1000	4000	6000	8000	12000

¹⁾ Refer to Appendix B for application in existing deviating low-voltage networks and their nominal voltages.

²⁾ Equipment with this rated surge voltage may be used in systems according to IEC 60364-4-443.

³⁾ The slash, i.e., /, indicates a three-phase four-wire system. The lower value is the conductor-to-neutral-conductor voltage, whereas the higher value is the conductor-to-conductor voltage. When only one value is specified, it refers to a three-phase three-conductor system, and indicates the conductor-to-conductor voltage.

⁴⁾ Refer to 2.2.2.1.1 for an explanation of overvoltage categories.

Minimum clearances for overvoltages (extract from Table 2)

Required rated impulse voltage ¹⁾ ⁵⁾ [kV]	Condition A Non-homogeneous field (refer to 3.15)			Condition B Homogeneous field (refer to 3.14)		
	Pollution degree ⁶⁾			Pollution degree ⁶⁾		
	1 [mm]	2 [mm]	3 [mm]	1 [mm]	2 [mm]	3 [mm]
0.33 ²⁾	0.01	0.2 ³⁾ ⁴⁾	0.8 ⁴⁾	0.01	0.2 ³⁾ ⁴⁾	0.8 ⁴⁾
0.40	0.02			0.02		
0.5 ²⁾	0.04			0.04		
0.60	0.06			0.06		
0.80 ²⁾	0.10			0.10		
1.0	0.15			0.15		
1.2	0.25	0.25		0.2		
1.5 ²⁾	0.5	0.5		0.3	0.3	
2.0	1.0	1.0	1.0	0.45	0.45	
2.5 ²⁾	1.5	1.5	1.5	0.6	0.6	
3.0	2.0	2.0	2.0	0.8	0.8	
4.0 ²⁾	3	3	3	1.2	1.2	1.2
5.0	4	4	4	1.5	1.5	1.5
6.0 ²⁾	5.5	5.5	5.5	2	2	2
8.0 ²⁾	8	8	8	3	3	3
10	11	11	11	3.5	3.5	3.5
12 ²⁾	14	14	14	4.5	4.5	4.5
15	18	18	18	5.5	5.5	5.5
20	25	25	25	8	8	8
25	33	33	33	10	10	10
30	40	40	40	12.5	12.5	12.5
40	60	60	60	17	17	17
50	75	75	75	22	22	22
60	90	90	90	27	27	27
80	130	130	130	35	35	35
100	170	170	170	45	45	45

¹⁾ This voltage is:

- For function insulation: the highest surge voltage expected for the clearance
- For basic insulation, if influenced directly or considerably by transient overvoltages from the low-voltage network: the rated surge voltage of the equipment
- For a different basic insulation: the highest surge voltage possible in the circuit.

²⁾ Preferred values

³⁾ For PCBs, the values of pollution degree 1 are applicable, except that no deviation below the value of 0.04 mm is permitted, as specified in Table 4.

⁴⁾ Minimum clearances for pollution degrees 2 and 3 are based on the corresponding creepage distances. This resistance is reduced due to the effects of humidity.

⁵⁾ Values can be interpolated for parts or circuits within equipment that are subjected to surge voltages.

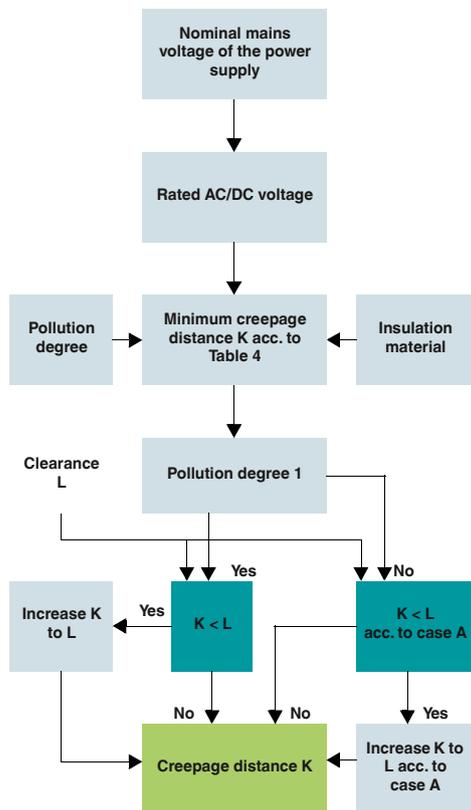
⁶⁾ The distances for pollution degree 4 are equal to those for pollution degree 3, except that the minimum clearance is 1.6 mm.

Altitude correction factors (extract from Table A.2)

Altitude [m]	Normal air pressure [kPa]	Multiplication factor for distances
2000	80.0	1.00
3000	70.0	1.14
4000	62.0	1.29
5000	54.0	1.48
6000	47.0	1.70
7000	41.0	1.95
8000	35.5	2.25
9000	30.5	2.62
10000	26.5	3.02
15000	12.0	6.67
20000	5.5	14.50

Dimensioning of creepage distances

Schematic for determining creepage distances



Single-phase three- or two-conductor AC or DC voltage systems (extract from Table 3 a)

Nominal voltage of the power supply system (mains) *)	Voltages for Table 4	
	For conductor-to-conductor insulation 1)	For conductor-to-ground insulation 1)
	All systems	Three-conductor systems center point grounded
[V]	[V]	[V]
12.5	12.5	-
24	25	-
25	-	-
30	32	-
42	50	-
48	-	-
50 **)	-	-
60	63	-
30 - 60	63	32
100 **)	100	-
110	125	-
120	-	-
150 **)	160	-
220	250	-
110 - 220	250	125
220 - 240	-	-
300 **)	320	-
220 - 440	500	250
600 **)	630	-
480 - 960	1000	500
1000 **)	1000	-

1) Conductor-to-ground insulation levels for non-grounded systems or those grounded through impedance correspond to conductor-to-conductor insulation levels as the operating voltage of every conductor to ground can, in practice, reach the conductor-to-conductor voltage. This is based on the fact that the actual voltage to ground is determined by the insulation resistance and capacitive reactance of each conductor to ground. Therefore, a low (but permissible) insulation resistance of a conductor can practically ground this and raise the two others to conductor-to-conductor voltage to ground.

*) Refer to 2.2.1 for correlation with the rated voltage.

**) These values correspond to the values in Table 1.

Three-phase four- or three-conductor AC voltage systems (extract from Table 3 b)

Nominal voltage of the power supply system (mains) *)	Voltages for Table 4		
	For conductor-to-conductor insulation	Insulation for conductor to ground	
		All systems	Three-phase four-conductor systems with grounded neutral conductor 2)
[V]	[V]	[V]	[V]
60	63	32	63
110/120/127	125	80	125
150 **)	160	-	160
208	200	125	200
220/230/240	250	160	250
300 **)	320	-	320
380/400/415	400	250	400
440	500	250	400
480/500	500	320	500
575	630	400	630
600 **)	630	-	630
660/690	630	400	630
720/830	800	500	800
960	1000	630	1000
1000 **)	1000	-	1000

1) Conductor-to-ground insulation levels for non-grounded systems or those grounded through impedance correspond to conductor-to-conductor insulation levels as the operating voltage of every conductor to ground can, in practice, reach the conductor-to-conductor voltage. This is based on the fact that the actual voltage to ground is determined by the insulation resistance and capacitive reactance of each conductor to ground. Therefore, a low (but permissible) insulation resistance of a conductor can practically ground this and raise the two others to conductor-to-conductor voltage to ground.

2) For equipment designed for use in three-phase four-conductor and three-phase three-conductor systems, grounded as well as non-grounded, only the values for three-conductor systems may be used.

*) Refer to 2.2.1 for correlation with the rated voltage.

**) These values correspond to the values in Table 1.

Creepage distances to prevent failures occurring due to creepage (extract from Table 4)

Voltage 1) r.m.s. value	Minimum creepage distances											
	Printed circuits			Pollution degree								
	Pollution degree			1			2			3		
	All insulation material groups	All insulation material groups except III b		All insulation material groups	Insulation material group			Insulation material group				
[V]	[mm]	[mm]	[mm]	I [mm]	II [mm]	III [mm]	I [mm]	II [mm]	III 2) [mm]			
10	0.025	0.04	0.08	0.4	0.4	0.4	1.00	1.00	1.00			
12.5	0.025	0.04	0.09	0.42	0.42	0.42	1.05	1.05	1.05			
16	0.025	0.04	0.10	0.45	0.45	0.45	1.10	1.10	1.10			
20	0.025	0.04	0.110	0.48	0.48	0.48	1.20	1.20	1.20			
25	0.025	0.04	0.125	0.5	0.5	0.5	1.25	1.25	1.25			
32	0.025	0.04	0.140	0.53	0.53	0.53	1.30	1.30	1.30			
40	0.025	0.04	0.16	0.56	0.8	1.1	1.4	1.6	1.8			
50	0.025	0.04	0.18	0.6	0.85	1.2	1.5	1.7	1.9			
63	0.040	0.63	0.20	0.63	0.9	1.25	1.6	1.8	2.0			
80	0.063	0.10	0.22	0.67	0.95	1.3	1.7	1.9	2.1			
100	0.10	0.16	0.25	0.71	1.0	1.4	1.8	2.0	2.2			
125	0.16	0.25	0.28	0.75	1.05	1.5	1.9	2.1	2.4			
160	0.25	0.4	0.32	0.8	1.1	1.6	2.0	2.2	2.5			
200	0.40	0.63	0.42	1.0	1.4	2.0	2.5	2.8	3.2			
250	0.56	1.0	0.56	1.25	1.8	2.5	3.2	3.6	4.0			
320	0.75	1.6	0.75	1.6	2.2	3.2	4.0	4.5	5.0			
400	1.0	2.0	1.00	2.0	2.8	4.0	5.0	5.6	6.3			
500	1.3	2.5	1.30	2.5	3.6	5.0	6.3	7.1	8.0			
630	1.8	3.2	1.80	3.2	4.5	6.3	8.0	9	10.0			
800	2.4	4.0	2.40	4.0	5.6	8.0	10.0	11	12.5			
1000	3.2	5.0	3.20	5.0	7.1	10	12.5	14	16.0			
1250			4.20	6.3	9	12.5	16	18	20			
1600			5.60	8	11	16	20	22	25			
2000			7.50	10	14	20	25	28	32			
2500			10	12.5	18	25	32	36	40			
3200			12.5	16	22	32	40	45	50			
4000			16	20	28	40	50	56	63			
5000			20	25	36	50	63	71	80			
6300			25	32	45	63	80	90	100			
8000			32	40	56	80	100	110	125			
10000			40	50	71	100	125	140	160			

1) This voltage is:
a) For function insulation: the working voltage.

b) For basic and additional insulation of a circuit supplied directly by the low-voltage network: either the voltage selected from Table 3 a or 3 b on the basis of the rated voltage of the equipment or the rated insulation voltage.

c) For basic and additional insulation of systems, equipment, and internal circuits which are not supplied directly from the mains: the highest r.m.s. value of the voltage that, within the bounds of the rated data, can occur in the system, the equipment or the internal circuit, when supplied with rated voltage and in the case of the most unfavorable combination of operating conditions.

2) With pollution degree 3, insulation material group III b is not recommended for use if voltages are greater than 630 V.

Certification bodies and safety marks

Certification bodies and approvals	Country code	Explosion protection	Country code	Marine classification societies	Country code
 IECEE CB Scheme (in combination with certifying body)	International	 International Electrotechnical Commission	International	 DNV GL - MARITIME	DE
 CENELEC Certification Agreement (CCA inspection report) (in combination with certifying body)	EU	 ATEX Directive	EU	 Bureau Veritas	FR
 Canadian Standards Association (CSA)	CA	 DEKRA Certification B.V.	NL	 Germanischer Lloyd AG	DE
 Canadian Standards Association (CSA) - CSA approval for the USA -	US	 Physikalisch-Technische Bundesanstalt	DE	 Lloyd's Register of Shipping	GB
 Canadian Standards Association (CSA) Combined logo - CSA approval for Canada and the USA -	CA US	 KIWA Nederland B.V.	NL	 Nippon Kaiji Kyokai	JP
 Underwriters Laboratories Inc. (UL)	US	 VTT Expert Services Oy	FI	 Det Norske Veritas	NO
 Underwriters Laboratories Inc. (UL) - UL approval for Canada -	CA	 IBExU Institut für Sicherheitstechnik GmbH	DE	 Polski Rejestr Statków	PL
 Underwriters Laboratories Inc. (UL) Combined logo - UL approval for the USA and Canada -	US CA	 TÜV Rheinland do Brasil	BR	 Russian Maritime Register of Shipping	RU
 INSIEME PER LA QUALITA'E LA SICUREZZA	IT	 Technischer Überwachungsverein Nord	DE	 Korean Register of Shipping	KR
 Eurasian Conformity	BY KZ RU	 DEKRA EXAM GmbH	DE	 American Bureau of Shipping	US
 DEKRA Certification B.V.	NL	 Canadian Standards Association (CSA)	CA		
 Österreichischer Verband für Elektrotechnik	AT	 Canadian Standards Association (CSA) - CSA approval for the USA -	US		
 electrosuisse SEV Verband für Elektro-, Energie- und Informationstechnik	CH	 Canadian Standards Association (CSA) Combined logo - CSA approval for Canada and the USA -	CA US		
 Verband Deutscher Elektrotechniker e.V. (VDE) - Approval of drawings - Reports with production monitoring	DE	 Underwriters Laboratories Inc. (UL)	US		
 Berufsgenossenschaft (BG) GS Tested safety	DE	 Underwriters Laboratories Inc. (UL) - UL approval for Canada -	CA		
 Intertek ETL Listed - Approval for the USA -	US	 Underwriters Laboratories Inc. (UL) Combined logo - UL approval for the USA and Canada -	US CA		
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A-INL-M20-S-S	1411249	700	A-INLE-PG7-N-S	1411275	699	CA-06P1N8AT007	1620259	84	CA-07P1N12T0DNS	1619445	82	
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A-INL-M40-P-GY	1411210	694	A-INSP-PG16-65N-P-BK	1415213	711	CA-06S1N128007S	1619534	76	CA-07P1N8A9006	1620138	84	
A-INL-M40-P-LG	1417664	694	A-INSP-PG16-65N-P-LG	1424523	711	CA-06S1N128008	1619659	78	CA-07P1N8A9007	1620080	80	
A-INL-M40-S-S	1411252	700	A-INSP-PG21-65N-P-BK	1415214	711	CA-06S1N128008S	1619508	76	CA-07P1N8A9008	1620037	80	
A-INL-M50-N-S	1411247	696	A-INSP-PG21-65N-P-LG	1424524	711	CA-06S1N1280DN	1619776	78	CA-07P1N8A90DN	1620165	80	
A-INL-M50-P-BK	1411219	694	A-INSP-PG29-65N-P-BK	1415215	711	CA-06S1N1280DNS	1619605	76	CA-07P1N8AHZ00	1619844	94	
A-INL-M50-P-GY	1411211	694	A-INSP-PG29-65N-P-LG	1424525	711	CA-06S1N129006	1620145	80	CA-07P1N8AT006	1620284	84	
A-INL-M50-P-LG	1417665	694	ALU-SB	1404531	474	CA-06S1N129007	1620119	80	CA-07P1N8AT006S	1619417	82	
A-INL-M50-S-S	1411253	700	ASI CC ADR	2741338	441	CA-06S1N129008	1620046	80	CA-07P1N8AT007	1620255	84	
A-INL-M63-N-S	1411248	696	ASI CC ADR CAB CINCH	2741341	442	CA-06S1N1290DN	1620172	80	CA-07P1N8AT007S	1619391	82	
A-INL-M63-P-BK	1411220	694				CA-06S1N12HZ00	1619851	94	CA-07P1N8AT008	1620191	84	
A-INL-M63-P-GY	1411212	694				CA-06S1N12T006	1620291	84	CA-07P1N8AT008S	1619363	82	
A-INL-M63-P-LG	1417666	694				CA-06S1N12T006S	1619424	82	CA-07P1N8AT0DN	1619336	84	
A-INL-M63-S-S	1411254	700				CA-06S1N12T007	1620262	84	CA-07P1N8AT0DNS	1619443	82	
A-INL-PG11-N-S	1411257	697	B			CA-06S1N12T007S	1619398	82	CA-07S1N122S00	1619989	92	
A-INL-PG11-P-BK	1424560	695	BMKL 11,5 (108X16) WH	0821797	443	CA-06S1N12T008	1620212	84	CA-07S1N126L00	1620407	90	
A-INL-PG11-P-GY	1411223	695	BMKL 64X16 WH	0821807	442	CA-06S1N12T008S	1619372	82	CA-07S1N126Y00	1619873	88	
A-INL-PG11-P-LG	1424550	695				CA-06S1N12T0DN	1619343	84	CA-07S1N126Z00	1619899	86	
A-INL-PG13,5-N-S	1411259	697				CA-06S1N12T0DNS	1619450	82	CA-07S1N128006	1619746	78	
A-INL-PG13,5-P-BK	1424561	695				CA-06S1N8A2S00	1619991	92	CA-07S1N128006S	1619575	76	
A-INL-PG13,5-P-GY	1411224	695				CA-06S1N8A6L00	1624030	90	CA-07S1N128007	1619720	78	
A-INL-PG13,5-P-LG	1424551	695				CA-06S1N8A6Y00	1619875	88	CA-07S1N128007S	1619530	76	
A-INL-PG16-N-S	1411260	697	C			CA-06S1N8A6Z00	1619901	86	CA-07S1N128008	1619655	78	
A-INL-PG16-P-BK	1424562	695	CA-06P1N122S00	1619992	92	CA-06S1N8A6Z00	1619748	78	CA-07S1N128008S	1619504	76	
A-INL-PG16-P-GY	1411225	695	CA-06P1N126L00	1619992	92	CA-06S1N8A8006S	1619577	76	CA-07S1N1280DN	1619772	78	
A-INL-PG16-P-LG	1424552	695	CA-06P1N126Y00	1619876	88	CA-06S1N8A8007	1619722	78	CA-07S1N1280DNS	1619601	76	
A-INL-PG21-N-S	1411262	697	CA-06P1N126Z00	1619902	86	CA-06S1N8A8007S	1619532	76	CA-07S1N129006	1620141	80	
A-INL-PG21-P-BK	1424563	695	CA-06P1N128006	1619902	86	CA-06S1N8A8008	1619657	78	CA-07S1N129007	1620115	80	
A-INL-PG21-P-GY	1411226	695	CA-06P1N128006S	1619902	86	CA-06S1N8A8008S	1619506	76	CA-07S1N129008	1620042	80	
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CA-17S1N128006S	1619541	77	CA-19S1N1280DN	1619752	79	CES-B10-SF-PLBK	0801655	685	CES-SRG-BK-2X9	1410411	687
CA-17S1N128007	1619702	79	CA-19S1N1280DNS	1619581	77	CES-B10-SFC-M	0801645	685	CES-SRG-BK-3	0801633	686
CA-17S1N128007S	1619514	77	CA-19S1N129006	1620121	81	CES-B10-SFFS-PLBK	0801660	685	CES-SRG-BK-4	0801632	686
CA-17S1N128008	1619639	79	CA-19S1N129007	1620048	81	CES-B10-WRG-BK	0801725	684	CES-SRG-BK-4X3	0801665	687
CA-17S1N128008S	1619483	77	CA-19S1N129008	1620020	81	CES-B16-8XSRC-BK	1411073	685	CES-SRG-BK-4X4	0801666	687
CA-17S1N1280DN	1619756	79	CA-19S1N1290DN	1620147	81	CES-B16-HFFS-PLBK	0801662	684	CES-SRG-BK-4X5	1410107	687
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CA-17S1N129006	1620125	81	CA-19S1N12T006	1620264	85	CES-B16-SFC-M	0801642	685	CES-SRG-BK-5	0801630	686
CA-17S1N129007	1620052	81	CA-19S1N12T006S	1619400	83	CES-B16-SFFS-PLBK	0801659	685	CES-SRG-BK-6	0801628	686
CA-17S1N129008	1620024	81	CA-19S1N12T007	1620214	85	CES-B16-WRG-BK	0801726	684	CES-SRG-BK-7	0801627	686
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CA-17S1N12HZ00	1619782	95	CA-19S1N12T008	1620174	85	CES-B24-HFFS-PLBK	0801661	684	CES-SRG-BK-9	0801622	686
CA-17S1N12T006	1620268	85	CA-19S1N12T008S	1619345	83	CES-B24-SF-PLBK	0801647	685	CES-STPG-GY	0801715	688
CA-17S1N12T006S	1619404	83	CA-19S1N12T0DN	1620293	85	CES-B24-SFC-M	0801641	685	CES-STPG-GY-10	0801682	688
CA-17S1N12T007	1620218	85	CA-19S1N12T0DNS	1619426	83	CES-B24-SFFS-PLBK	0801658	685	CES-STPG-GY-11	0801683	688
CA-17S1N12T007S	1619378	83	CA-1RP1N8A2S00	1624014	93	CES-B24-WRG-BK	0801727	684	CES-STPG-GY-12	0801684	688
CA-17S1N12T008	1620178	85	CA-1RP1N8A6L00	1623630	91	CES-LRC-BK	0801719	686	CES-STPG-GY-13	0801685	688
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EV-SETT2AC-BAS-RCM1-20ASE12	1628080	768				FLX ASI DIO 2/2 M12-2A	2773432	443	FOC-OE-OE-GZ03/...	1411564	420
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EV-T1G2C-1AC15A-5,0M14ASBK01	1628014	743				FLX ASI DO 4 M12-2A	2773458	442	FOC-PN-B-1000M12-C/M12-C/1	1408871	349
EV-T1G2C-1AC32A-5,0M10ASBK01	1628422	743	FL CAT5 PATCH 0,3	2832250	391	FOC-C-LC-P-GOF-MM	1411294	382	FOC-PN-B-1000M12-C/M12-C/2	1408870	349
EV-T1G2K-1AC15A-5,0M14ASBK01	1627757	743	FL CAT5 PATCH 0,5	2832263	391	FOC-C-LC-P-GOF-SM-APC	1412476	382	FOC-PN-B-1000M12-C/M12-C/5	1416680	349
EV-T1G2K-1AC32A-5,0M10ASBK01	1628419	743	FL CAT5 PATCH 1,0	2832276	391	FOC-C-LC-P-GOF-SM-PC	1411295	382	FOC-PN-B-1000M12-C/SCRJ/1	1408865	349
EV-T1G3C-1AC20A-4,0M2,5EHBK01	1627345	743	FL CAT5 PATCH 1,5	2832221	391	FOC-C-LCDU-GOF-MM	1411052	382	FOC-PN-B-1000M12-C/SCRJ/2	1408864	349
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FOC-SC-A-SC-A-GZ04/...	1413790	414				G-INS-PG13,5-M68N-PNES-BK	1424498	695	HC-A03-I-UT-F	1585223	501
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FOC-SC-A-SJ-A-GZ01/...	1405700	416				G-INS-PG13,5-M68N-NNES-S	1411173	697	HC-A04-I-PT-F	1585281	501
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FOC-SC-A-ST-A-GZ04/...	1413791	415				G-INS-PG21-M68N-PNES-LG	1424490	695	HC-A16-I-PT-F-32	1585401	515
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HC-ADV-B16-HHWH-1STM32-EMC-AL	1413417	607	HC-B 10-ANDOCK-MOD-T	1422078	585	HC-B 24-ANDOCK-MOD-A	1587483	585	HC-B-AF	1686533	586
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HC-ADV-B16-HHWH-1TTM40-EMC-AL	1413418	607	HC-B 10-EBUQ-2.5	1605569	537	HC-B 24-AP-GY	1660397	666	HC-B-G-M20-EC-AL	1411439	589
HC-ADV-B16-HHWH-1STM40-MF-BK	1420916	644	HC-B 10-ESTQ-2.5	1605624	537	HC-B 24-APV-GY	1661037	666	HC-B-G-M20-PLRBK	1407669	588
HC-ADV-B16-HHWH-1TGM32-PL	1404231	606	HC-B 10-I-CT-F	1648225	537	HC-B 24-EBUQ-2,5	1605585	541	HC-B-G-M25-EC-AL	1411446	589
HC-ADV-B16-HHWH-1TGM40-PL	1404233	606	HC-B 10-I-CT-M	1648212	537	HC-B 24-EBUQ-2,5-48	1605608	541	HC-B-G-M25-PLRBK	1407670	588
HC-ADV-B16-HHWH-1TTM40-EMC-AL	1413419	607	HC-B 10-I-PT-F	1660177	537	HC-B 24-ESTQ-2,5	1605640	541	HC-B-G-M32-EC-AL	1411440	589
HC-ADV-B16-HHWH-1TTM25-MF-BK	1420917	644	HC-B 10-I-PT-M	1407730	537	HC-B 24-ESTQ-2,5-48	1605666	541	HC-B-G-M32-PLRBK	1407671	588
HC-ADV-B16-HHWH-1TTM32-EMC-AL	1413416	607	HC-B 10-I-UT-F	1648186	537	HC-B 24-I-CT-F	1648348	541	HC-B-G-M40-EC-AL	1411441	589
HC-ADV-B16-HHWH-1TTM32-MF-BK	1420918	644	HC-B 10-I-UT-M	1648173	537	HC-B 24-I-CT-F-48	1584981	541	HC-B-G-M40-PLRBK	1407672	588
HC-ADV-B16-HHWH-1TTM40-EMC-AL	1413418	607	HC-B 10-SD-FL/FS	1660177	655	HC-B 24-I-CT-M	1648335	541	HC-B-G-M32-ER-AL	1414663	660
HC-ADV-B16-HHWH-1TTM40-MF-BK	1420919	644	HC-B 10-SD-FLU/FS-AL	1644562	655	HC-B 24-I-CT-M-48	1584978	541	HC-B-G-M20-PLRBK	1414660	659
HC-ADV-B16-HHWH-BLANK-ELC-AL	1420054	646	HC-B 10-SD-FQ/FS	1772586	655	HC-B 24-I-PT-F	1407735	541	HC-B-G-M25-ER-AL	1414664	660
HC-ADV-B16-HLWH-1STM25-EMC-AL	1414976	607	HC-B 10-SD-FQT/FS	1687260	654	HC-B 24-I-PT-F-48	1407737	541	HC-B-G-M25-PLRBK	1414661	659
HC-ADV-B16-HLWH-1STM25-MF-BK	1420920	644	HC-B 10-SD-FQT/FS-AL	1647750	654	HC-B 24-I-PT-M	1407736	541	HC-B-G-M32-ER-AL	1414665	660
HC-ADV-B16-HLWH-1TTM25-EMC-AL	1414975	607	HC-B 10-SD-FQU/FS-AL	1644575	655	HC-B 24-I-PT-M-48	1407738	541	HC-B-G-M32-PLRBK	1414662	659
HC-ADV-B16-HLWH-1TTM25-MF-BK	1420921	644	HC-B 10-SD-ML/FS	1678295	654	HC-B 24-I-UT-F	1648306	541	HC-B-G-M40-ER-AL	1414666	660
HC-ADV-B16-HLWH-BLANK-ELC-AL	1420053	646	HC-B 10-SD-MLT/FS-AL	1584512	654	HC-B 24-I-UT-F-48	1584949	541	HC-B-GM0-M40-ET-AL	1414647	660
HC-ADV-B24-HHWH-1SGM32-PL	1404237	620	HC-B 10-SD-MQ/FS	1678305	654	HC-B 24-I-UT-M	1648296	541	HC-B-GM0-M40-PLTBK	1414643	658
HC-ADV-B24-HHWH-1SGM40-PL	1404239	620	HC-B 10-SD-MQT/FS-AL	1584541	654	HC-B 24-I-UT-M-48	1584936	541	HC-B-GM4X10-M40-ET-AL	1414648	660
HC-ADV-B24-HHWH-1STM25-EMC-AL	1414981	621	HC-B 10-TMS-EEE-PR-DI	1409804	662	HC-B 24-SD-FL/FS	1660148	655	HC-B-GM4X10-M40-PLTBK	1414644	658
HC-ADV-B24-HHWH-1STM25-MF-BK	1420922	645	HC-B 10-TMS-SD-IP50	1690749	592	HC-B 24-SD-FLU/FS-AL	1644601	655	HC-B-GM5X8,5-M40-ET-AL	1414649	660
HC-ADV-B24-HHWH-1STM32-EMC-AL	1413431	621	HC-B 10-TMS-SD-IP66	1411504	592	HC-B 24-SD-FQ/FS	1772609	655	HC-B-GM5X8,5-M40-PLTBK	1414645	658
HC-ADV-B24-HHWH-1STM32-MF-BK	1420923	645	HC-B 16-A-DT-PEL-F	1648432	543	HC-B 24-SD-FQT/FS	1687286	654	HC-B-GM8X6,5-M40-ET-AL	1414650	660
HC-ADV-B24-HHWH-1TTM40-EMC-AL	1413433	621	HC-B 16-A-DT-PEL-M	1648445	543	HC-B 24-SD-FQT/FS-AL	1647776	654	HC-B-GM8X6,5-M40-PLTBK	1414646	658
HC-ADV-B24-HHWH-1STM40-MF-BK	1420924	645	HC-B 16-A-DT-PER-F	1648458	543	HC-B 24-SD-FQU/FS-AL	1644614	655	HC-B-GTRS-M20-ER-AL	1414656	660
HC-ADV-B24-HHWH-1TGM32-PL	1404235	620	HC-B 16-A-DT-PER-M	1648461	543	HC-B 24-SD-ML/FS	1678334	654	HC-B-GTRS-M20-PLRBK	1414651	659
HC-ADV-B24-HHWH-1TGM40-PL	1404238	620	HC-B 16-A-UT-PEL-F	1648042	545	HC-B 24-SD-MLT/FS-AL	1584538	654	HC-B-GTRS-M25-ER-AL	1414657	660
HC-ADV-B24-HHWH-1TTM25-EMC-AL	1414980	621	HC-B 16-A-UT-PEL-M	1648048	545	HC-B 24-SD-MQ/FS	1678347	654	HC-B-GTRS-M25-PLRBK	1414652	659
HC-ADV-B24-HHWH-1TTM25-MF-BK	1420925	645	HC-B 16-A-UT-PER-F	1648090	545	HC-B 24-SD-MQT/FS-AL	1584567	654	HC-B-GTRS-M32-ER-AL	1414658	660
HC-ADV-B24-HHWH-1TTM32-EMC-AL	1413430	621	HC-B 16-A-UT-PER-M	1648096	545	HC-B 24-TMS-EEE-PR-DI	1409820	662	HC-B-GTRS-M32-PLRBK	1414654	659
HC-ADV-B24-HHWH-1TTM32-MF-BK	1420926	645	HC-B 16-ADP/1 DSUB 37	1775512	667	HC-B 24-TMS-SD-IP50	1690765	620	HC-B-GTRS-M40-ER-AL	1414659	660
HC-ADV-B24-HHWH-1TTM40-EMC-AL	1413432	621	HC-B 16-ADP/1 DSUB 50	1775538	667	HC-B 24-TMS-SD-IP66	1411520	620	HC-B-PES	1604997	664
HC-ADV-B24-HHWH-1TTM40-MF-BK	1420927	645	HC-B 16-ADP/2 DSUB 37	1775525	667	HC-B 32-AMQ	1775693	634	HC-B-SG-PL-BK	1424343	692
HC-ADV-B24-HHWH-BLANK-ELC-AL	1420056	646	HC-B 16-ADP/2 DSUB 50	1775541	667	HC-B 32-KMQ-82/O1PG21	1675010	634	HC-B-TA-M20-ER-AL	1414256	661
HC-ADV-B24-HLWH-1STM25-EMC-AL	1414983	621	HC-B 16-ANDOCK	1586138	665	HC-B 32-KMQ-82/O2PG29	1675023	634	HC-B-TA-M20-PLR-BK	1414243	659
HC-ADV-B24-HLWH-1STM25-MF-BK	1420928	645	HC-B 16-ANDOCK-MOD-A	1587467	585	HC-B 32-KMQ-82/O1STM32	1647284	634	HC-B-TA-M25-ER-AL	1414257	661
HC-ADV-B24-HLWH-1TTM25-EMC-AL	1414982	621	HC-B 16-ANDOCK-MOD-T	1587454	585	HC-B 32-KMQ-82/O1STM40	1647297	634	HC-B-TA-M25-PLR-BK	1414244	659
HC-ADV-B24-HLWH-1TTM25-MF-BK	1420929	645	HC-B 16-AP-GY	1660384	666	HC-B 32-SD-FQU/FS	1646120	655	HC-B-TA-M32-ER-AL	1414258	661
HC-ADV-B24-HLWH-BLANK-ELC-AL	1420055	646	HC-B 16-APV-GY	1661121	666	HC-B 32-SD-FQ/FS	1604867	634	HC-B-TA-M32-PLR-BK	1414245	659
HC-B 6-A-DT-PEL-F	1648364	543	HC-B 16-EBUQ-2.5	1605572	539	HC-B 32-SMQ-72/O1PG29	1675036	634	HC-B-TA-M40-ER-AL	1414259	661
HC-B 6-A-DT-PER-F	1648377	543	HC-B 16-EBUQ-2.5-32	1605598	539	HC-B 32-SMQ-72/O2M32	1604868	634	HC-B-TA-M40-PLR-BK	1414246	659
HC-B 6-A-DT-PER-M	1648380	543	HC-B 16-ESTQ-2.5	1605637	539	HC-B 32-SMQ-72/O2M40	1604869	634	HC-B-TA-NPT-1/4-ER-AL	1414267	661
HC-B 6-A-UT-PEL-F	1648018	545	HC-B 16-ESTQ-2,5-32	1605653	539	HC-B 32-SMQ-72/O2PG29	1675049	634	HC-B-TA-NPT-1/4-PLR-BK	1414254	659
HC-B 6-A-UT-PEL-M	1648024	545	HC-B 16-I-CT-F	1648283	539	HC-B 32-TFQ-80/O1PG29G	1675081	634	HC-B-TA-NPT-1/1-ER-AL	1414266	661
HC-B 6-A-UT-PER-F	1648066	545	HC-B 16-I-CT-F-32	1584923	539	HC-B 32-TFQ-80/O1PG29S	1675094	634	HC-B-TA-NPT-1/1-PLR-BK	1414253	659
HC-B 6-A-UT-PER-M	1648072	545	HC-B 16-I-CT-M	1648270	539	HC-B 32-TFQ-80/O1PG36G	1460138	634	HC-B-TA-NPT-1/2-ER-AL	1414264	661
HC-B 6-ADP/1 DSUB 9	1775457	667	HC-B 16-I-CT-M-32	1584910	539	HC-B 32-TFQ-80/O1PG36S	1644818	634	HC-B-TA-NPT-1/2-PLR-BK	1414251	659
HC-B 6-ADP/1 DSUB 15	1775473	667	HC-B 16-I-PT-F	1407731	539	HC-B 32-TFQ-80/O1STM32G	1645383	634	HC-B-TA-NPT-3/4-ER-AL	1414265	661
HC-B 6-ADP/2 DSUB 9	1775460	667	HC-B 16-I-PT-F-32	1407733	539	HC-B 32-TFQ-80/O1STM32S	1645150	634	HC-B-TA-NPT-3/4-PLR-BK	1414252	659
HC-B 6-ADP/2 DSUB 15	1775486	667	HC-B 16-I-PT-M	1407732	539	HC-B 32-TFQ-80/O1STM40G	1647307	634	HC-B-TA-PG13-ER-AL	1414260	661
HC-B 6-ANDOCK	1586112	665	HC-B 16-I-PT-M-32	1407734	539	HC-B 32-TFQ-80/O1STM40S	1645451	634	HC-B-TA-PG13-PLR-BK	1414247	659
HC-B 6-AP-GY	1660368	666	HC-B 16-I-UT-F	1648241	539	HC-B 32-TFQ-80/O1STM50G	1460197	634	HC-B-TA-PG16-ER-AL	1414261	661
HC-B 6-EBUQ-2.5	1605556	535	HC-B 16-I-UT-F-32	1584884	539	HC-B 32-TFQ-80/O1STM50S	1585980	634	HC-B-TA-PG16-PLR-BK	1414248	659
HC-B 6-ESTQ-2.5	1605611	535	HC-B 16-I-UT-M	1648238	539	HC-B 48-AML	1772175	635	HC-B-TA-PG21-ER-AL	1414262	661
HC-B 6-I-CT-F	1648160	535	HC-B 16-I-UT-M-32	1584871	539	HC-B 48-AML	1772188	635	HC-B-TA		

Type	Order No.	Page	Type	Order No.	Page	Type	Order No.	Page
HC-B06-SG-CBK	1411483	662	HC-CIF-B24-BFWD-FH-AL	1404212	693	HC-DD108-I-CT-M	1584114	533
HC-B06-SL-PLBK	1407697	663	HC-CIF-B24-HFFD-WH-AL	1404213	693	HC-DD108-I-CT-M-216	1584127	533
HC-B06-SP-CBK	1411477	662	HC-CIF-B24-HFWL-PL-LG	1424337	692	HC-DD24-I-CT-F	1584046	533
HC-B10-24-DL-PLBK	1407696	663	HC-CIF-D15-AIWS-SM-NI	1424340	692	HC-DD24-I-CT-M	1584033	533
HC-B10-BC-HI-PLBK	1407693	653	HC-CIF-D25-AIWS-SM-NI	1424341	692	HC-DD42-I-CT-F	1584062	533
HC-B10-BCSFD-P-BK	1414628	655	HC-COM- 4/2-EBUC	1408517	649	HC-DD42-I-CT-M	1584059	533
HC-B10-BCSFS-P-BK	1414625	655	HC-COM- 4/2-ESTC	1408504	649	HC-DD72-I-CT-F	1584091	533
HC-B10-HCLFD-PR-BK	1414631	654	HC-COM- 8-EBUC	1408494	649	HC-DD72-I-CT-F-144	1584101	533
HC-B10-HCLWD-PLR-BK	1414638	654	HC-COM- 8-ESTC	1408481	649	HC-DD72-I-CT-M	1584075	533
HC-B10-HCLWS-PLR-BK	1414635	654	HC-COM-17-EBUC	1408478	649	HC-DD72-I-CT-M-144	1584088	533
HC-B10-I-TPT-F	1423018	537	HC-COM-17-ESTC	1408465	649	HC-EVO-A10UT-BWS-HH-M20-PLR-BK	1411356	518
HC-B10-I-TPT-M	1423017	537	HC-COM-K-AML-GR	1408355	651	HC-EVO-A10UT-BWSC-HH-M20-PLR-BK	1411357	518
HC-B10-SG-CBK	1411484	662	HC-COM-K-AML-GW	1408368	651	HC-EVO-A16UT-BWS-HH-M25-PLR-BK	1411358	522
HC-B10-SL-PLBK	1407698	663	HC-COM-K-KML-O1PG16	1408384	651	HC-EVO-A16UT-BWSC-HH-M25-PLR-BK	1411359	522
HC-B10-SP-CBK	1411479	662	HC-COM-K-KV-PG16(11.5-15) SML	1409299	651	HC-EVO-B06-BWS-PLR-BK	1407621	588
HC-B16-BC-HI-PLBK	1407694	653	HC-COM-K-KV-PG16(9-12) SML	1409286	651	HC-EVO-B06-BWSC-PLR-BK	1407622	588
HC-B16-BCSFD-P-BK	1414629	655	HC-COM-K-SD-FLU-BU/FS	1408397	651	HC-EVO-B06-CHWS-PLR-BK	1407625	588
HC-B16-BCSFS-P-BK	1414626	655	HC-COM-K-SD-FLU-ST/FS	1408407	651	HC-EVO-B06-HHFS-2B-PL-BK	1420930	640
HC-B16-HCLFD-PR-BK	1414632	654	HC-COM-K-SML-O1PG16	1408371	651	HC-EVO-B06-HHFS-EL-AL	1411447	589
HC-B16-HCLWD-PLR-BK	1414639	654	HC-COM-K-TFL-O1PG16-G	1408342	650	HC-EVO-B06-HHFS-PLBK	1407620	588
HC-B16-HCLWS-PLR-BK	1414636	654	HC-COM-K-TFL-O1PG16-S	1408339	650	HC-EVO-B06-HLFS-EL-AL	1411448	589
HC-B16-I-TPT-F	1423020	539	HC-COM-K-TFL-O1PG16-S	1676857	657	HC-EVO-B06-HLFS-PLBK	1407619	588
HC-B16-I-TPT-F-32	1423826	539	HC-CST-MOD	1636127	584	HC-EVO-B06-SHWS-2SSM20-PLR-BK	1421322	588
HC-B16-I-TPT-M	1423019	539	HC-D 4-1BU	1886143	669	HC-EVO-B06-SHWS-2SSM25-PLR-BK	1421229	588
HC-B16-I-TPT-M-32	1423825	539	HC-D 4-1ST	1886144	669	HC-EVO-B06-SHWS-2SSM32-PLR-BK	1407623	588
HC-B16-SG-CBK	1411485	662	HC-D 4-2BU	1886140	669	HC-EVO-B06-SHWSC-2SSM20-PLR-BK	1421329	588
HC-B16-SL-PLBK	1407700	663	HC-D 4-2ST	1886141	669	HC-EVO-B06-SHWSC-2SSM25-PLR-BK	1421244	588
HC-B16-SP-CBK	1411480	662	HC-D 4-BU-2BUS	1886139	669	HC-EVO-B06-SHWSC-2SSM32-PLR-BK	1407624	588
HC-B24-BC-HI-PLBK	1407695	653	HC-D 4-ST-1BUS	1886142	669	HC-EVO-B06PT-BWSC-HL-M20-PLR-BK	1407710	636
HC-B24-BCSFD-P-BK	1414630	655	HC-D 7-DS-IP65	1686229	665	HC-EVO-B06PT-BWSC-HL-M20ELC-AL	1411487	637
HC-B24-BCSFS-P-BK	1414627	655	HC-D 7-I-CT-F	1584347	503	HC-EVO-B10-BFDC-PLR-BK	1407635	602
HC-B24-HCLFD-PR-BK	1414633	654	HC-D 7-I-CT-M	1584334	503	HC-EVO-B10-BWD-PLR-BK	1407634	598
HC-B24-HCLWD-PLR-BK	1414640	654	HC-D 8-I-CT-F	1584363	503	HC-EVO-B10-BWS-PLR-BK	1407632	594
HC-B24-HCLWS-PLR-BK	1414637	654	HC-D 8-I-CT-M	1584350	503	HC-EVO-B10-BWSC-PLR-BK	1407633	594
HC-B24-I-TPT-F	1423022	541	HC-D 15-ADP/1 DSUB 9	1661312	667	HC-EVO-B10-CHWD-PLR-BK	1407641	594
HC-B24-I-TPT-F-48	1423828	541	HC-D 15-ADP/1 DSUB 15	1775253	667	HC-EVO-B10-CHWS-PLR-BK	1407640	594
HC-B24-I-TPT-M	1423021	541	HC-D 15-ADP/1 DSUB 25	1775266	667	HC-EVO-B10-HHFD-2B-PL-BK	1411495	641
HC-B24-I-TPT-M-48	1423827	541	HC-D 15-AP-GY	1660342	666	HC-EVO-B10-HHFD-EL-AL	1411451	599
HC-B24-SG-CBK	1411486	662	HC-D 15-I-CT-F	1584389	517	HC-EVO-B10-HHFD-PLBK	1407629	598
HC-B24-SL-PLBK	1407701	663	HC-D 15-I-CT-M	1584376	517	HC-EVO-B10-HHFD-EL-AL	1411453	595
HC-B24-SP-CBK	1411482	662	HC-D 25-AP-GY	1660355	666	HC-EVO-B10-HHFS-PLBK	1407627	594
HC-BB10-I-CT-F	1584703	547	HC-D 25-I-CT-F	1584402	517	HC-EVO-B10-HHWD-EL-AL	1411454	603
HC-BB10-I-CT-M	1584774	547	HC-D 25-I-CT-F-Z	1411481	517	HC-EVO-B10-HHWD-PLBK	1407631	602
HC-BB18-I-CT-F	1584729	547	HC-D 25-I-CT-M	1584392	517	HC-EVO-B10-HLFD-EL-AL	1411455	599
HC-BB18-I-CT-M	1584716	547	HC-D 25-I-CT-M-Z	1411478	517	HC-EVO-B10-HLFD-PLBK	1407628	598
HC-BB32-I-CT-F	1584745	547	HC-D 40-A-TWIN-PEL-F	1580147	531	HC-EVO-B10-HLFS-EL-AL	1411456	595
HC-BB32-I-CT-F-33-64	1406543	547	HC-D 40-A-TWIN-PEL-M	1580150	531	HC-EVO-B10-HLFS-PLBK	1407626	594
HC-BB32-I-CT-M	1584732	547	HC-D 40-A-TWIN-PER-F	1580163	531	HC-EVO-B10-HLWD-EL-AL	1411457	603
HC-BB32-I-CT-M-33-64	1406544	547	HC-D 40-A-TWIN-PER-M	1580176	531	HC-EVO-B10-HLWD-PLBK	1407630	602
HC-BB46-I-CT-F	1584758	547	HC-D 40-A-UT-PEL-F	1584253	531	HC-EVO-B10-SHFDC-2SSM20-PLR-BK	1421362	602
HC-BB46-I-CT-F-47-92	1406545	547	HC-D 40-A-UT-PEL-M	1584240	531	HC-EVO-B10-SHFDC-2SSM25-PLR-BK	1421320	602
HC-BB46-I-CT-M	1584761	547	HC-D 40-A-UT-PER-F	1584279	531	HC-EVO-B10-SHFDC-2SSM32-PLR-BK	1407639	602
HC-BB46-I-CT-M-47-92	1406546	547	HC-D 40-A-UT-PER-M	1584266	531	HC-EVO-B10-SHWD-2SSM20-PLR-BK	1421356	598
HC-BBB 40-EBUC	1409930	549	HC-D 40-I-CT-F	1584428	529	HC-EVO-B10-SHWD-2SSM25-PLR-BK	1421304	598
HC-BBB 40-ESTC	1409921	549	HC-D 40-I-CT-M	1584415	529	HC-EVO-B10-SHWD-2SSM32-PLR-BK	1407638	598
HC-BBB 64-EBUC	1409914	549	HC-D 64-A-TWIN-PEL-F	1580189	531	HC-EVO-B10-SHWS-2SSM20-PLR-BK	1421354	594
HC-BBB 64-ESTC	1409901	549	HC-D 64-A-TWIN-PEL-M	1580192	531	HC-EVO-B10-SHWS-2SSM25-PLR-BK	1421277	594
HC-BS-PG11	1674493	711	HC-D 64-A-TWIN-PER-F	1580202	531	HC-EVO-B10-SHWS-2SSM32-PLR-BK	1407636	594
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QPD H 4PE6,0 BK	1411426	483	QPD W 3PE1,5 M25 0,1 BK K TH	1577273	490	RC-15S2000	1623775	97	SAC 1,5/0,1-116/2XBI-1L-Z	1458347	249
QPD N 2,5 6-10 BK	1582226	475	QPD W 3PE2,5 6-10 M25 0,5 BK	1582163	478	RC-22P2000	1603321	97	SAC 1,5/0,15-116/2XA-1L-Z	1458020	249
QPD N 2,5 9-14 BK	1582229	475	QPD W 3PE2,5 6-10 M25 1,0 BK	1582160	478	RC-22S2000	1603327	97	SAC 1,5/0,2-116/2XB-1L-Z	1458208	249
QPD N 2PE1,5 4-9 BK	1415099	466	QPD W 3PE2,5 6-10 M25 DT BK	1582169	480	RC-5AP2000	1603505	97	SAC 1,5/0,15-116/2XBI-1L-Z	1458389	249
QPD N 2PE1,5 8-13 BK	1415100	466	QPD W 3PE2,5 6-10 M25 FC BK	1582166	479	RC-5AS2000	1603509	97	SAC 1,5/0,2-116/2XA-1L-Z	1458062	249
QPD N 3PE1,5 4-9 BK	1415097	466	QPD W 3PE2,5 9-14 M25 0,5 BK	1582175	478	RC-5CP2000	1603513	97	SAC 1,5/0,2-116/2XB-1L-Z	1458240	249
QPD N 3PE1,5 8-13 BK	1415098	466	QPD W 3PE2,5 9-14 M25 1,0 BK	1582172	478	RC-5CS2000	1603517	97	SAC 1,5/0,2-116/2XBI-1L-Z	1458428	249
QPD N 4PE1,5 5-10 BK	1415101	466	QPD W 3PE2,5 9-14 M25 DT BK	1582181	480	RC-Z2058	1604223	186	SAC 3,0/0,1-116/2XA-1L-Z	1457995	249
QPD N 4PE1,5 9-14 BK	1415104	466	QPD W 3PE2,5 9-14 M25 FC BK	1582178	479	RC-Z2059	1604225	186	SAC 3,0/0,1-116/2XB-1L-Z	1458172	249
QPD N 4PE2,5 6-11 BK	1459663	475	QPD W 3PE2,5 M25 0,5 BK	1582187	478	RC-Z2062	1604228	187	SAC 3,0/0,1-116/2XBI-1L-Z	1458350	249
QPD N 4PE2,5 9-16 BK	1459647	475	QPD W 3PE2,5 M25 1,0 BK	1582190	478	RC-Z2068	1604236	187	SAC 3,0/0,15-116/2XA-1L-Z	1458033	249
QPD N 4PE6,0 12-20 BK	1410406	483	QPD W 3PE2,5 M25 DT BK	1582193	480	RC-Z2104	1604260	187	SAC 3,0/0,15-116/2XB-1L-Z	1458211	249
QPD N 4PE6,0 9-14 BK	1410409	483	QPD W 3PE2,5 M25 FC BK	1582196	479	RC-Z2130	1604267	177	SAC 3,0/0,15-116/2XBI-1L-Z	1458392	249
QPD P 2PE1,5 4-9 BK	1414705	473	QPD W 4PE1,5 5-10 M25 0,5 BK	1414730	471	RC-Z2274	1604409	177	SAC 3,0/0,2-116/2XA-1L-Z	1458075	249
QPD P 2PE1,5 8-13 BK	1414706	473	QPD W 4PE1,5 5-10 M25 1,0 BK	1414731	471	RC-Z2468	1611796	186	SAC 3,0/0,2-116/2XB-1L-Z	1458253	249
QPD P 3PE1,5 4-9 BK	1414703	473	QPD W 4PE1,5 5-10 M25 FC BK	1414732	472	RC-Z2469	1611797	186	SAC 3,0/0,2-116/2XBI-1L-Z	1458431	249
QPD P 3PE1,5 8-13 BK	1414704	473	QPD W 4PE1,5 9-14 M25 0,5 BK	1414733	471	RC-Z2490	1611803	177	SAC 5,0/0,1-116/2XA-1L-Z	1458004	249
QPD P 3PE1,5 8-13 BK	1414704	473	QPD W 4PE1,5 9-14 M25 1,0 BK	1414734	471	RC-Z2494	1614123	177	SAC 5,0/0,1-116/2XB-1L-Z	1458185	249
QPD P 4PE1,5 9-14 BK	1414750	473	QPD W 4PE1,5 9-14 M25 FC BK	1414735	472	RC-Z2514	1614590	177	SAC 5,0/0,1-116/2XBI-1L-Z	1458363	249
QPD P 4PE1,5 9-14 BK	1414750	473	QPD W 4PE1,5 M25 0,5 BK	1414736	471	RC/TGGM/KVD/LBL 16+3	1685505	316	SAC 5,0/0,15-116/2XA-1L-Z	1458046	249
QPD P 4PE2,5 6-11 BK	1403784	481	QPD W 4PE1,5 M25 1,0 BK	1414737	471	RC/TWGM/KVD/LBL 16+3	1685518	316	SAC 5,0/0,15-116/2XB-1L-Z	1458224	249
QPD P 4PE2,5 9-16 BK	1403782	481	QPD W 4PE1,5 M25 FC BK	1414738	472	RCK-TWGM/BL16+3/5,0PUR SH	1519529	316	SAC 5,0/0,15-116/2XB-1L-Z	1458402	249
QPD P 4PE6,0 12-20 BK	1410387	487	QPD W 4PE2,5 6-11 M20 0,5 BK	1403725	478	RCK-TWGM/BL16+3/10,0PUR SH	1511828	316	SAC 5,0/0,2-116/2XA-1L-Z	1458088	249
QPD P 4PE6,0 9-14 BK	1410386	487	QPD W 4PE2,5 6-11 M20 0,5 EX	1411393	489	REDUC-K-KV-M25/M20 BK	1411232	708	SAC 5,0/0,2-116/2XA-1L-Z	1458088	249
QPD PSK 2,5	1582151	482	QPD W 4PE2,5 6-11 M20 1,0 BK	1403727	478	REDUC-K-KV-M32/M20 BK	1410725	708	SAC 5,0/0,2-116/2XB-1L-Z	1458444	249
QPD PSK 3/4X1,5	1414724	474	QPD W 4PE2,5 6-11 M20 1,0 EX	1411394	489	REDUC-K-KV-M32/M25 BK	1410712	708	SAC 10,0/0,1-116/2XA-1L-Z	1458017	249
QPD PSK 5X1,5	1414759	474	QPD W 4PE2,5 6-11 M20 FC BK	1403729	479	REDUC-K-KV-M40/M25 BK	1410741	708	SAC 10,0/0,1-116/2XB-1L-Z	1458198	249
QPD PSK 5X2,5	1404529	482	QPD W 4PE2,5 6-11 M20 FC EX	1411395	489	REDUC-K-KV-M40/M32 BK	1410738	708	SAC 10,0/0,1-116/2XBI-1L-Z	1458376	249
QPD PSK 5X6,0	1411404	482	QPD W 4PE2,5 6-11 M25 0,5 BK	1582557	478	REDUC-M-KV-M20/M16	1647611	708	SAC 10,0/0,15-116/2XA-1L-Z	1458059	249

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SAC-12P-1,5-PUR/FR SCO	1430653	218	SAC-17P-10,0-PVC/FS SCO	1555376	219	SAC-2P-M12MSB/15,0-910	1507272	429
SAC-12P-1,5-PUR/FS SCO	1430611	218	SAC-17P-100,0-PVC/0,14	1441545	304	SAC-2P-M12MSB/15,0-910/M12FSB	1507405	429
SAC-12P-1,5-PVC/FR SCO	1554888	219	SAC-17P-MR/1,5-35T SH SCO	1430242	221	SAC-2P-M12MSB/910/...	1538047	429
SAC-12P-1,5-PVC/FS SCO	1554856	219	SAC-17P-MR/1,5-PUR SCO	1430734	218	SAC-2P-MRB SCO/910/...	1433236	429
SAC-12P-3,0-35T/FR SH SCO	1430174	220	SAC-17P-MR/1,5-PVC SCO	1555305	219	SAC-2P-MRB-FRB SCO/910/...	1433278	429
SAC-12P-3,0-35T/FS SH SCO	1430132	220	SAC-17P-MR/3,0-35T SH SCO	1430255	221	SAC-2P-MRB-FSB SCO/910/...	1433265	429
SAC-12P-3,0-PUR/FR SCO	1430666	218	SAC-17P-MR/3,0-PUR SCO	1430747	218	SAC-2P-MSB SCO/910/...	1538050	429
SAC-12P-3,0-PUR/FS SCO	1430624	218	SAC-17P-MR/3,0-PVC SCO	1555318	219	SAC-2P-MSB-FRB SCO/910/...	1433252	429
SAC-12P-3,0-PVC/FR SCO	1554908	219	SAC-17P-MR/5,0-35T SH SCO	1430268	221	SAC-2P-MSB-FSB SCO/910/...	1538092	429
SAC-12P-3,0-PVC/FS SCO	1554889	219	SAC-17P-MR/5,0-PUR SCO	1430750	218	SAC-2P-MSB/0,3-910/FSB SCO	1518106	429
SAC-12P-5,0-35T/FR SH SCO	1430187	220	SAC-17P-MR/5,0-PVC SCO	1555321	219	SAC-2P-MSB/0,5-910/FSB SCO	1518119	429
SAC-12P-5,0-35T/FS SH SCO	1430145	220	SAC-17P-MR/10,0-35T SH SCO	1430271	221	SAC-2P-MSB/1,0-910/FSB SCO	1518122	429
SAC-12P-5,0-PUR/FR SCO	1430679	218	SAC-17P-MR/10,0-PUR SCO	1430763	218	SAC-2P-MSB/2,0-910 SCO	1518025	429
SAC-12P-5,0-PUR/FS SCO	1430637	218	SAC-17P-MR/10,0-PVC SCO	1555334	219	SAC-2P-MSB/2,0-910/FSB SCO	1518135	429
SAC-12P-5,0-PUR/M16FR	1693720	313	SAC-17P-MS/1,5-35T SH SCO	1430200	221	SAC-2P-MSB/5,0-910 SCO	1518038	429
SAC-12P-5,0-PVC/FR SCO	1554924	219	SAC-17P-MS/1,5-PUR SCO	1430695	218	SAC-2P-MSB/5,0-910/FSB SCO	1518148	429
SAC-12P-5,0-PVC/FS SCO	1554872	219	SAC-17P-MS/1,5-PVC SCO	1555266	219	SAC-2P-MSB/10,0-910 SCO	1518041	429
SAC-12P-10,0-35T/FR SH SCO	1430190	220	SAC-17P-MS/3,0-35T SH SCO	1430213	221	SAC-2P-MSB/10,0-910/FSB SCO	1518151	429
SAC-12P-10,0-35T/FS SH SCO	1430158	220	SAC-17P-MS/3,0-PUR SCO	1430705	218	SAC-2P-MSB/15,0-910 SCO	1518054	429
SAC-12P-10,0-PUR/FR SCO	1430682	218	SAC-17P-MS/3,0-PVC SCO	1555279	219	SAC-2P-MSB/15,0-910/FSB SCO	1518164	429
SAC-12P-10,0-PUR/FS SCO	1430640	218	SAC-17P-MS/5,0-35T SH SCO	1430226	221	SAC-2P-SUSMS/0,3-PUR/SUSFS	1410757	253
SAC-12P-10,0-PUR/M16FR	1693733	313	SAC-17P-MS/5,0-PUR SCO	1430718	218	SAC-2P-SUSMS/0,6-PUR/SUSFS	1410759	253
SAC-12P-10,0-PVC/FR SCO	1554937	219	SAC-17P-MS/5,0-PVC SCO	1555282	219	SAC-2P-SUSMS/1,5-PUR	1410752	253
SAC-12P-10,0-PVC/FS SCO	1554885	219	SAC-17P-MS/5,0-35T/M23FS SHSCO	1437407	221	SAC-2P-SUSMS/1,5-PUR/SUSFS	1410760	253
SAC-12P-100,0-35T/SH-0,14	1405789	305	SAC-17P-MS/10,0-35T/M23FS SHSCO	1437410	221	SAC-2P-SUSMS/3,0-PUR	1410753	253
SAC-12P-100,0-PVC/0,14	1441532	304	SAC-17P-MS/10,0-35T SH SCO	1430239	221	SAC-2P-SUSMS/3,0-PUR/SUSFS	1410761	253
SAC-12P-MR/1,5-35T SH SCO	1430080	220	SAC-17P-MS/10,0-35T/FS SH SCO	1402422	221	SAC-2P-SUSMS/5,0-PUR	1410755	253
SAC-12P-MR/1,5-PUR SCO	1430572	218	SAC-17P-MS/10,0-PUR SCO	1430721	218	SAC-2P-SUSMS/10,0-PUR	1410756	253
SAC-12P-MR/1,5-PVC SCO	1554814	219	SAC-17P-MS/10,0-PVC SCO	1555295	219	SAC-3P-1,0-PVC/FRS PE SCO	1411648	293
SAC-12P-MR/3,0-35T SH SCO	1430093	220	SAC-17P-MS/2,0-35T/M23FS SHSCO	1437423	221	SAC-3P-1,0-PVC/FRS PE SCO	1411644	293
SAC-12P-MR/3,0-PUR SCO	1430585	218	SAC-17P-MS/5,0-35T/FS SH SCO	1402421	221	SAC-3P-1,5-800/M12FR	1454260	198
SAC-12P-MR/3,0-PVC SCO	1554827	219	SAC-17P-MS/5,0-35T/M23FS SHSCO	1437436	221	SAC-3P-1,5-800/M12FR-2L	1454312	198
SAC-12P-MR/5,0-35T SH SCO	1430103	220	SAC-2P-1,5-PUR/DTFS	1410723	250	SAC-3P-1,5-800/M12FS	1456679	198
SAC-12P-MR/5,0-PUR SCO	1430598	218	SAC-2P-1,5-PUR/DTFS-1L	1410728	251	SAC-3P-1,5-PUR/A	1402983	244
SAC-12P-MR/5,0-PVC SCO	1554830	219	SAC-2P-1,5-PUR/DTFS-1L-S	1410732	252	SAC-3P-1,5-PUR/A-1L-R-ES	1413115	240
SAC-12P-MR/10,0-35T SH SCO	1430116	220	SAC-2P-1,5-PUR/SUSFS	1410748	253	SAC-3P-1,5-PUR/A-1L-R-ES 4A	1400827	241
SAC-12P-MR/10,0-PUR SCO	1430608	218	SAC-2P-2,0-910/FSB SCO	1518067	429	SAC-3P-1,5-PUR/A-1L-V	1443103	236
SAC-12P-MR/10,0-PVC SCO	1554843	219	SAC-2P-2,0-910/M12FSB	1507298	429	SAC-3P-1,5-PUR/A-1L-V 230V	1402985	238
SAC-12P-MS/1,5-35T SH SCO	1430048	219	SAC-2P-3,0-PUR/DTFS	1410724	250	SAC-3P-1,5-PUR/A-1L-Z	1434989	234
SAC-12P-MS/1,5-PUR SCO	1430530	218	SAC-2P-3,0-PUR/DTFS-1L	1410729	251	SAC-3P-1,5-PUR/B-1L-R-ES	1401294	240
SAC-12P-MS/1,5-PVC SCO	1554775	219	SAC-2P-3,0-PUR/DTFS-1L-S	1410733	252	SAC-3P-1,5-PUR/B-1L-V	1443145	236
SAC-12P-MS/3,0-35T SH SCO	1430051	220	SAC-2P-3,0-PUR/SUSFS	1410749	253	SAC-3P-1,5-PUR/B-1L-Z	1435386	234
SAC-12P-MS/3,0-35T/FS SH SCO	1402551	220	SAC-2P-5,0-910/FSB SCO	1518070	429	SAC-3P-1,5-PUR/B-1L-R-ES	1401340	240
SAC-12P-MS/3,0-PUR SCO	1430543	218	SAC-2P-5,0-910/M12FSB	1507308	429	SAC-3P-1,5-PUR/BI-1L-V	1443187	236
SAC-12P-MS/3,0-PVC SCO	1554788	219	SAC-2P-5,0-PUR/DTFS	1410726	250	SAC-3P-1,5-PUR/BI-1L-Z	1435234	234
SAC-12P-MS/5,0-35T SH SCO	1430064	220	SAC-2P-5,0-PUR/DTFS-1L	1410730	251	SAC-3P-1,5-PUR/CI-1L-R-ES	1401434	240
SAC-12P-MS/5,0-PUR SCO	1430556	218	SAC-2P-5,0-PUR/DTFS-1L-S	1410734	252	SAC-3P-1,5-PUR/CI-1L-V	1443226	236
SAC-12P-MS/5,0-PVC SCO	1554791	219	SAC-2P-5,0-PUR/SUSFS	1410750	253	SAC-3P-1,5-PUR/CI-1L-Z	1435535	234
SAC-12P-MS/5,0-35T/M23FS SHSCO	1437326	220	SAC-2P-10,0-910/FSB SCO	1518083	429	SAC-3P-1,5-PUR/CI-1L-R-ES	1401466	240
SAC-12P-MS/1,0-35T/M23FS SHSCO	1437339	220	SAC-2P-10,0-910/M12FSB	1507311	429	SAC-3P-1,5-PUR/CI-1L-V	1443268	236
SAC-12P-MS/10,0-35T SH SCO	1430077	220	SAC-2P-10,0-PUR/DTFS	1410727	250	SAC-3P-1,5-PUR/CI-1L-Z	1435687	234
SAC-12P-MS/10,0-PUR SCO	1430569	218	SAC-2P-10,0-PUR/DTFS-1L	1410731	251	SAC-3P-1,5-PUR/DTFS	1414995	250
SAC-12P-MS/10,0-PVC SCO	1554801	219	SAC-2P-10,0-PUR/DTFS-1L-S	1410735	252	SAC-3P-1,5-PUR/M 8FR	1669738	194
SAC-12P-MS/2,0-35T/M23FS SHSCO	1437342	220	SAC-2P-10,0-PUR/SUSFS	1410751	253	SAC-3P-1,5-PUR/M 8FR SH	1521766	199
SAC-12P-MS/5,0-35T/M23FS SHSCO	1430565	220	SAC-2P-15,0-910/FSB SCO	1518096	429	SAC-3P-1,5-PUR/M 2FR-2L	1671069	194
SAC-14P-5,0-PUR/M16FR	1693746	313	SAC-2P-15,0-910/M12FSB	1507324	429	SAC-3P-1,5-PUR/M 8FS	1669712	194
SAC-14P-10,0-PUR/M16FR	1693759	313	SAC-2P-910/...	1511491	429	SAC-3P-1,5-PUR/M 8FS SH	1521711	199
SAC-17P-1,5-35T/FR SH SCO	1430323	221	SAC-2P-960/...	1432389	435	SAC-3P-1,5-PUR/M12FR	1694509	194
SAC-17P-1,5-35T/FS SH SCO	1430284	221	SAC-2P-DTMS/0,3-PUR/DTFS	1414991	250	SAC-3P-1,5-PUR/M12FR B	1668195	194
SAC-17P-1,5-PUR/FR SCO	1430815	218	SAC-2P-DTMS/0,6-PUR/DTFS	1414992	250	SAC-3P-1,5-PUR/M12FR SH	1682812	199
SAC-17P-1,5-PUR/FS SCO	1430776	218	SAC-2P-DTMS/1,5-PUR/DTFS	1414993	250	SAC-3P-1,5-PUR/M12FR-2L	1694392	194
SAC-17P-1,5-PVC/FR SCO	1555389	219	SAC-2P-DTMS/3,0-PUR/DTFS	1414994	250	SAC-3P-1,5-PUR/M12FR-2L B	1668250	194
SAC-17P-1,5-PVC/FS SCO	1555347	219	SAC-2P-FRB SCO/910/...	1433249	429	SAC-3P-1,5-PUR/M12FS	1694486	194
SAC-17P-3,0-35T/FR SH SCO	1430336	221	SAC-2P-FSB SCO/910/...	1538076	429	SAC-3P-1,5-PUR/M12FS B	1668072	194
SAC-17P-3,0-35T/FS SH SCO	1430297	221	SAC-2P-M 8MS-A-1L-Z/...	1405650	234	SAC-3P-1,5-PUR/M12FS SH	1682786	199
SAC-17P-3,0-PUR/FR SCO	1430828	218	SAC-2P-M 8MS-B-1L-Z/...	1405651	234	SAC-3P-1,5-PUR/M12FS-2L	1694185	194
SAC-17P-3,0-PUR/FS SCO	1430789	218	SAC-2P-M 8MS-BI-1L-Z/...	1405652	234	SAC-3P-1,5-PUR/M5FR	1530508	190
SAC-17P-3,0-PVC/FR SCO	1555392	219	SAC-2P-M 8MS-C-1L-Z/...	1405653	234	SAC-3P-1,5-PUR/M5FS	1530427	190
SAC-17P-3,0-PVC/FS SCO	1555350	219	SAC-2P-M 8MS-CI-1L-Z/...	1405654	234	SAC-3P-1,5-PVC/A	1415920	245
SAC-17P-5,0-35T/FR SH SCO	1430349	221	SAC-2P-M12FSB/910/...	1538063	429	SAC-3P-1,5-PVC/A-1L-V	1415908	237
SAC-17P-5,0-35T/FS SH SCO	1430307	221	SAC-2P-M12MSB-M12FSB/910/...	1538089	429	SAC-3P-1,5-PVC/A-1L-V 230V	1415912	239
SAC-17P-5,0-PUR/FR SCO	1430831	218	SAC-2P-M12MSB/0,3-910/M12FSB	1507340	429	SAC-3P-1,5-PVC/A-1L-Z	1438684	237
SAC-17P-5,0-PUR/FS SCO	1430792	218	SAC-2P-M12MSB/0,5-910/M12FSB	1507353	429	SAC-3P-1,5-PVC/B-1L-V	1415925	235
SAC-17P-5,0-PVC/FR SCO	1555402	219	SAC-2P-M12MSB/1,0-910/M12FSB	1507366	429	SAC-3P-1,5-PVC/B-1L-Z	1415922	235
SAC-17P-5,0-PVC/FS SCO	1555363	219	SAC-2P-M12MSB/2,0-910	1507243	429	SAC-3P-1,5-PVC/BI-1L-V	1415931	237
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SAC-3P-MS/3,0-PUR/BI-1L-Z SCO	1435166	234	SAC-4P-3,0-800/M12FS	1456941	204	SAC-4P-10,0-PUR/M12FR	1681389	200	SAC-4P-M 8MR/10,0-PUR SH	1521892	205
SAC-3P-MS/3,0-PUR/CI-1L-Z SCO	1435467	234	SAC-4P-3,0-PUR/DTFS	1415008	250	SAC-4P-10,0-PUR/M12FR SH	1500729	205	SAC-4P-M 8MR/10,0-PVC	1415549	202
SAC-3P-MS/3,0-PUR/C-1L-Z SCO	1435616	234	SAC-4P-3,0-PUR/FRL SCO	1425078	300	SAC-4P-10,0-PUR/M12FR-3L	1681020	200	SAC-4P-M 8MR/3,0-PUR	1681826	200
SAC-3P-MS/A-1L-Z SCO	1458525	262	SAC-4P-3,0-PUR/FSL SCO	1425074	300	SAC-4P-10,0-PUR/M12FS	1683002	200	SAC-4P-M 8MR/3,0-PUR/M 8FR	1682294	200
SAC-3P-MS/B-1L-Z SCO	1458541	263	SAC-4P-3,0-PUR/M 8FR	1681884	200	SAC-4P-10,0-PUR/M12FS SH	1500716	205	SAC-4P-M 8MR/3,0-PUR/M 8FS	1682252	200
SAC-3P-MS/BI-1L-Z SCO	1458567	263	SAC-4P-3,0-PUR/M 8FR SH	1521973	205	SAC-4P-10,0-PUR/M12FS-2L	1694839	200	SAC-4P-M 8MR/3,0-PVC	1415547	202
SAC-3P-MSS/1,0-PVC PE SCO	1411637	293	SAC-4P-3,0-PUR/M 8FS	1681855	200	SAC-4P-10,0-PUR/M5FR	1530579	190	SAC-4P-M 8MR/3,0-PVC/M 8FR	1415583	202
SAC-3P-MSS/2,0-PVC PE SCO	1411637	293	SAC-4P-3,0-PUR/M 8FS SH	1521928	205	SAC-4P-10,0-PUR/M5FS	1530498	190	SAC-4P-M 8MR/3,0-PVC/M 8FS	1415579	202
SAC-3P-MSS/5,0-PVC PE SCO	1411638	293	SAC-4P-3,0-PUR/M12FR	1688234	200	SAC-4P-10,0-PVC/FRL SCO	1425100	301	SAC-4P-M 8MR/5,0-PUR	1681839	200
SAC-3P-MSS/10,0-PVC PE SCO	1411639	293	SAC-4P-3,0-PUR/M12FR SH	1682919	205	SAC-4P-10,0-PVC/FSL SCO	1425096	301	SAC-4P-M 8MR/5,0-PVC	1415548	202
SAC-3P-PUR-0,25-SH/...	1408511	305	SAC-4P-3,0-PUR/M12FR-3L	1682922	200	SAC-4P-10,0-PVC/M 8FR	1401064	202	SAC-4P-M 8MR/5,0-PVC/M 8FR	1521850	205
SAC-3P-PUR-0,25/...	1408505	305	SAC-4P-3,0-PUR/M12FS	1668111	200	SAC-4P-10,0-PVC/M 8FS	1401062	202	SAC-4P-M 8MR/5,0-PVC/M 8FS	1415579	202
SAC-3P-PUR-0,34-SH/...	1408512	305	SAC-4P-3,0-PUR/M12FS SH	1682854	205	SAC-4P-10,0-PVC/M12FR	1415608	202	SAC-4P-M 8MR/5,0-PUR	1681839	200
SAC-3P-PUR-0,34/...	1408506	305	SAC-4P-3,0-PUR/M12FS-2L	1694813	200	SAC-4P-10,0-PVC/M12FR-3L	1401063	202	SAC-4P-M 8MR/5,0-PVC	1552094	205
SAC-3P-PUR-0,5/...	1408529	306	SAC-4P-3,0-PUR/M5FR	1530553	190	SAC-4P-10,0-PVC/M12FS	1446333	202	SAC-4P-M 8MR/5,0-PVC/M 8FR	1697797	200
SAC-3P-PVC-0,25/...	1408518	305	SAC-4P-3,0-PUR/M5FS	1530472	190	SAC-4P-10,0-PVC/M12FS-2L	1415605	202	SAC-4P-M 8MR/5,0-PVC/M 8FS	1511718	205
SAC-3P-PVC-0,34-SH/...	1408525	305	SAC-4P-3,0-PVC/FRL SCO	1425098	301	SAC-4P-100,0-PUR/0,25	1501692	304	SAC-4P-M 8MR/5,0-PVC/M 8FS	1519736	260
SAC-3P-PVC-0,34/...	1408519	305	SAC-4P-3,0-PVC/FSL SCO	1425094	301	SAC-4P-100,0-PUR/0,34	1501663	304	SAC-4P-M 8MR/5,0-PVC/M 8FS	1506697	200
SAC-3P-Y-2XFR B SCO/...	1542172	256	SAC-4P-3,0-PVC/M 8FR	1415554	202	SAC-4P-100,0-PUR/SH,0,25	1535794	305	SAC-4P-M 8MR/5,0-PVC/M 8FS	1574580	205
SAC-3P-Y-2XFR SCO/...	1542004	256	SAC-4P-3,0-PVC/M 8FS	1415551	202	SAC-4P-100,0-PUR/SH,0,34	1501715	305	SAC-4P-M 8MR/5,0-PVC/M 8FS	1455722	205
SAC-3P-Y-2XFR-2L B SCO/...	1542185	256	SAC-4P-3,0-PVC/M12FR	1693526	202	SAC-4P-100,0-PVC/0,25	1501867	304	SAC-4P-M 8MR/5,0-PUR SH	1521818	205
SAC-3P-Y-2XFS B SCO/...	1542169	256	SAC-4P-3,0-PVC/M12FR-3L	1415610	202	SAC-4P-100,0-PVC/0,34	1501838	304	SAC-4P-M 8MR/1,5-PUR/M 8FSSH	1455735	205
SAC-3P-Y-2XFS SCO/...	1542198	256	SAC-4P-3,0-PVC/M12FS	1404407	202	SAC-4P-100,0-PVC/SH,0,34	1550669	305	SAC-4P-M 8MR/3,0-PUR SH	1521821	205
SAC-3P-Y-2XM8FR SCO/...	1541896	256	SAC-4P-3,0-PVC/M12FS-2L	1415597	202	SAC-4P-15,0-186/FS SCO	1555677	440	SAC-4P-M 8MR/3,0-PUR/M 8FSSH	1574603	205
SAC-3P-Y-2XM8FR-2L SCO/...	1541908	256	SAC-4P-5,0-105/FRL SCO	1425039	300	SAC-4P-15,0-186/FS SCO	1431241	435	SAC-4P-M 8MR/5,0-PUR SH	1521834	205
SAC-3P-Y-2XM8FS SCO/...	1541885	256	SAC-4P-5,0-105/FSL SCO	1425035	300	SAC-4P-3,0-PUR/AD	1438956	248	SAC-4P-M 8MR/3,0-PUR/M 8FR	1697755	200
SAC-3P-Y-2XSCO/...	1524242	256	SAC-4P-5,0-110/FRL SCO	1425059	301	SAC-4P-AD/...	1400899	248	SAC-4P-M 8MR/3,0-PUR/M 8FR	1682184	200
SAC-3P-Y/2X 1,5-PUR SCO	1524200	256	SAC-4P-5,0-110/FSL SCO	1425055	301	SAC-4P-DTMS/0,3-PUR/DTFS	1415016	250	SAC-4P-M 8MR/3,0-PUR/M 8FR	1682142	200
SAC-3P-Y/2X 3,0-PUR SCO	1524213	256	SAC-4P-5,0-186/FS SCO	1555651	440	SAC-4P-DTMS/0,6-PUR/DTFS	1415017	250	SAC-4P-M 8MR/3,0-PVC/M 8FS	1415562	202
SAC-3P-Y/2X 5,0-PUR SCO	1524226	256	SAC-4P-5,0-800/M12FR	1456970	204	SAC-4P-DTMS/1,5-PUR	1415012	250	SAC-4P-M 8MR/3,0-PVC/M 8FS	1415556	202
SAC-3P-Y/2X10,0-PUR SCO	1524239	256	SAC-4P-5,0-800/M12FR-3L	1567351	204	SAC-4P-DTMS/1,5-PUR/DTFS	1415019	250	SAC-4P-M 8MR/3,0-PVC/M 8FS	1415556	202
SAC-3P-Y/2XFS B PE SCO	1523968	258	SAC-4P-5,0-800/M12FS	1567322	204	SAC-4P-DTMS/3,0-PUR	1415013	250	SAC-4P-M 8MR/3,0-PUR/M 8FR	1682155	200
SAC-3P-Y/2XFS PE SCO	1523971	258	SAC-4P-5,0-960/M12FS VA	1431225	435	SAC-4P-DTMS/3,0-PUR/DTFS	1415025	250	SAC-4P-M 8MR/3,0-PVC/M 8FR	1415572	202
SAC-3P-Y/2XM 8FS SCO	1523984	258	SAC-4P-5,0-PUR/DTFS	1415010	250	SAC-4P-DTMS/5,0-PUR	1415014	250	SAC-4P-M 8MR/3,0-PVC/M 8FS	1415557	202
SAC-4P-1,0-PUR/FRS PE SCO	1408848	294	SAC-4P-5,0-PUR/FRL SCO	1425079	300	SAC-4P-DTMS/10,0-PUR	1415015	250	SAC-4P-M 8MR/3,0-PVC/M 8FS	1681787	200
SAC-4P-1,0-PUR/FRT SCO	1408827	295	SAC-4P-5,0-PUR/FSS PE SCO	1408853	294	SAC-4P-DTMS/10,0-PUR SH SCO	1424100	294	SAC-4P-M 8MR/1,5-PUR/M 8FR	1682207	200
SAC-4P-1,0-PUR/FSS PE SCO	1408843	294	SAC-4P-5,0-PUR/FRT SCO	1408829	295	SAC-4P-FRS/1,5-PUR PE SH SCO	1424101	294	SAC-4P-M 8MR/1,5-PUR/M 8FS	1682168	200
SAC-4P-1,0-PUR/FST SCO	1408823	295	SAC-4P-5,0-PUR/FSL SCO	1425075	300	SAC-4P-FRS/5,0-PUR PE SH SCO	1424102	294	SAC-4P-M 8MR/1,5-PVC	1415542	202
SAC-4P-1,5-105/FRL SCO	1425037	300	SAC-4P-5,0-PUR/FSS PE SCO	1408845	294	SAC-4P-FRS/10,0-PUR PE SH SCO	1424103	294	SAC-4P-M 8MR/1,5-PVC/M 8FR	1415573	202
SAC-4P-1,5-105/FSL SCO	1425033	300	SAC-4P-5,0-PUR/FST SCO	1408825	294	SAC-4P-FRT/1,5-PUR SH SCO	1424116	295	SAC-4P-M 8MR/1,5-PVC/M 8FS	1415558	202
SAC-4P-1,5-110/FRL SCO	1425057	301	SAC-4P-5,0-PUR/M 8FR	1681897	200	SAC-4P-FRT/3,0-PUR SH SCO	1424117	295	SAC-4P-M 8MR/10,0-PUR	1694143	200
SAC-4P-1,5-110/FSL SCO	1425053	301	SAC-4P-5,0-PUR/M 8FR SH	1521986	205	SAC-4P-FRT/5,0-PUR SH SCO	1424118	295	SAC-4P-M 8MR/10,0-PUR SH	1521847	205
SAC-4P-1,5-800/M12FR	1456954	204	SAC-4P-5,0-PUR/M 8FS	1681868	200	SAC-4P-FRT/10,0-PUR SH SCO	1424128	295	SAC-4P-M 8MR/10,0-PVC	1415545	202
SAC-4P-1,5-800/M12FR-3L	1456996	204	SAC-4P-5,0-PUR/M 8FS SH	1521931	205	SAC-4P-FSS/1,5-PUR PE SH SCO	1424096	294	SAC-4P-M 8MR/3,0-PUR	1681790	200
SAC-4P-1,5-800/M12FS	1456938	204	SAC-4P-5,0-PUR/M12FR	1682847	200	SAC-4P-FSS/3,0-PUR PE SH SCO	1424097	294	SAC-4P-M 8MR/3,0-PUR/M 8FR	1682210	200
SAC-4P-1,5-PUR/DTFS	1415007	250	SAC-4P-5,0-PUR/M12FR SH	1682922	205	SAC-4P-FSS/5,0-PUR PE SH SCO	1424098	294	SAC-4P-M 8MR/3,0-PUR/M 8FS	1682171	200
SAC-4P-1,5-PUR/FRL SCO	1425077	300	SAC-4P-5,0-PUR/M12FR-3L	1668302	200	SAC-4P-FSS/10,0-PUR PE SH SCO	1424099	294	SAC-4P-M 8MR/3,0-PVC	1415543	202
SAC-4P-1,5-PUR/FSL SCO	1425073	300	SAC-4P-5,0-PUR/M12FS	1668124	200	SAC-4P-FST/1,5-PUR SH SCO	1424112	295	SAC-4P-M 8MR/3,0-PVC/M 8FR	1415574	202
SAC-4P-1,5-PUR/M 8FR	1681871	200	SAC-4P-5,0-PUR/M12FS SH	1682867	205	SAC-4P-FST/3,0-PUR SH SCO	1424113	295	SAC-4P-M 8MR/3,0-PVC/M 8FS	1415560	202
SAC-4P-1,5-PUR/M 8FR SH	1521960	205	SAC-4P-5,0-PUR/M12FS-2L	1694826	200	SAC-4P-FST/5,0-PUR SH SCO	1424114	295	SAC-4P-M 8MR/5,0-PUR	1681800	200
SAC-4P-1,5-PUR/M 8FS	1681842	200	SAC-4P-5,0-PUR/M5FR	1530566	190	SAC-4P-FST/10,0-PUR SH SCO	1424115	295	SAC-4P-M 8MR/5,0-PVC	1415544	202
SAC-4P-1,5-PUR/M 8FS SH	1521915	205	SAC-4P-5,0-PUR/M5FS	1530485	190	SAC-4P-M 8FR SH/...	1522008	205	SAC-4P-M 8SIFR-2L/...	1511954	192
SAC-4P-1,5-PUR/M12FR	1668221	200	SAC-4P-5,0-PVC/FRL SCO	1425099	301	SAC-4P-M 8FR-2L/...	1517673	200	SAC-4P-M 8SIFR/...	1513392	192
SAC-4P-1,5-PUR/M12FR SH	1682906	205	SAC-4P-5,0-PVC/FSL SCO	1425095	301	SAC-4P-M 8FR/...	1697784	200	SAC-4P-M 8SIFR/...	1513389	192
SAC-4P-1,5-PUR/M12FR-3L	1668289	200	SAC-4P-5,0-PVC/M 8FR	1403254	202	SAC-4P-M 8FR SH/...	1521957	205	SAC-4P-M12FR FF VA/...	1431351	435
SAC-4P-1,5-PUR/M12FS	1668108	200	SAC-4P-5,0-PVC/M 8FS	1403252	202	SAC-4P-M 8FR SH/...	1697771	200	SAC-4P-M12FR FF VA/...	1697496	205
SAC-4P-1,5-PUR/M12FS SH	1668284	205	SAC-4P-5,0-PVC/M12FR	1693539	202	SAC-4P-M 8MR SH/...	1521902	205	SAC-4P-M12FR SH/...		

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SAC-4P-M12MR-M12FS FF VA/...	1431377	435	SAC-4P-M12MS/ 0,6-800/M12FS	1457063	204	SAC-4P-MRL/ 1,5-PUR SCO	1425069	300	SAC-4P-MSL/3,0-110/FSL SCO	1425064	301
SAC-4P-M12MR-M12FS SH/...	1536104	205	SAC-4P-M12MS/ 0,6-PUR/M12FR	1668483	200	SAC-4P-MRL/ 1,5-PVC SCO	1425089	301	SAC-4P-MSL/3,0-PUR/FSL SCO	1425084	300
SAC-4P-M12MR-M12FS/...	1697030	200	SAC-4P-M12MS/ 0,6-PUR/M12FR SH	1500978	205	SAC-4P-MRL/ 3,0-105 SCO	1425030	300	SAC-4P-MSL/3,0-PVC/FSL SCO	1425104	301
SAC-4P-M12MR/ 1,5-800	1457128	204	SAC-4P-M12MS/ 0,6-PUR/M12FS	1668360	200	SAC-4P-MRL/ 3,0-110 SCO	1425050	301	SAC-4P-MSS/ 1,0-PUR PE SCO	1408835	294
SAC-4P-M12MR/ 1,5-PUR SH	1668270	205	SAC-4P-M12MS/ 0,6-PUR/M12FS SH	1500855	205	SAC-4P-MRL/ 3,0-PUR SCO	1425070	300	SAC-4P-MSS/ 1,5-PUR PE SH SCO	1424104	294
SAC-4P-M12MR/ 3,0-800	1457131	204	SAC-4P-M12MS/ 0,6-PVC/M12FR	1454817	202	SAC-4P-MRL/ 3,0-PVC SCO	1425090	301	SAC-4P-MSS/ 2,0-PUR PE SCO	1408836	294
SAC-4P-M12MR/ 3,0-PUR SH	1668283	205	SAC-4P-M12MS/ 0,6-PVC/M12FS	1415612	202	SAC-4P-MRL/ 5,0-105 SCO	1425031	300	SAC-4P-MSS/ 3,0-PUR PE SH SCO	1424105	294
SAC-4P-M12MR/ 5,0-800	1457144	204	SAC-4P-M12MS/ 1,0-960/M12FS VA	1431270	435	SAC-4P-MRL/ 5,0-110 SCO	1425051	301	SAC-4P-MSS/ 5,0-PUR PE SCO	1408837	294
SAC-4P-M12MR/ 5,0-PUR SH	1668286	205	SAC-4P-M12MS/ 1,5-800	1457018	204	SAC-4P-MRL/ 5,0-PUR SCO	1425071	300	SAC-4P-MSS/ 5,0-PUR PE SH SCO	1424245	294
SAC-4P-M12MR/...	1696950	200	SAC-4P-M12MS/ 1,5-PUR/M12FR	1567238	204	SAC-4P-MRL/ 5,0-PVC SCO	1425091	301	SAC-4P-MSS/ 10,0-PUR PE SCO	1408838	294
SAC-4P-M12MR/0,3-PUR/M 8FR	1671551	200	SAC-4P-M12MS/ 1,5-800/M12FS	1567270	204	SAC-4P-MRL/ 10,0-105 SCO	1425032	300	SAC-4P-MSS/ 10,0-PUR PE SH SCO	1424107	294
SAC-4P-M12MR/0,3-PUR/M12FR	1668713	200	SAC-4P-M12MS/ 1,5-PUR	1668043	200	SAC-4P-MRL/ 10,0-110 SCO	1425052	301	SAC-4P-MST/ 1,0-PUR SCO	1408812	295
SAC-4P-M12MR/0,3-PUR/M12FR-3L	1668755	200	SAC-4P-M12MS/ 1,5-PUR SH	1668215	205	SAC-4P-MRL/ 10,0-PUR SCO	1425072	300	SAC-4P-MST/ 1,0-PUR/FST SCO	1408808	295
SAC-4P-M12MR/0,3-PUR/M12FS	1668593	200	SAC-4P-M12MS/ 1,5-PUR/M12FR SH	1500981	205	SAC-4P-MRL/ 10,0-PVC SCO	1425092	301	SAC-4P-MST/ 1,5-PUR SCO	1424120	295
SAC-4P-M12MR/0,3-PVC/M 8FR	1415667	202	SAC-4P-M12MS/ 1,5-PUR/M12FS	1668373	200	SAC-4P-MRS/ 1,0-PUR PE SCO	1408839	294	SAC-4P-MST/ 2,0-PUR SCO	1408813	295
SAC-4P-M12MR/0,3-PVC/M12FR	1415642	202	SAC-4P-M12MS/ 1,5-PUR/M12FS SH	1500868	205	SAC-4P-MRS/ 1,5-PUR PE SH SCO	1424108	294	SAC-4P-MST/ 2,0-PUR/FST SCO	1408809	295
SAC-4P-M12MR/0,3-PVC/M12FR-3L	1415646	202	SAC-4P-M12MS/ 1,5-PVC	1415585	202	SAC-4P-MRS/ 2,0-PUR PE SCO	1408840	294	SAC-4P-MST/ 3,0-PUR SH SCO	1424121	295
SAC-4P-M12MR/0,3-PVC/M12FS	1415628	202	SAC-4P-M12MS/ 1,5-PVC/M12FS	1415613	202	SAC-4P-MRS/ 3,0-PUR PE SH SCO	1424109	294	SAC-4P-MST/ 3,0-PUR SH SCO	1424123	295
SAC-4P-M12MR/0,6-PUR/M 8FR	1671564	200	SAC-4P-M12MS/ 2,0-960 VA	1431173	435	SAC-4P-MRS/ 5,0-PUR PE SCO	1408841	294	SAC-4P-MST/ 5,0-PUR SH SCO	1424122	295
SAC-4P-M12MR/0,6-PUR/M12FR	1668726	200	SAC-4P-M12MS/ 2,0-960/M12FS VA	1431283	435	SAC-4P-MRS/ 5,0-PUR PE SH SCO	1424110	294	SAC-4P-MST/ 5,0-PUR/FST SCO	1408810	295
SAC-4P-M12MR/0,6-PUR/M12FR-3L	1668768	200	SAC-4P-M12MS/ 3,0-800	1457021	204	SAC-4P-MRS/ 10,0-PUR PE SCO	1408842	294	SAC-4P-MST/ 10,0-PUR SCO	1408815	295
SAC-4P-M12MR/0,6-PUR/M12FS	1668603	200	SAC-4P-M12MS/ 3,0-800/M12FR	1457092	204	SAC-4P-MRS/ 10,0-PUR PE SH SCO	1424111	294	SAC-4P-MST/ 10,0-PUR SH SCO	1424124	295
SAC-4P-M12MR/0,6-PVC/M 8FR	1415668	202	SAC-4P-M12MS/ 3,0-800/M12FR-3L	1457115	204	SAC-4P-MRT/ 1,0-PUR SCO	1408816	295	SAC-4P-MST/ 10,0-PUR/FST SCO	1408811	295
SAC-4P-M12MR/0,6-PVC/M12FR	1415643	202	SAC-4P-M12MS/ 3,0-800/M12FS	1457076	204	SAC-4P-MRT/ 1,0-PUR/FRT SCO	1415196	295	SAC-4P-PUR-0,25-SH/...	1408513	305
SAC-4P-M12MR/0,6-PVC/M12FR-3L	1415647	202	SAC-4P-M12MS/ 3,0-PUR	1668056	200	SAC-4P-MRT/ 1,5-PUR SH SCO	1424124	295	SAC-4P-PUR-0,25/...	1408507	305
SAC-4P-M12MR/0,6-PUR/M12FS	1415628	202	SAC-4P-M12MS/ 3,0-PUR SH	1662618	205	SAC-4P-MRT/ 1,5-PUR/FRT SH SCO	1415202	295	SAC-4P-PUR-0,34-SH/...	1408514	305
SAC-4P-M12MR/1,5-PUR	1668166	200	SAC-4P-M12MS/ 3,0-PUR/M12FR SH	1500994	205	SAC-4P-MRT/ 10,0-PUR/FRT SCO	1415199	295	SAC-4P-PUR-0,34/...	1408508	305
SAC-4P-M12MR/1,5-PUR/M 8FR	1671577	200	SAC-4P-M12MS/ 3,0-PUR/M12FS	1668386	200	SAC-4P-MRT/ 10,0-PUR/FRT SH SCO	1415205	295	SAC-4P-PVC-0,25/...	1408521	305
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SAC-4P-M12MR/1,5-PVC	1415591	202	SAC-4P-M12MS/ 5,0-800	1457034	204	SAC-4P-MRT/ 3,0-PUR/FRT SH SCO	1415203	295	SAC-4PY- 1,5-PUR/2XF	1436178	255
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SAC-4P-M12MR/10,0-PUR SH	1500703	205	SAC-4P-M12MS/0,3-PUR/M 8FS	1694923	200	SAC-4P-MS-AD SCO/...	1400898	248	SAC-4PY-MT/2XF VP	1410632	302
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SAC-5P-5,0-802/M12FR	1457199	209	SAC-5P-20,0-923/FS CAN SCO	1419033	431	SAC-5P-M12MS/0,3-900/M12FS	1507528	433	SAC-5P-M12MSB/15,0-900/M12FSB	1507227	428
SAC-5P-5,0-802/M12FR-3L	1454370	209	SAC-5P-920/...	1511504	433	SAC-5P-M12MS/0,3-PUR/M12FR SH	1501003	210	SAC-5P-M12MSB/15,0-900/M12FSB	1537983	428
SAC-5P-5,0-802/M12FS	1454422	209	SAC-5P-AD-2L/...	1435124	246	SAC-5P-M12MS/0,3-PUR/M12FS SH	1500884	210	SAC-5P-M12T/2XM12 VP	1541186	259
SAC-5P-5,0-900/FSB SCO	1517929	428	SAC-5P-FR SCO/920/...	1433294	433	SAC-5P-M12MS/0,5-920/M12FS	1507531	433	SAC-5P-M12Y/2XM12FS VP	1683468	259
SAC-5P-5,0-900/M12FSB	1507120	428	SAC-5P-FRB SCO/900/...	1433197	428	SAC-5P-M12MS/0,6-802/M12FR	1454516	209	SAC-5P-M12Y/2XM12FS VP S21	1514029	259
SAC-5P-5,0-920/FSL SCO	1518229	433	SAC-5P-FS SCO/920/...	1538131	433	SAC-5P-M12MS/0,6-802/M12FR-3L	1454464	209	SAC-5P-MIR SCO/920/...	1433281	433
SAC-5P-5,0-920/M 8FS	1575783	432	SAC-5P-FSB SCO/900/...	1538018	428	SAC-5P-M12MS/0,6-802/M12FS	1454561	209	SAC-5P-MR-FR SCO/920/...	1433320	433
SAC-5P-5,0-920/M12FS	1507489	433	SAC-5P-M 8FR/920/...	1575916	432	SAC-5P-M12MS/0,6-PUR/M12FR SH	1501029	210	SAC-5P-MR-FS SCO/920/...	1433317	433
SAC-5P-5,0-923/FR CAN SCO	1419035	431	SAC-5P-M 8FS/920/...	1575819	432	SAC-5P-M12MS/0,6-PUR/M12FS SH	1500897	210	SAC-5P-MR/1,0-923/FR CAN SCO	1419073	431
SAC-5P-5,0-923/FS CAN SCO	1419030	431	SAC-5P-M 8MR-M 8FR/920/...	1575945	432	SAC-5P-M12MS/1,0-920/M12FS	1507544	433	SAC-5P-MR/0,3-923/FS CAN SCO	1419057	431
SAC-5P-5,0-PUR/AD-2L	1435108	246	SAC-5P-M 8MR-M 8FS/920/...	1575932	432	SAC-5P-M12MS/1,5-802	1457225	209	SAC-5P-MR/0,5-923/FR CAN SCO	1419074	431
SAC-5P-5,0-PUR/FRK PE SCO	1414800	296	SAC-5P-M 8MR/920/...	1575903	432	SAC-5P-M12MS/1,5-802/M12FR	1454532	209	SAC-5P-MR/0,5-923/FS CAN SCO	1419058	431
SAC-5P-5,0-PUR/FRK PE SH SCO	1414801	296	SAC-5P-M 8MRB/1,5-115	1404465	206	SAC-5P-M12MS/1,5-802/M12FR-3L	1454480	209	SAC-5P-MR/1,0-923/FR CAN SCO	1419075	431
SAC-5P-5,0-PUR/FRK PE SCO	1414804	296	SAC-5P-M 8MRB/3,0-115	1404466	206	SAC-5P-M12MS/1,5-802/M12FS	1454587	209	SAC-5P-MR/1,0-923/FS CAN SCO	1419059	431
SAC-5P-5,0-PUR/FRK PE SH SCO	1414805	296	SAC-5P-M 8MRB/5,0-115	1404467	206	SAC-5P-M12MS/1,5-PUR SH	1682728	210	SAC-5P-MR/2,0-923 CAN SCO	1419044	431
SAC-5P-5,0-PUR/M12FR	1669877	207	SAC-5P-M 8MRB/10,0-115	1404468	206	SAC-5P-M12MS/1,5-PUR/M12FR SH	1501045	210	SAC-5P-MR/2,0-923/FR CAN SCO	1419076	431
SAC-5P-5,0-PUR/M12FR-3L	1669890	207	SAC-5P-M 8MS DN TR	1435988	437	SAC-5P-M12MS/1,5-PUR/M12FS SH	1500907	210	SAC-5P-MR/2,0-923/FS CAN SCO	1419060	431
SAC-5P-5,0-PUR/M12FS	1669848	207	SAC-5P-M 8MS-M 8FS/920/...	1575893	432	SAC-5P-M12MS/2,0-920	1507421	433	SAC-5P-MR/5,0-923 CAN SCO	1419045	431
SAC-5P-5,0-PUR/M12FS SH	1682951	210	SAC-5P-M 8MS/0,3-920/M 8FS	1575822	432	SAC-5P-M12MS/2,0-920/M12FS	1507557	433	SAC-5P-MR/5,0-923/FR CAN SCO	1419077	431
SAC-5P-5,0-PVC/AD-2L	1438639	247	SAC-5P-M 8MS/0,5-920/M 8FS	1575835	432	SAC-5P-M12MS/3,0-802	1457238	209	SAC-5P-MR/5,0-923/FS CAN SCO	1419061	431
SAC-5P-5,0-PVC/FRK PE SCO	1414808	297	SAC-5P-M 8MS/1,0-920/M 8FS	1575848	432	SAC-5P-M12MS/3,0-802/M12FR	1457296	209	SAC-5P-MR/10,0-923 CAN SCO	1419046	431
SAC-5P-5,0-PVC/FRK PE SH SCO	1414809	297	SAC-5P-M 8MS/2,0-920	1575712	432	SAC-5P-M12MS/3,0-802/M12FR-3L	1457319	209	SAC-5P-MR/10,0-923/FR CAN SCO	1419078	431
SAC-5P-5,0-PVC/FRK PE SH SCO	1414812	297	SAC-5P-M 8MS/2,0-920/M12FS	1575851	432	SAC-5P-M12MS/3,0-802/M12FS	1457270	209	SAC-5P-MR/10,0-923/FS CAN SCO	1419062	431
SAC-5P-5,0-PVC/FRK PE SH SCO	1414813	297	SAC-5P-M 8MS/5,0-920	1575725	432	SAC-5P-M12MS/3,0-PUR SH	1682744	210	SAC-5P-MR/15,0-923 CAN SCO	1419047	431
SAC-5P-5,0-PVC/M12FR	1415688	208	SAC-5P-M 8MS/5,0-920/M 8FS	1575864	432	SAC-5P-M12MS/3,0-PUR/M12FR SH	1501058	210	SAC-5P-MR/15,0-923/FR CAN SCO	1419079	431
SAC-5P-5,0-PVC/M12FR-3L	1415693	208	SAC-5P-M 8MS/10,0-920	1575738	432	SAC-5P-M12MS/3,0-PUR/M12FS SH	1500910	210	SAC-5P-MR/15,0-923/FS CAN SCO	1419063	431
SAC-5P-5,0-PVC/M12FS	1415693	208	SAC-5P-M 8MS/10,0-920/M 8FS	1575877	432	SAC-5P-M12MS/5,0-802	1457241	209	SAC-5P-MR/20,0-923 CAN SCO	1419048	431
SAC-5P-5,0-PVC/M12FS SH	1453889	208	SAC-5P-M 8MS/15,0-920	1575754	432	SAC-5P-M12MS/5,0-920	1507434	433			

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SAC-5P-MRK/ 5,0-PUR PE SH SCO	1414842	296	SAC-5P-MSK/ 1,5-PVC PE SCO	1414868	297	SAC-6P- 3,0-PUR/DTFS	1415027	250	SAC-8P- 5,0-PUR/M 8FS SH	1404149	216
SAC-5P-MRK/ 5,0-PVC PE SCO	1414843	297	SAC-5P-MSK/ 1,5-PVC PE SH SCO	1414869	297	SAC-6P- 3,0-PUR/M 8FR	1522257	211	SAC-8P- 5,0-PUR/M12FR	1522642	214
SAC-5P-MRK/ 5,0-PVC PE SH SCO	1414845	297	SAC-5P-MSK/ 3,0-PUR PE SCO	1414870	296	SAC-6P- 3,0-PUR/M 8FR SH	1522451	212	SAC-8P- 5,0-PUR/M12FR SH	1522930	217
SAC-5P-MRK/10,0-PUR PE SCO	1414846	296	SAC-5P-MSK/ 3,0-PUR PE SH SCO	1414871	296	SAC-6P- 3,0-PUR/M 8FS	1522202	211	SAC-8P- 5,0-PUR/M12FS	1520369	214
SAC-5P-MRK/10,0-PUR PE SH SCO	1414847	296	SAC-5P-MSK/ 3,0-PVC PE SCO	1414872	297	SAC-6P- 3,0-PUR/M 8FS SH	1522406	212	SAC-8P- 5,0-PUR/M12FS SH	1522888	217
SAC-5P-MRK/10,0-PVC PE SCO	1414848	297	SAC-5P-MSK/ 3,0-PVC PE SH SCO	1414874	297	SAC-6P- 5,0-PUR/DTFS	1415028	250	SAC-8P- 5,0-PUR/M16FR	1693681	313
SAC-5P-MRK/10,0-PVC PE SH SCO	1414849	297	SAC-5P-MSK/ 5,0-PUR PE SCO	1414875	296	SAC-6P- 5,0-PUR/M 8FR	1522260	211	SAC-8P- 5,0-PUR/M12FR SH	1407822	313
SAC-5P-MRL/ 1,5-280 FE SCO	1414850	296	SAC-5P-MSK/ 5,0-PUR PE SH SCO	1414876	296	SAC-6P- 5,0-PUR/M 8FR SH	1522464	212	SAC-8P- 5,0-PVC/M12FR	1415735	215
SAC-5P-MRL/ 1,5-290 FE SCO	1424597	298	SAC-5P-MSK/ 5,0-PVC PE SCO	1414877	297	SAC-6P- 5,0-PUR/M 8FS	1522215	211	SAC-8P- 5,0-PVC/M12FS	1415726	215
SAC-5P-MRL/ 1,5-500 FE SCO	1414852	299	SAC-5P-MSK/ 5,0-PVC PE SH SCO	1414878	297	SAC-6P- 5,0-PUR/M 8FS SH	1522419	212	SAC-8P-10,0-PUR/M 8FR	1404194	213
SAC-5P-MRL/ 1,5-510 FE SCO	1424613	299	SAC-5P-MSK/10,0-PUR PE SCO	1414879	296	SAC-6P- 5,0-PUR/MC/M12FR	1407820	313	SAC-8P-10,0-PUR/M 8FS	1404190	213
SAC-5P-MRL/ 3,0-280 FE SCO	1414854	298	SAC-5P-MSK/10,0-PUR PE SH SCO	1414880	296	SAC-6P-10,0-PUR/DTFS	1415029	250	SAC-8P-10,0-PUR/M 8FS SH	1404150	216
SAC-5P-MRL/ 1,5-290 FE SCO	1424599	298	SAC-5P-MSK/10,0-PVC PE SCO	1414881	297	SAC-6P-10,0-PUR/M 8FR	1522273	211	SAC-8P-10,0-PUR/M12FR	1522655	214
SAC-5P-MRL/ 1,5-500 FE SCO	1414856	299	SAC-5P-MSK/10,0-PVC PE SH SCO	1414882	297	SAC-6P-10,0-PUR/M 8FR SH	1522477	212	SAC-8P-10,0-PUR/M12FR SH	1520643	304
SAC-5P-MRL/ 3,0-510 FE SCO	1424614	299	SAC-5P-MSL/ 1,5-280 FE SCO	1414883	298	SAC-6P-10,0-PUR/M 8FS	1522228	211	SAC-8P-10,0-PUR/M12FS	1520372	214
SAC-5P-MRL/ 5,0-280 FE SCO	1414858	298	SAC-5P-MSL/ 1,5-290 FE SCO	1424593	298	SAC-6P-10,0-PUR/M 8FS SH	1522422	212	SAC-8P-10,0-PUR/M12FS SH	1522891	217
SAC-5P-MRL/ 5,0-290 FE SCO	1424599	298	SAC-5P-MSL/ 1,5-500 FE SCO	1414885	299	SAC-6P-10,0-PUR/MC/M12FR	1407821	313	SAC-8P-10,0-PUR/M16FR	1693694	313
SAC-5P-MRL/ 5,0-500 FE SCO	1414860	299	SAC-5P-MSL/ 1,5-510 FE SCO	1424609	299	SAC-6P-100,0-PUR/SH/0,14	1550627	305	SAC-8P-100,0-PUR/MC/M12FR	1550643	304
SAC-5P-MRL/ 5,0-510 FE SCO	1424615	299	SAC-5P-MSL/ 3,0-280 FE SCO	1414887	298	SAC-6P-100,0-PUR/DTFS	1415035	250	SAC-8P-100,0-PVC/M12FR	1415736	215
SAC-5P-MRL/10,0-280 FE SCO	1414862	298	SAC-5P-MSL/ 3,0-290 FE SCO	1424594	298	SAC-6P-DTMS/ 0,3-PUR/DTFS	1415035	250	SAC-8P-100,0-PVC/M12FS	1415727	215
SAC-5P-MRL/10,0-290 FE SCO	1424600	298	SAC-5P-MSL/ 3,0-500 FE SCO	1414889	299	SAC-6P-DTMS/ 0,6-PUR/DTFS	1415036	250	SAC-8P-100,0-PUR/0,25	1550630	304
SAC-5P-MRL/10,0-500 FE SCO	1414864	299	SAC-5P-MSL/ 3,0-510 FE SCO	1424610	299	SAC-6P-DTMS/ 1,5-PUR/DTFS	1415037	250	SAC-8P-100,0-PUR/M 8FR	1404194	213
SAC-5P-MRL/10,0-510 FE SCO	1424616	299	SAC-5P-MSL/ 5,0-280 FE SCO	1414891	298	SAC-6P-DTMS/ 1,5-PUR/DTFS	1415037	250	SAC-8P-100,0-PVC/0,25	1550638	304
SAC-5P-MS SCO/920/...	1538115	433	SAC-5P-MSL/ 5,0-290 FE SCO	1424595	298	SAC-6P-DTMS/ 3,0-PUR	1415031	250	SAC-8P-100,0-PVC/SH/0,25	1550708	305
SAC-5P-MS-AD-2L SCO/920/...	1435072	246	SAC-5P-MSL/ 5,0-500 FE SCO	1414893	299	SAC-6P-DTMS/ 3,0-PUR/DTFS	1415038	250	SAC-8P-M 8MR/ 1,5-PUR	1404182	213
SAC-5P-MS-FR SCO/920/...	1433304	433	SAC-5P-MSL/ 5,0-510 FE SCO	1424611	299	SAC-6P-DTMS/ 5,0-PUR	1415032	250	SAC-8P-M 8MR/ 3,0-PUR	1404186	213
SAC-5P-MS-FS SCO/920/...	1538157	433	SAC-5P-MSL/0,3-280/FSL FE SCO	1425009	298	SAC-6P-DTMS/10,0-PUR	1415033	250	SAC-8P-M 8MR/ 5,0-PUR	1404185	213
SAC-5P-MS/ 0,3-920/FS SCO	1518258	433	SAC-5P-MSL/0,3-290/FSL FE SCO	1425017	298	SAC-6P-M 8FR SH/...	1522480	212	SAC-8P-M 8MR/10,0-PUR	1404183	213
SAC-5P-MS/ 0,3-923/FR CAN SCO	1419065	431	SAC-5P-MSL/0,3-500/FSL FE SCO	1425013	299	SAC-6P-M 8FR/...	1522286	211	SAC-8P-M 8MS/ 0,3-PUR/M 8FR	1404201	213
SAC-5P-MS/ 0,3-923/FS CAN SCO	1419049	431	SAC-5P-MSL/0,3-510/FSL FE SCO	1425021	299	SAC-6P-M 8FS SH/...	1522435	212	SAC-8P-M 8MS/ 0,3-PUR/M 8FS	1404196	213
SAC-5P-MS/ 0,3-PUR/AD-2L SCO	1435030	246	SAC-5P-MSL/0,6-280/FSL FE SCO	1425010	298	SAC-6P-M 8FS/SH/...	1522231	211	SAC-8P-M 8MS/ 0,3-PUR/M 8FS SH	1404133	216
SAC-5P-MS/ 0,5-920/FS SCO	1518261	433	SAC-5P-MSL/0,6-290/FSL FE SCO	1425018	298	SAC-6P-M 8MR SH/...	1522383	212	SAC-8P-M 8MS/ 0,6-PUR/M 8FR	1404202	213
SAC-5P-MS/ 0,5-923/FR CAN SCO	1419066	431	SAC-5P-MSL/0,6-500/FSL FE SCO	1425014	299	SAC-6P-M 8MR-M 8FR SH/...	1552049	212	SAC-8P-M 8MS/ 0,6-PUR/M 8FS	1404198	213
SAC-5P-MS/ 0,5-923/FS CAN SCO	1419050	431	SAC-5P-MSL/0,6-510/FSL FE SCO	1425022	299	SAC-6P-M 8MR-M 8FR/...	1551956	211	SAC-8P-M 8MS/ 0,6-PUR/M 8FS SH	1404134	216
SAC-5P-MS/ 0,6-PUR/AD-2L SCO	1435043	246	SAC-5P-MSL/1,5-280/FSL FE SCO	1425011	298	SAC-6P-M 8MR-M 8FS SH/...	1552036	212	SAC-8P-M 8MS/ 1,5-PUR	1404178	213
SAC-5P-MS/ 1,0-920/FS SCO	1518274	433	SAC-5P-MSL/1,5-290/FSL FE SCO	1425019	298	SAC-6P-M 8MR-M 8FS/...	1551943	211	SAC-8P-M 8MS/ 1,5-PUR SH	1404137	216
SAC-5P-MS/ 1,0-923/FR CAN SCO	1419067	431	SAC-5P-MSL/1,5-500/FSL FE SCO	1425015	299	SAC-6P-M 8MR/ 1,5-PUR	1522147	211	SAC-8P-M 8MS/ 1,5-PUR/M 8FR	1404203	213
SAC-5P-MS/ 1,0-923/FS CAN SCO	1419051	431	SAC-5P-MSL/1,5-510/FSL FE SCO	1425023	299	SAC-6P-M 8MR/ 1,5-PUR SH	1522341	212	SAC-8P-M 8MS/ 1,5-PUR/M 8FS	1404199	213
SAC-5P-MS/ 1,5-PUR/AD-2L SCO	1435056	246	SAC-5P-MSL/10,0-280 FE SCO	1414895	298	SAC-6P-M 8MR/ 3,0-PUR	1522150	211	SAC-8P-M 8MS/ 1,5-PUR/M 8FS SH	1404135	216
SAC-5P-MS/ 1,5-280 FE SCO	1518177	433	SAC-5P-MSL/10,0-290 FE SCO	1424596	298	SAC-6P-M 8MR/ 3,0-PUR SH	1522354	212	SAC-8P-M 8MS/ 3,0-PUR	1404180	213
SAC-5P-MS/ 2,0-920/FS SCO	1518287	433	SAC-5P-MSL/10,0-500 FE SCO	1414897	299	SAC-6P-M 8MR/ 5,0-PUR	1522163	211	SAC-8P-M 8MS/ 3,0-PUR SH	1404140	216
SAC-5P-MS/ 2,0-923 CAN SCO	1419039	431	SAC-5P-MSL/10,0-510 FE SCO	1424612	299	SAC-6P-M 8MR/ 5,0-PUR SH	1522367	212	SAC-8P-M 8MS/ 3,0-PUR/M 8FR	1404204	213
SAC-5P-MS/ 2,0-923/FR CAN SCO	1419068	431	SAC-5P-MSL/3,0-280/FSL FE SCO	1425012	298	SAC-6P-M 8MR/...	1522189	211	SAC-8P-M 8MS/ 3,0-PUR/M 8FS	1404200	213
SAC-5P-MS/ 2,0-923/FS CAN SCO	1419052	431	SAC-5P-MSL/3,0-290/FSL FE SCO	1425020	298	SAC-6P-M 8MR/10,0-PUR	1522176	211	SAC-8P-M 8MS/ 3,0-PUR/M 8FS SH	1404136	216
SAC-5P-MS/ 3,0-PUR/AD-2L SCO	1435069	246	SAC-5P-MSL/3,0-500/FSL FE SCO	1425016	299	SAC-6P-M 8MR/10,0-PUR SH	1522370	212	SAC-8P-M 8MS/ 5,0-PUR	1404181	213
SAC-5P-MS/ 5,0-920 SCO	1518180	433	SAC-5P-MSL/3,0-510/FSL FE SCO	1425024	299	SAC-6P-M 8MS SH/...	1522338	212	SAC-8P-M 8MS/ 5,0-PUR SH	1404141	216
SAC-5P-MS/ 5,0-923/FS SCO	1518290	433	SAC-5P-PUR-0,34-SH/...	1408515	305	SAC-6P-M 8MS-M 8FR SH/...	1552023	212	SAC-8P-M 8MS/10,0-PUR	1404179	213
SAC-5P-MS/ 5,0-923 CAN SCO	1419040	431	SAC-5P-PUR-0,34/...	1408509	305	SAC-6P-M 8MS-M 8FR/...	1551930	211	SAC-8P-M 8MS/10,0-PUR SH	1404138	216
SAC-5P-MS/ 5,0-923/FR CAN SCO	1419069	431	SAC-5P-PUR-0,5/...	1408530	306	SAC-6P-M 8MS-M 8FS SH/...	1552010	212	SAC-8P-M12FR SH/...	1522956	217
SAC-5P-MS/ 5,0-923/FS CAN SCO	1419053	431	SAC-5P-PVC-0,34-SH/...	1408527	305	SAC-6P-M 8MS-M 8FS/...	1551927	211	SAC-8P-M12FR-PURMC/	1520990	313
SAC-5P-MS/10,0-920 SCO	1518193	433	SAC-5P-PVC-0,34/...	1408523	305	SAC-6P-M 8MS/ 1,5-PUR	1522095	211	SAC-8P-M12FR/...	1522668	214
SAC-5P-MS/10,0-920/FS SCO	1518300	433	SAC-5P-PY/2XFS VP SCO	1546068	259	SAC-6P-M 8MS/ 1,5-PUR SH	1522299	212	SAC-8P-M12FS SH/...	1522901	217
SAC-5P-MS/10,0-923 CAN SCO	1419041	431	SAC-5PH-M-F/2XF SH 1 SCO	1417414	436	SAC-6P-M 8MS/ 3,0-PUR	1522105	211	SAC-8P-M12FS/...	1522613	214
SAC-5P-MS/10,0-923/FR CAN SCO	1419070	431	SAC-5PT-F/F-M VP	1424712	259	SAC-6P-M 8MS/ 3,0-PUR SH	1522309	212	SAC-8P-M12MR SH/...	1522859	217
SAC-5P-MS/10,0-923/FS CAN SCO	1419054	431	SAC-5PT-FB/2XMB PBDP SH	1424711	436	SAC-6P-M 8MS/ 5,0-PUR	1522118	211	SAC-8P-M12MR-M12FR SH/...	1552007	217
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SACC-M 8MR-3CON-M-SW	1407583	15	SACC-M12FS-8CON-PG 9-SH	1511860	22	SACC-M12MST-3PECON-PG11-M	1404643	286	SACC-MS-5QO SH DN SCO	1422759	423
SACC-M 8MR-3CON-SH	1436453	16	SACC-M12FS-8CON-PG11-M	1410665	21	SACC-M16-KD-NUT-SH	1440164	52	SACC-MS-5QO-0,75 SCO	1414600	17
SACC-M 8MR-4CON-M	1554209	16	SACC-M12FS-8CON-PG9-M	1513347	21	SACC-M16-SEAL CLM	1430394	52	SACC-MS-5QO-0,75 SH SCO	1413991	17
SACC-M 8MR-4CON-M-SW	1407585	15	SACC-M12FSB-5CON-PG9 SH AU	1507777	422	SACC-M16-SEALING PLUG SET	1453368	50	SACC-MS-8QO SH ETH SCO	1421679	345
SACC-M 8MS-3CON-M	1681156	16	SACC-M12FSB-5CON-PG9 9-M	1419640	286	SACC-M16FR-14CON-M	1500253	313	SACC-MS-8QO SH DN SCO	1422433	17
SACC-M 8MS-3CON-M-0,34-SH	1542884	16	SACC-M12FSS-3PECON-PG11-M	1404642	286	SACC-M16FS-14CON-M	1500554	313	SACC-MS-8QO-0,5 SH SCO	1414610	17
SACC-M 8MS-3CON-M-SH	1506901	16	SACC-M12FST-3PECON-PG11-M	1404644	286	SACC-MCH-M12MS-4CON	1440931	41	SACC-MSB-2PTL SH PB SCO	1424678	422
SACC-M 8MS-3CON-M-SW	1501252	15	SACC-M12MR-12SOL-PG 9-M	1404421	24	SACC-MCH-M12MS-4CON/0,5	1440805	40	SACC-MSB-2QO SH PB SCO	1413931	423
SACC-M 8MS-3QO-0,25-M	1441008	14	SACC-M12MR-12SOL-PG 9-M SH	1404412	24	SACC-MCH-M12MS-5CON	1419988	41	SACC-MSB-5PTL SH IB SCO	1424674	422
SACC-M 8MS-3QO-0,5-M	1441024	14	SACC-M12MR-4CON-PG 7-SH	1694279	22	SACC-MCH-M12MS-5CON/0,5	1440818	40	SACC-MSB-5PTL SH SCO	1424682	18
SACC-M 8MS-4CON-M	1681169	16	SACC-M12MR-4CON-PG 7-SH	1553200	21	SACC-MCH-M12MS-8CON	1440928	41	SACC-MSD-4CT SH PN SCO	1422846	19
SACC-M 8MS-4CON-M-SW	1542897	15	SACC-M12MR-4CON-PG 9-VA	1553226	21	SACC-MCH-M12MS-8CON/0,5	1457827	40	SACC-MSD-4PTL SH PN SCO	1424682	345
SACC-M 8MS-4CON-M-SH	1506914	16	SACC-M12MR-4CON-PG11-M PWR	1408990	21	SACC-MCH-M12MSB-5CON	1440915	41	SACC-MSD-4QO SH ETH SCO	1411066	345
SACC-M 8MS-4CON-M-SW	1501265	15	SACC-M12MR-4CON-PG7	1681109	21	SACC-MCH-M12MSB-5CON/0,5	1440759	40	SACC-MSD-4QO SH PN SCO	1411068	345
SACC-M 8MS-4QO-0,25-M	1441011	14	SACC-M12MR-4CON-PG7-M	1681101	20	SACC-MCH-M12MSD-4CON	1440944	41	SACC-MSQ-M12MS-25-3,2 SCO	1419959	40
SACC-M 8MS-4QO-0,5-M	1441037	14	SACC-M12MR-4PTL	1424692	18	SACC-MCH-M12MSD-4CON/0,5	1440821	40	SACC-MSQ-P-M12MS-25-2,7 SCO	1424131	287
SACC-M12-KD-NUT-SH	1440151	52	SACC-M12MR-5CON-PG 7	1662269	20	SACC-MCH-MSS-4CON/0,5 PE SCO	1424129	287	SACC-MSX-8CT SH SCO	1422844	19
SACC-M12-SET/2,5-3,5	1436505	20	SACC-M12MR-5CON-PG 7-M	1663129	21	SACC-MCH-MST-4CON/0,5 SCO	1424130	287	SACC-MSX-8QO SH ETH SCO	1411043	344
SACC-M12FR-12SOL-PG 9-M	1404423	24	SACC-M12MR-5CON-PG 7-SH	1693429	22	SACC-MCH-M12MSD-4CON/0,5	1521478	25	SACC-MSX-8QO SH PN SCO	1411044	344
SACC-M12FR-12SOL-PG 9-M SH	1404413	24	SACC-M12MR-5CON-PG 7-VA	1553213	21	SACC-MINFR-4CON-PG 9	1521494	25	SACC-PG9-KD-NUT-SH	1440177	52
SACC-M12FR-4CON-PG 7-VA	1553284	21	SACC-M12MR-5CON-PG 9-SH	1694282	22	SACC-MINFR-5CON-PG 9	1521517	25	SACC-PG9-SEAL CLM	1556320	52
SACC-M12FR-4CON-PG11-M PWR	1408991	21	SACC-M12MR-5CON-PG 9-VA	1553239	21	SACC-MINFR-5CON-PG11/2,5	1456297	25	SACC-SQ-M12FS-12CON-20/0,5	1441710	38
SACC-M12FR-4CON-PG7	1681130	20	SACC-M12MR-5CON-PG11-DUO	1531044	23	SACC-MINFR-5CON-PG13/2,5	1456307	25	SACC-SQ-M12FS-12CON-25F/0,5	1441590	39
SACC-M12FR-4CON-PG7-M	1681143	21	SACC-M12MR-5CON-PG11-M PWR	1408992	21	SACC-MINF3-3CON-PG 9	1521300	25	SACC-SQ-M12FS-17CON-20/0,5	1441736	38
SACC-M12FR-4PTL	1424694	18	SACC-M12MR-5CON-PG9	1513431	20	SACC-MINF3-3CON-PG13	1521313	25	SACC-SQ-M12FS-17CON-25F/0,5	1441613	39
SACC-M12FR-5CON-PG 7	1662308	20	SACC-M12MR-5CON-PG9-M	1681473	21	SACC-MINF3-4CON-PG 9	1521342	25	SACC-SQ-M12FS-4CON-20/0,5	1419797	38
SACC-M12FR-5CON-PG 7-M	1662984	21	SACC-M12MR-5CON-PG9-M SKINTOP	1561742	21	SACC-MINF3-4CON-PG13	1521355	25	SACC-SQ-M12FS-4CON-25F/0,5	1420003	39
SACC-M12FR-5CON-PG 7-VA	1553297	21	SACC-M12MR-5PTL	1424688	18	SACC-MINF5-5CON-PG 9	1521384	25	SACC-SQ-M12FS-5CON-20/0,5	1441655	38
SACC-M12FR-5CON-PG 9-SH	1430433	22	SACC-M12MR-6Q SH VARAN	1429156	345	SACC-MINF5-5CON-PG11/2,5	1456271	25	SACC-SQ-M12FS-5CON-25F/0,5	1440986	39
SACC-M12FR-5CON-PG 9-VA	1553307	21	SACC-M12MR-8Q SH	1553653	345	SACC-MINF5-5CON-PG13/2,5	1521397	25	SACC-SQ-M12FS-8CON-20/0,5	1441697	38
SACC-M12FR-5CON-PG11-M PWR	1408993	21	SACC-M12MRB-5CON-PG 9-SH	1430417	422	SACC-MINF5-5CON-PG13/2,5	1456284	25	SACC-SQ-M12FS-8CON-25F/0,5	1441574	39
SACC-M12FR-5CON-PG9	1500790	20	SACC-M12MRD-4Q SH	1553624	345	SACC-MINF5-5CON-PG16	1559071	25	SACC-SQ-M12FSB-5CON-20/0,5	1441671	38
SACC-M12FR-5CON-PG9-M	1681499	21	SACC-M12MRD-4Q SH PN	1554539	345	SACC-MINF5-5CON-PG16/2,5	1456268	25	SACC-SQ-M12FSB-5CON-25F/0,5	1441558	39
SACC-M12FR-5CON-PG9-M SKIN	1556812	21	SACC-M12MRS-2PECON-PG 9-M	1419641	286	SACC-MINFR-3CON-PG 9	1521465	25	SACC-SQ-M12FSB-5CON-25F/0,5	1441639	38
SACC-M12FR-5PTL	1424690	18	SACC-M12MRS-3PECON-PG11-M	1408985	286	SACC-MINFR-4CON-PG 9	1521481	25	SACC-SQ-M12FSB-5CON-25F/0,5	1440960	39
SACC-M12FR-6Q SH VARAN	1429169	345	SACC-M12MRT-4CON-PG11-M	1408988	286	SACC-MINFR-5CON-PG 9	1521504	25	SACC-SQ-M12MS-12CON-20/0,5	1441707	38
SACC-M12FR-8Q SH	1553666	345	SACC-M12MS-12SOL-PG 9-M	1404419	24	SACC-MINFR-5CON-PG11/2,5	1456242	25	SACC-SQ-M12MS-12CON-25F/0,5	1441587	39
SACC-M12FRB-5CON-PG 9-SH	1430420	422	SACC-M12MS-12SOL-PG 9-M SH	1404410	24	SACC-MINFR-5CON-PG13/2,5	1456255	25	SACC-SQ-M12MS-17CON-20/0,5	1441723	38
SACC-M12FRD-4Q SH	1553637	345	SACC-M12MS-4CON-PG 7	1681088	20	SACC-MINFR-5CON-PG 9	1521287	25	SACC-SQ-M12MS-17CON-25F/0,5	1441600	39
SACC-M12FRD-4Q SH PN	1554542	345	SACC-M12MS-4CON-PG 7-M	1662528	21	SACC-MINFR-5CON-PG13	1521290	25	SACC-SQ-M12MS-4CON-20/0,5	1419784	38
SACC-M12FRS-2PECON-PG 9-M	1419642	286	SACC-M12MS-4CON-PG 7-M SKIN	1556870	21	SACC-MINFR-5CON-PG13/2,5	1521326	25	SACC-SQ-M12MS-4CON-25F/0,5	1419991	39
SACC-M12FRS-3PECON-PG11-M	1408987	286	SACC-M12MS-4CON-PG 7-SH	1693830	22	SACC-MINFR-5CON-PG13/2,5	1521339	25	SACC-SQ-M12MS-5CON-20/0,5	1441642	38
SACC-M12FRT-4CON-PG11-M	1408989	286	SACC-M12MS-4CON-PG 7-VA	1553161	21	SACC-MINFR-5CON-PG 9	1521668	25	SACC-SQ-M12MS-5CON-25F/0,5	1440973	39
SACC-M12FS-12SOL-PG 9-M	1404420	24	SACC-M12MS-4CON-PG 9-SH	1501540	22	SACC-MINFR-5CON-PG11/2,5	1456226	25	SACC-SQ-M12MS-8CON-20/0,5	1441684	38
SACC-M12FS-12SOL-PG 9-M SH	1404411	24	SACC-M12MS-4CON-PG 9-VA	1553174	21	SACC-MINFR-5CON-PG13	1521371	25	SACC-SQ-M12MS-8CON-25F/0,5	1441561	39
SACC-M12FS-4CON-PG 7-SH	1694295	22	SACC-M12MS-4CON-PG11-DUO-M	1507052	23	SACC-MINFR-5CON-PG13/2,5	1456213	25	SACC-SQ-M12MSB-5CON-20/0,5	1441668	38
SACC-M12FS-4CON-PG 7-VA	1553242	21	SACC-M12MS-4CON-PG11-M PWR	1404415	21	SACC-MINFR-5CON-PG16	1559039	25	SACC-SQ-M12MSB-5CON-25F/0,5	1440999	39
SACC-M12FS-4CON-PG 9-M	1696439	21	SACC-M12MS-4CON-PG9-M	1523230	21	SACC-MINFR-5CON-PG16/2,5	1456239	25	SACC-SQ-M12MSD-4CON-20/0,5	1441626	38
SACC-M12FS-4CON-PG 9-SH	1515170	22	SACC-M12MS-4PTL	1424691	18	SACC-MINFR-5CON-PG17	1542981	20	SACC-SQ-M12MSD-4CON-25F/0,5	1440957	39
SACC-M12FS-4CON-PG 9-VA	1553268	21	SACC-M12MS-4QO-0,34	1641714	17	SACC-MINFR-5CON-PG17/2,5	1456242	25	SACC-V-3CON-M16/A-1L-S	1544714	27
SACC-M12FS-4CON-PG11-M PWR	1404416	21	SACC-M12MS-4QO-0,34-M	1641691	17	SACC-MR-4CON-PG 7-M SCO	1424667	18	SACC-V-3CON-PG9/A-1L-S	1671137	27
SACC-M12FS-4CON-PG7	1681114	20	SACC-M12MS-4QO-0,34-VA	1440779	17	SACC-MR-5CON-PG 7-M SCO	1542994	20	SACC-V-3CON-PG9/B-1L-S	1671153	28
SACC-M12FS-4CON-PG7-M	1681127	21	SACC-M12MS-4QO-0,75-M	1440025	22	SACC-MR-5CON-PG9/B-1L-S	1543003	20	SACC-V-3CON-PG9/B-1L-S	1671140	28
SACC-M12FS-4CON-PG7-M SKIN	1430381	21	SACC-M12MS-4QO-0,75-M	1641785	17	SACC-MR-5CT SH SCO	1422851	19	SACC-VB-3CON-M12/C-1L-SV 24V	1452262	29
SACC-M12FS-4QO-0,34-M	1641688	17	SACC-M12MS-5CON-PG 7	1440779	17	SACC-MR-5PTL M SCO	1424651	18	SACC-VB-3CON-M12/C-1L-SV 110V	1452275	29
SACC-M12FS-4QO-0,34-VA	1440766</										

Type	Order No.	Page	Type	Order No.	Page	Type	Order No.	Page	Type	Order No.	Page
SACC-VB-3CON-M16/A-GVL 110V	1452181	27	SACCBP-MSB-5CON-PG9/2,0-900SCO	1437669	425	SB-8ESCA8AA700S	1623365	129	SF-5EP1N8ACOA1	1605516	156
SACC-VB-3CON-M16/A-GVL 12/24V	1452178	27	SACCBP-MSB-5CON-PG9/5,0-900SCO	1437672	425	SB-8ESCA8AWT00S	1623371	128	SF-5EP1N8ACOA2	1607037	156
SACC-VB-3CON-M16/A-GVL 230V	1452194	27	SACCEC-M12FSB-5CON-M16/0,5-920	1525678	427	SB-8ESCD8A8L32S	1623683	126	SF-5EP1N8ACOA3	1607038	156
SACC-VB-3CON-M16/B-1L-SV 110V	1452217	28	SACCEC-M12FSB-5CON-M16/1,0-920	1525681	427	SB-8ESCD8A8L33S	1623684	126	SF-5EP1N8ACODU	1605517	156
SACC-VB-3CON-M16/B-1L-SV 230V	1452220	28	SACCEC-M12FSB-5CON-M16/2,0-920	1525694	427	SB-8ESCD8A8L34S	1623685	126	SF-5EP1N8ACL1	1607039	156
SACC-VB-3CON-M16/B-1L-SV 24V	1452204	28	SACCEC-M12FSB-5CON-M16/5,0-920	1525704	427	SB-8ESCD8A9L32S	1623701	127	SF-5EP1N8ACL2	1607040	156
SACC-VB-3CON-M16/B-1L-SV 24V	1452233	28	SACCEC-M12FSB-5CON-M16/0,5-910	1525597	426	SB-8ESCD8A9L33S	1623702	127	SF-5EP1N8ACL3	1607041	156
SACC-VB-3CON-M16/B-1L-SV 110V	1452246	28	SACCEC-M12FSB-5CON-M16/1,0-910	1525607	426	SB-8ESCD8A9L34S	1623703	127	SF-5EP1N8ACL4	1607042	156
SACC-VB-3CON-M16/B-1L-SV 230V	1452259	28	SACCEC-M12FSB-5CON-M16/2,0-910	1519574	426	SB-8ESCD8AA700S	1623719	129	SF-5EP1N8ACL1D	1605518	156
SACC-VB-4CON-M16/A	1452136	26	SACCEC-M12FSB-5CON-M16/5,0-910	1525610	426	SB-8ESCD8AWT00S	1623725	128	SF-5EP1N8AWA00	1605520	154
SACC-VB-5CON-M16/AD-2L 24V	1457908	27	SACCEC-M12FSB-5CON-M16/0,5-900	1529742	425	SB-8ESSA8A8L32S	1623329	126	SF-5EP1S8AWA00	1620619	154
SACCBP-FS-12CON-M16/1,0-PVCSO	1442188	46	SACCEC-M12FSB-5CON-M16/1,0-900	1529755	425	SB-8ESSA8A8L33S	1623330	126	SF-5EP1N8A80A1	1605524	152
SACCBP-FS-12CON-M16/2,0-PVCSO	1442191	46	SACCEC-M12FSB-5CON-M16/2,0-900	1529768	425	SB-8ESSA8A8L34S	1623331	126	SF-5ES1N8A80A1S	1618194	152
SACCBP-FS-17CON-M16/1,0-PVCSO	1442269	46	SACCEC-M12FSB-5CON-M16/5,0-910	1525711	425	SB-8ESSA8A9L32S	1623344	127	SF-5ES1N8A80A2S	1605526	152
SACCBP-FS-17CON-M16/2,0-PVCSO	1442272	46	SACCEC-M12MS-5CON-M16/0,5-920	1525623	427	SB-8ESSA8A9L33S	1623345	127	SF-5ES1N8A80A2S	1618195	152
SACCBP-FS-4CON-M16/1,0-PUR SCO	1419302	46	SACCEC-M12MS-5CON-M16/1,0-920	1525636	427	SB-8ESSA8A9L34S	1623346	127	SF-5ES1N8A80A3S	1605529	152
SACCBP-FS-4CON-M16/2,0-PUR SCO	1419315	46	SACCEC-M12MS-5CON-M16/2,0-920	1525649	427	SB-8ESSA8AA700S	1623366	129	SF-5ES1N8A80A3S	1618196	152
SACCBP-FS-5CON-M16/2,0-PUR SCO	1419331	46	SACCEC-M12MS-5CON-M16/5,0-910	1525652	427	SB-8ESSA8AWT00S	1623372	128	SF-5ES1N8A80DU	1605542	152
SACCBP-FS-5CON-PG9/0,5-920SCO	1437520	427	SACCEC-M12MSB-2CON-M16/0,5-910	1525555	426	SB-8ESSD8A8L32S	1623686	126	SF-5ES1N8A80DUS	1618197	152
SACCBP-FS-5CON-PG9/1,0-920SCO	1437533	427	SACCEC-M12MSB-2CON-M16/1,0-910	1525568	426	SB-8ESSD8A8L33S	1623687	126	SF-5ES1N8A8LB1	1605543	152
SACCBP-FS-5CON-PG9/1,0-920SCO	1437533	427	SACCEC-M12MSB-2CON-M16/2,0-910	1519561	426	SB-8ESSD8A8L34S	1623688	126	SF-5ES1N8A8LB1S	1618198	152
SACCBP-FS-5CON-PG9/5,0-920SCO	1437559	427	SACCEC-M12MSB-2CON-M16/5,0-910	1525571	426	SB-8ESSD8A9L32S	1623704	127	SF-5ES1N8A8LB2S	1605545	152
SACCBP-FS-8CON-M16/1,0-PUR SCO	1419357	46	SACCEC-M12MSB-5CON-M16/0,5-900	1529629	425	SB-8ESSD8A9L33S	1623705	127	SF-5ES1N8A8LB2S	1618199	152
SACCBP-FS-8CON-M16/2,0-PUR SCO	1419344	46	SACCEC-M12MSB-5CON-M16/1,0-900	1530223	425	SB-8ESSD8A9L34S	1623706	127	SF-5ES1N8A8LB3	1605546	152
SACCBP-FSB-2CON-PG9/0,5-910SCO	1437449	426	SACCEC-M12MSB-5CON-M16/2,0-900	1529726	425	SB-8ESSD8AA700S	1623720	129	SF-5ES1N8A8LB3S	1618200	152
SACCBP-FSB-2CON-PG9/1,0-910SCO	1437452	426	SACCEC-M12MSB-5CON-M16/5,0-910	1529739	425	SB-8ESSD8AWT00S	1623726	128	SF-5ES1N8A8LB4	1605548	152
SACCBP-FSB-2CON-PG9/2,0-910SCO	1437465	426	SB-10KP001	1623607	130	SB-Z0001	1623827	187	SF-5ES1N8A8LB4S	1618201	152
SACCBP-FSB-2CON-PG9/5,0-910SCO	1437478	426	SB-10KP002	1623611	130	SB-Z0002	1623828	187	SF-5ES1N8A8LDL	1605549	152
SACCBP-FSB-5CON-PG9/0,5-900SCO	1437601	425	SB-10KP003	1623612	130	SB-Z0016	1624515	179	SF-5ES1N8A8LDLS	1618202	152
SACCBP-FSB-5CON-PG9/1,0-900SCO	1437614	425	SB-10KP004	1623613	130	SB-Z0026	1624618	179	SF-5ES1N8AY000	1607082	155
SACCBP-FSB-5CON-PG9/2,0-900SCO	1437627	425	SB-10KS001	1623603	130	SC-Z2319	1605456	187	SF-5ES1N8AYW00	1607405	155
SACCBP-FSB-5CON-PG9/5,0-900SCO	1437630	425	SB-10KS002	1623604	130	SC-Z2320	1605457	187	SF-6AP2000	1605544	109
SACCBP-FSD-4CON-PG9/1,0-933SCO	1437779	399	SB-10KS003	1623605	130	SEALING PLUG 10X16 RD	1400284	474	SF-6AS2000	1605557	109
SACCBP-FSD-4CON-PG9/2,0-933SCO	1437782	399	SB-10KS004	1623606	130	SEALING PLUG 12X22 RD	1400260	712	SF-6CP2000	1605559	109
SACCBP-FSD-4CON-PG9/5,0-933SCO	1437795	399	SB-36KP002	1623383	130	SEALING PLUG 13X22 RD	1400265	712	SF-6CS2000	1605562	109
SACCBP-M12FS-5CON-M16/0,5-920	1534465	427	SB-36KP003	1623384	130	SEALING PLUG 14X22 RD	1400270	474	SF-7EE1N8AS000	1605567	157
SACCBP-M12FS-5CON-M16/1,0-920	1534478	427	SB-36KP004	1623385	130	SEALING PLUG 17X17 RD	1421861	712	SF-7EP1N8A90A1	1605568	153
SACCBP-M12FS-5CON-M16/2,0-920	1534481	427	SB-36KP005	1623386	130	SEALING PLUG 20X22 RD	1421862	712	SF-7EP1N8A90A2	1605570	153
SACCBP-M12FS-5CON-M16/5,0-920	1534494	427	SB-36KS002	1623378	130	SEALING PLUG 25X30 RD	1421863	712	SF-7EP1N8A90A3	1605571	153
SACCBP-M12FSB-2CON-M16/0,5-910	1534384	426	SB-36KS003	1623379	130	SEALING PLUG 28X30 RD	1421864	712	SF-7EP1N8A90DU	1605575	153
SACCBP-M12FSB-2CON-M16/1,0-910	1534397	426	SB-36KS004	1623380	130	SEALING PLUG 35X35 RD	1421865	712	SF-7EP1N8A9LB1	1605578	153
SACCBP-M12FSB-2CON-M16/2,0-910	1534407	426	SB-36KS005	1623381	130	SEALING PLUG 3X12 RD	1400238	712	SF-7EP1N8A9LB2	1605580	153
SACCBP-M12FSB-2CON-M16/5,0-910	1534410	426	SB-8EPCA8A8L32S	1623332	126	SEALING PLUG 5X12 RD	1400253	712	SF-7EP1N8A9LB3	1605581	153
SACCBP-M12FSB-5CON-M16/0,5-900	1534546	425	SB-8EPCA8A8L33S	1623333	126	SEALING PLUG 6X16 RD	1400254	712	SF-7EP1N8A9LB4	1605582	153
SACCBP-M12FSB-5CON-M16/1,0-900	1534559	425	SB-8EPCA8A8L34S	1623334	126	SEALING PLUG 7X16 RD	1400255	712	SF-7EP1N8A9LDL	1605583	153
SACCBP-M12FSB-5CON-M16/2,0-900	1534562	425	SB-8EPCA8A9L32S	1623356	127	SEALING PLUG 8X12 RD	1400257	712	SF-7EP1N8AA500	1620660	154
SACCBP-M12FSB-5CON-M16/5,0-900	1534575	425	SB-8EPCA8A9L33S	1623357	127	SEALING PLUG 9X16 RD	1400259	712	SF-7EP1N8AA600	1602682	154
SACCBP-M12MS-5CON-M16/0,5-920	1534423	427	SB-8EPCA8A9L34S	1623358	127	SF-08KP010	1621574	120	SF-7EP1N8ACOA1	1607048	156
SACCBP-M12MS-5CON-M16/1,0-920	1534436	427	SB-8EPCA8AA700S	1623368	129	SF-08KP020	1621575	120	SF-7EP1N8ACOA2	1607049	156
SACCBP-M12MS-5CON-M16/2,0-920	1534449	427	SB-8EPCA8AWT00S	1623374	128	SF-08KS010	1621571	120	SF-7EP1N8ACOA3	1607050	156
SACCBP-M12MS-5CON-M16/5,0-920	1534452	427	SB-8EPCD8A8L32S	1623692	126	SF-08KS020	1621573	120	SF-7EP1N8ACODU	1607051	156
SACCBP-M12MSB-2CON-M16/0,5-910	1534342	426	SB-8EPCD8A8L33S	1623693	126	SF-10KP004	1607355	109	SF-7EP1N8ACL1	1607052	156
SACCBP-M12MSB-2CON-M16/1,0-910	1534355	426	SB-8EPCD8A8L34S	1623694	126	SF-10KP320	1615961	70	SF-7EP1N8ACL2	1607053	156
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			VS-IP20/10G-IP20/10G-94F/1	1418866	406	VS-PPC/ME-IP20-93B-LI/5,0	1416138	398			
			VS-IP20/10G-IP20/10G-94F/5	1418879	406	VS-PPC/ME-IP20-93E-LI/5,0	1405992	402			
			VS-IP67-IP20-93E-LI/2,0	1405921	402						
						VS-PPC/ME-IP20-94B-LI/5,0	1407990	404			
			VS-IP67-IP20-94B-LI/5,0	1407932	404	VS-PPC/ME-OE-93E-LI/5,0	1405743	402			
			VS-IP67-OE-93E-LI/2,0	1405675	402	VS-PPC/ME-OE-94B-LI/5,0	1407783	404			
			VS-IP67-OE-94B-LI/5,0	1407725	404	VS-PPC/PL-IP20-93B-LI/5,0	1416141	399			
			VS-M12FSBP-IP20-93E-LI/2,0	1406085	403						
						VS-PPC/PL-IP20-93E-LI/5,0	1406030	403			
			VS-M12FSBP-IP20-94B-LI/5,0	1412082	405	VS-PPC/PL-IP20-94B-LI/5,0	1412024	405			
			VS-M12FSBP-IP67-93E-LI/2,0	1406247	403	VS-PPC/PL-OE-93E-LI/5,0	1405772	403			
			VS-M12FSBP-IP67-94B-LI/5,0	1412231	405	VS-PPC/PL-OE-94B-LI/5,0	1407819	405			
			VS-M12FSBP-OE-93E-LI/2,0	1405866	403						
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			VS-M12FSBP-OE-94B-LI/5,0	1407877	405	VS-SCRJ-GOF-BU/BU	1652978	359			
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			VS-M12FSBP-PPC/PL-93E-LI/2,0	1406603	403						
						VS-SCRJ-HCS-FA-IP20-PN	1404087	381			
			VS-M12FSBP-PPC/PL-94B-LI/5,0	1412590	405	VS-SCRJ-HCS-FA-IP67	1657012	359			
			VS-MP-PPC/CG-10G	1403678	365	VS-SCRJ-PC	1653757	358			
			VS-MP-PPC/CG-FO	1404319	374	VS-SCRJ-POF-FA-IP20	1654879	380			
			VS-MP-PPC/CG-PO	1403681	365						

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