

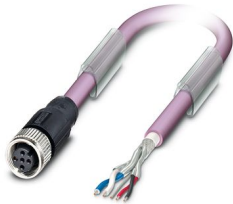
SAC-5P-M12FS/920/... - Bus system cable



1538128/920/1.0

<https://www.phoenixcontact.com/de/produkte/1538128?orderkey=MTUzODEyOC85MjAvMS4w>

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

Commercial data

Item number	1538128/920/1.0
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	C1 - Sensor-Aktor-Kabel
Product key	BF1CKD
Catalog page	Page 433 (C-2-2019)
Customs tariff number	85444290
Country of origin	PL

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Technical data

Notes

General	Further products with fixed cable length can be found in the accessories section
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Product properties

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

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Approvals

National Marine Electronics Association

Certificate	approved
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Interfaces

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

Signaling

Status display	No
Status display present	No

Electrical properties

Contact resistance	≤ 5 mΩ
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
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Material specifications

Flammability rating according to UL 94	HB
Seal material	NBR
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 (Socket) SR (shield)
	2 (Socket) RD (V+)
	3 (Socket) BK (V-)
	4 (Socket) WH (CAN_H)
	5 (Socket) BU (CAN_L)

Connector

Connection 1

Type	free cable end
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Connection 2

Type	Socket straight M12
Number of positions	5
Coding type	A (Standard)
Number of positions	5

Cable/line

Cable length	Free input (0.2 ... 40.0 m)
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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

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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 mm ² (Data cable) 2x 0.34 mm ² (Power supply) 1x 0.34 mm ² (Drain wire)
Wire diameter incl. insulation	1.95 mm ±0.05 mm (Data cable) 1.4 mm ±0.05 mm (Power supply)
External cable diameter	6.7 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 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
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)

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	-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
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)

Approvals

National Marine Electronics Association

Certificate	approved
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Standards and regulations

Standard designation	M12 connector
Standards/specifications	IEC 61076-2-101

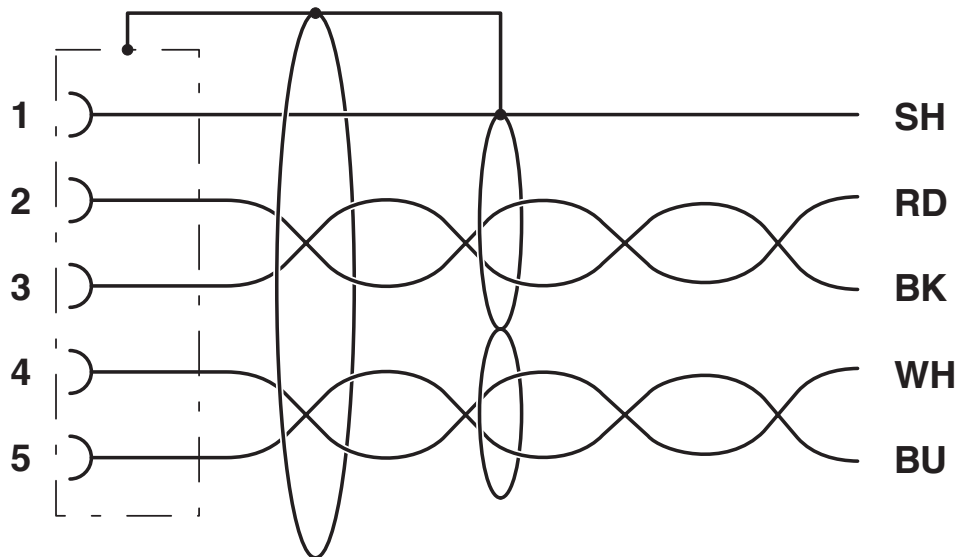
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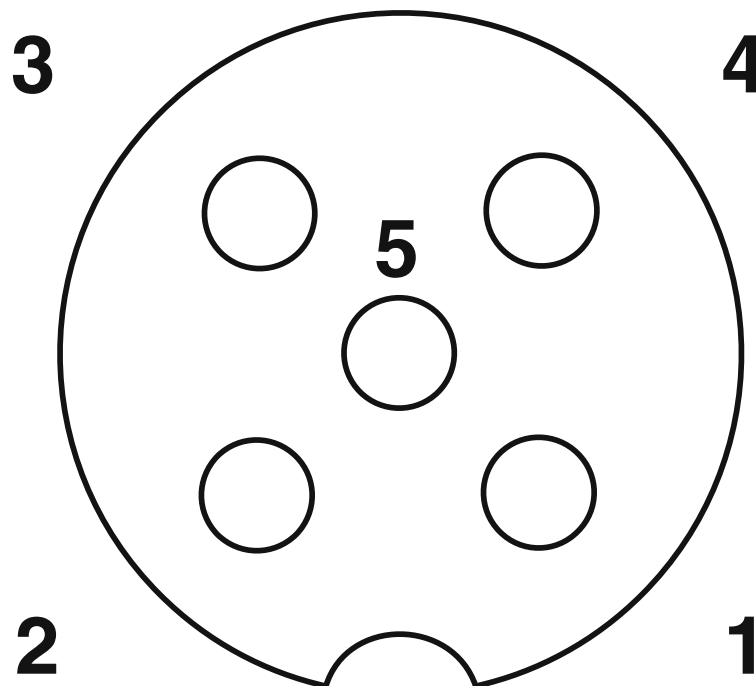
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Drawings

Circuit diagram



Schematic diagram



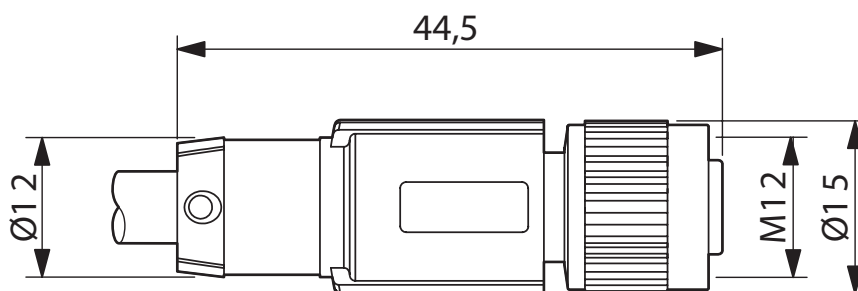
Pin assignment M12 socket, 5-pos., A-coded, socket side view

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Dimensional drawing



M12 x 1 socket, straight, shielded

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Approvals

🔗 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/de/produkte/1538128?orderkey=MTUzODEyOC85MjAvMS4w>

 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
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cULus Listed

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Classifications

ECLASS

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

ETIM

ETIM 8.0	EC001855
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UNSPSC

UNSPSC 21.0	26121600
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Environmental product compliance

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

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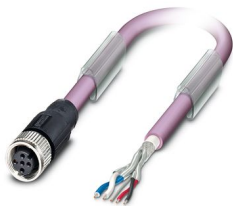
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Accessories

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

1507476

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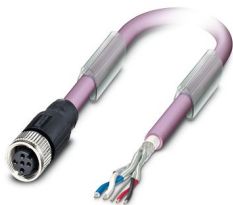


Bus system cable, CANopen[®], DeviceNet[™], 5-position halogen-free, shielded, free cable end, on Socket straight M12, coding: A, cable length: 2 m

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

1507489

<https://www.phoenixcontact.com/de/produkte/1507489>



Bus system cable, CANopen[®], DeviceNet[™], 5-position halogen-free, shielded, free cable end, on Socket straight M12, coding: A, cable length: 5 m

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

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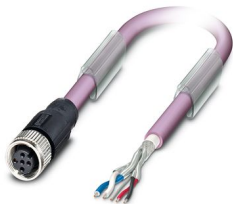
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SAC-5P-10,0-920/M12FS - Bus system cable

1507492

<https://www.phoenixcontact.com/de/produkte/1507492>



Bus system cable, CANopen[®], DeviceNet[™], 5-position halogen-free, shielded, free cable end, on Socket straight M12, coding: A, cable length: 10 m

SAC-5P-15,0-920/M12FS - Bus system cable

1507502

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Bus system cable, CANopen[®], DeviceNet[™], 5-position halogen-free, shielded, free cable end, on Socket straight M12, coding: A, cable length: 15 m

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PROT-M12 MS-PA-CHAIN - Screw plug

1430899

<https://www.phoenixcontact.com/de/produkte/1430899>

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



SAC-M12-EXCLIP-F - Locking clip

1558991

<https://www.phoenixcontact.com/de/produkte/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



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

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SACC-M12FS-5PL SH DN - Data connector

1424672

<https://www.phoenixcontact.com/de/produkte/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

SACC-M12MS-5PL SH DN - Data connector

1424670

<https://www.phoenixcontact.com/de/produkte/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

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

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<https://www.phoenixcontact.com/de/produkte/1538128?orderkey=MTUzODEyOC85MjAvMS4w>



SACC-M12FR-5PL SH DN - Data connector

1424673

<https://www.phoenixcontact.com/de/produkte/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

SACC-M12MR-5PL SH DN - Data connector

1424671

<https://www.phoenixcontact.com/de/produkte/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

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SACC-M12FS-5QO SH DN - Data connector

1422760

<https://www.phoenixcontact.com/de/produkte/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

SACC-M12MS-5QO SH DN - Data connector

1422759

<https://www.phoenixcontact.com/de/produkte/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-5P-M12FS/920/... - Bus system cable

1538128/920/1.0

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

1417414

<https://www.phoenixcontact.com/de/produkte/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-M12T/2XM12 VP - T distributor

1541186

<https://www.phoenixcontact.com/de/produkte/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-5P-M12FS/920/... - Bus system cable

1538128/920/1.0

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

1424712

<https://www.phoenixcontact.com/de/produkte/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 CAN TR - Termination resistor

1507816

<https://www.phoenixcontact.com/de/produkte/1507816>



Terminating resistor CANopen[®]/DeviceNet[™] M12

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TSD 04 SAC - Torque screwdriver

1208429

<https://www.phoenixcontact.com/de/produkte/1208429>



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

TSD-M 1,2NM - Torque screwdriver

1212224

<https://www.phoenixcontact.com/de/produkte/1212224>



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

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



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TSD-M SAC-BIT ADAPTER - Adapter insert

1212600

<https://www.phoenixcontact.com/de/produkte/1212600>



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

SAC BIT M12-D15 - Tool

1208432

<https://www.phoenixcontact.com/de/produkte/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

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