# SACC-E-M12MS-12P-M16XL/0,5 - Device connector front mounting

1411582

https://www.phoenixcontact.com/us/products/1411582

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Device connector front mounting, Universal, 12-position, Pin, straight, M12-Standard, A-coding, on free cable end, Individual wires, cable length: 0.5 m, 0.14 mm$^2$, TPE litz wire, potted, Item is lead-free in accordance with RoHS II without Exemption 6c (Pb < 0.1 %)

## Your advantages

- 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
- All standard pin assignments and codings for signal, data, and power transmission with a uniform design-in design
- For high transmission safety: shield connection to the housing with optional EMC nut

## Commercial data

| | |
|---|---|
| Item number | 1411582 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | AB24 |
| Product key | ABQCEB |
| GTIN | 4046356936101 |
| Weight per piece (including packing) | 28 g |
| Weight per piece (excluding packing) | 26.17 g |
| Customs tariff number | 85444290 |
| Country of origin | DE |

## 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. |
| General | Contact connection method: Crimp connection |

### Mounting

| | |
|---|---|
| Mounting type | Front mounting (M16 x 1.5, XL variant, tightening limitation) |
| Tightening torque | 1.5 Nm ... 2 Nm (Installation-side) |

### Product properties

| | |
|---|---|
| Product type | Circular connectors (device side) |
| Application | Signal |
| Number of positions | 12 |
| No. of cable outlets | 1 |
| Shielded | no |
| Coding | A |
| Thread type | M12 |

Insulation characteristics

| | |
|---|---|
| Overvoltage category | II |
| Degree of pollution | 3 |

### Material specifications

| | |
|---|---|
| Material Molding compound | PUR (potted) |
| Flammability rating according to UL 94 | V0 |
| Material grommet GRP | FKM |
| Contact material | CuZn |
| Contact surface material | Au |
| Contact carrier material | PA 6.6 |
| Material for screw connection | Zinc die-cast, nickel-plated |
| Conductor material | Tin-plated Cu litz wires |

### Electrical properties

| | |
|---|---|
| Rated surge voltage | 0.8 kV |
| Contact resistance | ≤ 3 mΩ |
| Insulation resistance | ≥ 100 MΩ |
| Nominal voltage $U_N$ | 30 V (AC) |
| | 30 V (DC) |

| | |
|---|---|
| Nominal current $I_N$ | 1.5 A |
| Max. conductor resistance | 57.6 mΩ/m |

## Connection data

Conductor connection

| | |
|---|---|
| Connection method | Individual wires |
| Contact connection type | Pin |
| Conductor cross-section | 0.14 mm² |
| Tightening torque | 1.5 Nm ... 2 Nm (Installation-side) |

## Mechanical properties

Mechanical data

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

## Interfaces

| | |
|---|---|
| Signal type/category | Universal |

## Connector

Connection 1

| | |
|---|---|
| Head design | Pin |
| Head cable outlet | straight |
| Head thread type | M12 |
| Head locking type | Standard |
| Coding | A |

Connection 2

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

## Cable/line

| | |
|---|---|
| Cable length | 0.5 m |
| Cable type | TPE litz wire |
| Wire diameter incl. insulation | 1.1 mm ±0.05 mm |
| Single wire, color | brown, blue, white, green, pink, yellow, black, gray, red, violet, gray/pink, red/blue |
| Cable cross section | 0.14 mm² |
| Conductor material | Tin-plated Cu litz wires |
| Conductor structure signal line | 7x 0.16 mm |
| AWG signal line | 26 |
| Material wire insulation | TPE |
| Thickness, insulation | 0.21 mm (Core insulation) |
| Nominal voltage, cable | 300 V |
| Test voltage, cable | 2000 V AC |

| | |
|---|---|
| Cable resistance | ≤ 57.6 mΩ/m |
| Cable insulation resistance | ≥ 20 MΩ*km |
| Ambient temperature (operation) | -40 °C ... 85 °C (cable, fixed installation) |
| | -25 °C ... 85 °C (Cable, flexible installation) |

## Environmental and real-life conditions

### Ambient conditions

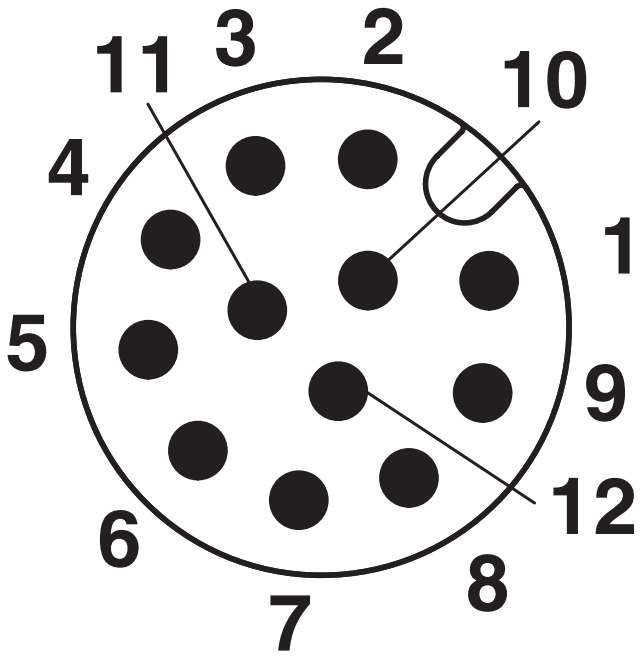
| | |
|---|---|
| Degree of protection | IP65 |
| | IP67 |
| Ambient temperature (operation) (male connector/female connector) | -25 °C ... 85 °C (Plug / socket) |
| | -40 °C ... 85 °C (without mechanical actuation) |
| Ambient temperature (operation) (Cable, flexible installation) | -25 °C ... 85 °C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

## Standards and regulations

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

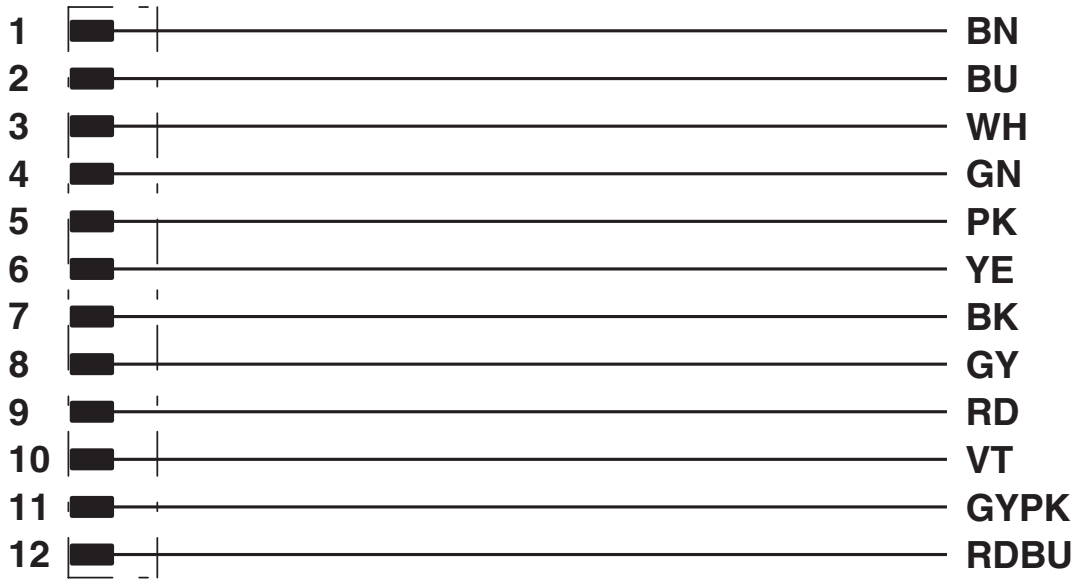
## Drawings

Schematic diagram




Pin assignment M12 male connector, 12-pos., male side view

Circuit diagram




Contact assignment of the M12 plug

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1411582

**cULus Recognized**
Approval ID: E221474-20140616

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 30 V | 1.5 A | 26 | - |

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27440103 |
| ECLASS-15.0 | 27440103 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC003570 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 39121400 |

## Environmental product compliance

EU RoHS

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|---|---|
| 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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