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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
- 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



Key Commercial Data

Packing unit	1 pc
GTIN	4 046356 533478
GTIN	4046356533478

Technical data

Dimensions

Length of cable	0.5 m

Ambient conditions

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

General



Technical data

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
Rated voltage	250 V
Rated surge voltage	2.5 kV
Number of positions	4
Insulation resistance	≥ 100 MΩ
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
Thread type	M16 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	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	$\geq 20 \text{ M}\Omega^*\text{km}$



Technical data

Cable

Conductor resistance	\leq 57.6 m Ω /m
Nominal voltage, cable	300 V
Test voltage, cable	3000 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
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 mus 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.



Technical data

Standards and Regulations

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

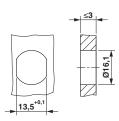
Drawings

Dimensional drawing



Housing cutout for M16 fastening thread, mounting panel with thread

Dimensional drawing



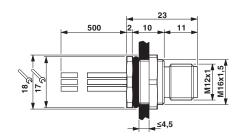
Housing cutout for M16 fastening thread, mounting panel with feed-through hole (alternatively with area as anti-rotation protection for panel thicknesses > 2 mm up to max. 4.5 mm)

Schematic diagram



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

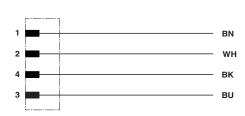
Dimensional drawing

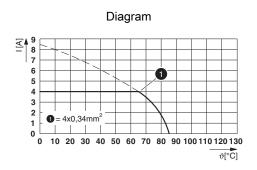


M12 flush-type plug



Circuit diagram





Contact assignment of the M12 plug and the M12 socket

I = current strength, T = ambient temperature

Classifications

eCl@ss

eCl@ss 10.0.1	27440102
eCl@ss 11.0	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 9.0	27440102

ETIM

ETIM 2.0	EC001297
ETIM 3.0	EC002061
ETIM 4.0	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



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Approvals

UL Recognized / EAC / cULus Recognized

Ex Approvals

Approval details

UL Recognized	http://database.ul.co	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 []

cULus Recognized CTUs	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm E221474-20140616	
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



Accessories

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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