1693788

https://www.phoenixcontact.com/pc/products/1693788

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Sensor/Actuator flush-type socket, 4-pos., M12, A-coded, front/screw mounting with Pg9 thread, with 0.5 m TPE litz wire, 4 x 0.34 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

Commercial Data

Item number	1693788
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Sales Key	02
Product Key	ABQCDB
Catalog Page	Page 35 (C-2-2019)
GTIN	4017918174330
Weight per Piece (including packing)	20.5 g
Weight per Piece (excluding packing)	20 g
Customs tariff number	85444290
Country of origin	DE

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.
	• 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.

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	• 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
Degree of protection	IP67
Ambient temperature (operation)	-25 °C ... 85 °C (Plug / socket)
	-40 °C ... 85 °C (without mechanical actuation)
	-25 °C ... 85 °C
	-40 °C ... 85 °C (cable, fixed installation)

Connector

Insertion/withdrawal cycles	≥ 100

Header 1

Head design	Socket
Head cable outlet	straight
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_N	250 V
Nominal current I_N	4 A

Material specifications

Flammability rating according to UL 94	V0
Sealing material	FKM
Contact material	CuZn

Contact surface material	Ni/Au
Contact carrier material	PA66
Cable gland material	Zinc die-cast, nickel-plated

Connection data

Conductor connection

Connection method	Individual wires

Mounting

Mounting type	Front mounting Pg9

Standards and regulations

M12

Standards/specifications	IEC 61076-2-101

Cable / line

Cable length	0.5 m

Cable structure

Cable type	TPE litz wire
Conductor material	Tin-plated Cu litz wires
Conductor structure signal line	7x 0.25 mm
AWG signal line	22
Material wire insulation	TPE
Thickness, insulation	0.21 mm
Wire diameter incl. insulation	1.2 mm ±0.07 mm
Single wire, color	brown, white, blue, black

Electrical properties

Nominal voltage, cable	300 V
Test voltage, cable	2000 V AC
Conductor resistance	≤ 57.6 Ω/km
Cable insulation resistance	≥ 20 MΩ*km

Ambient conditions

Ambient temperature (operation)	-25 °C ... 85 °C
	-40 °C ... 85 °C (cable, fixed installation)

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Drawings

Dimensional drawing
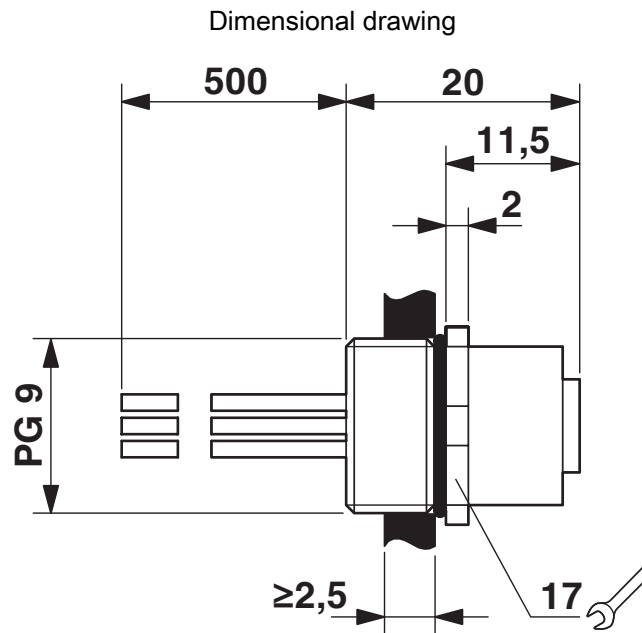
M12 flush-type connector

Dimensional drawing

max.4,5

$\varnothing 15,3^{+0,1}$

$13,5^{+0,1}$

1x45°
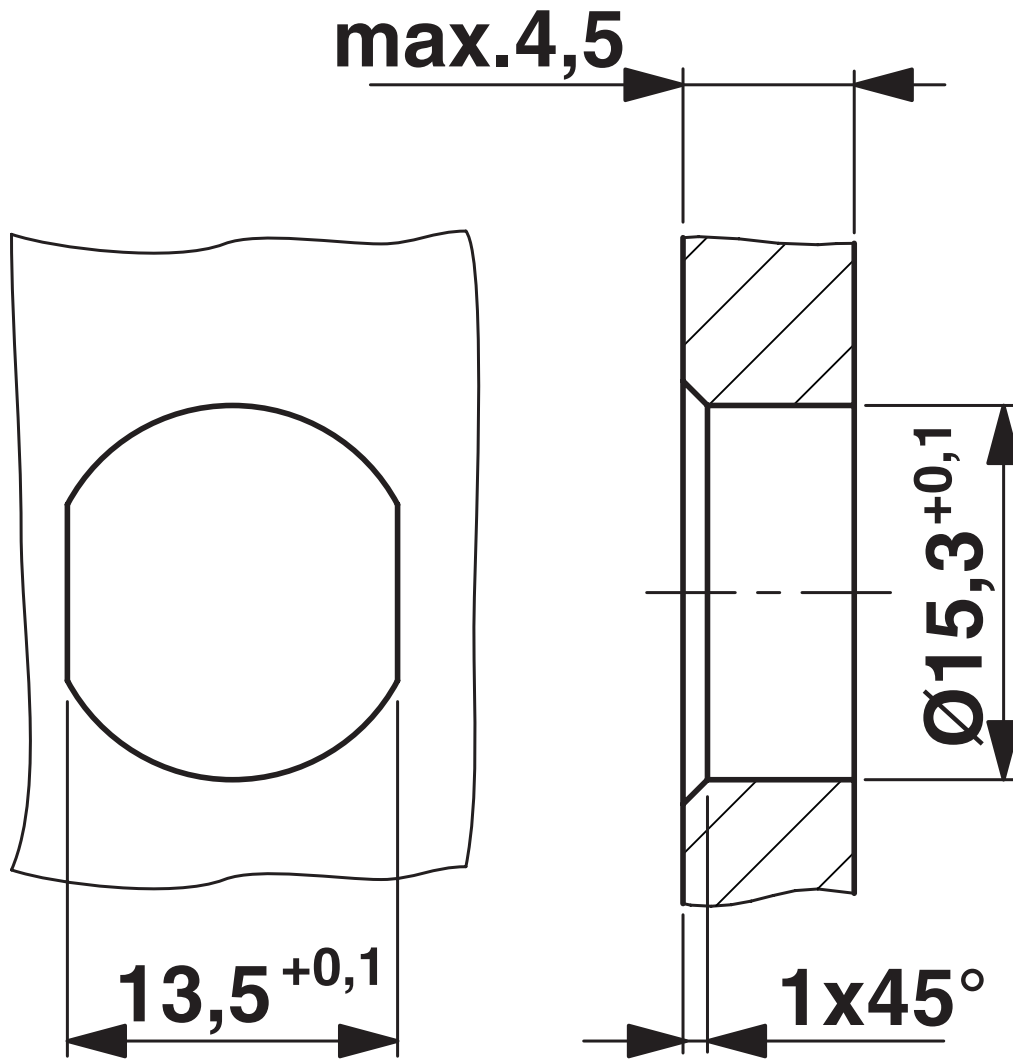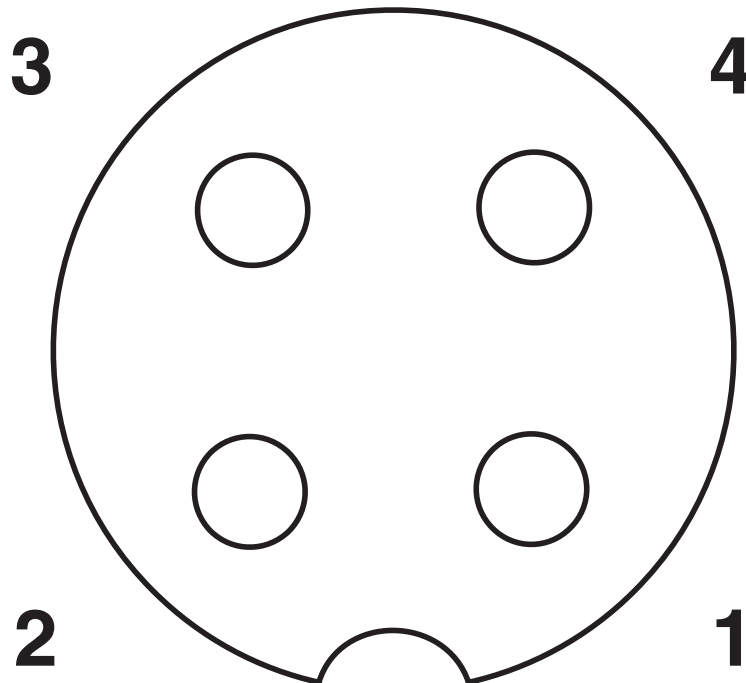
Housing cutout for Pg9 fastening thread, mounting panel with feed-through hole (alternatively with surface as protection against rotation)

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Diagram

I [A]

9
8
7
6
5
4
3
2
1
0

0 10 20 30 40 50 60 70 80 90 100 110 120 130

$\vartheta[°C]$

1 = 4x0,34mm^2
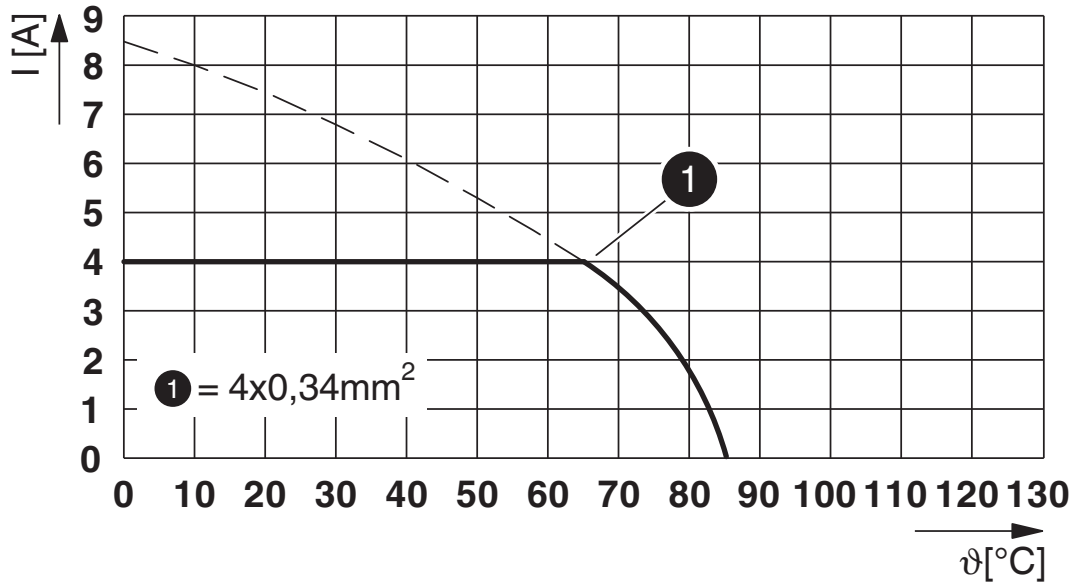
I = current strength, T = ambient temperature

Schematic diagram

3   4

2   1

Pin assignment M12 socket, 4-pos., A-coded, view female side
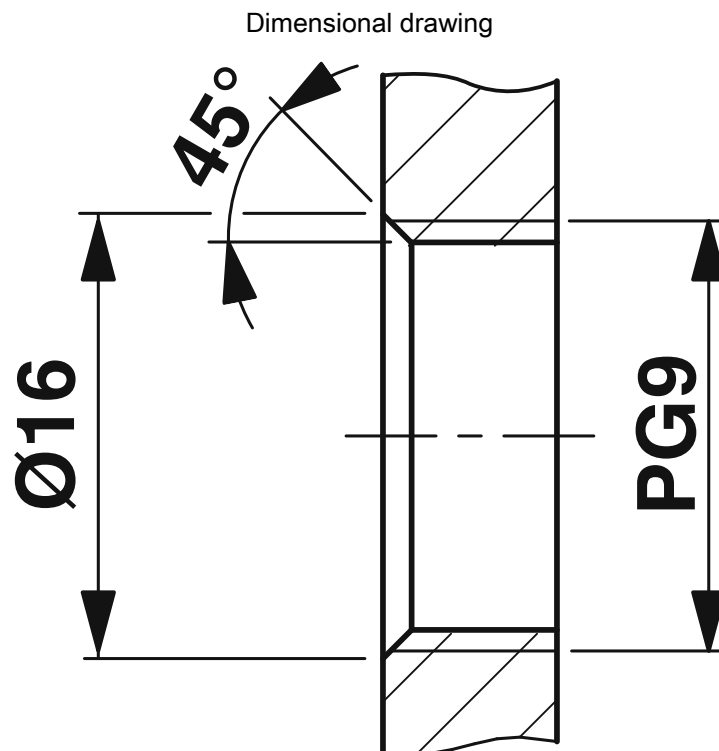
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Circuit diagram

1	BN
2	WH
4	BK
3	BU
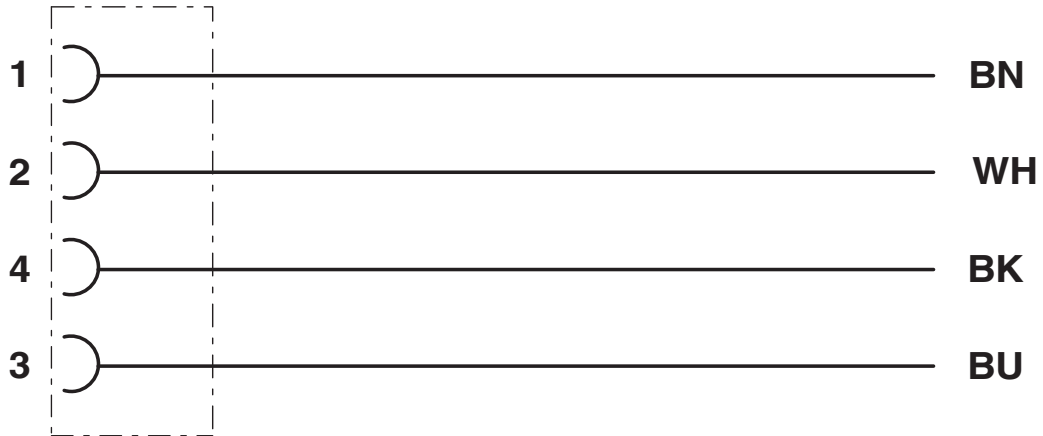
Contact assignment of the M12 plug and the M12 socket

Dimensional drawing

45°

Ø16

PG9

Housing cutout for Pg9 fastening thread, mounting panel with thread

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Approvals

cUL Recognized
Approval ID: FILE E 118976

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	250 V	4 A	- 22	-

UL Recognized
Approval ID: FILE E 118976

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	250 V	4 A	- 22	-

EAC
Approval ID: B.01687

cULus Recognized
Approval ID: E221474-20140616

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	250 V	4 A	22 - 20	-

cULus Recognized

Classifications

ECLASS

ECLASS-9.0	27440102
ECLASS-10.0.1	27440102
ECLASS-11.0	27440102

ETIM

ETIM 8.0	EC002635

UNSPSC

UNSPSC 21.0	39121400

Environmental Product Compliance

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

Panel feed-through - SACC-E-M12FS-4CON-PG9/0,5

Accessories

Screw plug

Screw plug - PROT-M12 - 1680539

https://www.phoenixcontact.com/pc/products/1680539

An M12 screw plug for the unoccupied M12 sockets of the sensor/actuator cable, boxes and flush-type connectors

Screw plug

Screw plug - PROT-M12 SH - 1503302

https://www.phoenixcontact.com/pc/products/1503302

An M12 screw plug for the unoccupied M12 sockets of the shielded sensor/actuator cable, boxes and flush-type connectors

Panel feed-through - SACC-E-M12FS-4CON-PG9/0,5

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Screw plug

Screw plug - PROT-M12 FB - 1555538

https://www.phoenixcontact.com/pc/products/1555538

M12 high-grade steel screw plug, for unoccupied M12 sockets of the sensor/actuator cables, boxes and flush-type connectors for the food industry

Flat gasket

Flat gasket - SACC-PG9-SEAL CLM - 1556320

https://www.phoenixcontact.com/pc/products/1556320

Pg9 flat gasket, for M12 flush-type connectors with Pg9 fastening thread

Panel feed-through - SACC-E-M12FS-4CON-PG9/0,5

Flat nut

Flat nut - SACC-E-MU-PG9 - 1504084

Flat nut with Pg9 thread