

# SACC-E-M12MS-5CON-PG9/0,5 - Device connector front mounting



1671111

<https://www.phoenixcontact.com/de/produkte/1671111>

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Device connector front mounting, Universal, 5-position, Flush-type male connector, straight, M12-Standard, coding: A , on free cable end, Front mounting, Pg9, Individual wires, cable length: 0.5 m, 0.34 mm<sup>2</sup>, 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	1671111
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	C1 - Sensor-Aktor-Kabel
Product Key	ABQCEE
Catalog Page	Page 35 (C-2-2019)
GTIN	4017918134969
Weight per Piece (including packing)	21,17 g
Weight per Piece (excluding packing)	20,8 g
Customs tariff number	85366990
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	
Safety note	<p>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 style="list-style-type: none"><li>• 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><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><li>• The products are suitable for applications in plant, controller, and electrical device engineering.</li><li>• When operating the connectors in outdoor applications, they must be separately protected against environmental influences.</li><li>• Assembled products may not be manipulated or improperly opened.</li><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 <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a>).</li><li>• When using the product in direct connection with third-party manufacturers, the user is responsible.</li><li>• For operating voltages &gt; 50 V AC, conductive connector housings must be grounded</li><li>• Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards.</li><li>• Observe the corresponding technical data. You will find information:<ul style="list-style-type: none"><li>o On the product</li><li>o On the packing label</li><li>o In the supplied documentation</li><li>o Online at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a> under the product</li></ul></li><li>• Only use tools recommended by Phoenix Contact</li><li>• 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 <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a></li></ul>

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	<ul style="list-style-type: none"> <li>• Ensure that the protective or functional ground has been properly connected.</li> <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> <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>
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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	5
Application	Signal
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 6.6
Material for screw connection	Zinc die-cast, nickel-plated
Conductor material	Tin-plated Cu litz wires

## Electrical properties

Rated surge voltage	1.5 kV
Contact resistance	≤ 3 mΩ
Insulation resistance	> 100 MΩ
Nominal voltage $U_N$	60 V (AC)
	60 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
Type of contact	Crimp contacts
Conductor cross section	0.34 mm <sup>2</sup>
Tightening torque	3 Nm 4 Nm

## Mechanical properties

### Mechanical data

Insertion/withdrawal cycles	> 100
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## Connector

### Connection 1

Head design	Flush-type male connector
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	0.5 m
Cable type	TPE litz wire
Signal type/category	Universal
Wire diameter incl. insulation	1.2 mm ±0.07 mm
Single wire, color	black, brown, blue, white, gray
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
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 (Cable, flexible installation)

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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 (Cable, flexible installation)
	-40 °C ... 85 °C (cable, fixed installation)

## Standards and regulations

### M12

Standards/specifications	IEC 61076-2-101
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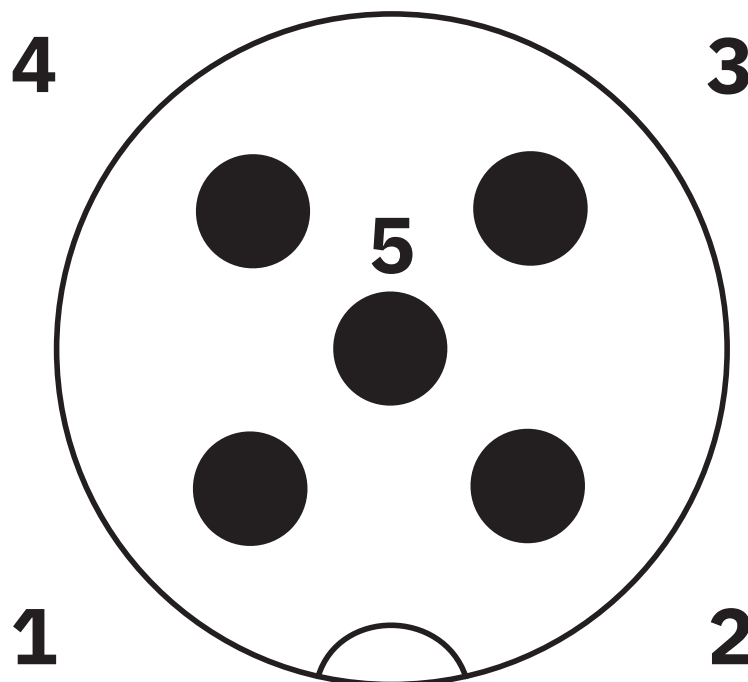
<https://www.phoenixcontact.com/de/produkte/1671111>

## Drawings

Circuit diagram



Schematic diagram



Pin assignment M12 male connector, 5-pos., A-coded, male side

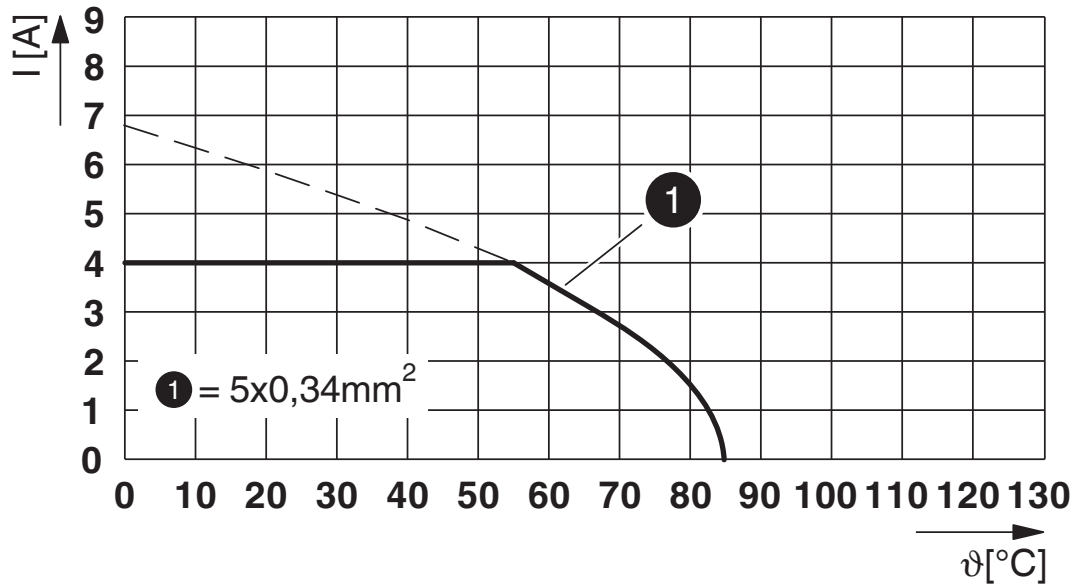
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Diagram



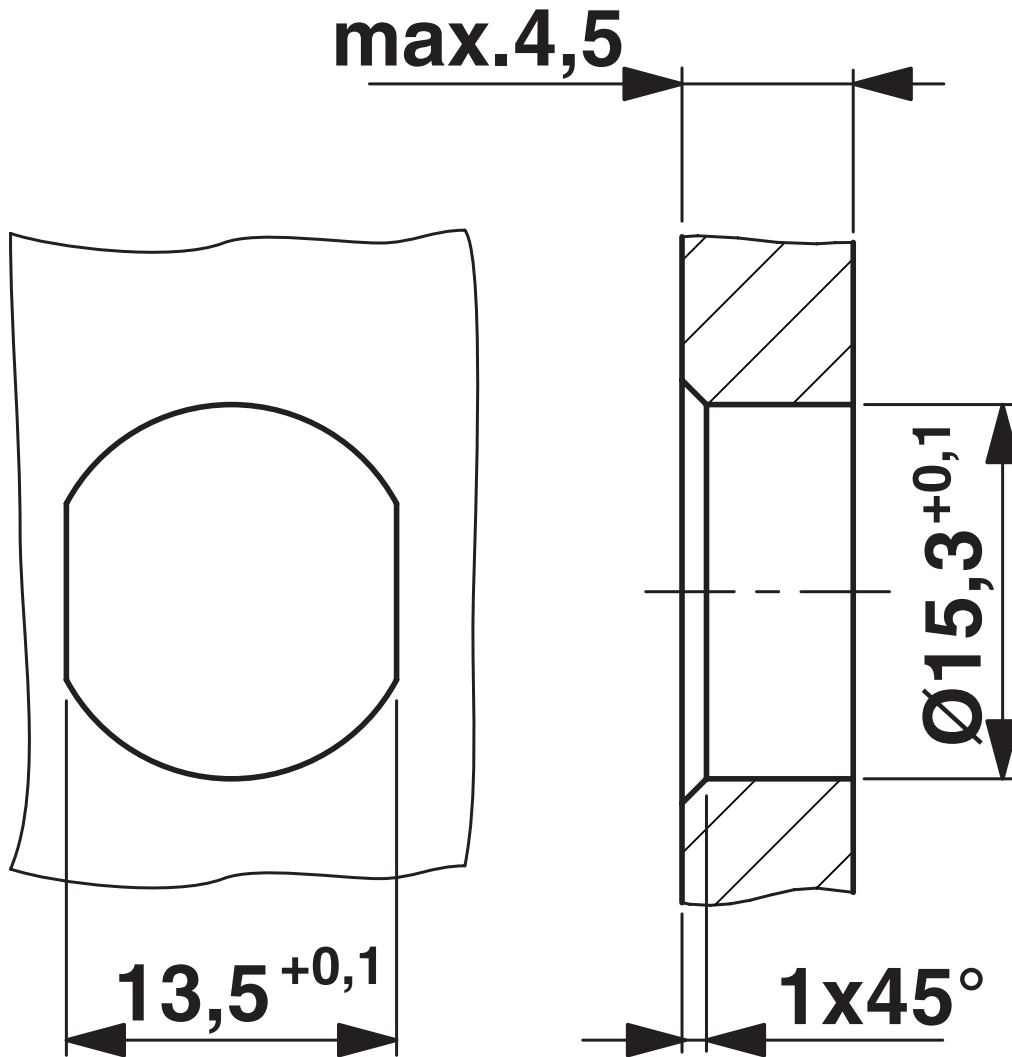
I = current strength, T = ambient temperature

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Dimensional drawing



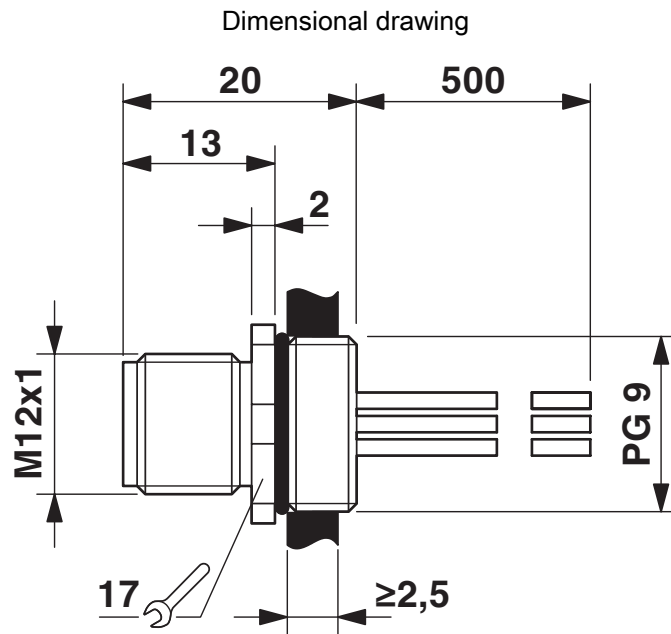
Housing cutout for Pg9 fastening thread, mounting panel with feed-through hole (alternatively with surface as protection against rotation)



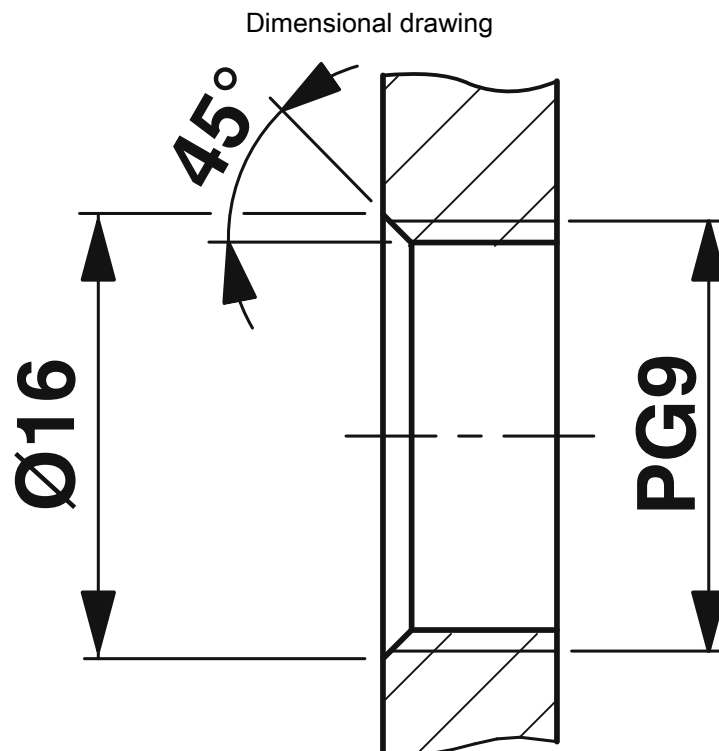
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Dimensional drawing



Housing cutout for Pg9 fastening thread, mounting panel with thread

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/de/produkte/1671111>

 <b>cUL Recognized</b> Approval ID: E118976-20100522				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $mm^2$
	60 V	4 A	- 22	-

 <b>UL Recognized</b> Approval ID: E118976-20100522				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $mm^2$
	60 V	4 A	- 22	-

 <b>EAC</b> Approval ID: B.01687				
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 <b>cULus Recognized</b> Approval ID: E221474-20140616				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $mm^2$
	60 V	4 A	22 - 20	-

# SACC-E-M12MS-5CON-PG9/0,5 - Device connector front mounting



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## Classifications

### ECLASS

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

### ETIM

ETIM 8.0	EC002635
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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/de/produkte/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



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### SACC-PG9-SEAL CLM - Flat gasket

1556320

<https://www.phoenixcontact.com/de/produkte/1556320>

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



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## PROT-M12 FS - Sealing cap

1560251

<https://www.phoenixcontact.com/de/produkte/1560251>



M12 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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## PROT-M12 FS-M - Sealing cap

1430488

<https://www.phoenixcontact.com/de/produkte/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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## SACC-M16-NUT-VA - Flat nut

1404983

<https://www.phoenixcontact.com/de/produkte/1404983>

Flat nut with M16 thread



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