

## Bus system cable - SAC-5P-MR/ 0,5-923/FR CAN SCO - 1419074

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Bus system cable, CANopen®, DeviceNet™, 5-position, PUR halogen-free, gray RAL 7001, shielded, Plug angled M12 SPEEDCON, A-coded, on Socket angled M12 SPEEDCON, A-coded, cable length: 0.5 m, Connector unshielded



### Key Commercial Data

Packing unit	1 STK
GTIN	
GTIN	4046356543354
Weight per Piece (excluding packing)	61.000 g
Custom tariff number	85444290
Country of origin	Germany
Note	Made to Order (non-returnable)

### Technical data

#### Dimensions

Length of cable	0.5 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

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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
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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 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)
	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

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## Technical data

### Cable

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
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
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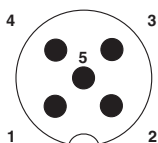
## Technical data

### Environmental Product Compliance

	No hazardous substances above threshold values
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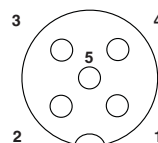
## Drawings

Schematic diagram



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

Schematic diagram



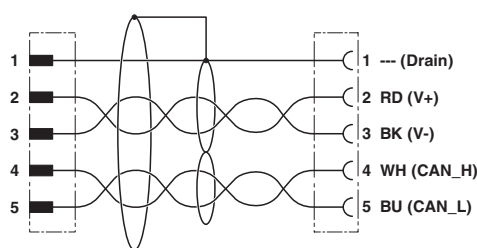
Pin assignment M12 socket, 5-pos., A-coded, socket side view

Cable cross section



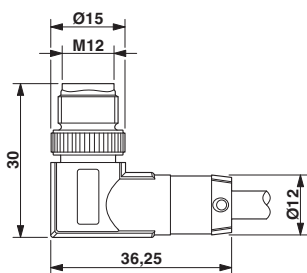
CAN Bus/DeviceNet [923]

Circuit diagram



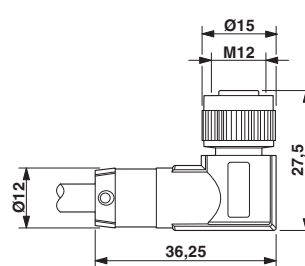
Contact assignment of the M12 plug and the M12 socket

Dimensional drawing



M12 x 1 male plug, angled

Dimensional drawing



M12 x 1 socket, angled

## Classifications

eCl@ss

eCl@ss 4.0	27060307
eCl@ss 4.1	27060307
eCl@ss 5.0	27061801
eCl@ss 5.1	27060300
eCl@ss 6.0	27279200

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## Classifications

### eCl@ss

eCl@ss 7.0	27279218
eCl@ss 8.0	27279218
eCl@ss 9.0	27060308

### ETIM

ETIM 2.0	EC000830
ETIM 3.0	EC000830
ETIM 4.0	EC001855
ETIM 5.0	EC002599
ETIM 6.0	EC001855

### UNSPSC

UNSPSC 6.01	26121616
UNSPSC 7.0901	26121616
UNSPSC 11	26121604
UNSPSC 12.01	26121616
UNSPSC 13.2	31251501

## Approvals

### Approvals

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Approvals

EAC

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Ex Approvals

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### Approval details

EAC		EAC-Zulassung
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## Accessories

Accessories

H-distributor

## Bus system cable - SAC-5P-MR/ 0,5-923/FR CAN SCO - 1419074

### Accessories

H distributor - SAC-5PH-M-F/2XF SH1 SCO - 1417414



H distributor, 5-position, shielded, Plug straight M12, A-coded, on Socket straight M12, A-coded and Socket straight M12, A-coded, Thread M12 not rotatable, Parallel distributor

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### Protective cap

Sealing cap - PROT-M12 FS-PA-CHAIN - 1430873

M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs



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Screw plug - PROT-M12 MS-PA-CHAIN - 1430899

M12 sealing cap with fixing band, for sensor cables, for free M12 sockets



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### Safety locking

Locking clip - SAC-M12-EXCLIP-M - 1558988



Locking clip for the pin side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools

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Locking clip - SAC-M12-EXCLIP-F - 1558991



Locking clip for the socket side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools

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### Screwdriver tools

## Bus system cable - SAC-5P-MR/ 0,5-923/FR CAN SCO - 1419074

### Accessories

Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

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Tool - SAC BIT M12-D15 - 1208432



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive

### T-distributor

T distributor - SAC-5P-M12T/2XM12 VP - 1541186



T distributor, 5-position, Plug straight M12, A-coded, on Socket straight M12, A-coded and Socket straight M12, A-coded, Parallel distributor

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T distributor - SAC-5PT-F/F-M VP - 1424712



T distributor, CANopen<sup>®</sup>, DeviceNet<sup>™</sup>, 5-position, Socket straight M12, A-coded, on Socket straight M12, A-coded and Plug straight M12, A-coded, Parallel distributor

### Terminal resistor

Termination resistor - SAC-5P-M12MS CAN TR - 1507816



Terminating resistor CANopen<sup>®</sup>/DeviceNet<sup>™</sup> M12

### Torque tool

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### Accessories

Torque screwdriver - TSD 04 SAC - 1208429



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

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Torque screwdriver - TSD-M 1,2NM - 1212224



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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