

# SAC-2P-M12MSB/30,0-910/M12FSB - Bus system cable



1524145

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Bus system cable, PROFIBUS, 4-position, PUR halogen-free, red lilac RAL 4001, shielded, Plug straight M12, coding: B, on Socket straight M12, coding: B, cable length: 30 m

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1524145       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BF04          |
| Product key                          | AF1CKC        |
| GTIN                                 | 4017918947231 |
| Weight per piece (including packing) | 1,812 g       |
| Weight per piece (excluding packing) | 1,728 g       |
| Customs tariff number                | 85444290      |
| Country of origin                    | PL            |

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## Technical data

### Product properties

|                      |                         |
|----------------------|-------------------------|
| Product type         | Data cable preassembled |
| Sensor type          | PROFIBUS                |
| Number of positions  | 4                       |
| 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 | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage $U_N$ | 48 V AC                    |
|                       | 60 V DC                    |
| Nominal current $I_N$ | 4 A                        |

### Mechanical properties

#### Mechanical data

|                             |            |
|-----------------------------|------------|
| Insertion/withdrawal cycles | $\geq 100$ |
|-----------------------------|------------|

### Material specifications

|                                        |                                             |
|----------------------------------------|---------------------------------------------|
| Flammability rating according to UL 94 | V0                                          |
| Seal material                          | 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

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|                     |                   |
|---------------------|-------------------|
| Type                | Plug straight M12 |
| Number of positions | 4                 |
| Coding type         | B (inverse)       |

## Connection 2

|                     |                     |
|---------------------|---------------------|
| Type                | Socket straight M12 |
| Number of positions | 4                   |
| Coding type         | B                   |

## Cable/line

|              |      |
|--------------|------|
| Cable length | 30 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, |

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|                                 |                                                          |
|---------------------------------|----------------------------------------------------------|
|                                 | Acceleration: 3 m/s <sup>2</sup>                         |
| 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) |

# SAC-2P-M12MSB/30,0-910/M12FSB - Bus system cable

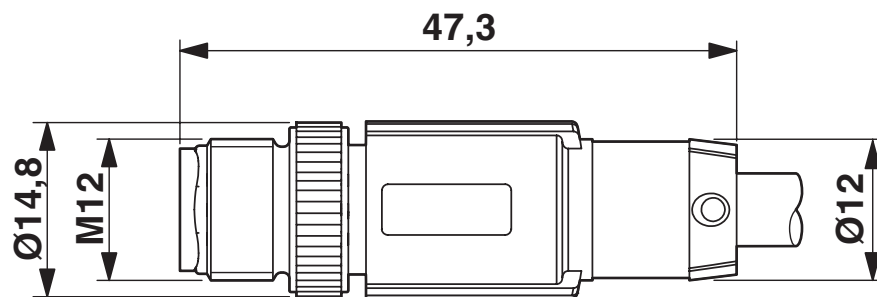


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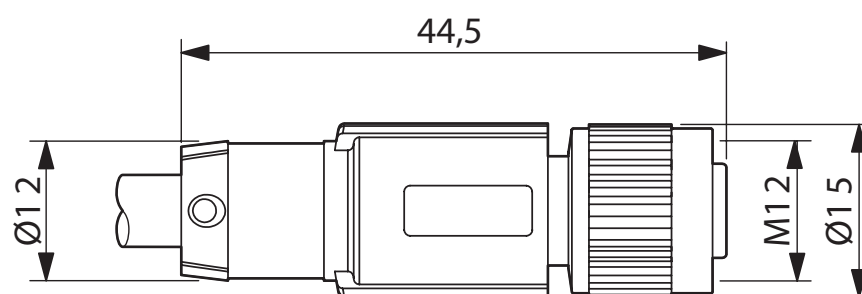
## Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



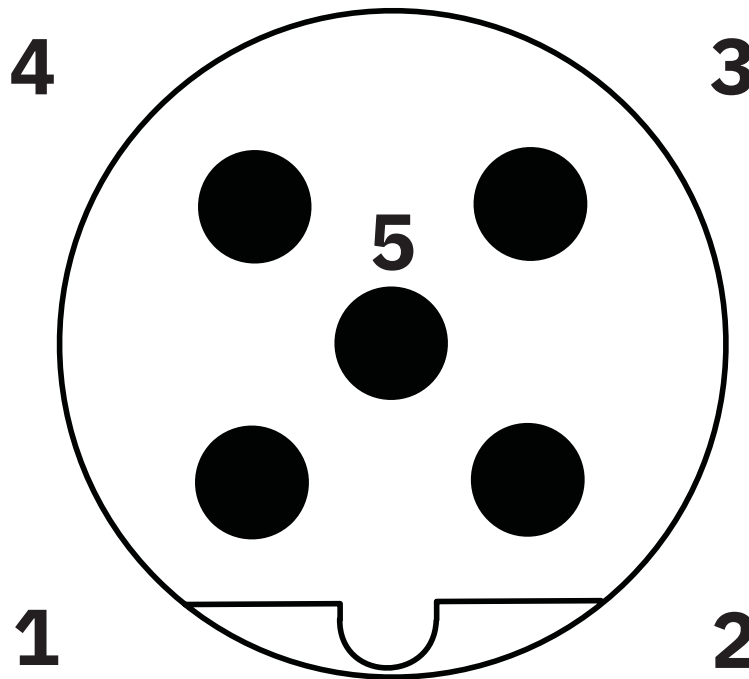
M12 x 1 socket, straight, shielded

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Schematic diagram



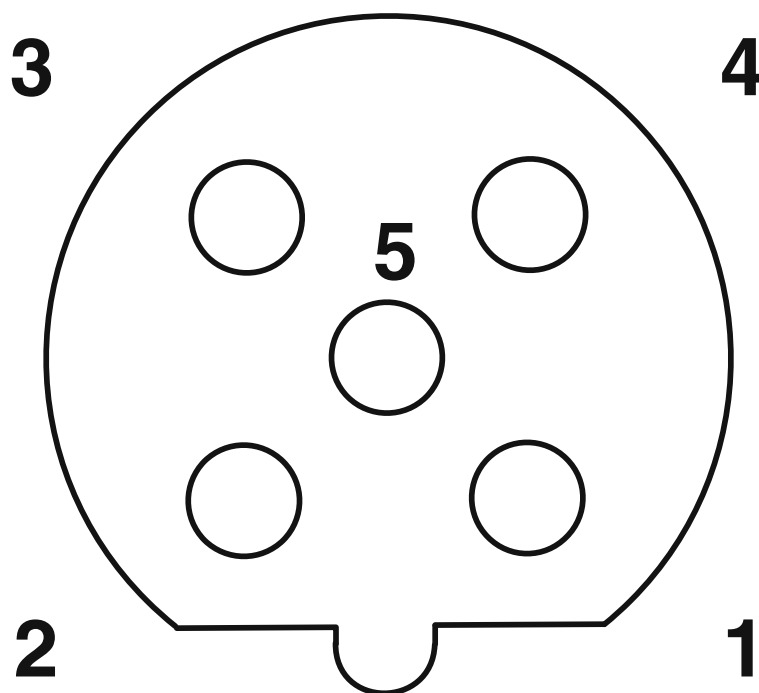
Pin assignment M12 male connector, 5-pos., B-coded, male side

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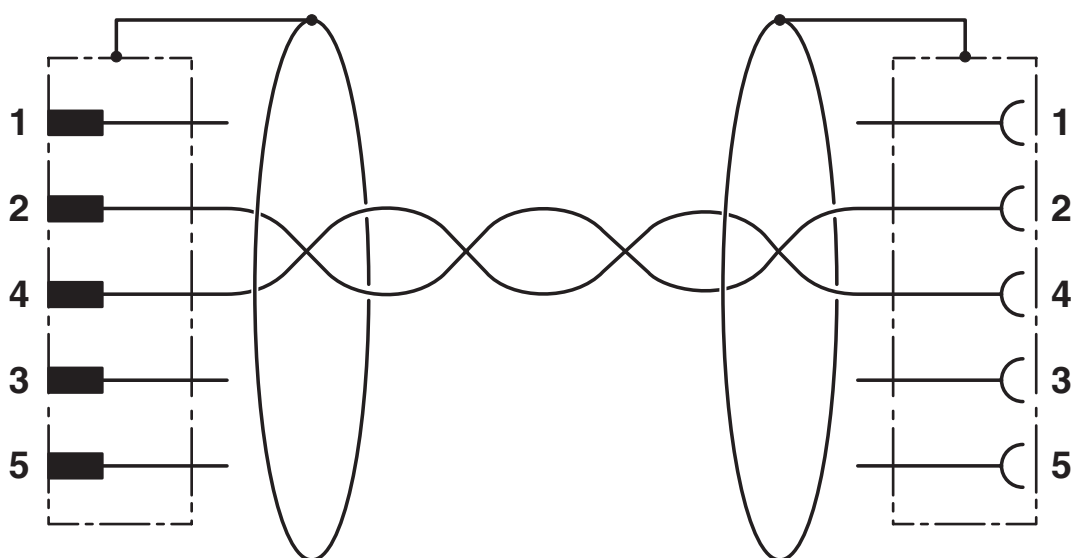
<https://www.phoenixcontact.com/us/products/1524145>

Schematic diagram



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

Circuit diagram



Contact assignment of the M12 connector and the M12 socket

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## Approvals

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**EAC-RoHS**

Approval ID: RU D-DE.HB35.B.00387



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## Classifications

### ECLASS

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

### ETIM

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

### UNSPSC

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

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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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