

# SACCEC-M12MSB-2CON-M16/1,0-910 - Device connector front mounting



1525568

<https://www.phoenixcontact.com/us/products/1525568>

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Device connector front mounting, 2-position halogen-free, red lilac RAL 4001, shielded, Pin, straight, M12, B-coding, on free cable end, Cable connection, cable length: 1 m, PROFIBUS, this item is expected to be lead-free from Q4 2025 in accordance with RoHS II without exception 6c (Pb < 0.1%), a lead-free alternative is possible on request in advance

## 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	1525568
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB25
Product key	ABQDEA
GTIN	4046356022309
Weight per piece (including packing)	84.3 g
Weight per piece (excluding packing)	78.601 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.
Order information:	Positioning nut is included in the scope of supply
General	Contact connection method: Crimp connection

### 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.</li></ul>
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	<p>The suitable accessories are available online in the accessory section of the product at <a href="https://phoenixcontact.com/products">phoenixcontact.com/products</a></p> <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 (M16 x 1,5, mit Kontermutter)
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## Product properties

Product type	Circular connectors (device side)
Application	Data
Number of positions	2
No. of cable outlets	1
Shielded	yes
Coding	B
Thread type	M12

### Insulation characteristics

Ovvoltage category	II
Degree of pollution	3

## Material specifications

Flammability rating according to UL 94	V0
Seal material	NBR
Contact material	CuZn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Material for screw connection	Brass, nickel-plated

## Electrical properties

Rated surge voltage	1.5 kV
Contact resistance	≤ 3 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage $U_N$	48 V AC
	60 V DC
Nominal current $I_N$	4 A (Plug/socket in accordance with IEC 61076-2-101, cable technical data is to be observed)
Test voltage	2500 V
Transmission medium	Copper

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## Connection data

### Conductor connection

Connection method	Cable connection
Contact connection type	Pin

## Mechanical properties

### Mechanical data

Insertion/withdrawal cycles	> 100
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## Connector

### Connection 1

Head design	Pin
Head cable outlet	straight
Head thread type	M12
Coding	B

### Connection 2

Head design	free cable end
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## Cable/line

Cable length	1 m
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### PROFIBUS [910]

Dimensional drawing	
UL AWM Style	21198 (80°C/300 V)
Number of positions	2
Shielded	yes
Cable type	PROFIBUS [910]
Conductor structure	1x2xAWG24/19
AWG signal line	24
Conductor cross section	2x 0.25 mm² (Signal line)
Wire diameter incl. insulation	2.55 mm ±0.05 mm
External cable diameter	7.70 mm ±0.02 mm
Outer sheath, material	PUR

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External sheath, color	red lilac RAL 4001
Conductor material	Tin-plated Cu litz wires
Single wire, color	red, green
Overall twist	2 cores with 2 fillers to the core
Optical shield covering	80 %
Insulation resistance	$\geq 5 \text{ G}\Omega \cdot \text{km}$
Wave impedance	$150 \Omega \pm 10 \% \text{ (3 MHz ... 20 MHz)}$
Nominal voltage, cable	$\leq 125 \text{ V}$
Test voltage Core/Core	2000 V (50 Hz, 1 min.)
Test voltage Core/Shield	2000.00 V (50 Hz, 1 min.)
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	8 x D
Dynamic load capacity (bending)	Max. bending cycles: 4000000, Bending radius: 65 mm, Bending radius: 15 x D, Traversing path: 4.5 m, Traversing rate: 3 m/s, Acceleration: 3 m/s <sup>2</sup>
Shield attenuation	<p><math>\leq 4.9 \text{ dB (at 16 MHz)}</math></p> <p><math>\leq 4.9 \text{ dB (at 4 MHz)}</math></p> <p><math>\leq 0.5 \text{ dB (at 38.4 kHz)}</math></p> <p><math>\leq 0.3 \text{ dB (at 9.6 kHz)}</math></p>
Halogen-free	<p>in accordance with DIN VDE 0472 part 815</p> <p>according to IEC 60754-1</p>
Flame resistance	<p>UL 1581, Section 1060 and UL 2556, Section 9.3 (FT1)</p> <p>UL 1581, Section 1100 and UL 2556, Section 9.1 (HFT/FT2)</p> <p>IEC 60332-1-2</p>
Resistance to oil	in accordance with DIN EN 60811-404
Ambient temperature (operation)	<p>-40 °C ... 80 °C (cable, fixed installation)</p> <p>-30 °C ... 70 °C (Cable, flexible installation)</p> <p>-20 °C ... 60 °C (for installation)</p> <p>-20 °C ... 60 °C (cable, drag chain applications)</p>

## Environmental and real-life conditions

### Ambient conditions

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

## Standards and regulations

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

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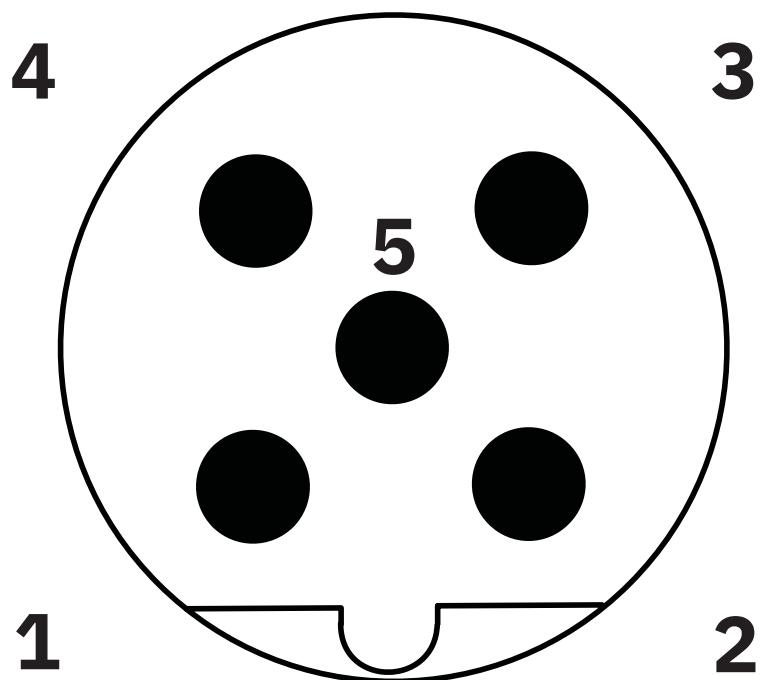


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Drawings

Schematic diagram



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

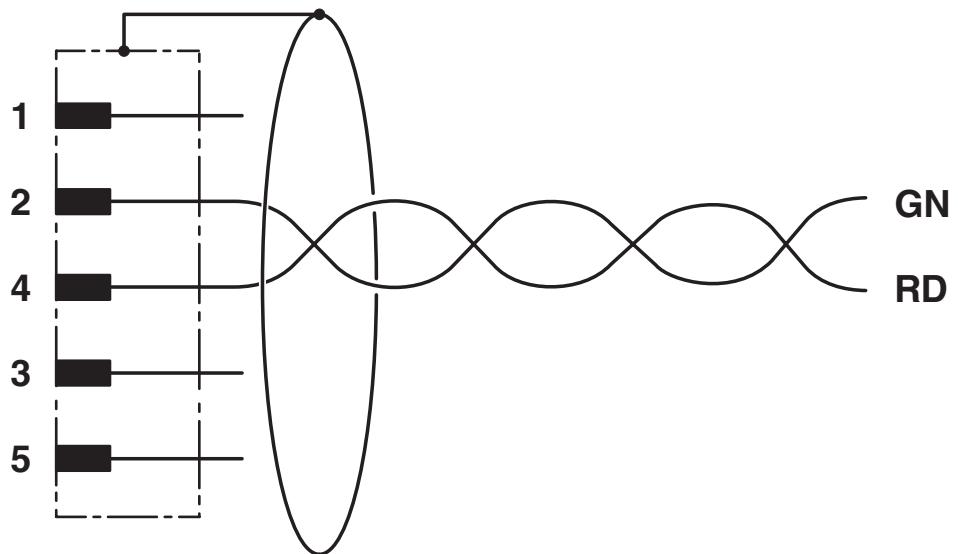
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Circuit diagram



Contact assignment of the M12 plug

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## Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1525568>

cUL Recognized		Approval ID: E221474-20220907			
		Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
keine		60 V	1.5 A	-	-

UL Recognized		Approval ID: E221474-20220907			
		Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
keine		60 V	2 A	-	-

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## Classifications

### ECLASS

ECLASS-13.0	27440103
ECLASS-15.0	27440103

### ETIM

ETIM 9.0	EC003570
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c)

### China RoHS

Environment friendly use period (EFUP)	EFUP-50  An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
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### EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: n/a)
SCIP	ac8f761c-234d-4afc-854d-a27f96e282b7

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