

## Bus system cable - SAC-5P-MS/ 1,0-923/FS CAN SCO - 1419051


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Bus system cable, CANopen®, DeviceNet™, 5-position, PUR halogen-free, gray RAL 7001, shielded, Plug straight M12 SPEEDCON, A-coded, on Socket straight M12 SPEEDCON, A-coded, cable length: 1 m, Connector unshielded



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 542951
GTIN	4046356542951

### Technical data

#### Dimensions

Length of cable	1 m
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#### 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
Color handle area	black
Coding	A - standard
Signal type/category	CANopen®
	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, 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
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### 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

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### Technical data

#### Cable

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
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)

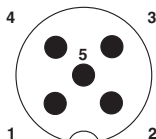
#### Environmental Product Compliance

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

#### Drawings

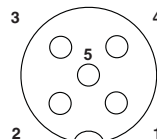
# Bus system cable - SAC-5P-MS/ 1,0-923/FS CAN SCO - 1419051

Schematic diagram



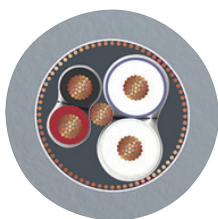
Pin assignment M12 male connector, 5-pos., A-coded, male side

Schematic diagram



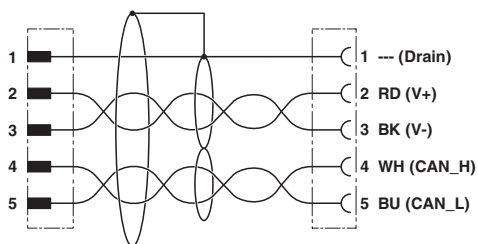
Pin assignment M12 socket, 5-pos., A-coded, socket side view

Cable cross section



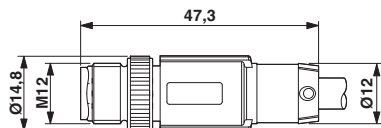
CAN Bus/DeviceNet [923]

Circuit diagram



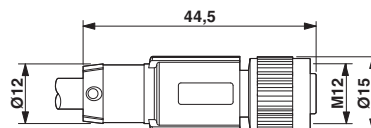
Contact assignment of the M12 plug and the M12 socket

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, straight

## Approvals

Approvals

Approvals

EAC

Ex Approvals

Approval details

## Bus system cable - SAC-5P-MS/ 1,0-923/FS CAN SCO - 1419051

### Approvals

EAC



EAC-Zulassung

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