SAC-5P-M12MS/10,0-920 - Bus system cable

1507447

https://www.phoenixcontact.com/us/products/1507447

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Bus system cable, CANopen®, DeviceNet™, 5-position, PUR halogen-free, red lilac RAL 4001, shielded, Plug straight M12, coding: A, on free cable end, cable length: 10 m

Commercial data

Item number	1507447
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF04
Product key	BF1CKD
Catalog page	Page 433 (C-2-2019)
GTIN	4017918900250
Weight per piece (including packing)	586.4 g
Weight per piece (excluding packing)	571 g
Customs tariff number	85444290
Country of origin	PL

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Technical data

Notes

General	Further products with variable cable lengths can be found in the accessories section

Product properties

Product type	Data cable preassembled
Application	Standard
Sensor type	CANopen®
Number of positions	5
No. of cable outlets	1
Shielded	yes
Coding	A

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Interfaces

Bus system	CANopen®/DeviceNet™
Signal type/category	CANopen®
	DeviceNet™

Signaling

Status display	No
Status display present	No

Electrical properties

Insulation resistance	≥ 100 MΩ
Nominal voltage U_N	48 V AC
	60 V DC
Nominal current I_N	4 A
Transmission medium	Copper

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100

Material specifications

Flammability rating according to UL 94	HB
Material of grip body	TPU, hardly inflammable, self-extinguishing
Contact material	CuSn
Contact surface material	Ni/Au

Contact carrier material	TPU GF
Material for screw connection	Zinc die-cast, nickel-plated

Connection data

Pin assignment

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

Connector

Connection 1

Type	Plug straight M12
Number of positions	5
Coding type	A (Standard)
Ambient temperature (operation)	-25 °C ... 90 °C

Connection 2

Type	free cable end

Cable/line

Cable length	10 m

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

Dimensional drawing

Cable weight	90 kg/km
UL AWM Style	21198 (80°C/300 V)
Number of positions	4
Shielded	yes
Cable type	CANopen$^®$/DeviceNet™, PUR, violet [920]
Conductor structure	2xAWG24/19+2xAWG22/19
Conductor structure signal line	19x 0.13 mm
AWG signal line	24
Conductor cross section	2x 0.25 mm² (Data cable)
	2x 0.34 mm² (Power supply)
	1x 0.34 mm² (Drain wire)

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Wire diameter incl. insulation	1.95 mm ±0.05 mm (Data cable)
	1.4 mm ±0.05 mm (Power supply)
External cable diameter	6.70 mm ±0.3 mm
Outer sheath, material	PUR
External sheath, color	red lilac RAL 4001
Conductor material	Tin-plated Cu litz wires
Material wire insulation	Foamed PE (Data cable)
	PE (Power supply)
Single wire, color	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
Optical shield covering	80 %
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)
Wave impedance	120 Ω ±10 % (with 1 MHz)
Cable capacity	nom. 40 nF/km (Data cable)
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	2000.00 V (50 Hz, 1 min.)
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Smallest bending radius, fixed installation	34 mm
Smallest bending radius, movable installation	67 mm
Max. bending cycles	5000000
Minimum bending radius, drag chain applications	10 x D
Bending radius	70 mm
Traversing path	4.5 m
Traversing rate	3 m/s
Acceleration	3 m/s²
Shield attenuation	≤ 22.9 dB/km (with 1 MHz)
	≤ 16.4 dB/km (At 500 kHz)
	≤ 9.5 dB/km (At 125 kHz)
Halogen-free	in accordance with DIN VDE 0472 part 815
	according to IEC 60754-1
Flame resistance	IEC 60332-1-2
	in accordance with ISO 6722-1 5.22 (UN ECE-R 118.01)
Other resistance	Low adhesion
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-30 °C ... 70 °C (Cable, flexible installation)
	-20 °C ... 60 °C (for installation)
	-20 °C ... 60 °C (cable, drag chain applications)

Environmental and real-life conditions

Ambient conditions

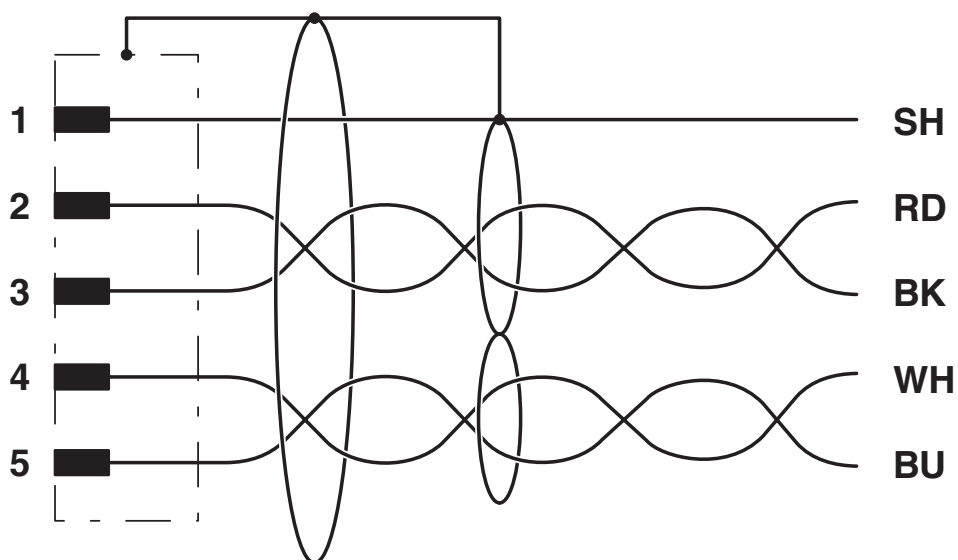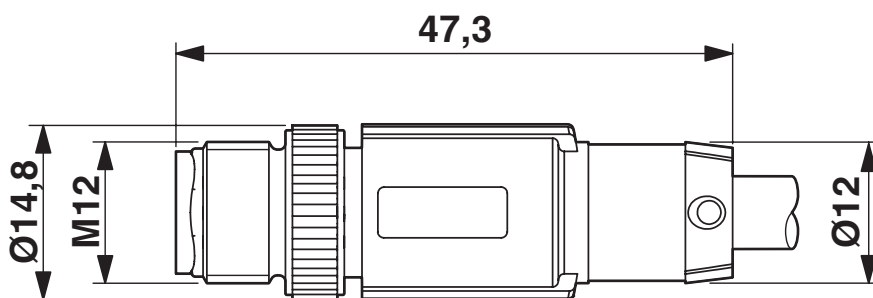| Degree of protection	IP65
	IP67

SAC-5P-M12MS/10,0-920 - Bus system cable
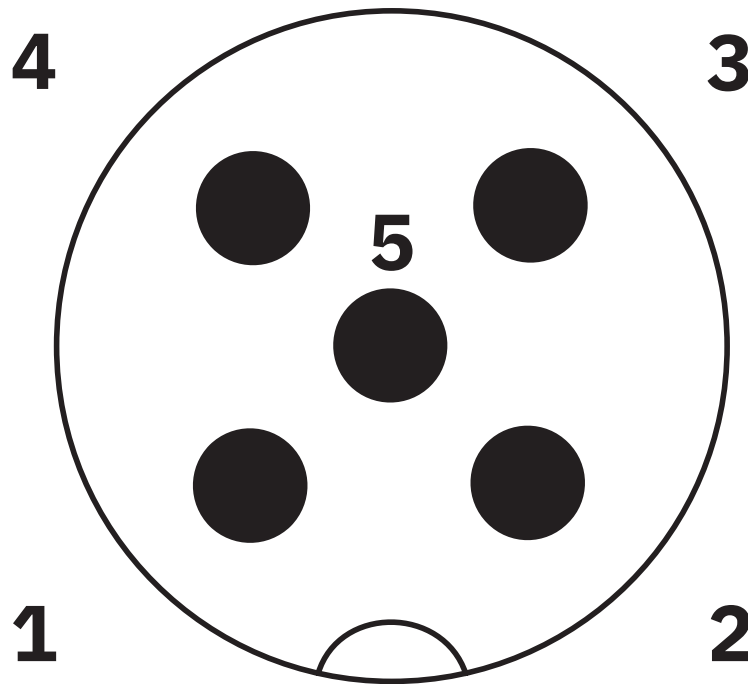
Drawings

Circuit diagram

Dimensional drawing

Plug, M12 x 1, straight, shielded

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Schematic diagram

4 **3**

5

1 **2**

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

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1507447

UL Listed
Approval ID: FILE E 221474

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	125 V	4 A	-	-

cUL Listed
Approval ID: FILE E 221474

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	125 V	4 A	-	-

EAC-RoHS
Approval ID: RU D-DE.HB35.B.00387

cULus Listed

Classifications

ECLASS

ECLASS-11.0	27060307
ECLASS-12.0	27060307
ECLASS-13.0	27060307

ETIM

ETIM 9.0	EC001855

UNSPSC

UNSPSC 21.0	26121600

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions

China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%

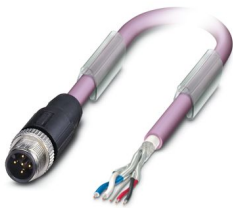# SAC-5P-M12MS/10,0-920 - Bus system cable

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Accessories

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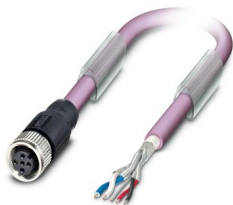
1538102

https://www.phoenixcontact.com/us/products/1538102

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

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

1538128

https://www.phoenixcontact.com/us/products/1538128

Bus system cable, CANopen®, DeviceNet™, 5-position, PUR halogen-free, red lilac 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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SAC-5P-M12MS-M12FS/920/... - Bus system cable

1538144

https://www.phoenixcontact.com/us/products/1538144

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

PROT-M12 FS-PA-CHAIN - Sealing cap

1430873

https://www.phoenixcontact.com/us/products/1430873

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

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SAC-M12-EXCLIP-M - Locking clip

1558988

https://www.phoenixcontact.com/us/products/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

SACC-M12FS-5PL SH DN - Data connector

1424672

https://www.phoenixcontact.com/us/products/1424672

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

SAC-5P-M12MS/10,0-920 - Bus system cable

1507447

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SACC-M12MS-5PL SH DN - Data connector

1424670

https://www.phoenixcontact.com/us/products/1424670

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

SACC-M12FR-5PL SH DN - Data connector

1424673

https://www.phoenixcontact.com/us/products/1424673

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

SAC-5P-M12MS/10,0-920 - Bus system cable

1507447

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SACC-M12MR-5PL SH DN - Data connector

1424671

https://www.phoenixcontact.com/us/products/1424671

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

SACC-M12FS-5QO SH DN - Data connector

1422760

https://www.phoenixcontact.com/us/products/1422760

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

SAC-5P-M12MS/10,0-920 - Bus system cable

1507447

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SACC-M12MS-5QO SH DN - Data connector

1422759

https://www.phoenixcontact.com/us/products/1422759

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

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

1417414

https://www.phoenixcontact.com/us/products/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

SAC-5P-M12MS/10,0-920 - Bus system cable

1507447

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

1541186

https://www.phoenixcontact.com/us/products/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

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

1424712

https://www.phoenixcontact.com/us/products/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

SAC-5P-M12MS/10,0-920 - Bus system cable

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SAC-5P-M12MS CAN TR - Termination resistor

1507816

https://www.phoenixcontact.com/us/products/1507816

Terminating resistor CANopen®/DeviceNet™ M12

TSD 04 SAC - Torque screwdriver

1208429

https://www.phoenixcontact.com/us/products/1208429

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

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1507447

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TSD-M 1,2NM - Torque screwdriver

1212224

https://www.phoenixcontact.com/us/products/1212224

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

TSD-M SAC-BIT ADAPTER - Adapter insert

1212600

https://www.phoenixcontact.com/us/products/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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SAC BIT M12-D15 - Tool

1208432

https://www.phoenixcontact.com/us/products/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