

1027686

https://www.phoenixcontact.com/us/products/1027686

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Device connector front mounting, PROFINET CAT5 (IEC 11801:2002), 4-position, Socket, straight, M12-Push-pull external locking, coding: D, on free cable end, Front mounting, M16 x 1. 5, Individual wires, cable length: 0.5 m,  $0.34 \text{ mm}^2$ , TPE litz wire

### Your advantages

- · Established M12 standard for secure transmission of signals, data, and power
- · Easy and quick cabling of devices and systems in hard-to-reach areas
- · Manufacturer-independent M12 push-pull locking system for maximum availability
- · Reliable shield connection even under extreme mechanical strain
- Compatible with connectors with screw or push-in connection

#### Commercial data

Item number	1027686
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB24
Product key	ABQCBB
Catalog page	Page 36 (C-2-2019)
GTIN	4055626533971
Weight per piece (including packing)	32.78 g
Weight per piece (excluding packing)	23.5 g
Customs tariff number	85444290
Country of origin	DE



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### 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.
General	Push-pull external locking
General	Contact connection method: Crimp connection
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.
	<ul> <li>WARNING: Commission properly functioning products only.</li> <li>The products must be regularly inspected for damage.</li> <li>Decommission defective products immediately. Replace damaged products. Repairs are not possible.</li> </ul>
	<ul> <li>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.</li> </ul>
	<ul> <li>The products are suitable for applications in plant, controller, and electrical device engineering.</li> </ul>
	<ul> <li>When operating the connectors in outdoor applications, they must be separately protected against environmental influences.</li> </ul>
	<ul> <li>Assembled products may not be manipulated or improperly opened.</li> </ul>
	<ul> <li>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).</li> </ul>
	<ul> <li>When using the product in direct connection with third-party manufacturers, the user is responsible.</li> </ul>
	<ul> <li>For operating voltages &gt; 50 V AC, conductive connector housings must be grounded</li> </ul>
	<ul> <li>Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards.</li> </ul>
	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

• Use a protective cap to protect connectors that are not in use.

• Only use tools recommended by Phoenix Contact



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	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.
	<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>
Mounting	
Mounting type	Front mounting M16 x 1.5
Product properties	
Product type	Circular connectors (device side)
Application	Data
	Signal
Sensor type	PROFINET
Number of positions	4
No. of cable outlets	1
Shielded	no
Coding	D
Thread type	M12
Data management status	
Article revision	07
Insulation characteristics	
Overvoltage category	II .
Degree of pollution	3
Material specifications	
Material	Brass, nickel-plated
Flammability rating according to UL 94	V0
Seal material	NBR/FKM
Material of grip body	Brass, nickel-plated
Contact material	CuZn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Material for screw connection	Brass, nickel-plated
Conductor material	Tin-plated Cu litz wires
Electrical properties	
Rated surge voltage	2.5 kV



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Contact resistance	≤ 3 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage U <sub>N</sub>	250 V (AC)
	250 V (DC)
Nominal current I <sub>N</sub>	4 A
Transmission medium	Copper
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Max. conductor resistance	57.6 mΩ/m

### Connection data

#### Conductor connection

Connection method	Individual wires
Contact connection type	Socket
Conductor cross section	0.34 mm²
Tightening torque	3 Nm 4 Nm (Installation-side)

### Mechanical properties

### Mechanical data

Insertion/withdrawal cycles	> 100

#### Connector

#### Connection 1

Head design	Socket
Head cable outlet	straight
Head thread type	M12
Head locking type	Push-pull external locking
Coding	D

## Connection 2

Head design	free cable end
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### Cable/line

Cable length	0.5 m
Cable type	TPE litz wire
Signal type/category	PROFINET CAT5 (IEC 11801:2002)
Wire diameter incl. insulation	1.2 mm ±0.07 mm
Single wire, color	yellow, orange, white, blue
Cable cross section	0.34 mm²
Conductor material	Tin-plated Cu litz wires
Conductor structure signal line	7x 0.25 mm
AWG signal line	22
Material wire insulation	TPE



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Thickness, insulation	0.21 mm (Core insulation)
Nominal voltage, cable	300 V
Test voltage, cable	2000 V AC
Cable 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)

### Environmental and real-life conditions

#### Ambient conditions

Degree of protection	IP67
	IP65/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)

### Standards and regulations

#### M12

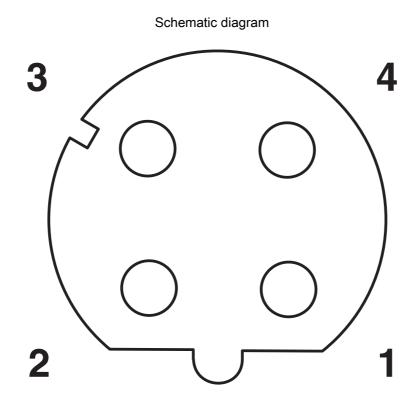
Standard designation	M12 connector
Standards/specifications	IEC 61076-2-010
Note	Push-pull (type 2)



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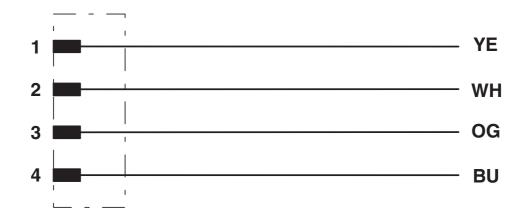
https://www.phoenixcontact.com/us/products/1027686

# Drawings



Pin assignment M12 socket, 4-pos., D-coded, female side

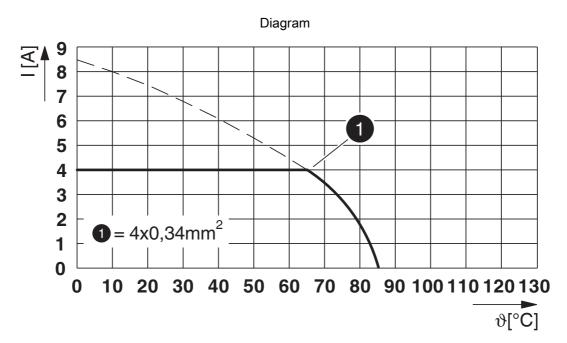
Circuit diagram





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I = current strength, T = ambient temperature



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## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1027686

c <b>F11</b> us	<b>cULus Recognized</b> 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	-



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## Classifications

UNSPSC 21.0

### **ECLASS**

202.00				
27440103				
27440103				
27440103				
ETIM				
EC003570				
UNSPSC				

39121400



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# Environmental product compliance

EU RoHS					
Fulfills EU RoHS substance requirements	Yes, No exemptions				
China RoHS					
Environment friendly use period (EFUP)	EFUP-E				
	No hazardous substances above the limits				
EU REACH SVHC					
REACH candidate substance (CAS No.)	No substance above 0.1 wt%				



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### Accessories

SACC-E-MU-M16 - Flat nut

1504097

https://www.phoenixcontact.com/us/products/1504097

Flat nut, Screw mounting, M16 x 1.5, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1239863



### SACC-M16-SEAL CLM - Flat gasket

1430394

https://www.phoenixcontact.com/us/products/1430394

M16 flat gasket for M12 flush-type connectors with M16 fastening thread





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### PROT-M12 - Screw plug

1680539

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



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

### PROT-M12 SH - Screw plug

1503302

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



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



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PROT-M12 FB - Screw plug

1555538

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

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