

# Bus system cable - SAC-5P-M12MS/15,0-920/M12FS



1507586

<https://www.phoenixcontact.com/pc/products/1507586>

Please be informed that the data shown in this PDF document is generated from our Online Catalog. Please find the complete data in the user documentation. Our General Terms of Use for Downloads are valid.



Bus system cable, CANopen<sup>®</sup>, DeviceNet<sup>™</sup>, 5-position, PUR halogen-free, red lilac RAL 4001, shielded, Plug straight M12, coding: A, on Socket straight M12, coding: A, cable length: 15 m

## Commercial Data

Item number	1507586
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	BF1CKD
Catalog Page	Page 433 (C-2-2019)
GTIN	4017918900373
Weight per Piece (including packing)	906.1 g
Weight per Piece (excluding packing)	870.1 g
Customs tariff number	85444290
Country of origin	PL

## Technical Data

### Notes

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

### Product properties

Product type	Data cable preassembled
Number of positions	5
Application	Standard
No. of cable outlets	1
Shielded	yes
Coding	A - standard

### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### Interfaces

Bus system	CANopen <sup>®</sup> /DeviceNet <sup>™</sup>
Signal type/category	CANopen <sup>®</sup> DeviceNet <sup>™</sup>

### LED signaling

Status display	No
Status display present	No

### Electrical properties

Contact resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage U <sub>N</sub>	48 V AC 60 V DC
Nominal current I <sub>N</sub>	4 A
Transmission medium	Copper

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	≥ 100
-----------------------------	-------

### Material specifications

Flammability rating according to UL 94	HB
Sealing material	NBR
Material of grip body	TPU, hardly inflammable, self-extinguishing
Contact material	CuSn

# Bus system cable - SAC-5P-M12MS/15,0-920/M12FS



1507586

<https://www.phoenixcontact.com/pc/products/1507586>

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) = 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)

## Connector

### Connection 1

Head design	Plug
Head cable outlet	straight
Head thread type	M12
Coding	A


### Connection 2

Head design	Socket
Head cable outlet	straight
Head thread type	M12
Coding	A

## Cable / line

Cable length	15 m
--------------	------

### CANopen<sup>®</sup>/DeviceNet<sup>™</sup>, 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 <sup>®</sup> /DeviceNet <sup>™</sup> , PUR, violet [920]
Conductor structure	2xAWG24/19+2xAWG22/19
Conductor structure signal line	19x 0.13 mm

# Bus system cable - SAC-5P-M12MS/15,0-920/M12FS



1507586

<https://www.phoenixcontact.com/pc/products/1507586>

AWG signal line	24
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)
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
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)
	-20 °C ... 60 °C (for installation)
	-20 °C ... 60 °C (cable, drag chain applications)

## Ambient conditions

Degree of protection	IP65
----------------------	------

# Bus system cable - SAC-5P-M12MS/15,0-920/M12FS



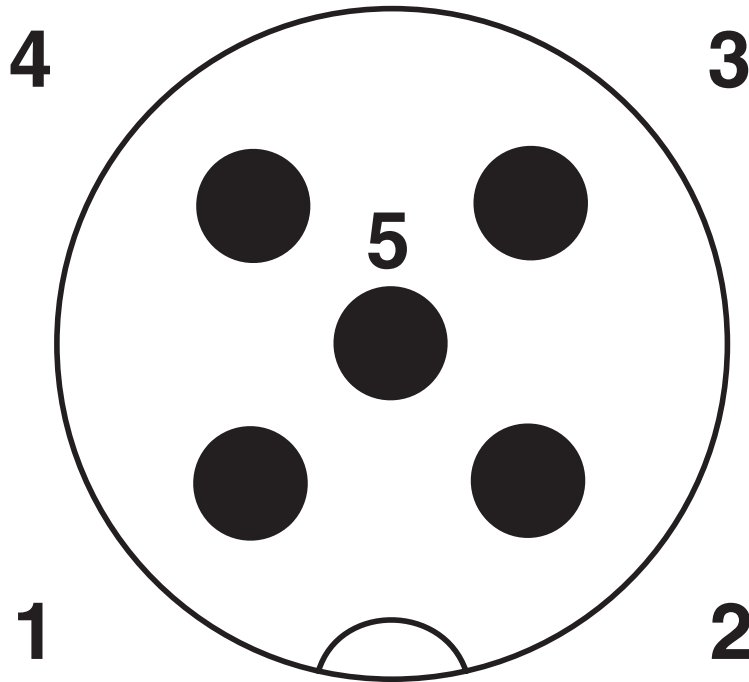
1507586

<https://www.phoenixcontact.com/pc/products/1507586>

	IP67
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)

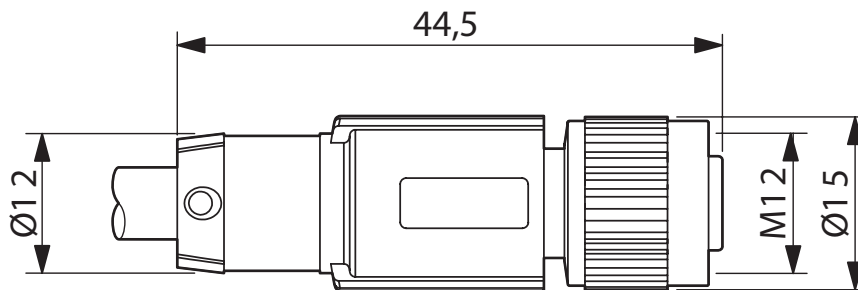
Drawings

Schematic diagram



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

Dimensional drawing

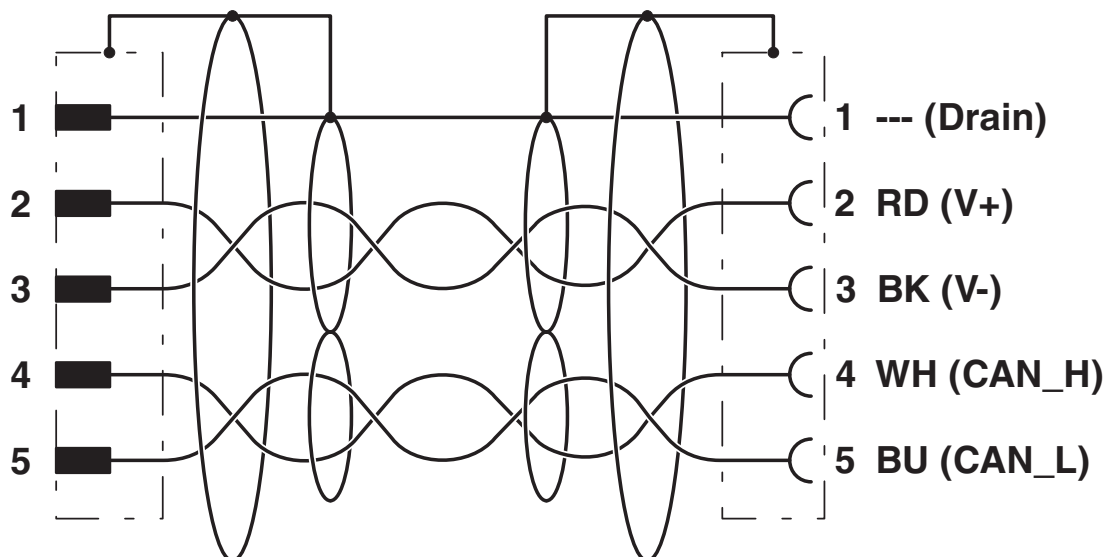


M12 x 1 socket, straight, shielded

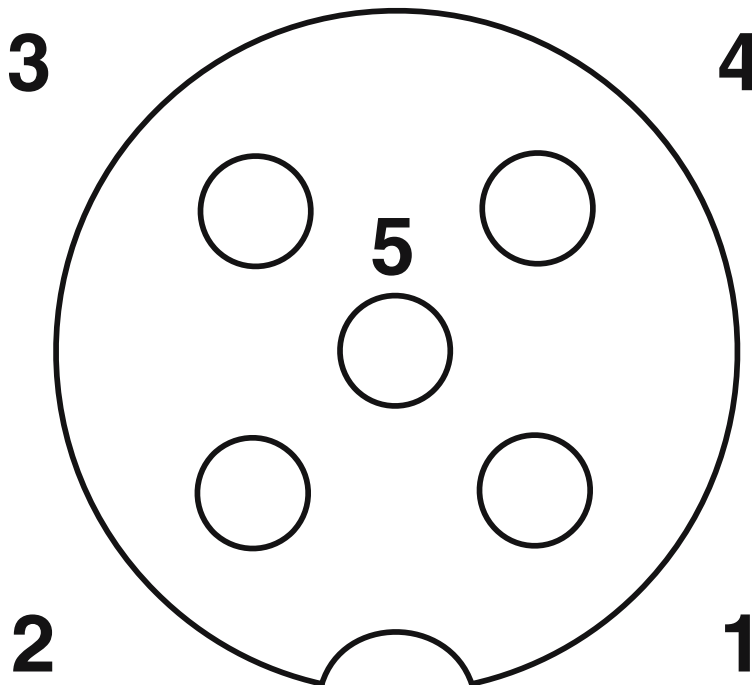
1507586

<https://www.phoenixcontact.com/pc/products/1507586>

Circuit diagram



Schematic diagram



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

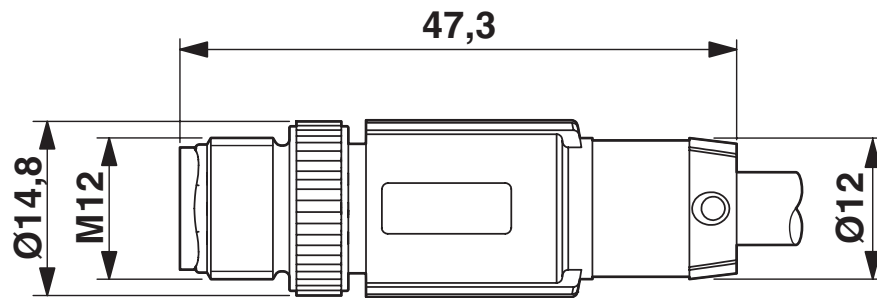
# Bus system cable - SAC-5P-M12MS/15,0-920/M12FS



1507586

<https://www.phoenixcontact.com/pc/products/1507586>

Dimensional drawing



Plug, M12 x 1, straight, shielded

# Bus system cable - SAC-5P-M12MS/15,0-920/M12FS



1507586

<https://www.phoenixcontact.com/pc/products/1507586>

## Approvals



**EAC**

Approval ID: RU C-DE.BL08.B.00286



**UL Listed**

Approval ID: FILE E 221474

	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	125 V	4 A	-	-



**cUL Listed**

Approval ID: FILE E 221474

	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	125 V	4 A	-	-



**EAC**

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

**cULus Listed**

# Bus system cable - SAC-5P-M12MS/15,0-920/M12FS



1507586

<https://www.phoenixcontact.com/pc/products/1507586>

## Classifications

### ECLASS

ECLASS-9.0	27060308
ECLASS-10.0.1	27060308
ECLASS-11.0	27060307

### ETIM

ETIM 8.0	EC001855
----------	----------

### UNSPSC

UNSPSC 21.0	26121600
-------------	----------

# Bus system cable - SAC-5P-M12MS/15,0-920/M12FS



1507586

<https://www.phoenixcontact.com/pc/products/1507586>

## Environmental Product Compliance

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

# Bus system cable - SAC-5P-M12MS/15,0-920/M12FS



1507586

<https://www.phoenixcontact.com/pc/products/1507586>

## Accessories

### Bus system cable

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

<https://www.phoenixcontact.com/pc/products/1538144>



Bus system cable, CANopen<sup>®</sup>, DeviceNet<sup>™</sup>, 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)

---

### Bus system cable

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

<https://www.phoenixcontact.com/pc/products/1538102>



Bus system cable, CANopen<sup>®</sup>, DeviceNet<sup>™</sup>, 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)

# Bus system cable - SAC-5P-M12MS/15,0-920/M12FS



1507586

<https://www.phoenixcontact.com/pc/products/1507586>

## Bus system cable

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

<https://www.phoenixcontact.com/pc/products/1538128>



Bus system cable, CANopen<sup>®</sup>, DeviceNet<sup>™</sup>, 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)

---

## Torque screwdriver

Torque screwdriver - TSD 04 SAC - 1208429

<https://www.phoenixcontact.com/pc/products/1208429>



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

# Bus system cable - SAC-5P-M12MS/15,0-920/M12FS



1507586

<https://www.phoenixcontact.com/pc/products/1507586>

## Torque screwdriver

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

<https://www.phoenixcontact.com/pc/products/1212224>



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

---

## Adapter insert

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

<https://www.phoenixcontact.com/pc/products/1212600>



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

# Bus system cable - SAC-5P-M12MS/15,0-920/M12FS



1507586

<https://www.phoenixcontact.com/pc/products/1507586>

## Tool

Tool - SAC BIT M12-D15 - 1208432

<https://www.phoenixcontact.com/pc/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

---

## Sealing cap

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

<https://www.phoenixcontact.com/pc/products/1430873>



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

# Bus system cable - SAC-5P-M12MS/15,0-920/M12FS



1507586

<https://www.phoenixcontact.com/pc/products/1507586>

## Locking clip

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

<https://www.phoenixcontact.com/pc/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

---

## Screw plug

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

<https://www.phoenixcontact.com/pc/products/1430899>

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



# Bus system cable - SAC-5P-M12MS/15,0-920/M12FS



1507586

<https://www.phoenixcontact.com/pc/products/1507586>

## Locking clip

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

<https://www.phoenixcontact.com/pc/products/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

---

## H distributor

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

<https://www.phoenixcontact.com/pc/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

# Bus system cable - SAC-5P-M12MS/15,0-920/M12FS



1507586

<https://www.phoenixcontact.com/pc/products/1507586>

## T distributor

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

<https://www.phoenixcontact.com/pc/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

---

## T distributor

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

<https://www.phoenixcontact.com/pc/products/1424712>



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

# Bus system cable - SAC-5P-M12MS/15,0-920/M12FS



1507586

<https://www.phoenixcontact.com/pc/products/1507586>

## Termination resistor

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

<https://www.phoenixcontact.com/pc/products/1507816>

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



---

Phoenix Contact 2022 © - all rights reserved

<https://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG

Flachsmarktstraße 8

D-32825 Blomberg

+49 (0) 5235-3 00

[info@phoenixcontact.com](mailto:info@phoenixcontact.com)