

## Bus system cable - SAC-5P-MS/10,0-920/FS SCO - 1518300

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Bus system cable, CANopen<sup>®</sup>, DeviceNet<sup>™</sup>, 5-position, PUR halogen-free, violet RAL 4001, shielded, Plug straight M12 SPEEDCON, A-coded, on Socket straight M12 SPEEDCON, A-coded, Cable length: 10 m



### Key Commercial Data

|                                      |   |
|--------------------------------------|---|
| Packing unit                         | 1 pc  |
| GTIN                                 | <br>4 017918 968427 |
| Weight per Piece (excluding packing) | 591.6 g   |
| Custom tariff number                 | 85444290  |
| Country of origin                    | Poland  |

### Technical data

#### Dimensions

|                 |      |
|-----------------|------|
| Length of cable | 10 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         | 60 V         |
| Number of positions   | 5            |
| Insulation resistance | ≥ 100 MΩ     |
| Coding                | A - standard |

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### Technical data

#### General

|                      |                        |
|----------------------|------------------------|
| Signal type/category | CANopen®               |
|                      | DeviceNet™             |
| Status display       | No                     |
| Overvoltage category | II                     |
| 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, hardly inflammable, self-extinguishing |
| Material, knurls                       | Zinc die-cast, nickel-plated                |
| Sealing material                       | NBR   |

#### Pin assignment

|  |                                     |
|--|-------------------------------------|
| Position = wire color (signal) = position (optional) | 1 (Plug) = SR (shield) = 1 (Socket) |
|  | 2 (Plug) = RD (V+) = 2 (Socket)     |
|  | 3 (Plug) = BK (V-) = 3 (Socket)     |
|  | 4 (Plug) = WH (CAN_H) = 4 (Socket)  |
|  | 5 (Plug) = BU (CAN_L) = 5 (Socket)  |

#### Standards and Regulations

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

#### Cable

|                                     |                               |
|-------------------------------------|-------------------------------|
| Cable type                          | CAN Bus/DeviceNet             |
| Cable type (abbreviation)           | 920                           |
| UL AWM style                        | 21198 (80°C/300 V)            |
| Cable structure                     | 2xAWG24/19+2xAWG22/19         |
| Conductor cross section             | 2x 0.25 mm² (Data cable)      |
|                                     | 2x 0.34 mm² (Power supply)    |
|                                     | 1x 0.34 mm² (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) |

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## Technical 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                        | violet RAL 4001                                       |
| External cable diameter D                     | 6.7 mm ±0,3 mm  |
| Minimum bending radius, flexible installation | 10 x D  |
| Number of bending cycles                      | 5000000   |
| Bending radius                                | 70 mm   |
| Traversing path                               | 4.5 m   |
| Traversing rate                               | 3 m/s   |
| Acceleration                                  | 3 m/s <sup>2</sup>                                    |
| 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)                              |
| Conductor resistance                          | ≤ 90.9 Ω/km (Data cable)                              |
|   | ≤ 57.4 Ω/km (Power supply)                            |
| Cable capacity                                | nom. 40 pF/m (Data cable)                             |
| Wave impedance                                | 120 Ω ±10 % (with 1 MHz)                              |
| Wave attenuation                              | ≥ 0.0229 dB/m (with 1 MHz)                            |
| 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   |
|   | in accordance with ISO 6722-1 5.22 (UN ECE-R 118.01)  |
| 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)       |

## Bus system cable - SAC-5P-MS/10,0-920/FS SCO - 1518300

### Technical data

#### Cable

|  |  |
|--|--|
|  | ≤ 70 °C (cable, drag chain applications) |
|--|--|

### 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 | 27061801 |
| eCl@ss 7.0 | 27061801 |
| eCl@ss 8.0 | 27279218 |
| eCl@ss 9.0 | 27060311 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC000830 |
| ETIM 3.0 | EC001855 |
| ETIM 4.0 | EC001855 |
| ETIM 5.0 | EC001855 |

#### UNSPSC

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

### Approvals

#### Approvals

#### Approvals

#### EAC

#### Ex Approvals

Bus system cable - SAC-5P-MS/10,0-920/FS SCO - 1518300

Approvals

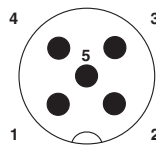
Approvals submitted

Approval details

|     |
|-----|
| EAC |
|-----|

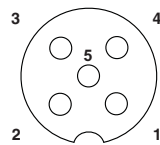
Drawings

Schematic diagram



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

Schematic diagram



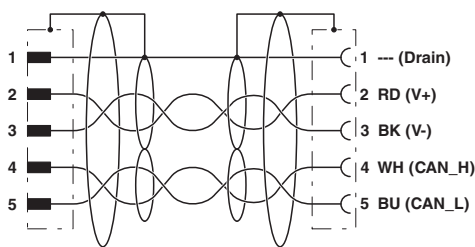
Pin assignment M12 socket, 5-pos., A-coded, socket side view

Cable cross section



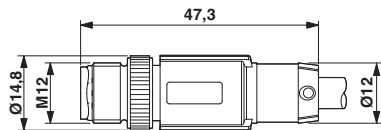
CAN Bus/DeviceNet [920]

Circuit diagram



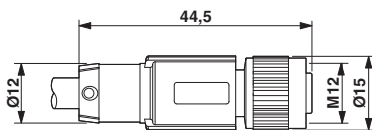
Contact assignment of the M12 connector and the M12 socket

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, straight, shielded



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