

SACC-E-M12FS-4CON-PG9/2,0 - Device connector front mounting



1406413

<https://www.phoenixcontact.com/us/products/1406413>

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Device connector front mounting, Universal, 4-position, Socket, straight, M12-Standard, coding: A, on free cable end, Front mounting, Pg9, Individual wires, cable length: 2 m, TPE litz wire

Your advantages

- 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	1406413
Packing unit	1 pc
Minimum order quantity	50 pc
Sales key	AB24
Product key	ABQCFE
GTIN	4046356764032
Weight per piece (including packing)	46.9 g
Weight per piece (excluding packing)	46 g
Customs tariff number	85444290
Country of origin	DE

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Technical data

Notes

General	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	<p data-bbox="849 819 1452 902">WARNING: The connectors may not be plugged in or disconnected under load. Ignoring the warning or improper use may damage persons and/or property.</p> <ul data-bbox="849 920 1469 2087" style="list-style-type: none"><li data-bbox="849 920 1469 1025">• 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.<li data-bbox="849 1043 1469 1238">• 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 data-bbox="849 1256 1469 1308">• The products are suitable for applications in plant, controller, and electrical device engineering.<li data-bbox="849 1326 1469 1377">• When operating the connectors in outdoor applications, they must be separately protected against environmental influences.<li data-bbox="849 1395 1469 1447">• Assembled products may not be manipulated or improperly opened.<li data-bbox="849 1464 1469 1547">• 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 data-bbox="849 1565 1469 1617">• When using the product in direct connection with third-party manufacturers, the user is responsible.<li data-bbox="849 1635 1469 1686">• For operating voltages > 50 V AC, conductive connector housings must be grounded<li data-bbox="849 1704 1469 1787">• Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards.<li data-bbox="849 1805 1469 1962">• Observe the corresponding technical data. You will find information:<ul data-bbox="849 1850 1469 1962" style="list-style-type: none"><li data-bbox="849 1850 1469 1879">o On the product<li data-bbox="849 1883 1469 1912">o On the packing label<li data-bbox="849 1917 1469 1946">o In the supplied documentation<li data-bbox="849 1951 1469 1962">o Online at phoenixcontact.com/products under the product<li data-bbox="849 1980 1469 2009">• Only use tools recommended by Phoenix Contact<li data-bbox="849 2027 1469 2087">• 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

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	<ul style="list-style-type: none">• 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).
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Mounting

Mounting type	Front mounting Pg9
Connection method	Individual wires

Product properties

Product type	Circular connectors (device side)
Sensor type	Universal
Number of positions	4
No. of cable outlets	1
Shielded	no
Coding	A
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	Ni/Au
Contact carrier material	PA 66
Material for screw connection	Zinc die-cast, nickel-plated
Conductor material	Tin-plated Cu litz wires

Electrical properties

Rated surge voltage	2.5 kV AC
Contact resistance	≤ 3 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage U _N	250 V (AC) 250 V (DC)
Nominal current I _N	4 A
Max. conductor resistance	57.6 Ω/km

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Connection data

Conductor connection

Connection method	Individual wires
Contact connection type	Crimp contacts
Conductor cross section	0.34
Tightening torque	3 Nm
	4 Nm

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	A

Connection 2

Head design	free cable end
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Cable/line

Cable length	2 m
Cable type	TPE litz wire
Signal type/category	Universal
Wire diameter incl. insulation	1.2 mm ±0.07 mm
Single wire, color	brown, white, blue, black
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
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

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Environmental and real-life conditions

Ambient conditions

Degree of protection	IP67
	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)

Standards and regulations

M12

Standard designation	M12 connector
Standards/specifications	according to IEC 61076-2-101

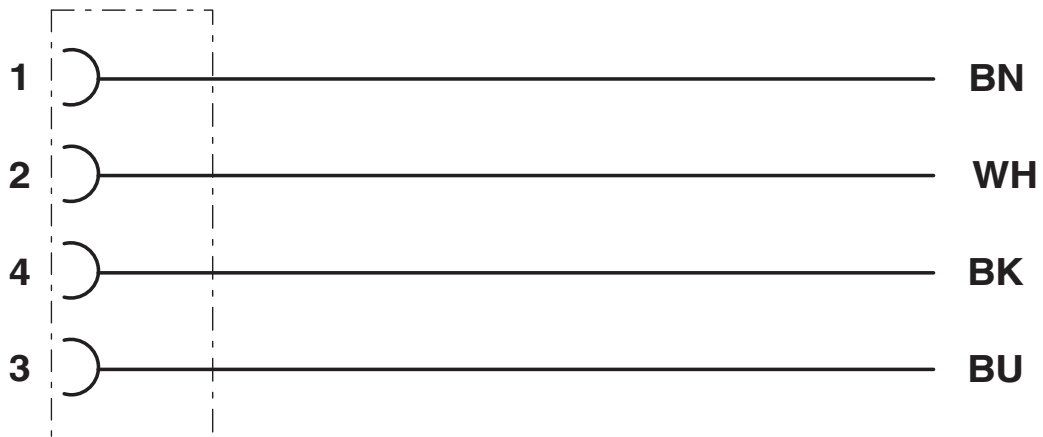
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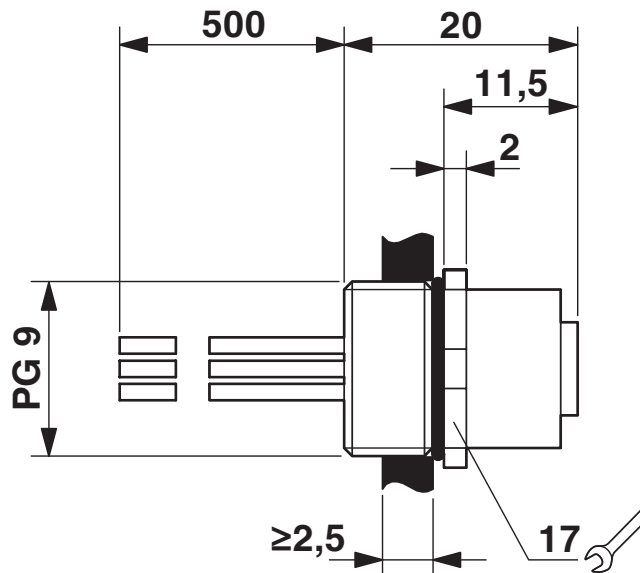
<https://www.phoenixcontact.com/us/products/1406413>

Drawings

Circuit diagram



Dimensional drawing



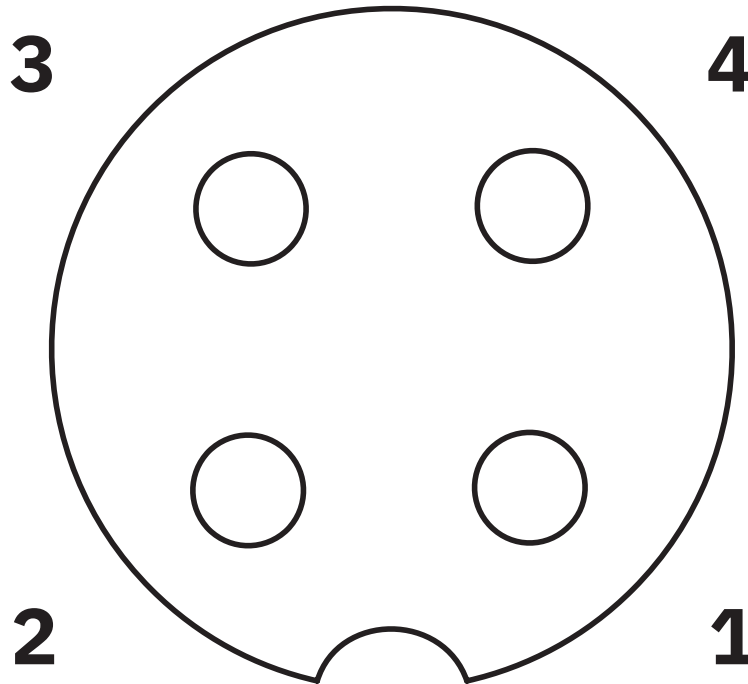
Dimensional drawing

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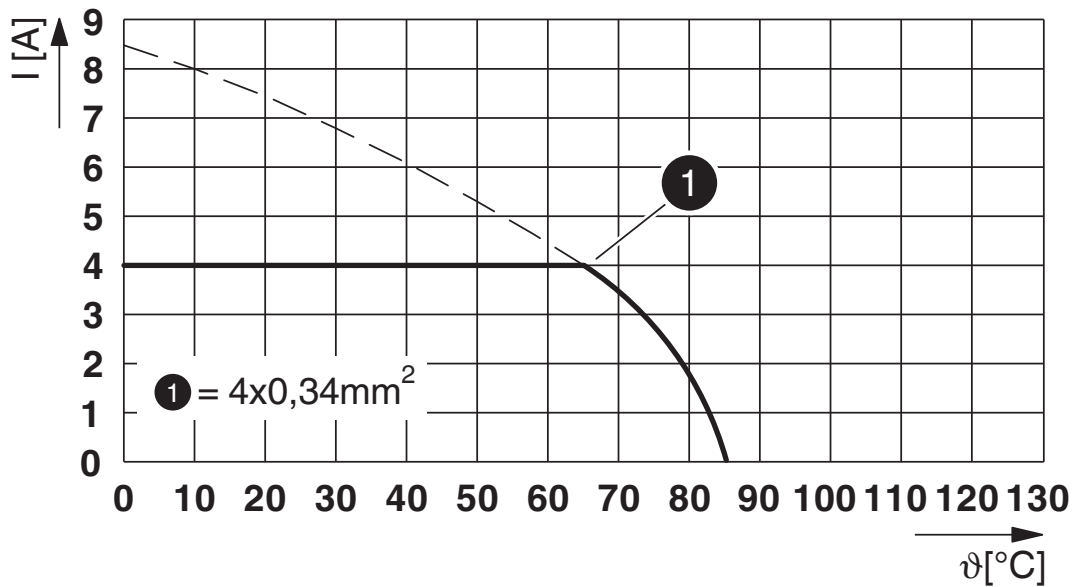
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Schematic diagram



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

Diagram



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/1406413>

 cUL Recognized Approval ID: E118976-20100522	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	250 V	4 A	- 22	-

 UL Recognized Approval ID: E118976-20100522	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
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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	-

cULus Recognized

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Classifications

ECLASS

ECLASS-11.0	27440103
ECLASS-12.0	27440103
ECLASS-13.0	27440103

ETIM

ETIM 8.0	EC003570
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UNSPSC

UNSPSC 21.0	39121400
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Environmental product compliance

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

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Accessories

SACC-E-MU-PG9 - Flat nut

1504084

<https://www.phoenixcontact.com/us/products/1504084>

Flat nut, Screw mounting, Pg9, cable gland Pg9, Alternative product in accordance with RoHS II without Exemption 6c (Pb <0.1%) item no.: 1239862



SACC-PG9-SEAL CLM - Flat gasket

1556320

<https://www.phoenixcontact.com/us/products/1556320>

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