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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,  $4 \times 0.34 \text{ mm}^2$ 

#### Your advantages

- ☑ Pre-assembled with litz wires for immediate use
- 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



### **Key Commercial Data**

Packing unit	1 pc
GTIN	4 046356 533478
GTIN	4046356533478

### Technical data

#### **Dimensions**

Length of cable	0.5 m
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#### Ambient conditions

Ambient temperature (operation)	-25 °C 85 °C (Plug / socket)
Degree of protection	IP67 (When plugged in)
	IP65 (When plugged in)

#### General

	The electrical and mechanical data specified assume that the connector pair is correctly locked and mounted. If the connector is unlocked and if
Note	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.



### Technical data

### General

Rated current at 40°C	4 A
Rated voltage	250 V
Rated surge voltage	2.5 kV
Number of positions	4
Insulation resistance	$\geq$ 100 M $\Omega$
Coding	A - standard
Standards/regulations	M12 connector IEC 61076-2-101
Signal type/category	Universal
Status display	No
Overvoltage category	II
Degree of pollution	3
Connection method	Individual wires
Insertion/withdrawal cycles	> 100
Torque	3 Nm 4 Nm (Installation-side)
Mounting type	Rear mounting M16 x 1.5 With flat nut

#### Material

Flammability rating according to UL 94	V0
Contact material	CuZn
Contact surface material	Au
Contact carrier material	PA 6.6
Material, knurls	Zinc die-cast, nickel-plated
Sealing material	FKM

#### Cable

Cable type	TPE litz wire
Conductor cross section	0.34 mm²
AWG signal line	22
Conductor structure signal line	7x 0.25 mm
Core diameter including insulation	1.2 mm ±0.07 mm
Thickness, insulation	0.21 mm (Core insulation)
Wire colors	brown, white, blue, black
Material conductor insulation	TPE
Conductor material	Tin-plated Cu litz wires
Standards/specifications	M12 connector IEC 61076-2-101
Insulation resistance	≥ 20 MΩ*km
Conductor resistance	≤ 57.6 mΩ/m
Nominal voltage, cable	300 V
Test voltage, cable	2000 V AC
Ambient temperature (operation)	-40 °C 85 °C (cable, fixed installation)
	-25 °C 85 °C (cable, flexible installation)



### Technical data

### Standards and Regulations

Standards/specifications	M12 connector IEC 61076-2-101
Flammability rating according to UL 94	V0
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.
	WARNING: Commission properly functioning products only. The products must be regularly inspected for damage. Decommission defective products immediately. Replace damaged products. Repairs are not possible.
	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
	The products are suitable for applications in plant, controller, and electrical device engineering.
	When operating the connectors in outdoor applications, they must be separately protected against environmental influences.
	Assembled products may not be manipulated or improperly opened.
	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).
	When using the product in direct connection with third-party manufacturers, the user is responsible.
	For operating voltages > 50 V AC, conductive connector housings must be grounded
	Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards.
	Observe the corresponding technical data. You will find information: o On the product o On the packing label o In the supplied documentation o Online at phoenixcontact.com/products under the product
	Only use tools recommended by Phoenix Contact
	Use a protective cap to protect connectors that are not in use. The suitable accessories are available online in the accessory section of the product at phoenixcontact.com/products
	Ensure that the protective or functional ground has been properly connected.
	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).

### **Environmental Product Compliance**

REACh SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years

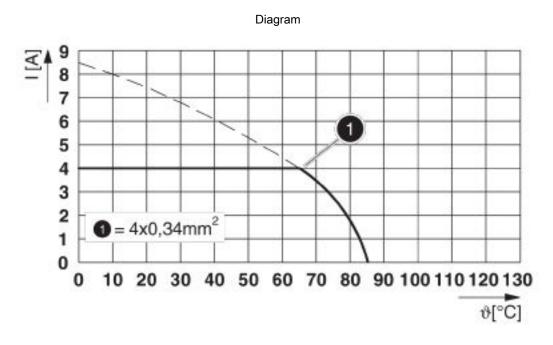


### Technical data

**Environmental Product Compliance** 

For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"
Category Manufacturer's declaration

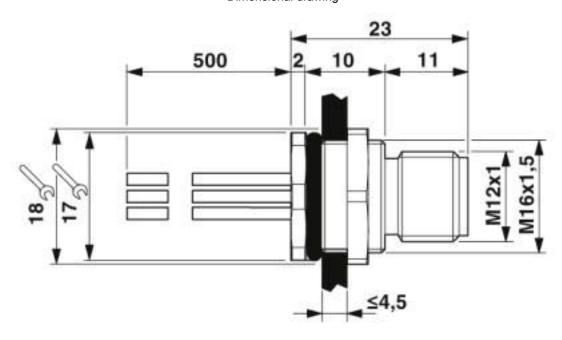
### Drawings



I = current strength, T = ambient temperature

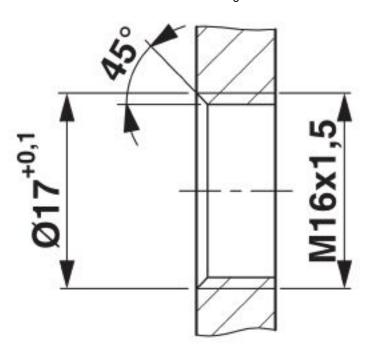


Dimensional drawing



M12 flush-type plug

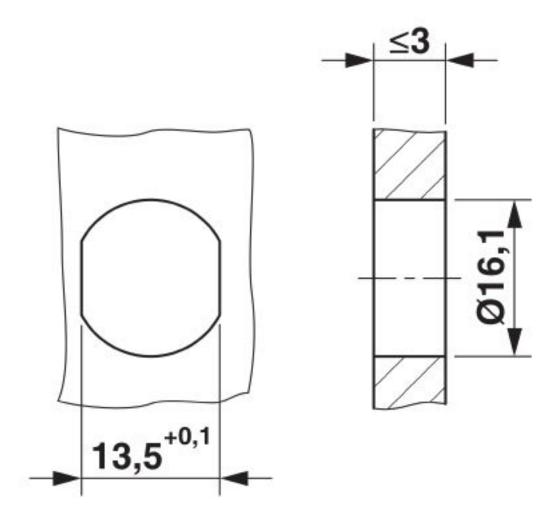
Dimensional drawing



Housing cutout for M16 fastening thread, mounting panel with thread

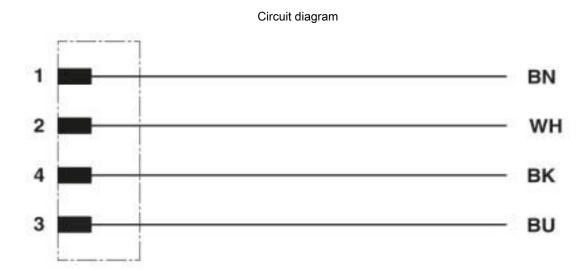


### Dimensional drawing



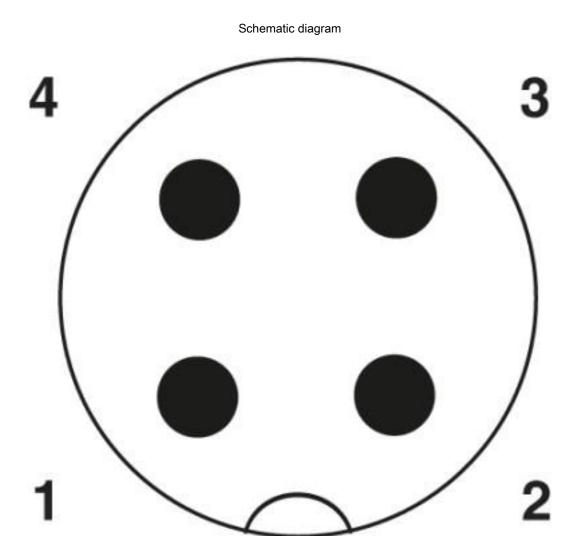
Housing cutout for M16 fastening thread, mounting panel with feed-through hole (alternatively with area as anti-rotation protection for panel thicknesses > 2 mm up to max. 4.5 mm)





Contact assignment of the M12 plug and the M12 socket





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

### Classifications

### eCl@ss

eCl@ss 10.0.1	27440102
eCl@ss 4.0	27140800
eCl@ss 4.1	27140800
eCl@ss 5.0	27143400
eCl@ss 5.1	27143400
eCl@ss 6.0	27279200
eCl@ss 7.0	27440103
eCl@ss 8.0	27440103
eCI@ss 9.0	27440102



### Classifications

### **ETIM**

ETIM 2.0	EC001297
ETIM 3.0	EC002061
ETIM 4.0	EC002061
ETIM 5.0	EC002061
ETIM 6.0	EC002061

### **UNSPSC**

UNSPSC 6.01	31251501
UNSPSC 7.0901	31251501
UNSPSC 11	31251501
UNSPSC 12.01	31251501
UNSPSC 13.2	39121413
UNSPSC 18.0	39121413
UNSPSC 19.0	39121413
UNSPSC 20.0	39121413
UNSPSC 21.0	39121413

## **Approvals**

### Approvals

Approvals

UL Recognized / EAC / cULus Recognized

Ex Approvals

### Approval details

UL Recognized	<i>7</i> .1	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm		FILE E 118976
Nominal voltage UN			250 V	
Nominal current IN			4 A	
mm²/AWG/kcmil			22	

EAC	ERC	B.01687
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### Approvals

cULus Recognized	c <b>911</b> us	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm E221474-201406		21474-20140616
Nominal voltage UN			250 V	
Nominal current IN			4 A	
mm²/AWG/kcmil			22-20	

#### Accessories

Accessories

Protective cap

Sealing cap - PROT-M12 FS - 1560251



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

Sealing cap - PROT-M12 FS-M - 1430488



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

#### Seal

Flat gasket - SACC-M16-SEAL CLM - 1430394



M16 flat gasket, for rear mounting of M12 flush-type connectors with M16 fastening thread



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