

## Bus system cable - SAC-2P-MSB/ 1,0-910/FSB SCO - 1518122

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Bus system cable, PROFIBUS (12 Mbps), 2-position, PUR halogen-free, violet RAL 4001, shielded, Plug straight M12 SPEEDCON, coding: B, on Socket straight M12 SPEEDCON, coding: B, cable length: 1 m

RoHS



### Key Commercial Data

|                                      |   |
|--------------------------------------|---|
| Packing unit                         | 1 pc  |
| GTIN                                 | <br>4 017918 968243 |
| GTIN                                 | 4017918968243   |
| Weight per Piece (excluding packing) | 103.800 g   |
| 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         | 48 V AC |
|                       | 60 V DC |
| Number of positions   | 2       |

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### Technical data

#### General

|                       |                                |
|-----------------------|--------------------------------|
| Insulation resistance | ≥ 100 MΩ                       |
| Coding                | B - inverse                    |
| Signal type/category  | PROFIBUS, 12 Mbps (max. 100 m) |
| Status display        | No                             |
| Overvoltage category  | II                             |
| Degree of pollution   | 3                              |
| Torque                | 0.4 Nm (M12 connector)         |

#### Material

|                          |   |
|--------------------------|---|
| Contact material         | CuSn  |
| Contact surface material | Ni/Au                                       |
| Contact carrier material | TPU GF                                      |
| Material of grip body    | TPU, hardly inflammable, self-extinguishing |
| Material, knurls         | Zinc die-cast, nickel-plated                |
| Sealing material         | NBR   |

#### Pin assignment

|   |                                      |
|---|--------------------------------------|
| Contact   Color (signal designation)   Contact (optional) | 2 (Plug)   GN (A cable)   2 (Socket) |
|   | 4 (Plug)   RD (B cable)   4 (Socket) |

#### 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  |

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### Technical data

#### Cable

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

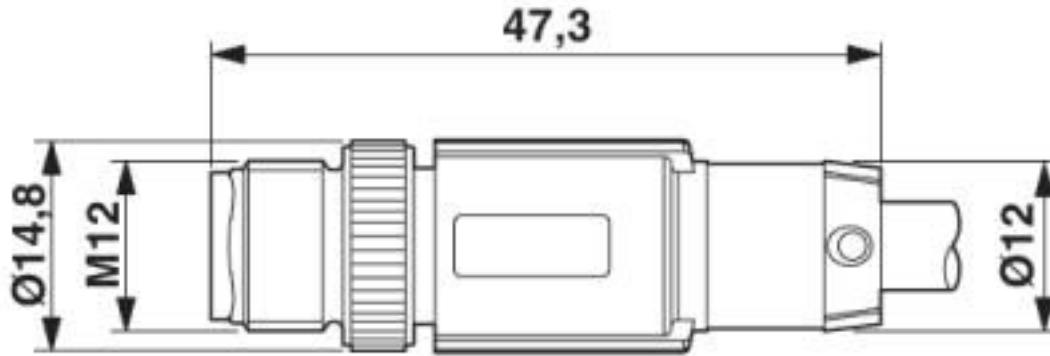
#### Environmental Product Compliance

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

#### Drawings

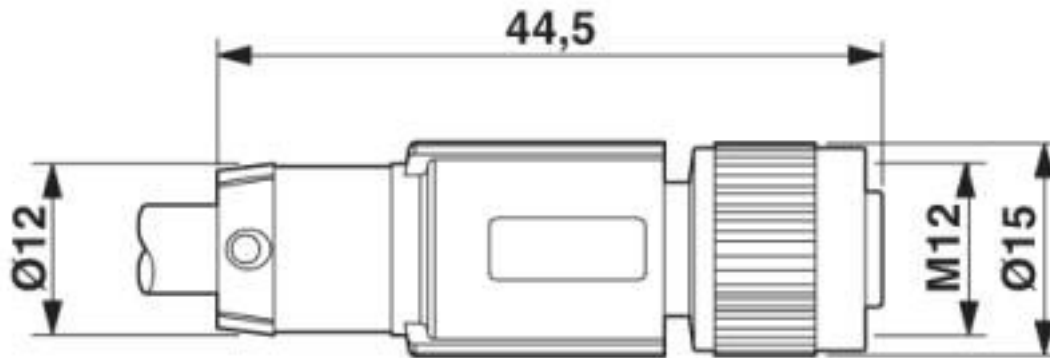
## Bus system cable - SAC-2P-MSB/ 1,0-910/FSB SCO - 1518122

Dimensional drawing



Plug, M12 x 1, straight, shielded

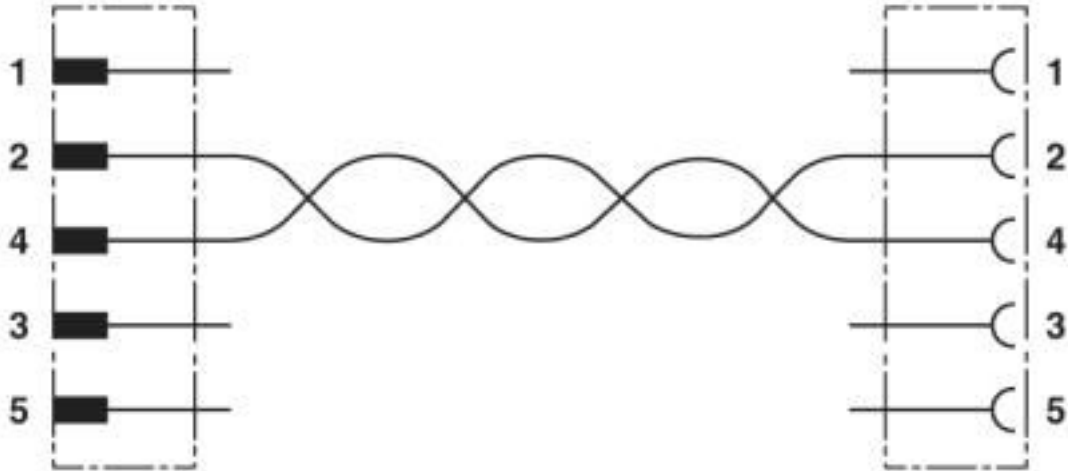
Dimensional drawing



M12 x 1 socket, straight, shielded

## Bus system cable - SAC-2P-MSB/ 1,0-910/FSB SCO - 1518122

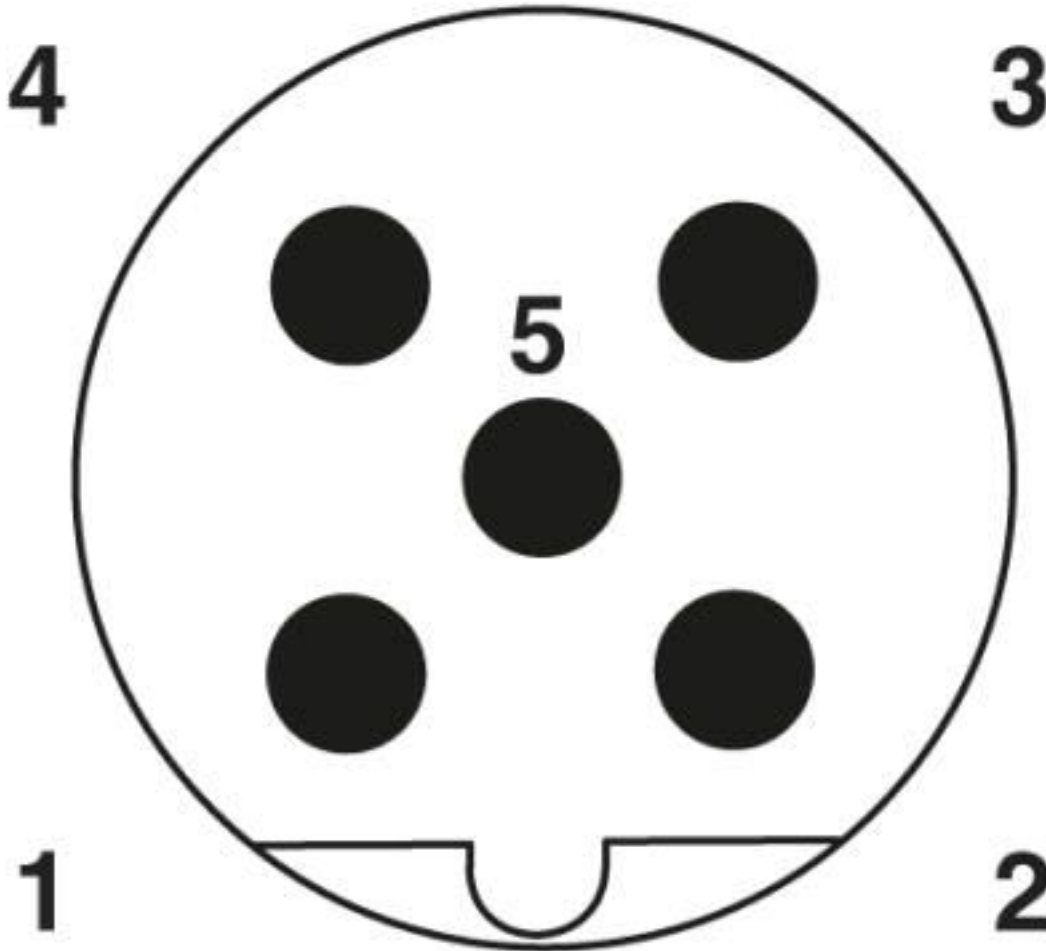
Circuit diagram



Contact assignment of the M12 plug and the M12 socket

## Bus system cable - SAC-2P-MSB/ 1,0-910/FSB SCO - 1518122

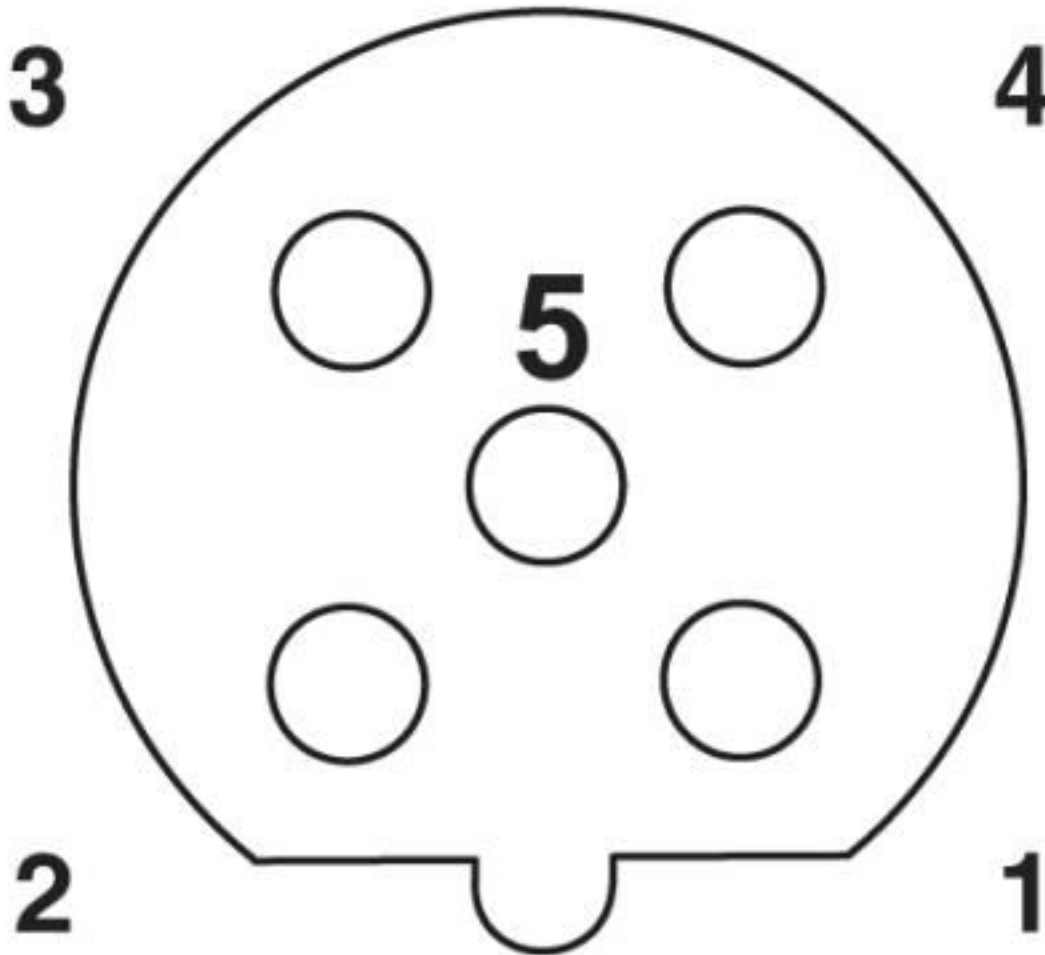
Schematic diagram



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

# Bus system cable - SAC-2P-MSB/ 1,0-910/FSB SCO - 1518122

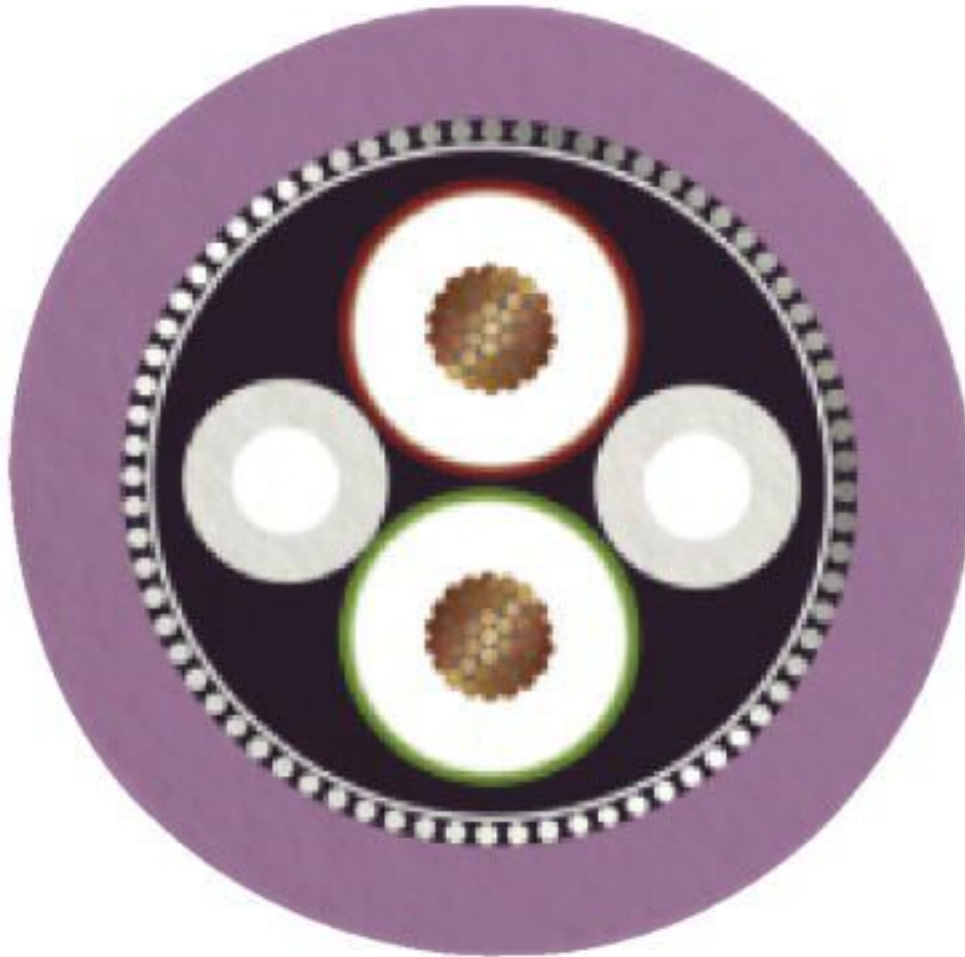
Schematic diagram



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

## Bus system cable - SAC-2P-MSB/ 1,0-910/FSB SCO - 1518122

Cable cross section



PROFIBUS [910]

### Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27060308 |
| eCl@ss 4.0    | 27060300 |
| eCl@ss 4.1    | 27060300 |
| eCl@ss 5.0    | 27061800 |
| eCl@ss 5.1    | 27061800 |
| eCl@ss 6.0    | 27279200 |
| eCl@ss 7.0    | 27279218 |

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### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 8.0 | 27279218 |
| eCl@ss 9.0 | 27060308 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC000830 |
| ETIM 3.0 | EC001855 |
| ETIM 4.0 | EC001855 |
| ETIM 5.0 | EC002599 |
| ETIM 6.0 | EC001262 |
| ETIM 7.0 | EC001262 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 31251501 |
| UNSPSC 7.0901 | 31251501 |
| UNSPSC 11     | 31251501 |
| UNSPSC 12.01  | 31251501 |
| UNSPSC 13.2   | 31251501 |
| UNSPSC 18.0   | 26121604 |
| UNSPSC 19.0   | 26121604 |
| UNSPSC 20.0   | 26121604 |
| UNSPSC 21.0   | 26121604 |

### Approvals

#### Approvals

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#### Approvals

UL Listed / cUL Listed / EAC-RoHS / EAC / cULus Listed

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#### Ex Approvals

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#### Approval details

# Bus system cable - SAC-2P-MSB/ 1,0-910/FSB SCO - 1518122

## Approvals

|                    |       |   |               |
|--------------------|-------|---|---------------|
| UL Listed          |       | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 221474 |
|                    |       |   |               |
| Nominal voltage UN | 300 V |   |               |
| Nominal current IN | 4 A   |   |               |

|                    |       |   |               |
|--------------------|-------|---|---------------|
| cUL Listed         |       | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 221474 |
|                    |       |   |               |
| Nominal voltage UN | 300 V |   |               |
| Nominal current IN | 4 A   |   |               |

|          |  |                          |
|----------|--|--------------------------|
| EAC-RoHS |  | RU D-<br>DE.HB35.B.00387 |
|----------|--|--------------------------|

|     |  |               |
|-----|--|---------------|
| EAC |  | EAC-Zulassung |
|-----|--|---------------|

|              |  |
|--------------|--|
| cULus Listed |  |
|--------------|--|