

1419991

https://www.phoenixcontact.com/us/products/1419991

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Flush-type connector, 4-position, M12, Front mounting, Square flange, Individual wires, cable length: 0.5 m, 0.34 mm<sup>2</sup>, TPE litz wire

#### 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

#### **Commercial Data**

Item number	1419991		
Packing unit	1 pc		
Minimum order quantity	1 pc		
Note	Made to Order (non-returnable)		
Sales Key	A11		
Product Key	ABQCDC		
Catalog Page	Page 43 (C-2-2019)		
GTIN	4046356533812		
Weight per Piece (including packing)	24.1 g		
Weight per Piece (excluding packing)	23.1 g		
Customs tariff number	85444290		
Country of origin	DE		



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#### **Technical Data**

#### Notes

Notes	on	opera	tion
140103	011	opoid	LIOII

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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	<ul> <li>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</li> </ul>
	<ul> <li>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).</li> </ul>
Product properties	
Product type	Circular connectors (device side)
Number of positions	4
No. of cable outlets	1
Shielded	no
Coding	A - standard
Thread type	M12
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 (Cable, flexible installation)
	-40 °C 85 °C (cable, fixed installation)
Connector	
Insertion/withdrawal cycles	> 100
Connection 1	
Head thread type	M12
nead tillead type	WIZ
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	
Flammability rating according to UL 94	Vo
Sealing material	FKM
Material of grip body	Zinc die-cast, nickel-plated
Contact material	CuZn
Contact surface material	Ni/Au



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Contact carrier material	PA 6.6	
Cable gland material	Zinc die-cast, nickel-plated	

#### Connection data

#### Conductor connection

Connection method	Individual wires	
Type of contact	Crimp contacts	
Conductor cross section	0.34 mm²	
Tightening torque	3 Nm	
	4 Nm	

#### Mounting

Mounting type Front mou	inting Square flange
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#### Standards and regulations

#### M12

Standards/specifications	IEC 61076-2-101
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#### Cable / line

Cable length	0.5 m	
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 (Core insulation)	
Wire diameter incl. insulation	1.2 mm ±0.07 mm	
Single wire, color	brown, white, blue, black	
Nominal voltage, cable	300 V	
Test voltage, cable	2000 V AC	
Conductor resistance	≤ 57.6 mΩ/m	
Cable insulation resistance	≥ 20 MΩ*km	
Ambient temperature (operation)	-40 °C 85 °C (cable, fixed installation)	
	-25 °C 85 °C (Cable, flexible installation)	

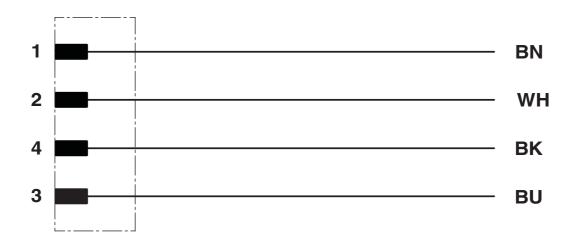


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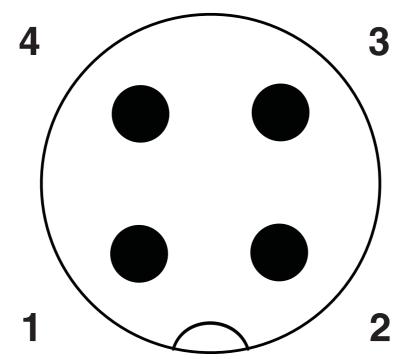
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### **Drawings**

#### Circuit diagram



### Schematic diagram

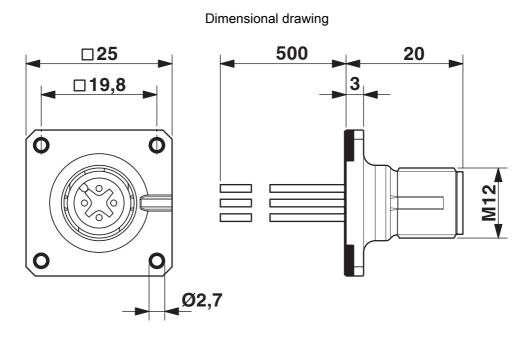


Pin assignment M12 plug, 4-pos., A-coded, view plug side

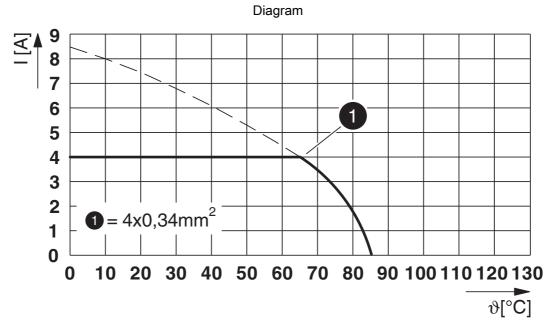


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#### M12 flush-type plug



I = current strength, T = ambient temperature



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### Approvals

. <b>7.1</b>	<b>cUL Recognized</b> Approval ID: FILE E 118	976			
		Nominal Voltage U <sub>N</sub>	Nominal Current I <sub>N</sub>	Cross Section AWG	Cross Section mm <sup>2</sup>
		250 V	4 A	- 22	-

<b>71</b>	UL Recognized Approval ID: FILE E 118976				
		Nominal Voltage U <sub>N</sub>	Nominal Current I <sub>N</sub>	Cross Section AWG	Cross Section mm <sup>2</sup>
		250 V	4 A	- 22	-

EHC	EAC
LIIL	Approval ID: B.01687

CULus Recognized Approval ID: E221474-20140616					
		Nominal Voltage U <sub>N</sub>	Nominal Current I <sub>N</sub>	Cross Section AWG	Cross Section mm <sup>2</sup>
		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	
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

#### Sealing cap

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

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