

## Bus system cable - SAC-2P-M12MSB/20,0-910/M12FSB - 1524132

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Bus system cable, PROFIBUS, 2-position, PUR halogen-free, violet RAL 4001, shielded, Plug straight M12, B-coded, on Socket straight M12, B-coded, cable length: 20 m



### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                                    |
| GTIN         | <br>4 017918 947217 |
| GTIN         | 4017918947217                                                                                           |

### Technical data

#### Dimensions

|                 |      |
|-----------------|------|
| Length of cable | 20 m |
|-----------------|------|

#### Ambient conditions

|                      |      |
|----------------------|------|
| Degree of protection | IP65 |
|                      | IP67 |
|                      | IP68 |

#### General

|                             |             |
|-----------------------------|-------------|
| Rated current at 40°C       | 4 A         |
| Rated voltage               | 48 V AC     |
|                             | 60 V DC     |
| Number of positions         | 2           |
| Insulation resistance       | ≥ 100 MΩ    |
| Coding                      | B - inverse |
| Signal type/category        | PROFIBUS    |
| Status display              | No          |
| Overvoltage category        | II          |
| Degree of pollution         | 3           |
| Insertion/withdrawal cycles | ≥ 100       |

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### Technical data

#### Material

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

#### Standards and Regulations

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

#### Cable

|                                               |                                                            |
|-----------------------------------------------|------------------------------------------------------------|
| Cable type                                    | PROFIBUS                                                   |
| Cable type (abbreviation)                     | 910                                                        |
| UL AWM style                                  | 21198 (80°C/300 V)                                         |
| Cable structure                               | 1x2xAWG24/19                                               |
| Conductor cross section                       | 2x 0.25 mm <sup>2</sup> (Signal line)                      |
| AWG signal line                               | 24                                                         |
| Conductor structure signal line               | 19x 0.13 mm                                                |
| Core diameter including insulation            | 2.55 mm ±0.07 mm                                           |
| Wire colors                                   | Red, green                                                 |
| Overall twist                                 | 2 cores with 2 fillers to the core                         |
| Shielding                                     | Plastic-coated aluminum foil, tinned copper braided shield |
| Optical shield covering                       | 85 %                                                       |
| External sheath, color                        | violet RAL 4001                                            |
| External cable diameter D                     | 7.8 mm ±0.2 mm                                             |
| Smallest bending radius, fixed installation   | 40 mm                                                      |
| Smallest bending radius, movable installation | 65 mm                                                      |
| Number of bending cycles                      | 4000000                                                    |
| Bending radius                                | 65 mm                                                      |
| Traversing path                               | 4.5 m                                                      |
| Traversing rate                               | 3 m/s                                                      |
| Acceleration                                  | 3 m/s <sup>2</sup>                                         |
| Number of bending cycles                      | 5000000                                                    |
| Bending radius                                | 80 mm                                                      |
| Traversing path                               | 4.5 m                                                      |
| Traversing rate                               | 3 m/s                                                      |
| Acceleration                                  | 3 m/s <sup>2</sup>                                         |
| Cable weight                                  | 90 kg/km                                                   |
| Outer sheath, material                        | PUR                                                        |
| Material, filler                              | PP                                                         |
| Material conductor insulation                 | Foam-Skin PP                                               |

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### Technical data

#### Cable

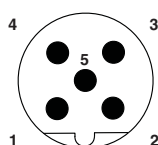
|                                 |                                                                   |
|---------------------------------|-------------------------------------------------------------------|
| Conductor material              | Tin-plated Cu litz wires                                          |
| Insulation resistance           | $\geq 5 \text{ G}\Omega \cdot \text{km}$                          |
| Conductor resistance            | $\leq 78.6 \text{ }\Omega/\text{km}$                              |
| Cable capacity                  | nom. 30 pF/m                                                      |
| Wave impedance                  | $150 \text{ }\Omega \pm 10 \text{ }\%$ (3 MHz ... 20 MHz)         |
| Attenuation                     | $\leq 0.049 \text{ dB/m}$ (at 16 MHz)                             |
| Nominal voltage, cable          | 30 V                                                              |
| Test voltage Core/Core          | 1500 V (50 Hz, 1 min.)                                            |
| Test voltage Core/Shield        | 1500 V (50 Hz, 1 min.)                                            |
| Flame resistance                | UL 1581, Sec. 1060 (FT-1)                                         |
|                                 | IEC 60332-1-2                                                     |
| Halogen-free                    | in accordance with DIN VDE 0472 part 815                          |
|                                 | according to IEC 60754-1                                          |
| Other resistance                | Low adhesion                                                      |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation)                      |
|                                 | -30 °C ... 80 °C (cable, flexible installation)                   |
|                                 | $\leq 70 \text{ }^\circ\text{C}$ (cable, drag chain applications) |

#### Environmental Product Compliance

|            |                                                         |
|------------|---------------------------------------------------------|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

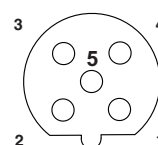
### Drawings

Schematic diagram



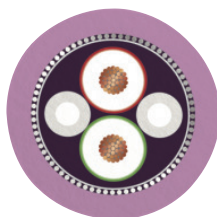
Pin assignment M12 male connector, 5-pos., B-coded, male side

Schematic diagram

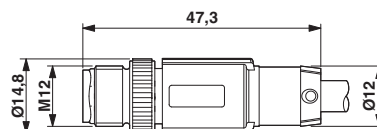


Pin assignment M12 socket, 5-pos., B-coded, female side

Cable cross section



Dimensional drawing

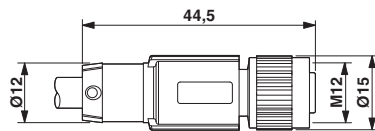


PROFIBUS [910]

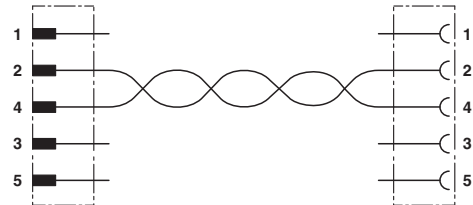
Plug, M12 x 1, straight, shielded

## Bus system cable - SAC-2P-M12MSB/20,0-910/M12FSB - 1524132

Dimensional drawing



Circuit diagram



M12 x 1 socket, straight, shielded

Contact assignment of the M12 connector and the M12 socket

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