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Sensor/actuator panel-mount connector, 5-pos., M12, B-coded, front/screw mounting with M20 x 1.5 thread, with 0.5 m TPE litz wire, 5 x 0.34 mm<sup>2</sup>, stainless steel version

#### 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
- Mall standard pin assignments and codings for signal, data, and power transmission with a uniform design-in design

### RoHS

### Key Commercial Data

Packing unit	1 pc
GTIN	4 046356 528733
GTIN	4046356528733

### Technical data

#### Dimensions

Length of cable	0.5 m
Ambient conditions	
Ambient temperature (operation)	-25 °C 85 °C (Plug / socket)
	-40 °C 85 °C (without mechanical actuation)
Degree of protection	IP65/IP67/IP69/IP69K

#### General

Note	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.
Rated current at 40°C	4 A



### Technical data

### General

Rated voltage	60 V
Rated surge voltage	1.5 kV
Number of positions	5
Insulation resistance	$\geq$ 100 MΩ
Coding	B - inverse
Standards/regulations	M12 connector IEC 61076-2-101
Status display	No
Overvoltage category	11
Degree of pollution	3
Connection method	Individual wires
Insertion/withdrawal cycles	> 100
Torque	3 Nm 4 Nm (Installation-side)
Mounting type	Front mounting M20 x 1,5
Material	

Flammability rating according to UL 94	V0
Contact material	CuZn
Contact surface material	Au
Contact carrier material	PA 6.6
Material, knurls	Stainless steel
Sealing material	NBR

### Cable

Cable type	TPE litz wire
Conductor cross section	0.34 mm <sup>2</sup>
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
Wire colors	Brown, white, blue, black, gray
Material conductor insulation	TPE
Conductor material	Tin-plated Cu litz wires
Standards/specifications	M12 connector IEC 61076-2-101
Insulation resistance	$\geq 20 \text{ M}\Omega^*\text{km}$
Conductor resistance	$\leq$ 57.6 m $\Omega$ /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)

#### Standards and Regulations

Standards/specifications	M12 connector IEC 61076-2-101
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### Technical data

### Standards and Regulations

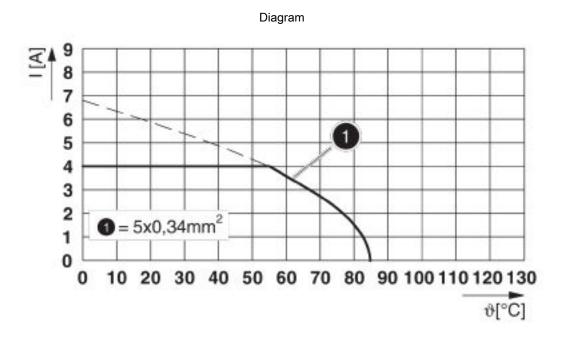
Flammability rating according to UL 94	VO
Safety note	WARNING: The connectors may not be plugged in or disconnected under load. Ignoring the warning or improper use may damage persons and/or property.
	WARNING: Commission properly functioning products only. The products must be regularly inspected for 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**

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

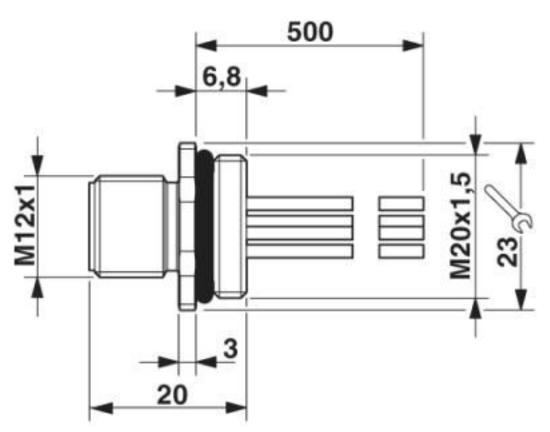
Drawings





I = current strength, T = ambient temperature

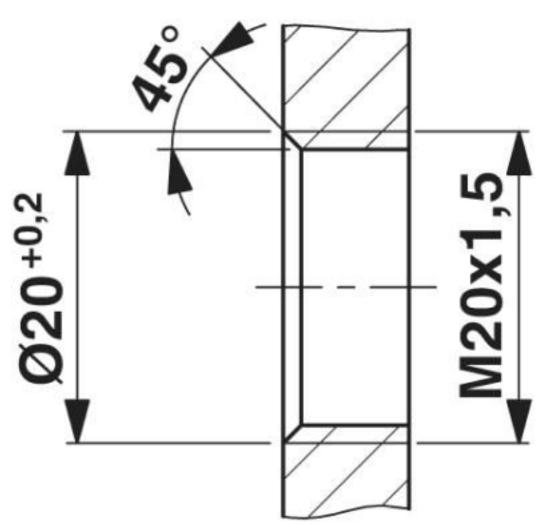




Dimensional drawing

M12 flush-type plug

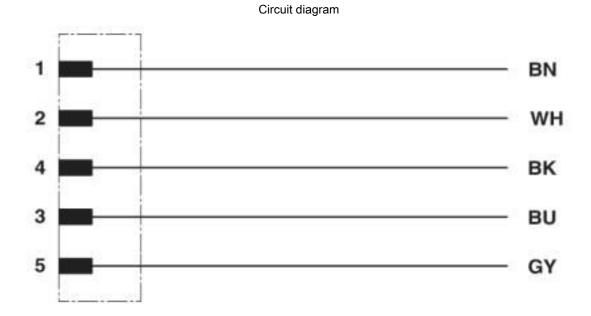




Dimensional drawing

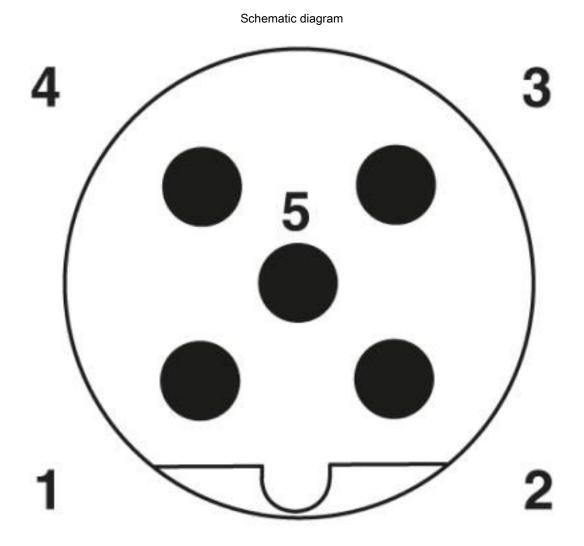
Housing cutout for M20 fastening thread, mounting panel with thread





Contact assignment of the M12 plug and the M12 socket





Pin assignment M12 male connector, 5-pos., B-coded, male 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
eCl@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

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#### Approval details

UL Recognized	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.	htm FILE E 118976
Nominal voltage UN	60 V	
Nominal current IN	4 A	
mm²/AWG/kcmil	22	

EAC	EAC	B.01687
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### Approvals

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	cULus Recognized	c <b>RL</b> us	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm E221474-20140616	
No	minal voltage UN			60 V
No	minal current IN			4 A
mm	n²/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

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