

## Bus system cable - SAC-2P-MRB/2,0-910/FRB SCO - 1403635

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Bus system cable, PROFIBUS (12 Mbps), 2-position, PUR halogen-free, violet RAL 4001, shielded, Plug angled M12 SPEEDCON, B-coded, on Socket angled M12 SPEEDCON, B-coded, Cable length: 2 m



### Key Commercial Data

|                      |          |
|----------------------|----------|
| Packing unit         | 1 STK    |
| Custom tariff number | 85444290 |
| Country of origin    | Poland   |

### Technical data

#### Dimensions

|                 |     |
|-----------------|-----|
| Length of cable | 2 m |
|-----------------|-----|

#### Ambient conditions

|                                 |                                  |
|---------------------------------|----------------------------------|
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket) |
| Degree of protection            | IP65                             |
|                                 | IP67                             |

#### General

|                       |                   |
|-----------------------|-------------------|
| Rated current at 40°C | 4 A               |
| Rated voltage         | 250 V             |
| Number of positions   | 2                 |
| Insulation resistance | ≥ 100 MΩ          |
| Coding                | B - inverse       |
| Signal type/category  | PROFIBUS, 12 Mbps |
| Status display        | No                |
| Overvoltage category  | II                |

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### Technical data

#### General

|                     |   |
|---------------------|---|
| Degree of pollution | 3 |
|---------------------|---|

#### Material

|                                        |                                             |
|----------------------------------------|---------------------------------------------|
| Flammability rating according to UL 94 | V0                                          |
| Contact material                       | CuSn                                        |
| Contact surface material               | Ni/Au                                       |
| Contact carrier material               | PA 66                                       |
| 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                                                      |

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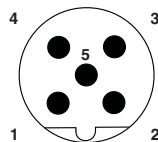
### Technical data

#### Cable

|                                 |                                                 |
|---------------------------------|-------------------------------------------------|
| Traversing rate                 | 3 m/s                                           |
| Acceleration                    | 3 m/s <sup>2</sup>                              |
| Outer sheath, material          | PUR                                             |
| Material, filler                | PP                                              |
| Material conductor insulation   | Foam-Skin PP                                    |
| Conductor material              | Tin-plated Cu litz wires                        |
| Insulation resistance           | ≥ 5 GΩ*km                                       |
| Conductor resistance            | ≤ 78.6 Ω/km                                     |
| Cable capacity                  | nom. 30 pF/m                                    |
| Wave impedance                  | 150 Ω ±10 % (3 MHz ... 20 MHz)                  |
| Wave attenuation                | ≤ 0.049 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) |
|                                 | ≤ 70 °C (cable, drag chain applications)        |

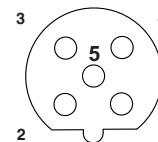
### Drawings

Schematic diagram



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

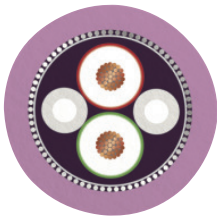
Schematic diagram



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

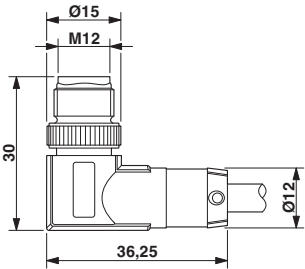
Bus system cable - SAC-2P-MRB/2,0-910/FRB SCO - 1403635

Cable cross section



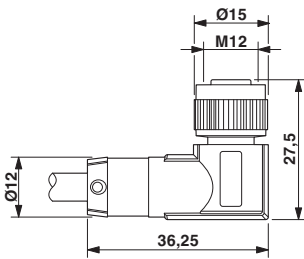
PROFIBUS [910]

Dimensional drawing

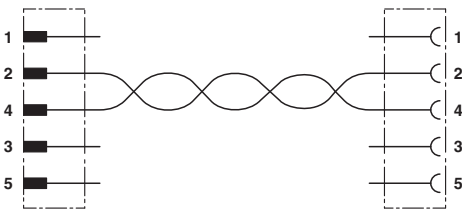


Plug M12 SPEEDCON, angled, shielded

Dimensional drawing



Circuit diagram



Contact assignment of the M12 plug and the M12 socket

Socket M12-SPEEDCON, angled, shielded

Classifications

eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27060306 |
| eCl@ss 4.1 | 27060306 |
| eCl@ss 5.0 | 27061801 |
| eCl@ss 5.1 | 27061801 |
| eCl@ss 6.0 | 27269202 |
| eCl@ss 7.0 | 27449203 |
| eCl@ss 8.0 | 27279218 |
| eCl@ss 9.0 | 27060311 |

ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001855 |
| ETIM 4.0 | EC001855 |
| ETIM 5.0 | EC001855 |

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### Classifications

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 31251501 |
| UNSPSC 7.0901 | 31251501 |
| UNSPSC 11     | 31251501 |
| UNSPSC 12.01  | 31251501 |
| UNSPSC 13.2   | 31251501 |