

## Bus system cable - SAC-5P- 2,0-920/M12FS - 1507476

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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, coding: A, cable length: 2 m

**RoHS**

DeviceNet CANopen

### Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 900274
GTIN	4017918900274
Weight per Piece (excluding packing)	140.100 g
Custom tariff number	85444290
Country of origin	Poland

### 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)
	-25 °C ... 90 °C (Plug / socket)
Degree of protection	IP65
	IP67

#### General

Note	Further products with variable cable lengths can be found in the accessories section
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# Bus system cable - SAC-5P- 2,0-920/M12FS - 1507476

## Technical data

### 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
Signal type/category	CANopen®
	DeviceNet™
Status display	No
Overshoot category	II
Degree of pollution	3
Insertion/withdrawal cycles	≥ 100
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

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

### Standards and Regulations

Flammability rating according to UL 94	HB
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### Cable

Cable type	CANopen®/DeviceNet™, 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 mm² (Data cable)

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## Technical 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
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)

## Bus system cable - SAC-5P- 2,0-920/M12FS - 1507476

### Technical data

#### Cable

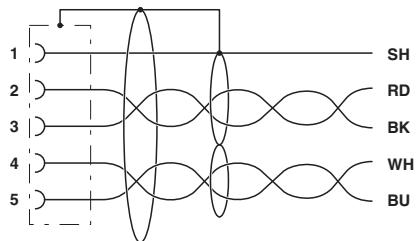
	$\leq 9.5 \text{ dB/km}$ (At 125 kHz)
Nominal voltage, cable	$\leq 300 \text{ V}$ (Peak value, not for high-power applications)
Test voltage Core/Core	2000 V (50 Hz, 1 min.)
Test voltage Core/Shield	2000 V (50 Hz, 1 min.)
Other resistance	Low adhesion
Flame resistance	UL 1581, Sec. 1060 (FT-1)
	IEC 60332-1
	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
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

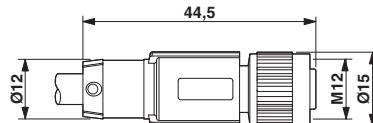
### Drawings

Circuit diagram



Contact assignment of the M12 socket

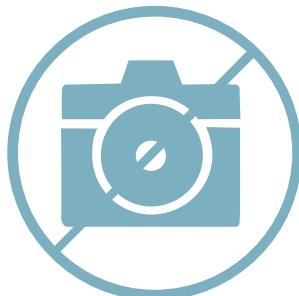
Dimensional drawing



M12 x 1 socket, straight, shielded

## Bus system cable - SAC-5P- 2,0-920/M12FS - 1507476

Schematic diagram



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

Cable cross section



CANopen®/DeviceNet™, PUR, violet [920]

## Bus system cable - SAC-5P- 2,0-920/M12FS - 1507476

### Classifications

#### eCl@ss

eCl@ss 10.0.1	27060308
eCl@ss 11.0	27060307
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 9.0	27060308

#### ETIM

ETIM 2.0	EC000830
ETIM 3.0	EC001855
ETIM 4.0	EC001855
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 / EAC-RoHS / EAC / cULus Listed

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#### Ex Approvals

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## Bus system cable - SAC-5P- 2,0-920/M12FS - 1507476

### Approvals

#### 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	

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	

EAC-RoHS		RU D-DE.HB35.B.00387
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EAC		EAC-Zulassung
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cULus Listed	
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### Accessories

#### Accessories

##### Circular connector (cable-side)

Data connector - SACC-M12FS-5PL SH DN - 1424672



Data connector, CANopen®, DeviceNet™, 5-position, shielded, Socket straight M12, Coding: A, Push-in connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

## Bus system cable - SAC-5P- 2,0-920/M12FS - 1507476

### Accessories

Data connector - SACC-M12MS-5PL SH DN - 1424670



Data connector, CANopen®, DeviceNet™, 5-position, shielded, Plug straight M12, Coding: A, Push-in connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

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Data connector - SACC-M12FR-5PL SH DN - 1424673



Data connector, CANopen®, DeviceNet™, 5-position, shielded, Socket angled M12, Coding: A, Push-in connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

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Data connector - SACC-M12MR-5PL SH DN - 1424671



Data connector, CANopen®, DeviceNet™, 5-position, shielded, Plug angled M12, Coding: A, Push-in connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

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### Data cable preassembled

Bus system cable - SAC-5P-M12FS/920/... - 1538128



Bus system cable, CANopen®, DeviceNet™, 5-position, PUR halogen-free, violet RAL 4001, shielded, free cable end, on Socket straight M12, coding: A, cable length: Free input (0.2 ... 40.0 m)

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Bus system cable - SAC-5P-M12MS/920/... - 1538102



Bus system cable, CANopen®, DeviceNet™, 5-position, PUR halogen-free, violet RAL 4001, shielded, Plug straight M12, coding: A, on free cable end, cable length: Free input (0.2 ... 40.0 m)

## Bus system cable - SAC-5P- 2,0-920/M12FS - 1507476

### Accessories

Bus system cable - SAC-5P-M12MS-M12FS/920/... - 1538144



Bus system cable, CANopen®, DeviceNet™, 5-position, PUR halogen-free, violet RAL 4001, shielded, Plug straight M12, coding: A, on Socket straight M12, coding: A, cable length: Free input (0.2 ... 40.0 m)

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### H-distributor

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



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

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### Plug for cable screw gland

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-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- 2,0-920/M12FS - 1507476

### 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

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, unshielded, Plug straight M12, coding: A, on Socket straight M12, coding: A and Socket straight M12, coding: A, Parallel distributor

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



T distributor, CANopen®, DeviceNet™, 5-position, unshielded, Socket straight M12, coding: A, on Socket straight M12, coding: A and Plug straight M12, coding: A, Parallel distributor

### Terminal resistor

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



Terminating resistor CANopen®/DeviceNet™ M12

## Bus system cable - SAC-5P- 2,0-920/M12FS - 1507476

### Accessories

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#### Torque tool

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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Data connector - SACC-FS-5QO SH DN SCO - 1422760



Data connector, CANopen®, DeviceNet™, 5-position, halogen-free, shielded, Socket straight M12 SPEEDCON, Coding: A, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm

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Data connector - SACC-MS-5QO SH DN SCO - 1422759



Data connector, CANopen®, DeviceNet™, 5-position, halogen-free, shielded, Plug straight M12 SPEEDCON, Coding: A, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm