

1419629

https://www.phoenixcontact.com/pc/products/1419629

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Sensor/actuator flush-type plug, 4-pos., M12 SPEEDCON, rear/screw mounting with M16 thread, with 0.5 m TPE litz wire, 4 x 0.34  $\rm mm^2$ 

### Your advantages

- · Pre-assembled with litz wires for immediate use
- · Customer-specific assemblies and litz wire lengths available
- · Sealed on the litz wire side for optimum leak-tightness
- · All standard pin assignments and codings for signal, data, and power transmission with a uniform design-in design
- · For high transmission safety: shield connection to the housing with optional EMC nut
- · SPEEDCON fast locking system reduces cabling times



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### **Commercial Data**

Item number	1419629
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Product Key	ABQCDG
Catalog Page	Page 49 (C-2-2019)
GTIN	4046356533478
Weight per Piece (including packing)	23.7 g
Weight per Piece (excluding packing)	23.3 g
Customs tariff number	85444290
Country of origin	DE



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## **Technical Data**

### Notes

Notes on operation	The electrical and mechanical data specified assume that the connector pair is correctly locked and mounted. If the connector is unlocked and if there is a danger of contamination, the connector must be sealed using a protective cap > IP54. Influences arising from litz wires, cables or PCB assembly must also be taken into consideration.
Safety note	
Safety note	WARNING: The connectors may not be plugged in or disconnected under load. Ignoring the warning or improper use may damage persons and/or property.
	<ul> <li>WARNING: Commission properly functioning products only.</li> <li>The products must be regularly inspected for damage.</li> <li>Decommission defective products immediately. Replace damaged products. Repairs are not possible.</li> </ul>
	<ul> <li>WARNING: Only electrically qualified personnel may install and operate the product. They must observe the following safety notes. The qualified personnel must be familiar with the basics of electrical engineering. They must be able to recognize and prevent danger. The relevant symbol on the packaging indicates that only personnel familiar with electrical engineering are allowed to install and operate the product.</li> </ul>
	<ul> <li>The products are suitable for applications in plant, controller, and electrical device engineering.</li> </ul>
	<ul> <li>When operating the connectors in outdoor applications, they must be separately protected against environmental influences.</li> </ul>
	<ul> <li>Assembled products may not be manipulated or improperly opened.</li> </ul>
	<ul> <li>Only use mating connectors that are specified in the technical data of the standards listed (e.g. the ones listed in the product accessories online at phoenixcontact.com/products).</li> </ul>
	<ul> <li>When using the product in direct connection with third-party manufacturers, the user is responsible.</li> </ul>
	<ul> <li>For operating voltages &gt; 50 V AC, conductive connector housings must be grounded</li> </ul>
	<ul> <li>Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards.</li> </ul>
	<ul> <li>Observe the corresponding technical data. You will find information:</li> <li>o On the product</li> <li>o On the packing label</li> <li>o In the supplied documentation</li> <li>o Online at phoenixcontact.com/products under the product</li> </ul>
	Only use tools recommended by Phoenix Contact
	<ul> <li>Use a protective cap to protect connectors that are not in use.</li> <li>The suitable accessories are available online in the accessory section of the product at phoenixcontact.com/products</li> </ul>



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• Ensure that the protective or functional ground has been properly connected.

 $\bullet$  VDE 0100/1.97 § 411.1.3.2 and DIN EN 60 204/11.98 § 14.1.3 are applicable when combining several circuits in a cable and/or connector

• The connector warms up in normal operation. Depending on the ambient conditions, the surface of the connector can continue to warm up. In this case, the user is responsible for posting warnings (e.g. DIN EN ISO 13732-1:2008-12).

### **Product properties**

Product type	Circular connectors (device side)
Number of positions	4
No. of cable outlets	1
Shielded	no
Coding	A - standard

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

#### Ambient conditions

Degree of protection	IP67 (When plugged in)
	IP65 (When plugged in)
Degree of protection	IP65/IP67
Ambient temperature (operation)	-25 °C 85 °C (Plug / socket)
	-40 °C 85 °C (without mechanical actuation)
	-25 °C 85 °C (Cable, flexible installation)
	-40 °C 85 °C (cable, fixed installation)

### Connector

Insertion/withdrawal cycles	> 100	
Header 1		
Head design	Plug	
Head thread type	M12	
Coding	A-coded	

### **Electrical properties**

Rated surge voltage	2.5 kV
Contact resistance	≤ 3 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage U <sub>N</sub>	250 V
Nominal current I <sub>N</sub>	4 A

Material specifications



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Flammability rating according to UL 94	VO
Sealing material	FKM
Contact material	CuZn
Contact surface material	Au
Contact carrier material	PA 6.6
Cable gland material	Zinc die-cast, nickel-plated
onnection data	
Conductor connection	
Connection method	Individual wires
ounting	
Mounting type	Rear mounting M16 x 1.5 With flat nut
Assembly instructions	With flat nut
andards and regulations	
M12	
Standards/specifications	IEC 61076-2-101
able / line	
able / line Cable length	0.5 m
	0.5 m
Cable length	0.5 m TPE litz wire
Cable length Cable structure	
Cable length Cable structure Cable type	TPE litz wire
Cable length Cable structure Cable type Signal type/category	TPE litz wire Universal
Cable length Cable structure Cable type Signal type/category Conductor material	TPE litz wire Universal Tin-plated Cu litz wires
Cable length Cable structure Cable type Signal type/category Conductor material Conductor structure signal line	TPE litz wire         Universal         Tin-plated Cu litz wires         7x 0.25 mm
Cable length Cable structure Cable type Signal type/category Conductor material Conductor structure signal line AWG signal line	TPE litz wire         Universal         Tin-plated Cu litz wires         7x 0.25 mm         22
Cable length Cable structure Cable type Signal type/category Conductor material Conductor structure signal line AWG signal line Material wire insulation	TPE litz wireUniversalTin-plated Cu litz wires7x 0.25 mm22TPE
Cable length Cable structure Cable type Signal type/category Conductor material Conductor structure signal line AWG signal line Material wire insulation Thickness, insulation	TPE litz wireUniversalTin-plated Cu litz wires7x 0.25 mm22TPE0.21 mm (Core insulation)
Cable length         Cable structure         Cable type         Signal type/category         Conductor material         Conductor structure signal line         AWG signal line         Material wire insulation         Thickness, insulation         Wire diameter incl. insulation	TPE litz wire         Universal         Tin-plated Cu litz wires         7x 0.25 mm         22         TPE         0.21 mm (Core insulation)         1.2 mm ±0.07 mm
Cable length Cable structure Cable type Signal type/category Conductor material Conductor structure signal line AWG signal line Material wire insulation Thickness, insulation Wire diameter incl. insulation Single wire, color	TPE litz wire         Universal         Tin-plated Cu litz wires         7x 0.25 mm         22         TPE         0.21 mm (Core insulation)         1.2 mm ±0.07 mm
Cable length Cable structure Cable type Signal type/category Conductor material Conductor structure signal line AWG signal line AWG signal line Material wire insulation Thickness, insulation Wire diameter incl. insulation Single wire, color	TPE litz wire         Universal         Tin-plated Cu litz wires         7x 0.25 mm         22         TPE         0.21 mm (Core insulation)         1.2 mm ±0.07 mm         brown, white, blue, black
Cable length Cable structure Cable type Signal type/category Conductor material Conductor structure signal line AWG signal line AWG signal line Material wire insulation Thickness, insulation Wire diameter incl. insulation Single wire, color	TPE litz wire         Universal         Tin-plated Cu litz wires         7x 0.25 mm         22         TPE         0.21 mm (Core insulation)         1.2 mm ±0.07 mm         brown, white, blue, black         300 V
Cable length         Cable structure         Cable type         Signal type/category         Conductor material         Conductor structure signal line         AWG signal line         Material wire insulation         Thickness, insulation         Wire diameter incl. insulation         Single wire, color         Electrical properties         Nominal voltage, cable         Test voltage, cable	TPE litz wireUniversalTin-plated Cu litz wires $7x 0.25 \text{ mm}$ 22TPE0.21 mm (Core insulation)1.2 mm $\pm 0.07 \text{ mm}$ brown, white, blue, black $300 \vee$ $3000 \lor AC$
Cable length         Cable structure         Cable type         Signal type/category         Conductor material         Conductor structure signal line         AWG signal line         Material wire insulation         Thickness, insulation         Wire diameter incl. insulation         Single wire, color         Electrical properties         Nominal voltage, cable         Test voltage, cable         Conductor resistance	TPE litz wireUniversalTin-plated Cu litz wires $7x 0.25 \text{ mm}$ 22TPE0.21 mm (Core insulation)1.2 mm $\pm 0.07 \text{ mm}$ brown, white, blue, black300 V300 V AC $300 \text{ V AC}$ $\leq 57.6 \text{ m}\Omega/\text{m}$
Cable length Cable structure Cable type Signal type/category Conductor material Conductor structure signal line AWG signal line Material wire insulation Thickness, insulation Thickness, insulation Single wire, color Electrical properties Nominal voltage, cable Test voltage, cable Conductor resistance Cable insulation resistance	TPE litz wireUniversalTin-plated Cu litz wires $7x 0.25 \text{ mm}$ 22TPE0.21 mm (Core insulation)1.2 mm $\pm 0.07 \text{ mm}$ brown, white, blue, black300 V300 V AC $300 \text{ V AC}$ $\leq 57.6 \text{ m}\Omega/\text{m}$



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### Drawings

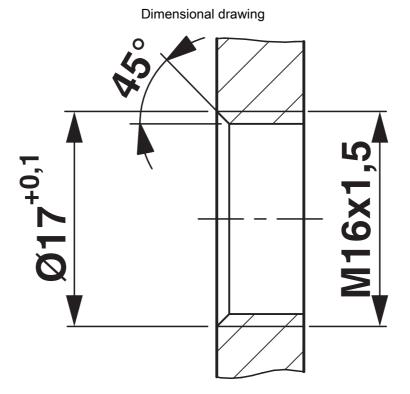
Schematic diagram

Pin assignment of M12 male connector, 4-pos., A-coded, view of connector side



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Housing cutout for M16 fastening thread, mounting panel with thread

Circuit diagram

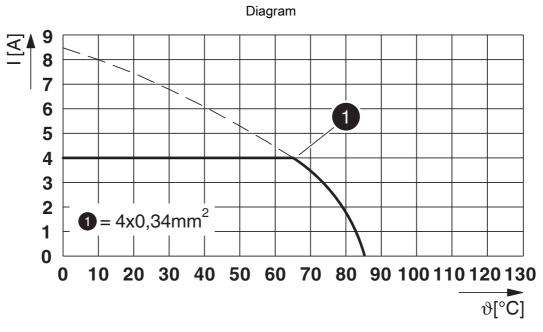


Contact assignment of the M12 plug and the M12 socket

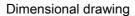


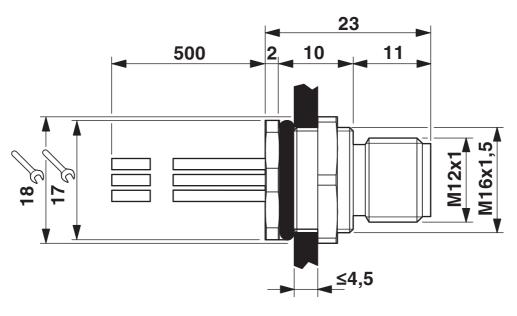
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I = current strength, T = ambient temperature





M12 flush-type plug



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#### Approvals cUL Recognized **A** Approval ID: FILE E 118976 Cross Section mm<sup>2</sup> Nominal Voltage U<sub>N</sub> Nominal Current I<sub>N</sub> Cross Section AWG 250 V - 22 4 A \_ **UL Recognized** *F* Approval ID: FILE E 118976 Nominal Voltage U<sub>N</sub> Nominal Current I<sub>N</sub> Cross Section mm<sup>2</sup> Cross Section AWG 250 V 4 A - 22 \_ EAC EAC Approval ID: B.01687 cULus Recognized .**91**.us Approval ID: E221474-20140616 Cross Section mm<sup>2</sup> Nominal Voltage U<sub>N</sub> Nominal Current I<sub>N</sub> Cross Section AWG 250 V 4 A 22 - 20 \_

cULus Recognized



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### Classifications

### ECLASS

	ECLASS-9.0	27440102	
	ECLASS-10.0.1	27440102	
	ECLASS-11.0	27440102	
ET	ETIM		
	ETIM 8.0	EC002635	
UNSPSC			
	UNSPSC 21.0	39121400	



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## **Environmental Product Compliance**

REACh SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"



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### Accessories

### Flat gasket

Flat gasket - SACC-M16-SEAL CLM - 1430394 https://www.phoenixcontact.com/pc/products/1430394

M16 flat gasket for M12 flush-type connectors with M16 fastening thread



### Sealing cap

Sealing cap - PROT-M12 FS - 1560251 https://www.phoenixcontact.com/pc/products/1560251



M12 sealing cap for unoccupied M12 plugs of the sensor/actuator cable, flush-type plugs and I/O devices in the field



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Sealing cap

Sealing cap - PROT-M12 FS-M - 1430488 https://www.phoenixcontact.com/pc/products/1430488



M12 metal sealing cap for unoccupied M12 plugs of the sensor/actuator cable, flush-type plugs and I/O devices in the field

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