

SACC-E-M12FSD-4P-M16XL/0,5 - Device connector front mounting



1411569

<https://www.phoenixcontact.com/us/products/1411569>

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Device connector front mounting, PROFINET CAT5 (IEC 11801:2002), 4-position, Socket, straight, M12-Standard, coding: D, on free cable end, Front mounting, M16 x 1.5, Individual wires, cable length: 0.5 m, 0.34 mm², TPE litz wire

Your advantages

- Easy-to-install, optimized XL housing contour with wrench size 19
- Mechanical tightening limitation for long-term-stable gasket
- Preassembled 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	1411569
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB24
Product key	ABQCFB
Catalog page	Page 39 (C-2-2019)
GTIN	4046356936088
Weight per piece (including packing)	32.5 g
Weight per piece (excluding packing)	23.1 g
Customs tariff number	85444290
Country of origin	DE

SACC-E-M12FSD-4P-M16XL/0,5 - Device connector front mounting



1411569

<https://www.phoenixcontact.com/us/products/1411569>

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.
Notes on operation	This product corresponds to the PROFINET Cabling and Interconnection Technology Guideline for PROFINET regulations, version 2.00, order no: 2.252, Chapter 8.2 Connectors for Outside Environment (Balanced cabling)
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. • 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
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SACC-E-M12FSD-4P-M16XL/0,5 - Device connector front mounting



1411569

<https://www.phoenixcontact.com/us/products/1411569>

- 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](https://www.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).

Mounting

Mounting type	Front mounting M16 x 1.5 XL version, tightening limitation
Assembly instructions	XL version, tightening limitation

Product properties

Product type	Circular connectors (device side)
Application	Signal
Sensor type	PROFINET
Number of positions	4
No. of cable outlets	1
Shielded	no
Coding	D
Thread type	M12

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Material specifications

Flammability rating according to UL 94	V0
Seal material	FKM
Contact material	CuZn
Contact surface material	Au
Contact carrier material	PA 6.6
Material for screw connection	Zinc die-cast, nickel-plated
Conductor material	Tin-plated Cu litz wires

Electrical properties

Rated surge voltage	2.5 kV
Contact resistance	≤ 3 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage U_N	250 V (AC)

SACC-E-M12FSD-4P-M16XL/0,5 - Device connector front mounting



1411569

<https://www.phoenixcontact.com/us/products/1411569>

	250 V (DC)
Nominal current I_N	4 A
Transmission medium	Copper
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Max. conductor resistance	57.6 Ω /km

Connection data

Conductor connection

Connection method	Individual wires
Contact connection type	Socket
Conductor cross section	0.34 mm ²
Tightening torque	0.8 Nm ... 1.3 Nm (Installation-side)

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	> 100
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Connector

Connection 1

Head design	Socket
Head cable outlet	straight
Head thread type	M12
Head locking type	Standard
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 $\pm$ 0.07 mm
Single wire, color	yellow, orange, white, blue
Cable cross section	0.34 mm ²
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)
Nominal voltage, cable	300 V
Test voltage, cable	2000 V AC

SACC-E-M12FSD-4P-M16XL/0,5 - Device connector front mounting



1411569

<https://www.phoenixcontact.com/us/products/1411569>

Cable resistance	≤ 57.6 Ω/km
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	according to IEC 61076-2-101

SACC-E-M12FSD-4P-M16XL/0,5 - Device connector front mounting

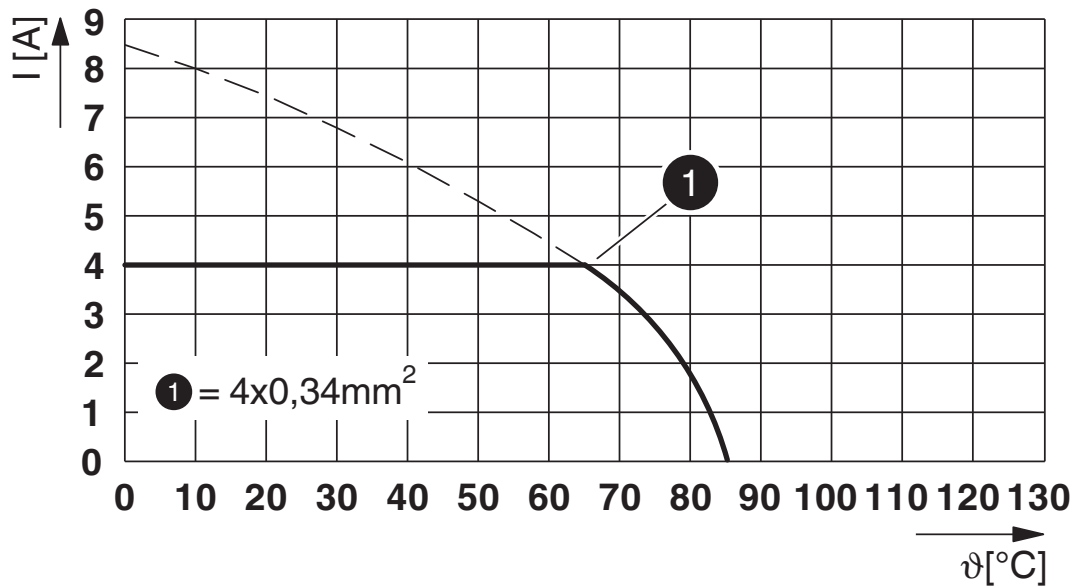


1411569

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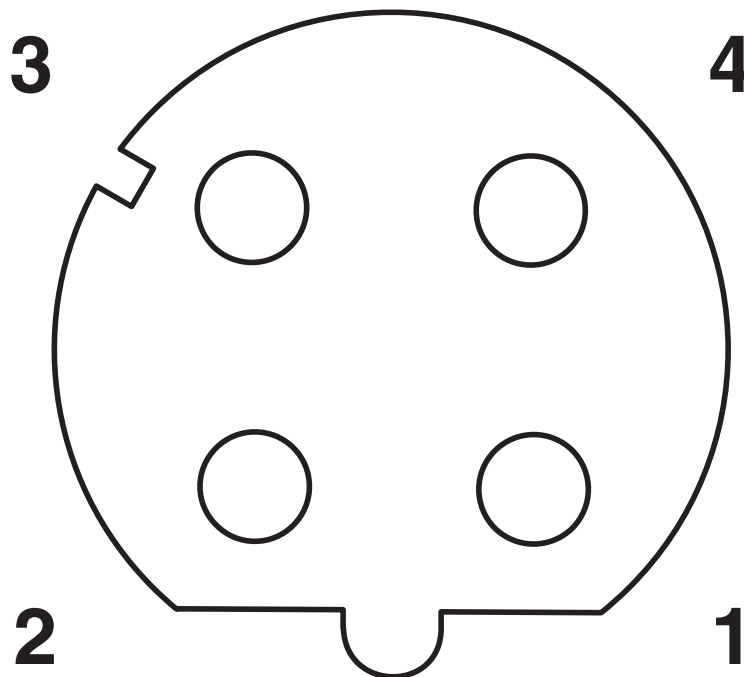
Drawings

Diagram



I = current strength, T = ambient temperature

Schematic diagram



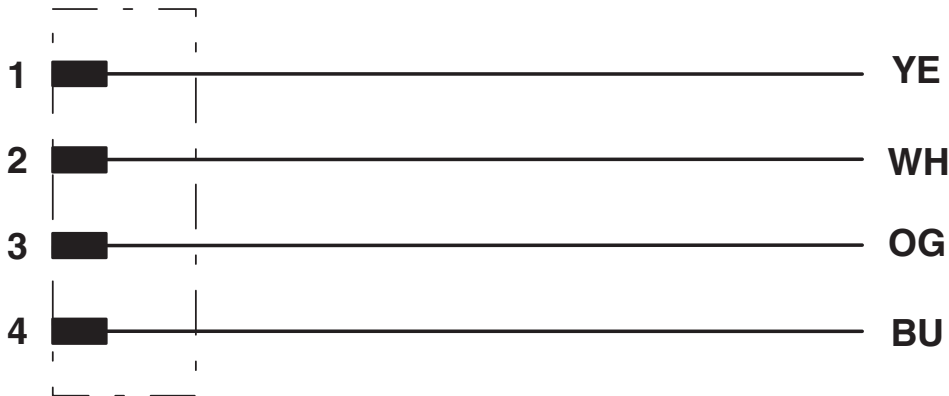
Pin assignment M12 socket, 4-pos., D-coded, female side

SACC-E-M12FSD-4P-M16XL/0,5 - Device connector
front mounting



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Circuit diagram



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Approvals

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	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	-

SACC-E-M12FSD-4P-M16XL/0,5 - Device connector front mounting



1411569

<https://www.phoenixcontact.com/us/products/1411569>

Classifications

ECLASS

ECLASS-11.0	27440102
ECLASS-12.0	27440116
ECLASS-13.0	27440116

ETIM

ETIM 9.0	EC002635
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UNSPSC

UNSPSC 21.0	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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1411569

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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



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



SACC-E-M12FSD-4P-M16XL/0,5 - Device connector front mounting



1411569

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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

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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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com