

## Bus system cable - SAC-5P-MS/ 2,0-923 CAN SCO - 1419039

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Bus system cable, CANopen®, DeviceNet™, 5-position, PUR halogen-free, silver-gray RAL 7001, shielded, Plug straight M12 SPEEDCON, A-coded, on free cable end, cable length: 2 m, Connector unshielded



### Key Commercial Data

|              |               |
|--------------|---------------|
| Packing unit | 1 pc          |
| GTIN         |               |
| GTIN         | 4046356542821 |

### Technical data

#### Dimensions

|  |       |
|--|-------|
| Length of cable                            | 2 m   |
| Stripping length of the free conductor end | 50 mm |

#### 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<br>60 V DC     |
| Number of positions   | 5                      |
| Color handle area     | black                  |
| Coding                | A - standard           |
| Signal type/category  | CANopen®<br>DeviceNet™ |
| Status display        | No                     |
| Overvoltage category  | II                     |

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## Technical data

### General

|                     |                        |
|---------------------|------------------------|
| Degree of pollution | 3                      |
| Torque              | 0.4 Nm (M12 connector) |

### Material

|  |                              |
|--|------------------------------|
| Flammability rating according to UL 94 | HB                           |
| Contact material                       | CuSn                         |
| Contact surface material               | Ni/Au                        |
| Contact carrier material               | TPU GF                       |
| Material of grip body                  | TPU                          |
| Material, knurls                       | Zinc die-cast, nickel-plated |

### Pin assignment

|   |                        |
|---|------------------------|
| Contact   Color (signal designation)   Contact (optional) | 1 (Plug)   SR (shield) |
|   | 2 (Plug)   RD (V+)     |
|   | 3 (Plug)   BK (V-)     |
|   | 4 (Plug)   WH (CAN_H)  |
|   | 5 (Plug)   BU (CAN_L)  |

### Standards and Regulations

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

### Cable

|                                     |   |
|-------------------------------------|---|
| Cable type                          | CAN Bus/DeviceNet drop cable                          |
| Cable type (abbreviation)           | 923   |
| UL AWM style                        | 21198 (80°C/300 V)                                    |
| Cable structure                     | 2xAWG24/19+2xAWG22/19                                 |
| Conductor cross section             | 2x 0.25 mm <sup>2</sup> (Data cable)                  |
|                                     | 2x 0.34 mm <sup>2</sup> (Power supply)                |
|                                     | 1x 0.34 mm <sup>2</sup> (Drain wire)                  |
| AWG signal line                     | 24  |
| AWG power supply                    | 22  |
| Conductor structure signal line     | 19x 0.13 mm   |
| Conductor structure, voltage supply | 19x 0.15 mm   |
| Core diameter including insulation  | 1.95 mm ±0.05 mm (Data cable)                         |
|                                     | 1.4 mm ±0.05 mm (Power supply)                        |
| Wire colors                         | Red-black, blue-white                                 |
| Twisted pairs                       | 2 cores to the pair                                   |
| Type of pair shielding              | Plastic-coated aluminum foil, aluminum side outside   |
| Overall twist                       | 2 pairs around a drain wire in the center to the core |
| Shielding                           | Tinned copper braided shield                          |
| Optical shield covering             | 80 %  |
| External sheath, color              | silver-gray RAL 7001                                  |
| External cable diameter D           | 6.7 mm ±0,3 mm  |

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#### Cable

|   |   |
|---|---|
| Minimum bending radius, fixed installation      | 5 x D   |
| Minimum bending radius, flexible installation   | 10 x D  |
| Number of bending cycles                        | 5000000   |
| Bending radius                                  | 70 mm   |
| Minimum bending radius, drag chain applications | 10 x D  |
| 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 conductor insulation                   | Foamed PE (Data cable)                                |
|   | PE (Power supply)                                     |
| Conductor material                              | Tin-plated Cu litz wires                              |
| Insulation resistance                           | ≥ 5 GΩ*km (Data cable)                                |
|   | ≥ 5 GΩ*km (Power supply)                              |
| Loop resistance                                 | ≤ 181.80 Ω/km (Data cable)                            |
|   | ≤ 114.80 Ω/km (Power supply)                          |
| Cable capacity                                  | nom. 40 nF/km (Data cable)                            |
| Wave impedance                                  | 120 Ω ±10 % (with 1 MHz)                              |
| Attenuation                                     | ≤ 22.9 dB/km (with 1 MHz)                             |
|   | ≤ 16.4 dB/km (At 500 kHz)                             |
|   | ≤ 9.5 dB/km (At 125 kHz)                              |
| Nominal voltage, cable                          | ≤ 300 V (Peak value, not for high-power applications) |
| Test voltage Core/Core                          | 2000 V (50 Hz, 1 min.)                                |
| Test voltage Core/Shield                        | 2000 V (50 Hz, 1 min.)                                |
| Flame resistance                                | UL 1581, Sec. 1060 (FT-1)                             |
|   | IEC 60332-1   |
| 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)          |
|   | -20 °C ... 80 °C (cable, flexible installation)       |

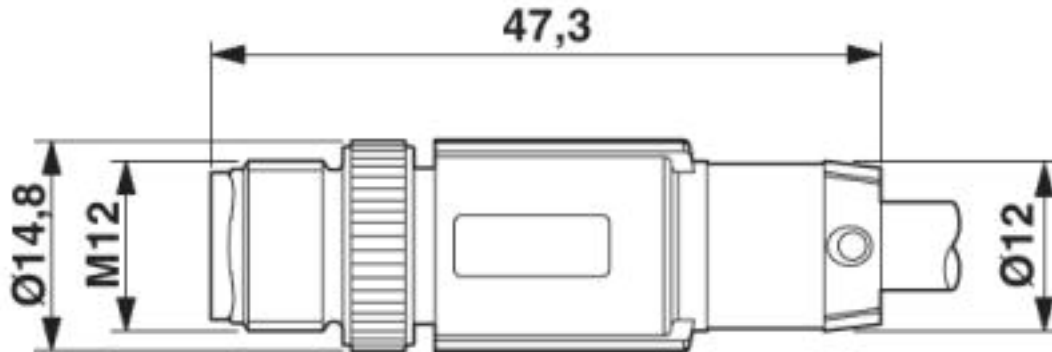
#### Environmental Product Compliance

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

#### Drawings

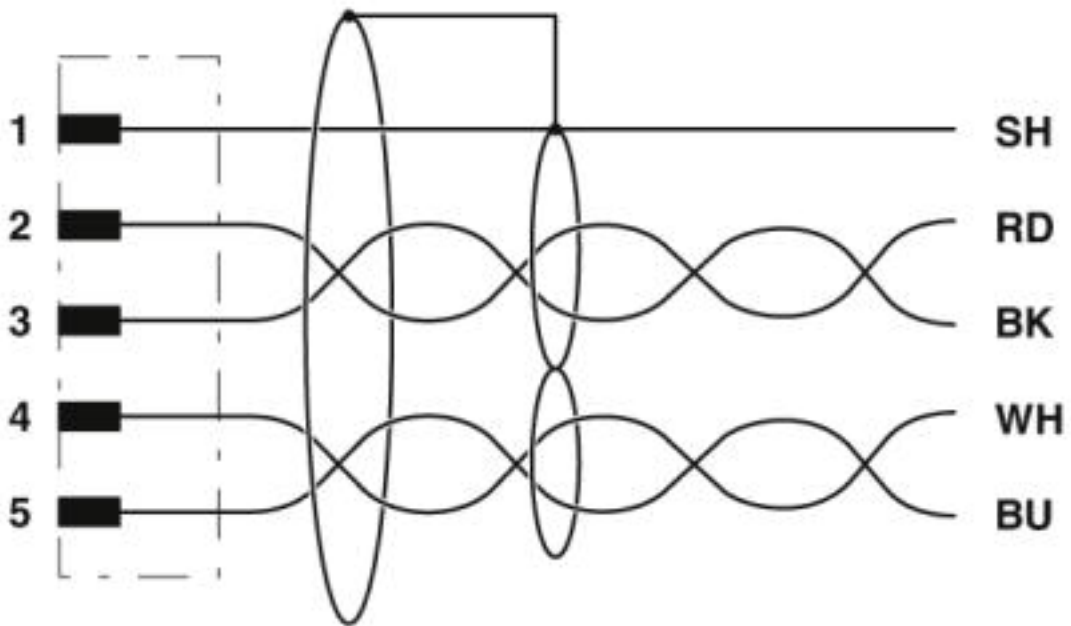
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Dimensional drawing



Plug, M12 x 1, straight, shielded

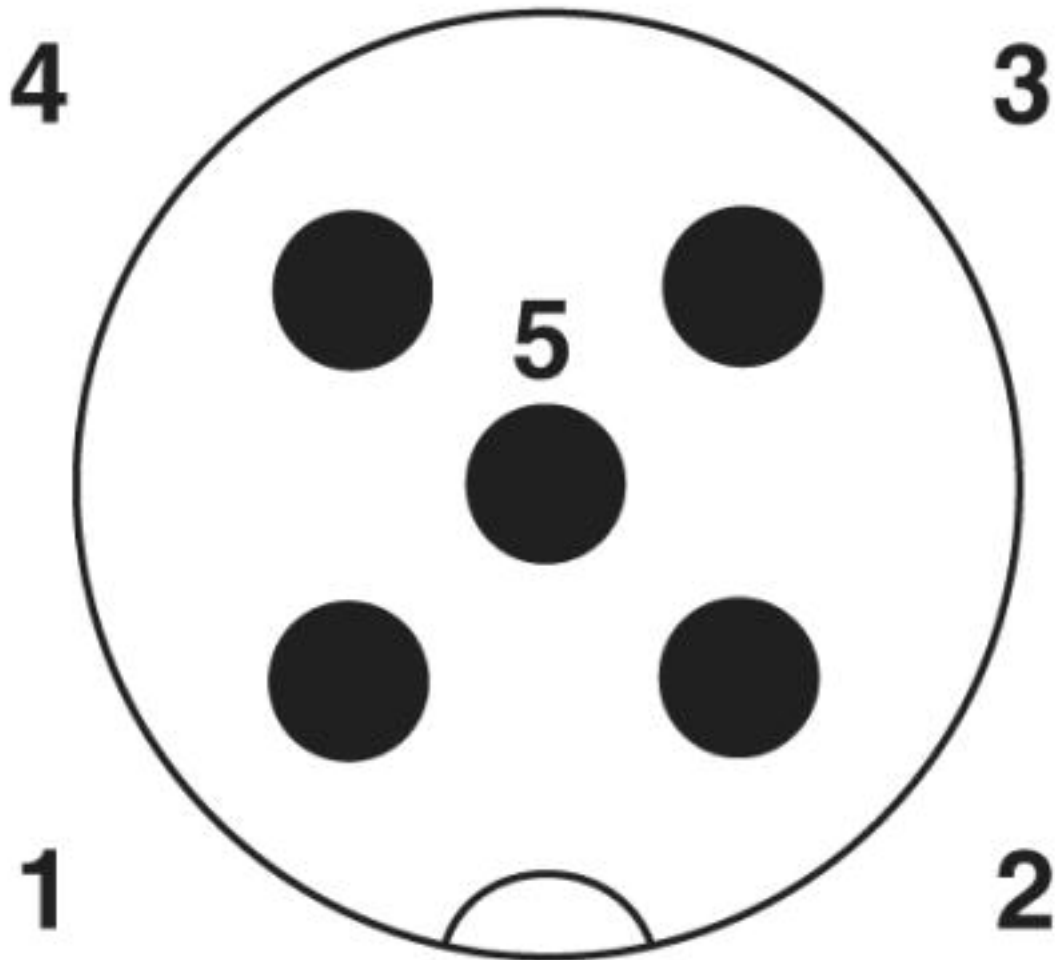
Circuit diagram



Contact assignment of the M12 plug

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Schematic diagram



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

## Bus system cable - SAC-5P-MS/ 2,0-923 CAN SCO - 1419039

Cable cross section



CAN Bus/DeviceNet [923]

### Approvals

Approvals

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Approvals

EAC

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Ex Approvals

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Approval details

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### Approvals

EAC



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