# SACC-E-M12MS-5CON-M20/0,5 VA - Device connector front mounting

1452068

https://www.phoenixcontact.com/us/products/1452068

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Device connector front mounting, 5-position, Pin, straight, M12-Standard, A-coding, on free cable end, Individual wires, cable length: 0.5 m, 0.34 mm$^2$, TPE litz wire, potted

## Your advantages

- 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 | 1452068 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | AB24 |
| Product key | ABQCUC |
| GTIN | 4046356528719 |
| Weight per piece (including packing) | 45 g |
| Weight per piece (excluding packing) | 33.44 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 |

Safety note

| | |
|---|---|
| Safety note | • 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. |

### Mounting

| | |
|---|---|
| Mounting type | Front mounting (M20 x 1,5) |
| Tightening torque | 3 Nm ... 4 Nm (Installation-side) |

### Product properties

| | |
|---|---|
| Product type | Circular connectors (device side) |
| Application | Signal |
| Number of positions | 5 |
| 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 | NBR |
| Contact material | CuZn |
| Contact surface material | Au |
| Contact carrier material | PA 6.6 |
| Material for screw connection | Stainless steel |
| Conductor material | Tin-plated Cu litz wires |

### Electrical properties

| | |
|---|---|
| Rated surge voltage | 1.5 kV |

| | |
|---|---|
| Contact resistance | ≤ 3 mΩ |
| Insulation resistance | ≥ 100 MΩ |
| Nominal voltage $U_N$ | 60 V |
| Nominal current $I_N$ | 4 A |
| Max. conductor resistance | 57.6 mΩ/m |

## Connection data

Conductor connection

| | |
|---|---|
| Connection method | Individual wires |
| Contact connection type | Pin |
| Conductor cross-section | 0.34 mm² |
| 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 |
| 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 | 1.2 mm ±0.07 mm |
| Single wire, color | brown, white, blue, black, gray |
| Cable cross section | 0.34 mm² |
| Conductor material | Tin-plated Cu litz wires |
| Conductor structure signal line | 7x 0.25 mm |
| AWG signal line | 22 |
| Material wire insulation | TPE |
| Thickness, insulation | 0.21 mm |
| 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

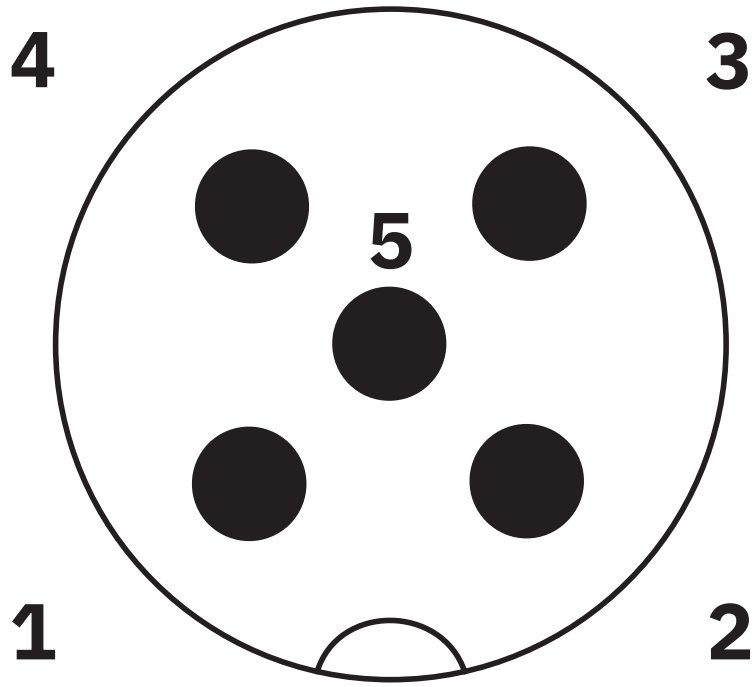
| | |
|---|---|
| Degree of protection | IP65/IP67/IP69/IP69K |
| | IP65/IP67/IP69K |
| Ambient temperature (operation) (male connector/female connector) | -25 °C ... 85 °C (Plug / socket) |
| | -40 °C ... 85 °C (without mechanical actuation) |
| Ambient temperature (operation) (Cable, flexible installation) | -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 |

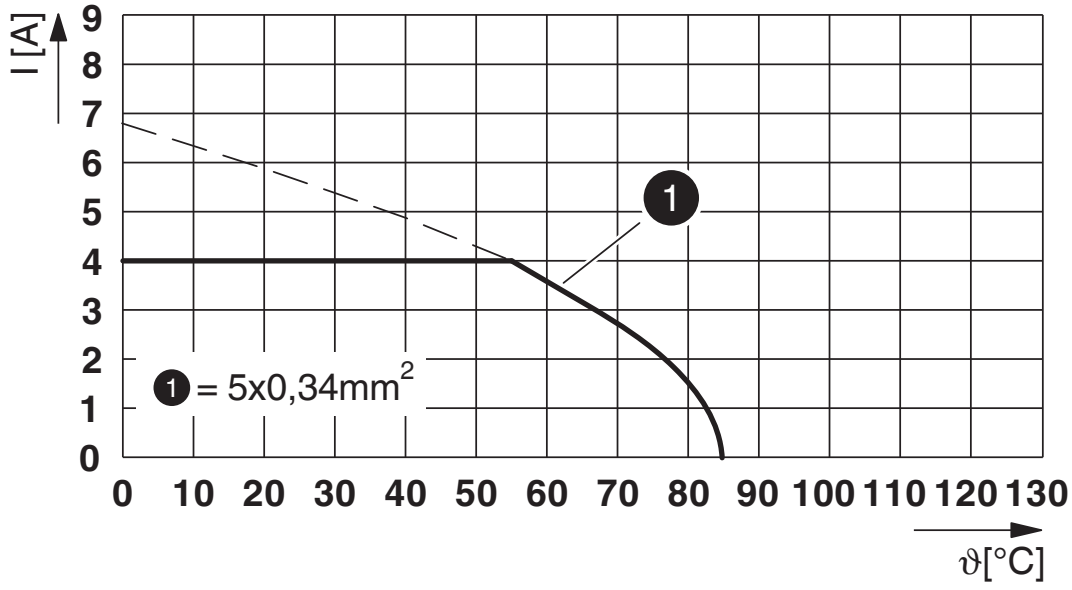
## Drawings

Schematic diagram




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

Diagram




I = current strength, T = ambient temperature

Circuit diagram




Contact assignment of the M12 plug and the M12 socket

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1452068

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

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 60 V | 4 A | 22 - 20 | - |

**cUL Recognized**
Approval ID: E118976-20100522

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 60 V | 4 A | 22 | - |

**UL Recognized**
Approval ID: E118976-20100522

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 60 V | 4 A | 22 | - |

## 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

| | |
|---|---|
| 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% |


Phoenix Contact 2026 © - all rights reserved
https://www.phoenixcontact.com



Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com