

## Bus system cable - SAC-5P- 5,0-920/FS SCO - 1518229


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Bus system cable, CANopen®, DeviceNet™, 5-position, PUR halogen-free, violet RAL 4001, shielded, free cable end, on Socket straight M12 SPEEDCON, coding: A, cable length: 5 m



### Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 1 pc  |
| GTIN         | <br>4 017918 968342 |
| GTIN         | 4017918968342   |

### Technical data

#### Dimensions

|  |       |
|--|-------|
| Length of cable                            | 5 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                |
|                       | 60 V DC                |
| Number of positions   | 5                      |
| Insulation resistance | ≥ 100 MΩ               |
| Coding                | A - standard           |
| Status display        | No                     |
| Overvoltage category  | II                     |
| Degree of pollution   | 3                      |
| Torque                | 0.4 Nm (M12 connector) |

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## Technical data

### 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   |

### Standards and Regulations

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

### Cable

|   |  |
|---|--|
| Cable type                                      | CANopen <sup>®</sup> /DeviceNet <sup>™</sup> , PUR, violet |
| Cable type (abbreviation)                       | 920  |
| 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                          | violet RAL 4001  |
| External cable diameter D                       | 6.7 mm ±0.3 mm   |
| 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   |

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### Technical data

#### Cable

|                                 |  |
|---------------------------------|--|
| Outer sheath, material          | PUR  |
| Material conductor insulation   | Foamed PE (Data cable)   |
|                                 | PE (Power supply)  |
| Conductor material              | Tin-plated Cu litz wires   |
| Insulation resistance           | $\geq 5 \text{ G}\Omega\cdot\text{km}$ (Data cable)                |
|                                 | $\geq 5 \text{ G}\Omega\cdot\text{km}$ (Power supply)              |
| Loop resistance                 | $\leq 181.80 \text{ }\Omega/\text{km}$ (Data cable)                |
|                                 | $\leq 114.80 \text{ }\Omega/\text{km}$ (Power supply)              |
| Cable capacity                  | nom. 40 nF/km (Data cable)   |
| Wave impedance                  | 120 $\Omega \pm 10 \%$ (with 1 MHz)                                |
| Attenuation                     | $\leq 22.9 \text{ dB/km}$ (with 1 MHz)                             |
|                                 | $\leq 16.4 \text{ dB/km}$ (At 500 kHz)                             |
|                                 | $\leq 9.5 \text{ dB/km}$ (At 125 kHz)                              |
| Nominal voltage, cable          | $\leq 300 \text{ V}$ (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)                    |

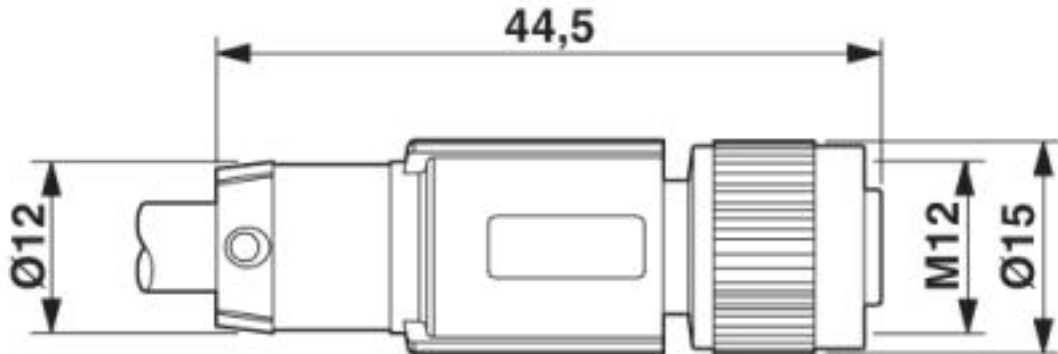
#### Environmental Product Compliance

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

#### Drawings

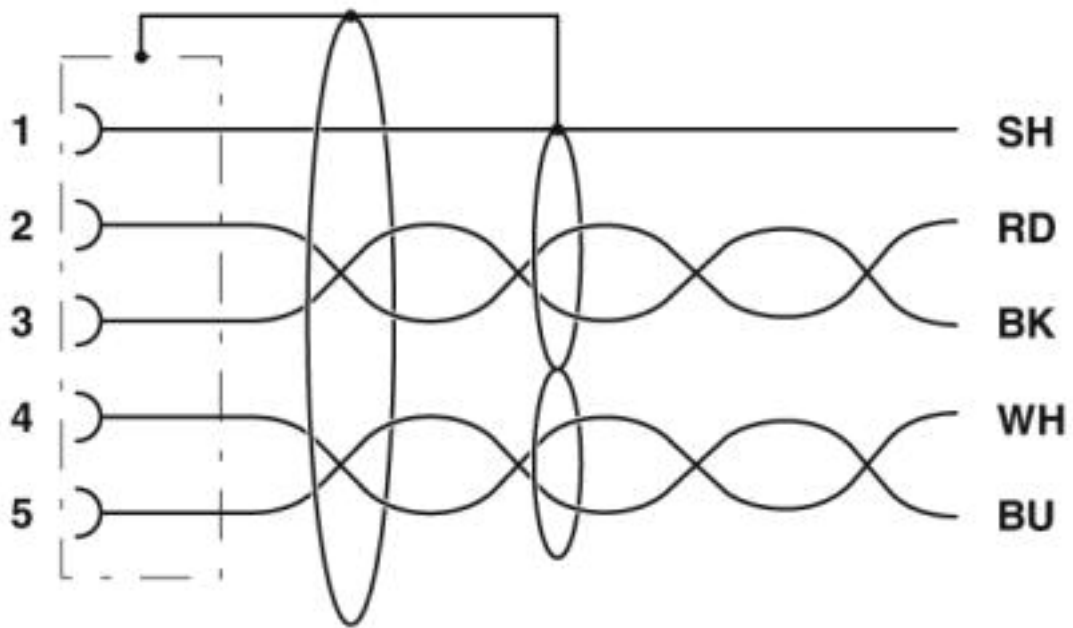
# Bus system cable - SAC-5P- 5,0-920/FS SCO - 1518229

Dimensional drawing



M12 x 1 socket, straight, shielded

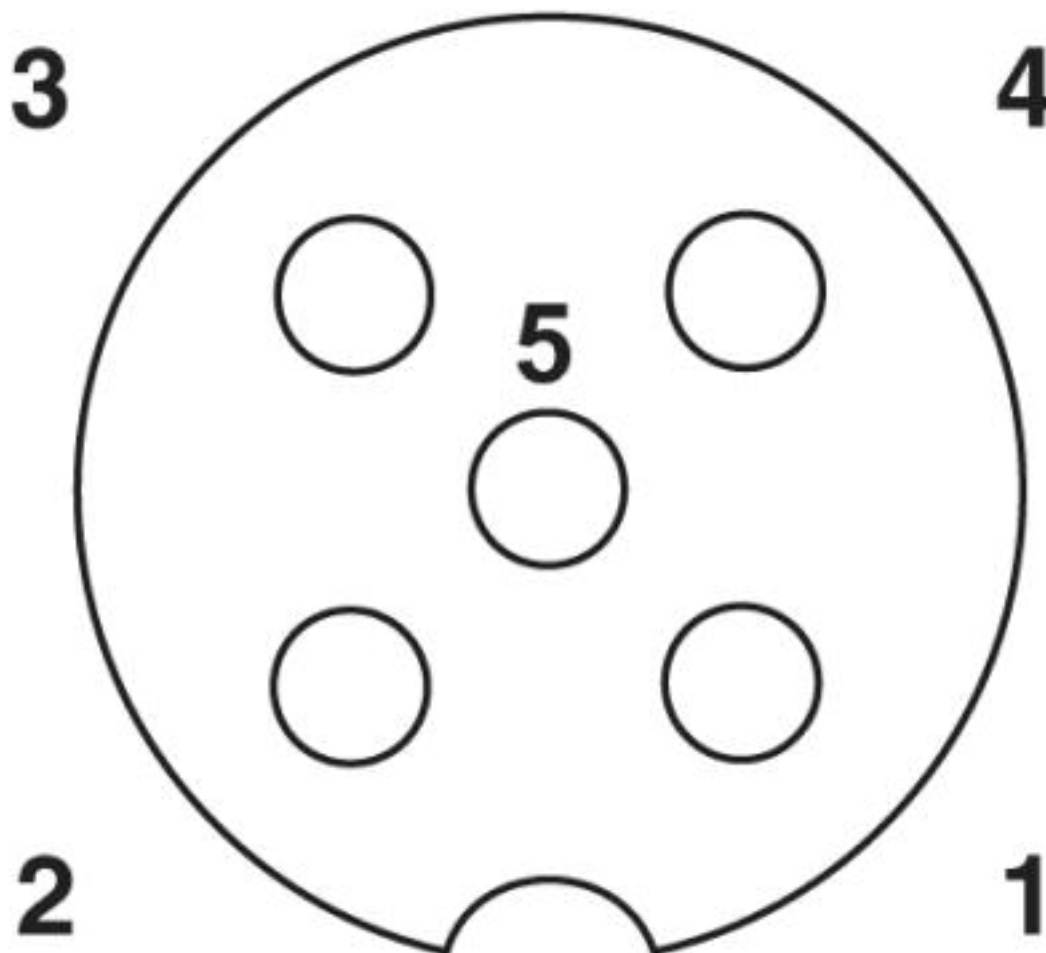
Circuit diagram



Contact assignment of the M12 socket

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Schematic diagram



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

## Bus system cable - SAC-5P- 5,0-920/FS SCO - 1518229

Cable cross section



CANopen<sup>®</sup>/DeviceNet<sup>™</sup>, PUR, violet [920]

### 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

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### Approvals


UL Listed / cUL Listed / cULus Listed

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### Ex Approvals


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### 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 | 125 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 |   | 125 V   |               |
| Nominal current IN |   | 4 A   |               |

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

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