

SACC-E-M12FSS-4P-M16XL/0,5 PEX - Device connector front mounting



1238901

<https://www.phoenixcontact.com/us/products/1238901>

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Device connector front mounting, Power, 4-position, Socket, straight, M12-Standard, S-coding, on free cable end, Individual wires, cable length: 0.5 m, 1.31 mm², UL/cUL stranded hook-up wire, potted, Item is lead-free in accordance with RoHS II without Exemption 6c (Pb < 0.1 %)

Your advantages

- For compact devices: transmit high power in a confined space
- Easy-to-install, optimized XL housing contour with wrench size 19
- Mechanical tightening limitation for long-term-stable gasket
- 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
- For high transmission safety: shield connection to the housing with optional EMC nut

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1238901 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | AB24 |
| Product key | ABQCFG |
| GTIN | 4063151388881 |
| Weight per piece (including packing) | 46.8 g |
| Weight per piece (excluding packing) | 45.018 g |
| Customs tariff number | 85366990 |
| 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. |
|--------------------|--|

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">• 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.• 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.• The products are suitable for applications in plant, controller, and electrical device engineering.• When operating the connectors in outdoor applications, they must be separately protected against environmental influences.• Assembled products may not be manipulated or improperly opened.• 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).• When using the product in direct connection with third-party manufacturers, the user is responsible.• For operating voltages > 50 V AC, conductive connector housings must be grounded• Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards.• Observe the corresponding technical data. You will find information:<ul style="list-style-type: none">◦ On the product◦ On the packing label◦ In the supplied documentation◦ Online at phoenixcontact.com/products under the product• Only use tools recommended by Phoenix Contact• 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 phoenixcontact.com/products |
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|--|---|
| | <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 | 0.8 Nm ... 1.3 Nm (Installation-side) |
|-------------------|---------------------------------------|

Product properties

| | |
|----------------------|-----------------------------------|
| Product type | Circular connectors (device side) |
| Application | Power |
| Sensor type | Power |
| Number of positions | 4 |
| No. of cable outlets | 1 |
| Shielded | no |
| Coding | S |
| Thread type | M12 |

Insulation characteristics

| | |
|---------------------|-----|
| Ovvoltage category | III |
| Degree of pollution | 3 |

Material specifications

| | |
|--|------------------------------|
| Material Molding compound | PUR (potted) |
| Flammability rating according to UL 94 | V0 |
| Seal material | FKM |
| Contact material | CuZn |
| Contact surface material | Au |
| Contact carrier material | PA |
| Material for screw connection | Zinc die-cast, nickel-plated |
| Conductor material | Bare Cu litz wires |

Electrical properties

| | |
|--|----------------------------|
| Rated voltage in acc. with IEC 61076-2-101 | 630 V |
| Rated surge voltage | 6 kV |
| Rated surge voltage | 6 kV AC |
| Contact resistance | $\leq 3 \text{ m}\Omega$ |
| Insulation resistance | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage U_N | 630 V |
| Nominal current I_N | 12 A |

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| | |
|--------------|------|
| Test voltage | 6 kV |
|--------------|------|

Connection data

Conductor connection

| | |
|-------------------------|---------------------------------------|
| Connection method | Individual wires |
| Contact connection type | Socket |
| Conductor cross-section | 1.31 mm ² |
| Tightening torque | 0.8 Nm ... 1.3 Nm (Installation-side) |

Mechanical properties

Mechanical data

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

Connector

Connection 1

| | |
|-------------------|----------|
| Head design | Socket |
| Head cable outlet | straight |
| Head thread type | M12 |
| Head locking type | Standard |
| Coding | S |

Connection 2

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

Cable/line

| | |
|---------------------------------|--|
| Cable length | 0.5 m |
| Cable type | UL/cUL stranded hook-up wire |
| Signal type/category | Power |
| Wire diameter incl. insulation | 2.2 mm ±0.07 mm |
| Single wire, color | black 1, black 2, black 3, green/yellow |
| Cable cross section | 1.31 mm ² |
| Conductor material | Bare Cu litz wires |
| AWG signal line | 16 |
| Material wire insulation | mPPE |
| Halogen-free | yes |
| Flame resistance | in acc. to UL 1581 VW1 |
| Ambient temperature (operation) | -40 °C ... 85 °C (without mechanical actuation) |
| | -40 °C ... 85 °C (without mechanical actuation) |
| | -25 °C ... 105 °C (Cable, flexible installation) |

Environmental and real-life conditions

Ambient conditions

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| | |
|---|--|
| Degree of protection | IP67 IP65/IP67 |
| Ambient temperature (operation) (male connector/female connector) | -25 °C ... 85 °C (Plug / socket) |
| Ambient temperature (operation) (Cable, fixed installation) | -40 °C ... 85 °C (without mechanical actuation) |
| Ambient temperature (operation) (Cable, flexible installation) | -25 °C ... 105 °C (Cable, flexible installation) |
| Ambient temperature (operation) (Cable, fixed installation) | -40 °C ... 105 °C (cable, fixed installation) |
| UL Type Rating | Type 4 (indoor use only) |

Standards and regulations

| | |
|--------------------------|------------------------------|
| Flame resistance | in acc. to UL 1581 VW1 |
| Standard designation | M12 circular connector |
| Standards/specifications | according to IEC 61076-2-111 |

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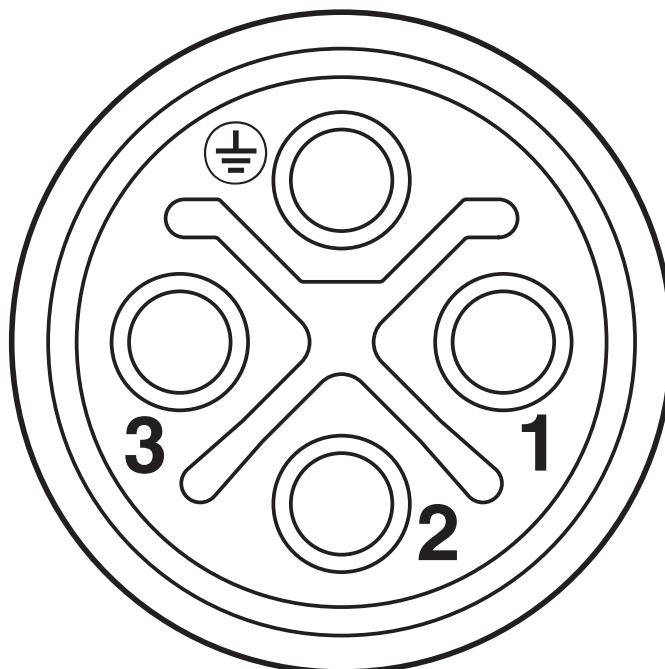


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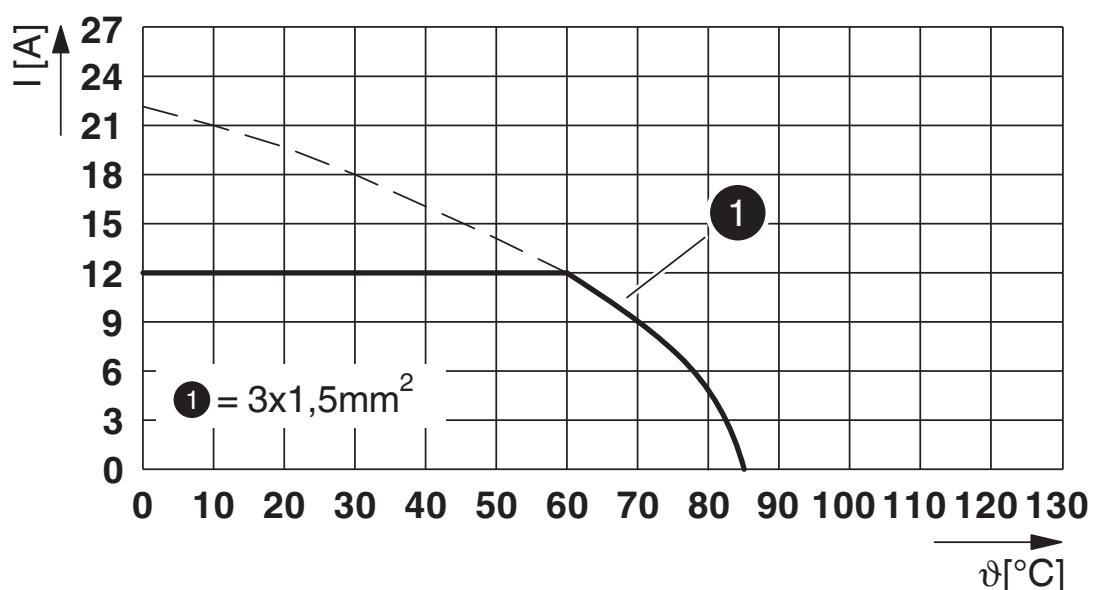
Drawings

Schematic diagram



Pin assignment of M12 socket, 4-pos., S-coded, socket side view

Diagram



I = current strength, T = ambient temperature

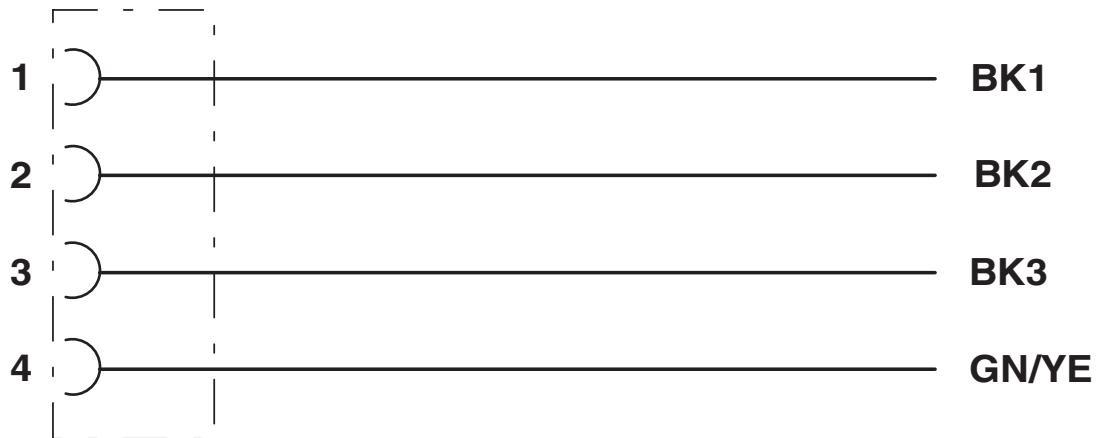
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Circuit diagram



Contact assignment of the M12 socket

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27440103 |
|-------------|----------|

ETIM

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|----------|----------|
| ETIM 9.0 | EC003570 |
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UNSPSC

| | |
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| UNSPSC 21.0 | 26121600 |
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Environmental product compliance

EU RoHS

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

China RoHS

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|--|--|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
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| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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