

SACCEC-M12MSB-5CON-M16/5,0-900X - Device connector front mounting



1239916

<https://www.phoenixcontact.com/pc/products/1239916>

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Device connector front mounting, INTERBUS (16 Mbps), 5-position, Pin, straight, M12, B-coding, on free cable end, Cable connection, cable length: 5 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 | 1239916 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Product key | ABQDEA |
| GTIN | 4063151394431 |
| Weight per piece (including packing) | 391.7 g |
| Weight per piece (excluding packing) | 367.929 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. • 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 | 3 Nm ... 4 Nm (Installation-side) |
|-------------------|-----------------------------------|

Product properties

| | |
|----------------------|-----------------------------------|
| Product type | Circular connectors (device side) |
| Application | Data |
| Sensor type | INTERBUS |
| Number of positions | 5 |
| 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 |

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| | |
|--------------------|---------|
| Transmission speed | 16 Mbps |
|--------------------|---------|

Connection data

Conductor connection

| | |
|-------------------------|-----------------------------------|
| Connection method | Cable connection |
| Contact connection type | Pin |
| Tightening torque | 3 Nm ... 4 Nm (Installation-side) |

Mechanical properties

Mechanical data

| | |
|-----------------------------|-------|
| Insertion/withdrawal cycles | > 100 |
|-----------------------------|-------|

Connector

Connection 1

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

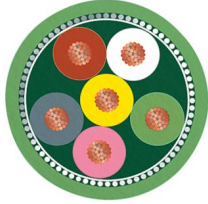
Connection 2

| | |
|-------------|----------------|
| Head design | free cable end |
|-------------|----------------|

Cable/line

| | |
|--------------|-----|
| Cable length | 5 m |
|--------------|-----|

INTERBUS [900]

| | |
|---------------------------------|--|
| Dimensional drawing |  |
| Cable weight | 70 kg/km |
| Number of positions | 6 |
| Shielded | yes |
| Cable type | INTERBUS [900] |
| Conductor structure | 3 x 2 x 0.22 mm ² |
| Signal speed | 0.66 c |
| Conductor structure signal line | 32x 0.10 mm |
| AWG signal line | 24 |

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| | |
|---|--|
| Conductor cross-section | 3x 2x 0.22 mm ² |
| External cable diameter | 8.00 mm |
| Outer sheath, material | PUR |
| External sheath, color | may green RAL 6017 |
| Conductor material | Bare Cu litz wires |
| 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 |
| Insulation resistance | ≥ 5 GΩ*km |
| Coupling resistance | < 250.00 mΩ/m (at 30 MHz) |
| Loop resistance | ≤ 159.80 Ω/km |
| Wave impedance | 120 Ω ±20 % (at 64 kHz) 100 Ω ±15 % (with 1 MHz) |
| Cable capacity | ≤ 60 nF/km (At 800 Hz) |
| Nominal voltage, cable | 250 V (Peak value, not for high-power applications) |
| Test voltage Core/Core | 1500 V _{rms} |
| Test voltage Core/Shield | 1000.00 V _{rms} |
| Minimum bending radius, fixed installation | 7.5 x D |
| Minimum bending radius, flexible installation | 15 x D |
| Smallest bending radius, fixed installation | 60 mm |
| Smallest bending radius, movable installation | 120 mm |
| Dynamic load capacity (bending) | Max. bending cycles: 5000000, Bending radius: 120 mm, Traversing path: 10 m, Traversing rate: 1.6 m/s, Acceleration: 3.2 m/s ² |
| 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) |
| Shield attenuation | ≤ 15 dB/km (at 256 kHz) ≤ 24 dB/km (at 772 kHz) ≤ 27 dB/km (with 1 MHz) ≤ 52 dB/km (at 4 MHz) ≤ 84 dB/km (at 10 MHz) ≤ 112 dB/km (at 16 MHz) ≤ 119 dB/km (at 20 MHz) |
| Flame resistance | according to VDE 0472, Part 4, test type B according to IEC 60332-1 |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation) |

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|--|---|
| | -30 °C ... 70 °C (Cable, flexible installation) |
|--|---|

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 | 27060311 |
|-------------|----------|

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC001855 |
|----------|----------|

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Environmental product compliance

EU RoHS

| | |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

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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