

## Bus system cable - SAC-2P-MSB/ 0,5-910/FSB SCO - 1518119

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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: 0.5 m

RoHS



### Key Commercial Data

|              |                                                                                      |
|--------------|--------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                 |
| GTIN         |  |
| GTIN         | 4017918968236                                                                        |

### Technical data

#### Dimensions

|                 |       |
|-----------------|-------|
| Length of cable | 0.5 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                              |
| 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)         |

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## Technical data

### 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                                                      |
| 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

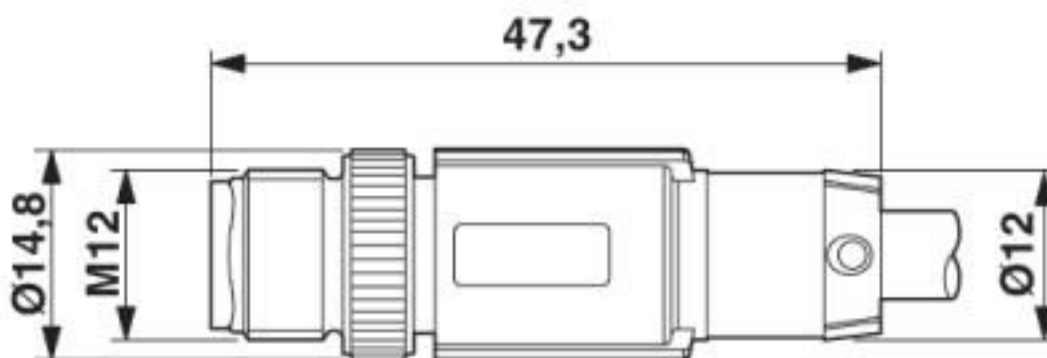
|                                 |                                                                     |
|---------------------------------|---------------------------------------------------------------------|
| Conductor material              | Tin-plated Cu litz wires                                            |
| 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

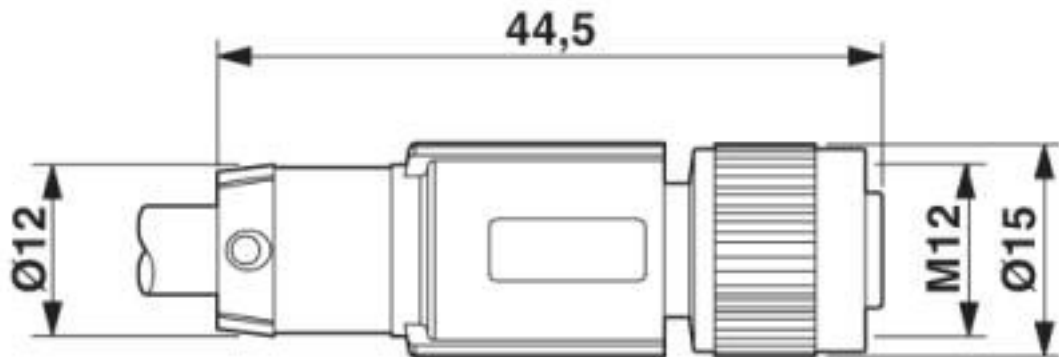
Dimensional drawing



Plug, M12 x 1, straight, shielded

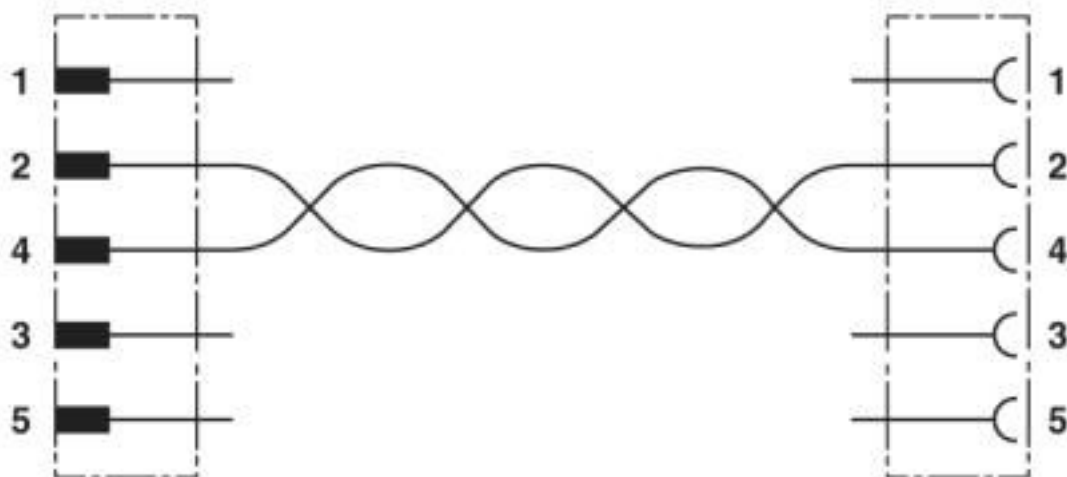
## Bus system cable - SAC-2P-MSB/ 0,5-910/FSB SCO - 1518119

Dimensional drawing



M12 x 1 socket, straight, shielded

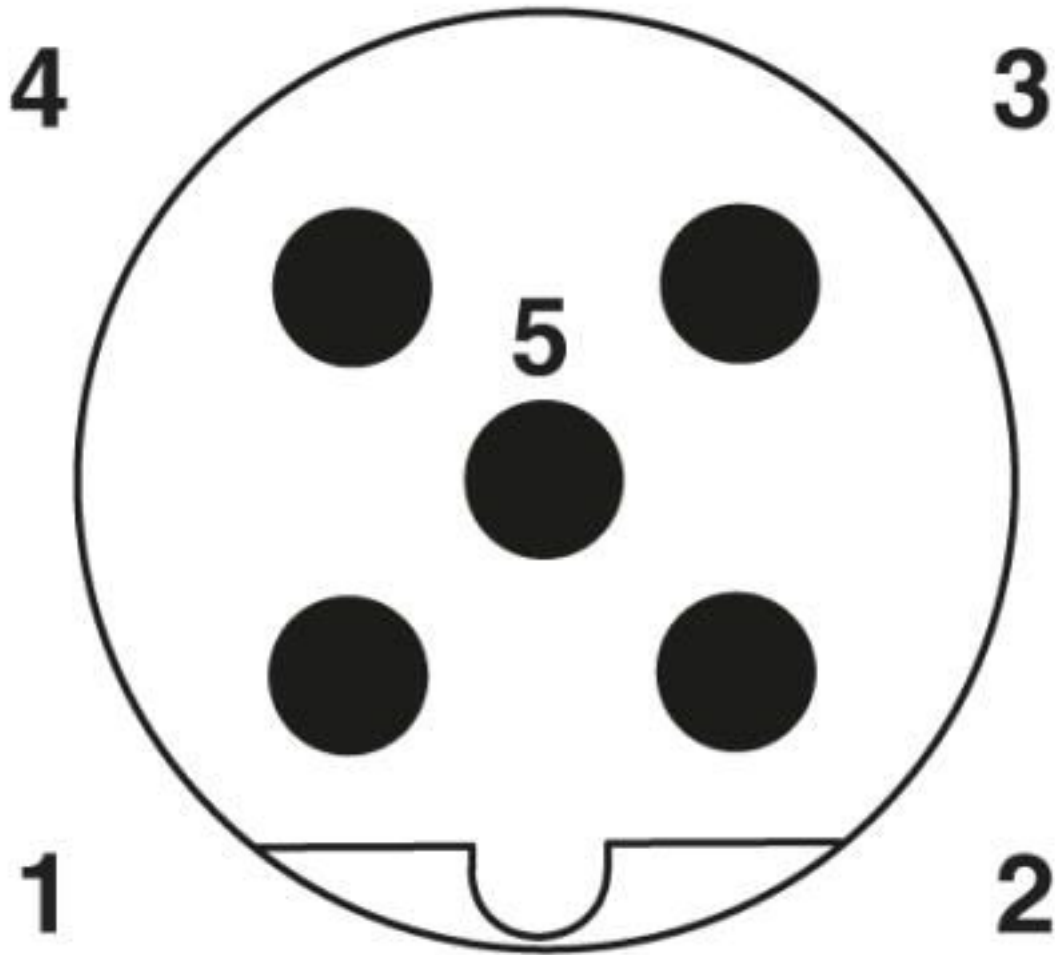
Circuit diagram



Contact assignment of the M12 plug and the M12 socket

## Bus system cable - SAC-2P-MSB/ 0,5-910/FSB SCO - 1518119

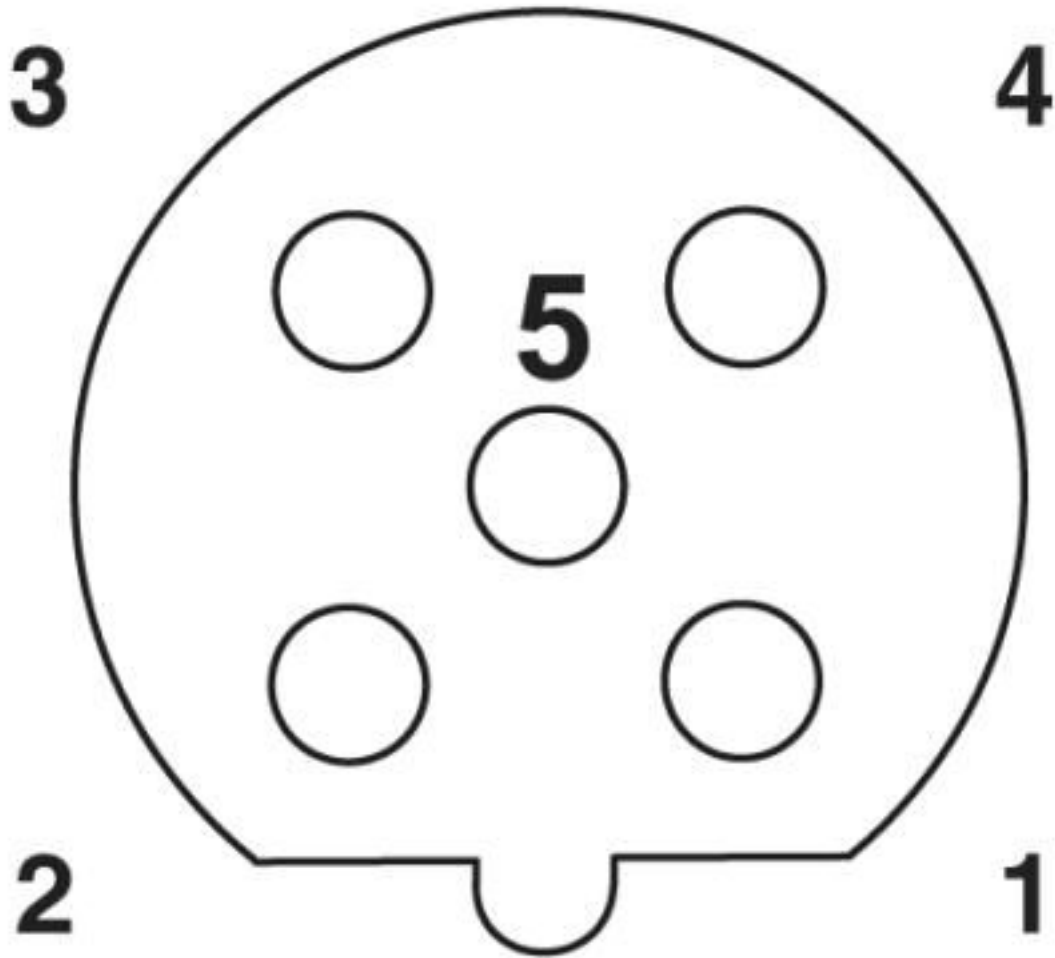
Schematic diagram



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

## Bus system cable - SAC-2P-MSB/ 0,5-910/FSB SCO - 1518119

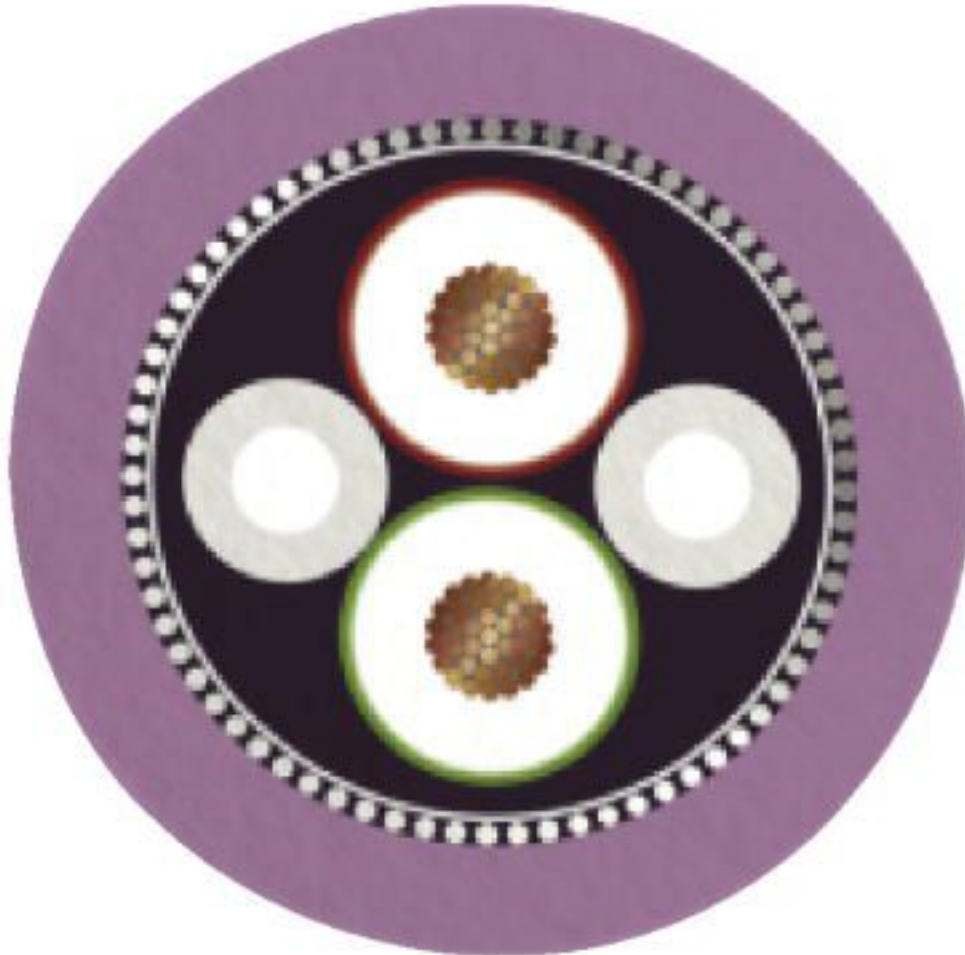
Schematic diagram



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

## Bus system cable - SAC-2P-MSB/ 0,5-910/FSB SCO - 1518119

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

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### Classifications

#### 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

#### Approvals

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

#### Ex Approvals

### Approval details

|                    |                                                                                     |                                                                                                                                                       |               |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 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                                                                                 |                                                                                                                                                       |               |

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### Approvals

|                    |                                                                                   |                                                                                                                                                       |               |
|--------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 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 |  |
|--------------|-------------------------------------------------------------------------------------|

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