

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



1239883

<https://www.phoenixcontact.com/pc/products/1239883>

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Device connector front mounting, 2-position, Pin, straight, M12, B-coding, on free cable end, Cable connection, cable length: 1 m, Item is lead-free in accordance with RoHS II without Exemption 6c (Pb < 0.1 %)

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	1239883
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	ABQDEA
GTIN	4063151393892
Weight per piece (including packing)	84.3 g
Weight per piece (excluding packing)	78.656 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:	Lock nut is included in the scope of delivery
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.
	<ul style="list-style-type: none"> • 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.
	<ul style="list-style-type: none"> • 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.
	<ul style="list-style-type: none"> • The products are suitable for applications in plant, controller, and electrical device engineering.
	<ul style="list-style-type: none"> • When operating the connectors in outdoor applications, they must be separately protected against environmental influences.
	<ul style="list-style-type: none"> • Assembled products may not be manipulated or improperly opened.
	<ul style="list-style-type: none"> • 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).
	<ul style="list-style-type: none"> • When using the product in direct connection with third-party manufacturers, the user is responsible.
	<ul style="list-style-type: none"> • For operating voltages > 50 V AC, conductive connector housings must be grounded
	<ul style="list-style-type: none"> • Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards.
	<ul style="list-style-type: none"> • Observe the corresponding technical data. You will find information: <ul style="list-style-type: none"> o On the product o On the packing label o In the supplied documentation o Online at phoenixcontact.com/products under the product
	<ul style="list-style-type: none"> • Only use tools recommended by Phoenix Contact
	<ul style="list-style-type: none"> • Use a protective cap to protect connectors that are not in use.

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	The suitable accessories are available online in the accessory section of the product at phoenixcontact.com/products
	<ul style="list-style-type: none"> • Ensure that the protective or functional ground has been properly connected.
	<ul style="list-style-type: none"> • 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
	<ul style="list-style-type: none"> • 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).

Product properties

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

Insulation characteristics

Overvoltage 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

Connection data

Conductor connection

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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

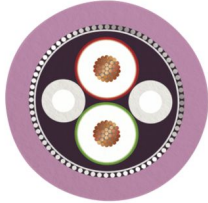
Connection 2

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 mm ² (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
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

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Optical shield covering	80 %
Insulation resistance	≥ 5 GΩ*km
Wave impedance	150 Ω ±10 % (3 MHz ... 20 MHz)
Nominal voltage, cable	≤ 125 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 ²
Shield attenuation	≤ 4.9 dB (at 16 MHz)
	≤ 4.9 dB (at 4 MHz)
	≤ 0.5 dB (at 38.4 kHz)
	≤ 0.3 dB (at 9.6 kHz)
Halogen-free	in accordance with DIN VDE 0472 part 815
	according to IEC 60754-1
Flame resistance	UL 1581, Section 1060 and UL 2556, Section 9.3 (FT1)
	UL 1581, Section 1100 and UL 2556, Section 9.1 (HFT/FT2)
	IEC 60332-1-2
Resistance to oil	in accordance with DIN EN 60811-404
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-30 °C ... 70 °C (Cable, flexible installation)
	-20 °C ... 60 °C (for installation)
	-20 °C ... 60 °C (cable, drag chain applications)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP67
	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

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

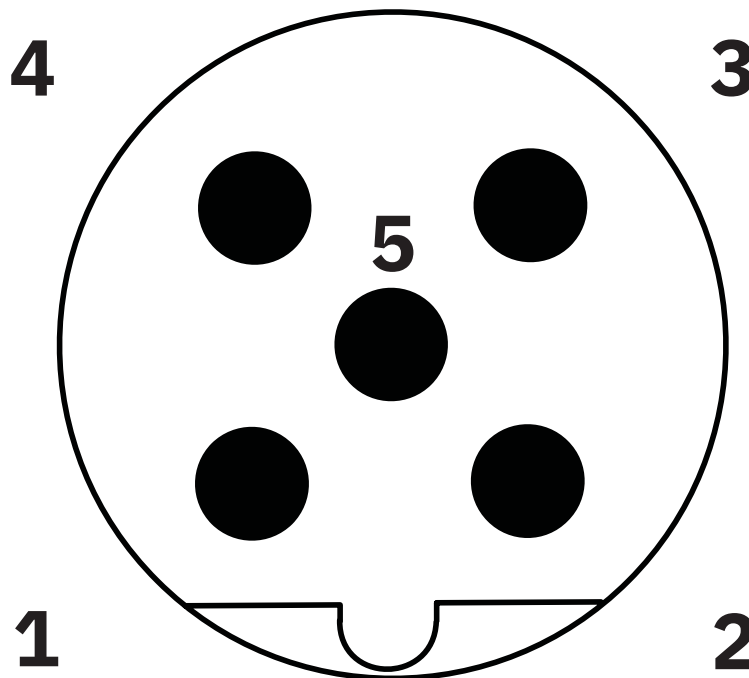
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Drawings

Schematic diagram



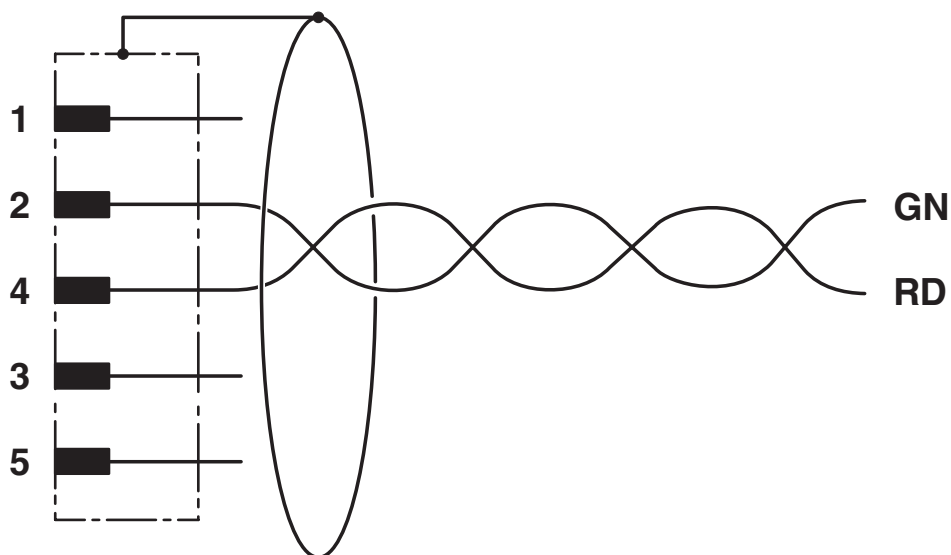
Pin assignment M12 male connector, 5-pos., B-coded, male side

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Circuit diagram



Contact assignment of the M12 plug

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Classifications

ECLASS

ECLASS-13.0	27440103
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ETIM

ETIM 9.0	EC003570
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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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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