# SAC-2P-M12MSB/ 3,0-910/M12FSB - Bus system cable

1525445

https://www.phoenixcontact.com/us/products/1525445

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Bus system cable, PROFIBUS, 2-position, PUR halogen-free, red lilac RAL 4001, shielded, Plug straight M12, coding: B, on Socket straight M12, coding: B, cable length: 3 m

## Commercial data

| | |
|---|---|
| Item number | 1525445 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | BF04 |
| Product key | AF1CKC |
| GTIN | 4017918950040 |
| Weight per piece (including packing) | 211.2 g |
| Weight per piece (excluding packing) | 208 g |
| Customs tariff number | 85444290 |
| Country of origin | PL |

## Technical data

### Product properties

| | |
|---|---|
| Product type | Data cable preassembled |
| Number of positions | 2 |
| No. of cable outlets | 1 |
| Shielded | yes |
| Coding | B |

Insulation characteristics

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

### Interfaces

| | |
|---|---|
| Bus system | PROFIBUS |
| Signal type/category | PROFIBUS |

### Signaling

| | |
|---|---|
| Status display | no |
| Status display present | no |

### Electrical properties

| | |
|---|---|
| Insulation resistance | ≥ 100 MΩ |
| Nominal voltage $U_N$ | 48 V AC |
| | 60 V DC |
| Nominal current $I_N$ | 4 A |

### Mechanical properties

Mechanical data

| | |
|---|---|
| Insertion/withdrawal cycles | ≥ 100 |

### Material specifications

| | |
|---|---|
| Flammability rating according to UL 94 | V0 |
| Material grommet GRP | NBR |
| Material of grip body | TPU, hardly inflammable, self-extinguishing |
| Contact material | CuSn |
| Contact surface material | Ni/Au |
| Contact carrier material | PA 6.6 |
| Material for screw connection | Zinc die-cast, nickel-plated |

### Connector

Connection 1

| | |
|---|---|
| Type | Plug straight M12 |

| | |
|---|---|
| Number of positions | 2 |
| Coding type | B (inverse) |

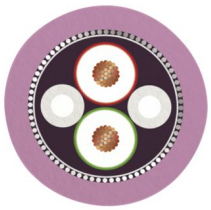
Connection 2

| | |
|---|---|
| Type | Socket straight M12 |
| Number of positions | 2 |
| Coding type | B |

## Cable/line

| | |
|---|---|
| Cable length | 3 m |

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 mm² (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 |
| 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/s² |

| | |
|---|---|
| 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) |

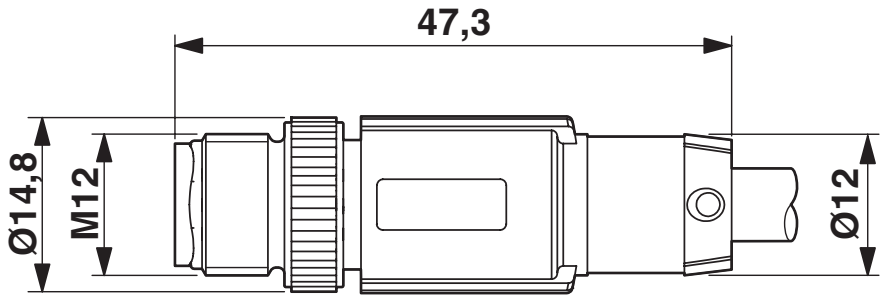
## Environmental and real-life conditions

### Ambient conditions

| | |
|---|---|
| Degree of protection | IP65 |
| | IP67 |
| | IP68 |
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket) |
| | -40 °C ... 80 °C (cable, fixed installation) |
| | -20 °C ... 80 °C (Cable, flexible installation) |

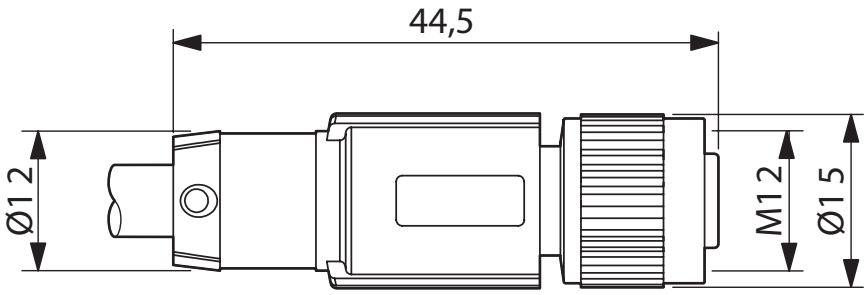
## Drawings

Dimensional drawing



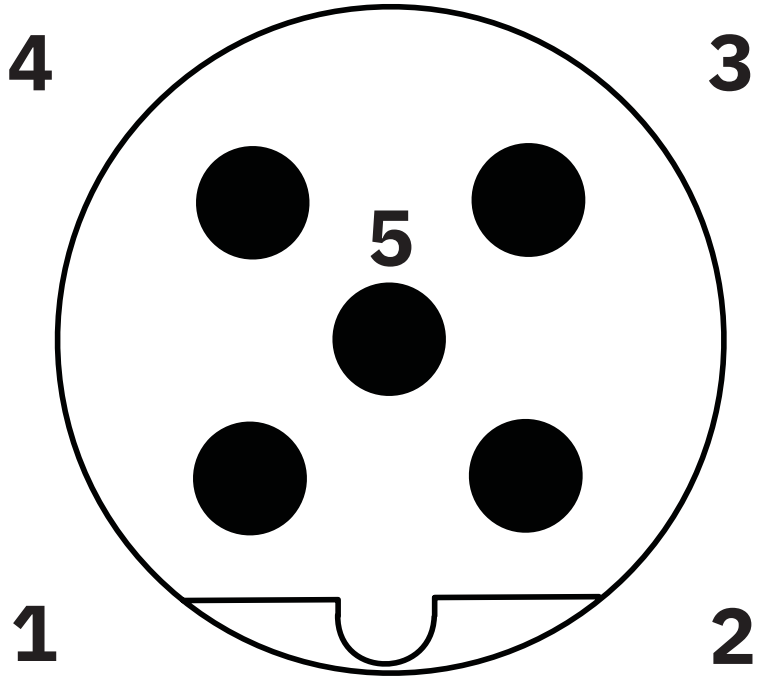

Plug, M12 x 1, straight, shielded

Dimensional drawing



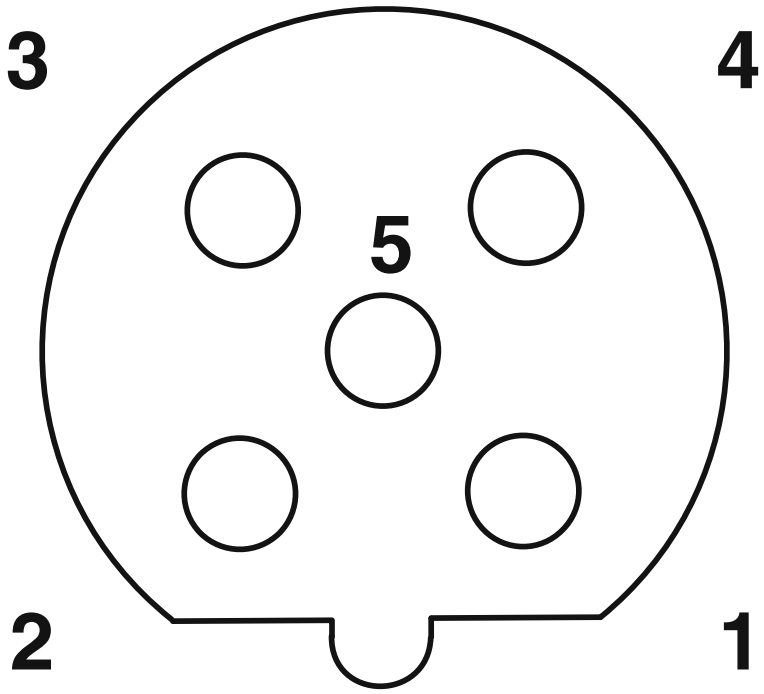

M12 x 1 socket, straight, shielded

Schematic diagram



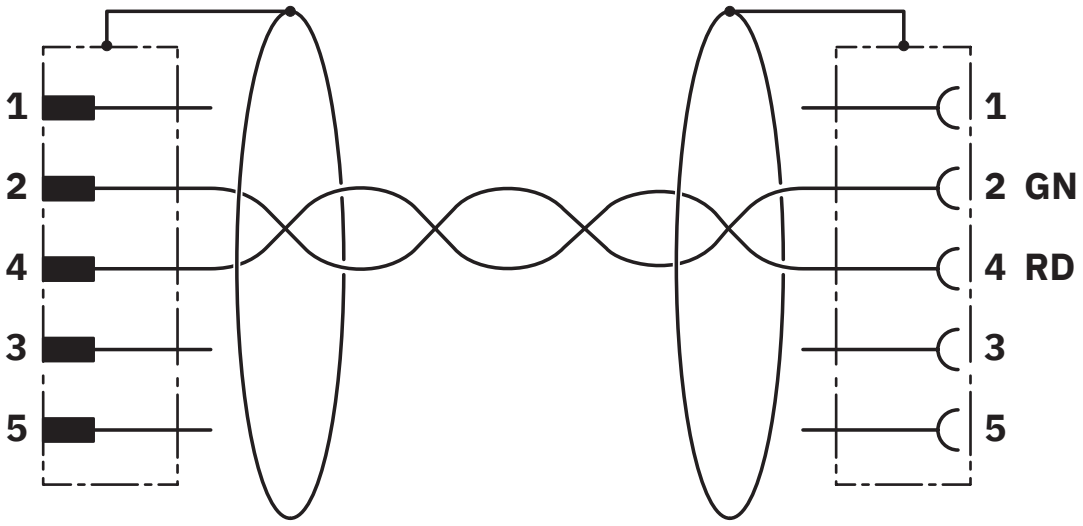

Pin assignment M12 male connector, 5-pos., B-coded, male side

Schematic diagram




Pin assignment M12 socket, 5-pos., B-coded, female side

Circuit diagram




Contact assignment of the M12 connector and the M12 socket

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1525445

**EAC-RoHS**
Approval ID: RU D-DE.HB35.B.00387

**UL Listed**
Approval ID: FILE E 221474

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 300 V | 4 A | - | - |

**cUL Listed**
Approval ID: FILE E 221474

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 300 V | 4 A | - | - |

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27060307 |
| ECLASS-15.0 | 27060307 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC002599 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 26121600 |

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