

# SACCBP-MSB-5CON-PG9/5,0-900SCO - Bus system flush-type plug



1437672

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Bus system flush-type male connector, INTERBUS, 5-pos., M12, shielded, B-coded, SPEEDCON, rear/screw mounting with Pg9 thread, with 5.0 m bus line



## Your advantages

- Preassembled with cables in various standard lengths for immediate use
- Customer-specific assemblies and cable lengths can be supplied
- Sealed on the cable side for optimum tightness of seal
- Cable designs for all common networks and fieldbuses
- For high transmission safety: shield connection to the housing with optional EMC nut

## Commercial data

Item number	1437672
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	AB25
Product key	ABQYAA
GTIN	4046356458412
Weight per piece (including packing)	222.22 g
Weight per piece (excluding packing)	222.22 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.
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### Safety note

Safety note	<p><b>WARNING:</b> 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>• <b>WARNING:</b> 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>• <b>WARNING:</b> 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>◦ On the product</li><li>◦ On the packing label</li><li>◦ In the supplied documentation</li><li>◦ 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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- 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

Tightening torque	2 Nm ... 3 Nm (Installation-side)
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## Product properties

Product type	Circular connectors (device side)
Sensor type	INTERBUS
Number of positions	5
No. of cable outlets	1
Shielded	yes
Coding	B

## Insulation characteristics

Overvoltage category	II
Degree of pollution	3

## Material specifications

Flammability rating according to UL 94	V0
Seal material	FKM
Outer sheath, material	PUR

## Electrical properties

Rated surge voltage	1.5 kV
Insulation resistance	100 MΩ
Nominal voltage $U_N$	48 V AC
	60 V DC
Nominal current $I_N$	4 A
Transmission medium	Copper
Transmission speed	16 Mbps

## Mechanical properties

Mechanical data	
Insertion/withdrawal cycles	> 100

## Connector

### Connection 1

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Head design	Plug
Head cable outlet	straight
Head thread type	M12
Head locking type	SPEEDCON
Coding	B

Connection 2

Head design	free cable end
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Cable/line

Cable length	5 m
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INTERBUS [900]

Dimensional drawing



Shielded	yes
Cable weight	70 kg/km
Cable type	INTERBUS
Cable type (abbreviation)	900
Signal type/category	INTERBUS
Cable structure	3 x 2 x 0.22 mm <sup>2</sup>
External cable diameter	8.00 mm
Outer sheath, material	PUR
External sheath, color	may green RAL 6017
Conductor material	Bare Cu litz wires
Conductor structure signal line	32x 0.10 mm
AWG signal line	24
Conductor cross section	3x 2x 0.22 mm <sup>2</sup>
Material wire insulation	PE
Single wire, color	green-yellow, white-brown, gray-pink
Twisted pairs	2 cores to the pair
Overall twist	3 pairs to the core
Shielding	Braided copper wires
Nominal voltage, cable	250 V (Peak value, not for high-power applications)
Test voltage Core/Core	1500 V <sub>rms</sub>
Test voltage Core/Shield	1000.00 V <sub>rms</sub>
Cable insulation resistance	≥ 5 GΩ*km

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Coupling resistance	< 250.00 mΩ/m (at 30 MHz)
Wave impedance	120 Ω ±20 % (at 64 kHz)
	100 Ω ±15 % (with 1 MHz)
Loop resistance	≤ 159.80 Ω/km
Cable capacity	≤ 60 nF/km (At 800 Hz)
Signal speed	0.66 c
Minimum bending radius, fixed installation	7.5 x D
Minimum bending radius, flexible installation	15 x D
Number of bending cycles	5000000
Bending radius	120 mm
Traversing path	10 m
Traversing rate	1.6 m/s
Acceleration	3.2 m/s <sup>2</sup>
Near end crosstalk attenuation (NEXT)	≥ 61 dB (at 772 kHz) ≥ 59 dB (with 1 MHz) ≥ 55 dB (at 2 MHz) ≥ 50 dB (at 4 MHz) ≥ 46 dB (at 8 MHz) ≥ 44 dB (at 10 MHz) ≥ 41 dB (at 16 MHz) ≥ 40 dB (at 20 MHz)
Flame resistance	according to VDE 0472, Part 4, test type B according to IEC 60332-1
Ambient temperature (operation)	-30 °C ... 70 °C (Cable, flexible installation) -40 °C ... 80 °C (cable, fixed installation)

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP67 (When plugged in) IP65 (When plugged in) IP65/IP67
Ambient temperature (operation) (male connector/female connector)	-25 °C ... 85 °C (Plug / socket) -40 °C ... 85 °C (without mechanical actuation)

## Standards and regulations

M12

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

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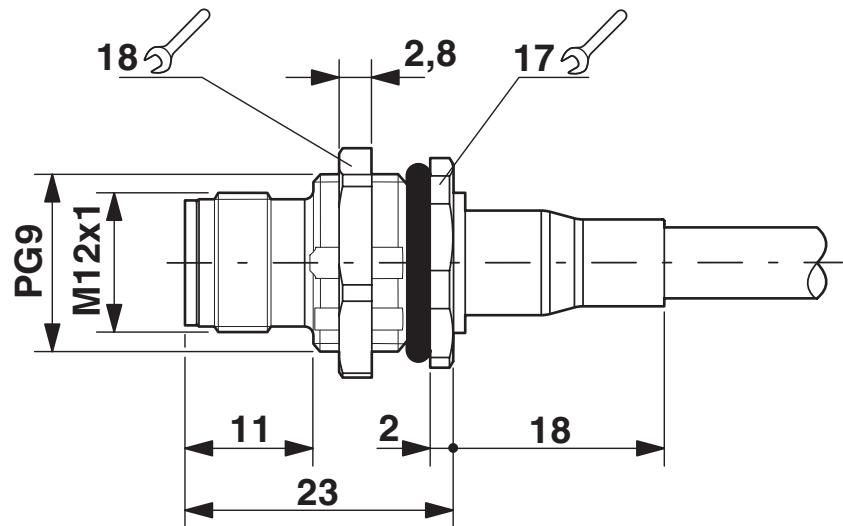


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## Drawings

Dimensional drawing



M12 panel feed-through

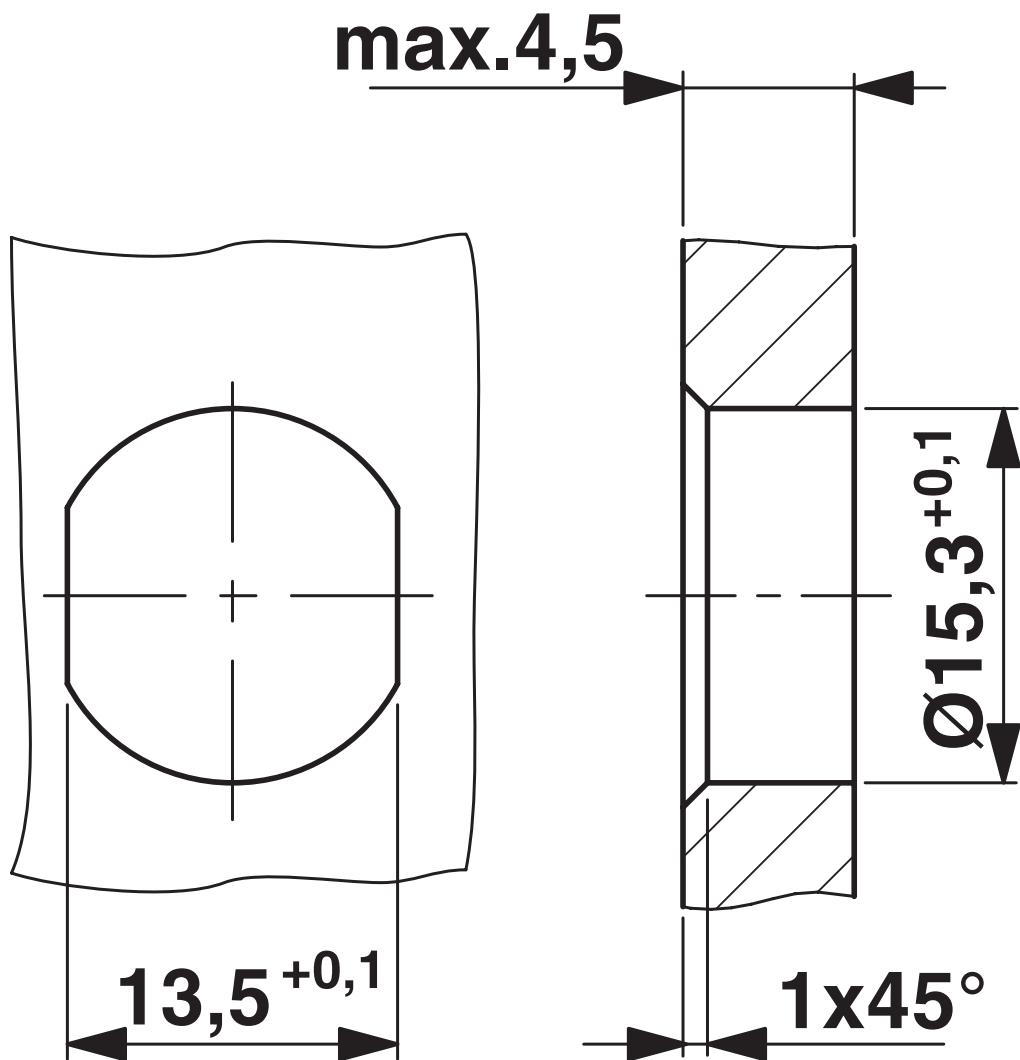
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Dimensional drawing



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

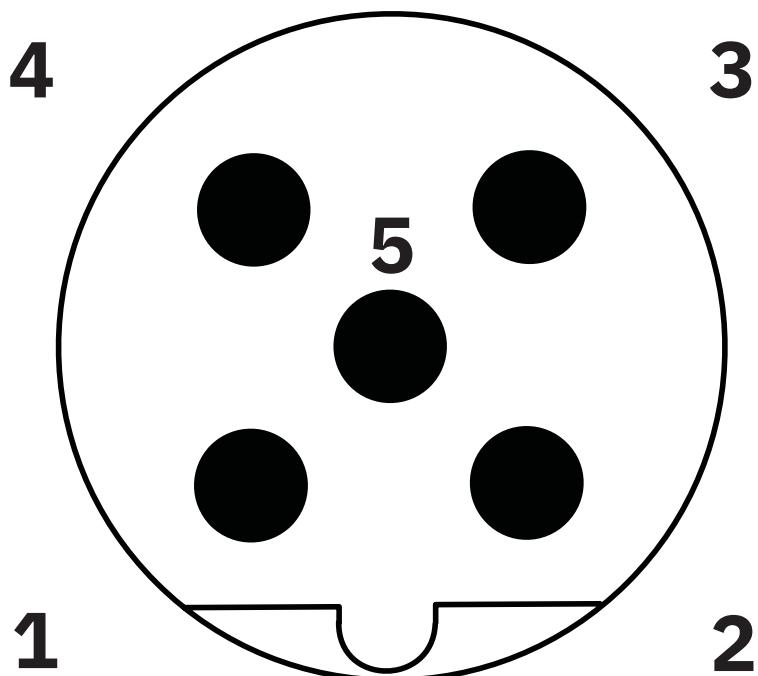
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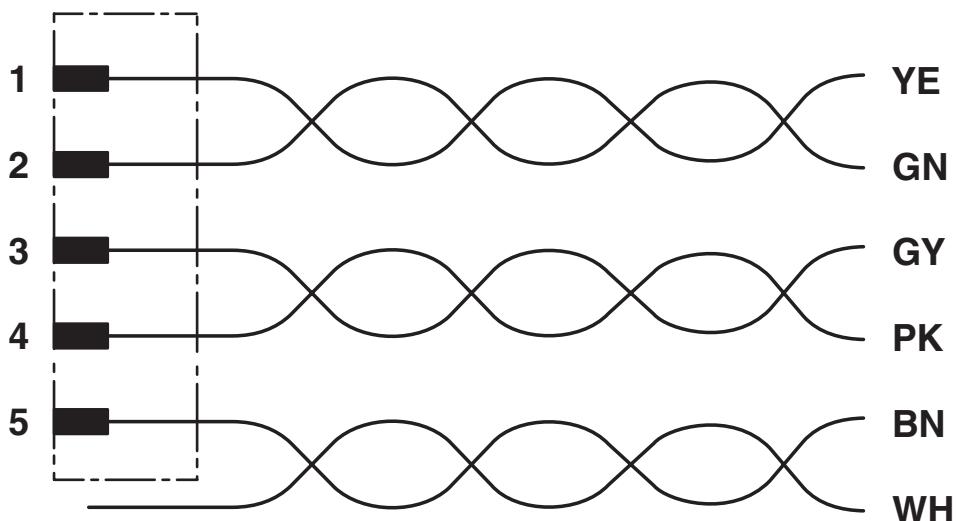
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Schematic diagram



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

Circuit diagram



Contact assignment of the M12 plug

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