

## Bus system cable - SAC-2P-MRB/1,0-910/FRB SCO - 1403634

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's documentation. Our General Terms of Use for Downloads are valid  
(<http://phoenixcontact.com/download>)



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: 1 m



### Key Commercial Data

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

### Technical data

#### Dimensions

|                 |     |
|-----------------|-----|
| Length of cable | 1 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                |

## Bus system cable - SAC-2P-MRB/1,0-910/FRB SCO - 1403634

### 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                                                      |

## Bus system cable - SAC-2P-MRB/1,0-910/FRB SCO - 1403634

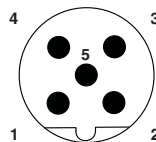
### Technical data

#### 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)        |

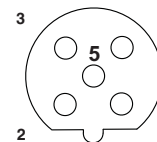
### Drawings

Schematic diagram



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

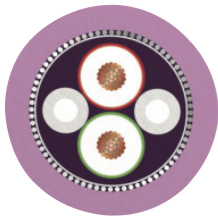
Schematic diagram



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

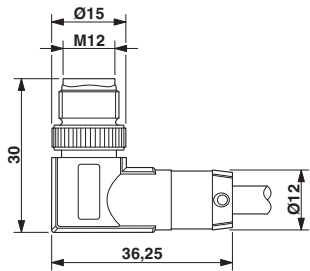
Bus system cable - SAC-2P-MRB/1,0-910/FRB SCO - 1403634

Cable cross section



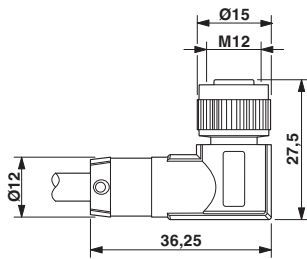
PROFIBUS [910]

Dimensional drawing

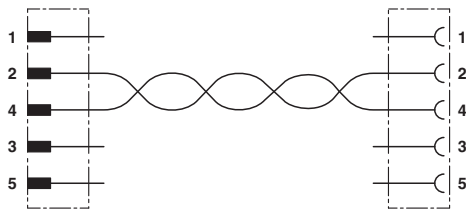


Plug M12 SPEEDCON, angled, shielded

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 |

## Bus system cable - SAC-2P-MRB/1,0-910/FRB SCO - 1403634

### Classifications

#### UNSPSC

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