

1507191

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Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded (Braided copper wires), Plug straight M12, coding: B, on Socket straight M12, coding: B, cable length: 2 m

### Commercial data

Item number	1507191
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF04
Product key	BF1CKB
Catalog page	Page 428 (C-2-2019)
GTIN	4017918900045
Weight per piece (including packing)	176.1 g
Weight per piece (excluding packing)	170.4 g
Customs tariff number	85444290
Country of origin	PL



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## Technical data

#### Notes

General	Further products with variable cable type and variable cable
	length can be found in the accessories section

### Product properties

Data cable preassembled
Standard
INTERBUS
5
1
yes
В

#### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

#### Interfaces

Bus system	INTERBUS
Signal type/category	INTERBUS, 16 Mbps

## Signaling

Status display	No
Status display present	No

### Electrical properties

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

## Material specifications

Flammability rating according to UL 94	V0
Seal material	NBR
Material of grip body	TPU, hardly inflammable, self-extinguishing
Contact material	CuSn
Contact surface material	Ni/Au



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Contact carrier material	PA 6.6
Material for screw connection	Zinc die-cast, nickel-plated

### Connection data

#### Pin assignment

iii assigniiicht	
Contact   Color (signal designation)   Contact (optional)	1 (Plug)   YE ( <u>DO</u> )   1 (Socket)
	2 (Plug)   GN ( <u>DO</u> )   2 (Socket)
	3 (Plug)   GY (DI)   3 (Socket)
	4 (Plug)   PK ( <u>DI</u> )   4 (Socket)
	5 (Plug)   BN (GND)   5 (Socket)

### Connector

#### Connection 1

Туре	Plug straight M12
Number of positions	5
Coding type	B (inverse)

### Connection 2

Туре	Socket straight M12
Number of positions	5
Coding type	В

### Cable/line

Cable length	2 m

### INTERBUS [900]

Dimensional drawing



Cable weight	70 kg/km
Number of positions	6
Shielded	yes
Cable type	INTERBUS [900]
Conductor structure	3 x 2 x 0.22 mm <sup>2</sup>
Signal speed	0.66 c
Conductor structure signal line	32x 0.10 mm
AWG signal line	24
Conductor cross section	3x 2x 0.22 mm²
External cable diameter	8.00 mm



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Outer sheath, material	PUR
External sheath, color	may green RAL 6017
Conductor material	Bare Cu litz wires
Material wire insulation	PE
Single wire, color	green-yellow, white-brown, gray-pink
Twisted pairs	2 cores to the pair
Overall twist	3 pairs to the core
Insulation resistance	≥ 5 GΩ*km
Coupling resistance	< 250.00 mΩ/m (at 30 MHz)
Loop resistance	≤ 159.80 Ω/km
Wave impedance	120 Ω ±20 % (at 64 kHz)
	100 Ω ±15 % (with 1 MHz)
Cable capacity	≤ 60 nF/km (At 800 Hz)
Nominal voltage, cable	250 V (Peak value, not for high-power applications)
Test voltage Core/Core	1500 V <sub>rms</sub>
Test voltage Core/Shield	1000.00 V <sub>rms</sub>
Minimum bending radius, fixed installation	7.5 x D
Minimum bending radius, flexible installation	15 x D
Smallest bending radius, fixed installation	60 mm
Smallest bending radius, movable installation	120 mm
Max. bending cycles	5000000
Near end crosstalk attenuation (NEXT)	≥ 61 dB (at 772 kHz)
	≥ 59 dB (with 1 MHz)
	≥ 55 dB (at 2 MHz)
	≥ 50 dB (at 4 MHz)
	≥ 46 dB (at 8 MHz)
	≥ 44 dB (at 10 MHz)
	≥ 41 dB (at 16 MHz)
	≥ 40 dB (at 20 MHz)
Shield attenuation	≤ 15 dB/km (at 256 kHz)
	≤ 24 dB/km (at 772 kHz)
	≤ 27 dB/km (with 1 MHz)
	≤ 52 dB/km (at 4 MHz)
	≤ 84 dB/km (at 10 MHz)
	≤ 112 dB/km (at 16 MHz)
	≤ 119 dB/km (at 20 MHz)
Flame resistance	according to VDE 0472, Part 4, test type B
	according to IEC 60332-1
Ambient temperature (operation)	-40 °C 80 °C (cable, fixed installation)

### Environmental and real-life conditions

Ambient conditions



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Degree of protection	IP65
	IP67
Ambient temperature (operation)	-25 °C 90 °C (Plug / socket)

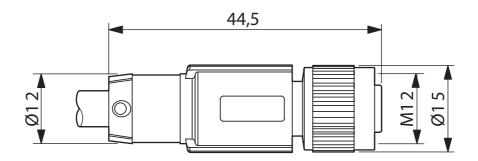


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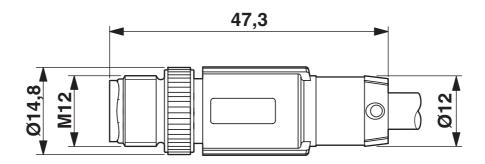
## Drawings

### Dimensional drawing



M12 x 1 socket, straight, shielded

### Dimensional drawing

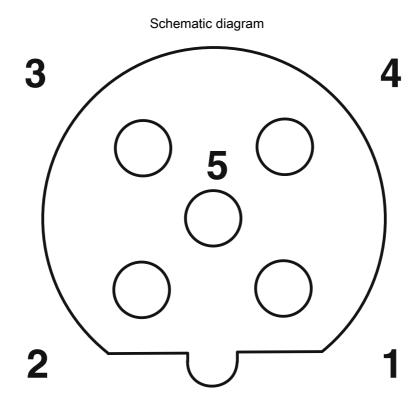


Plug, M12 x 1, straight, shielded



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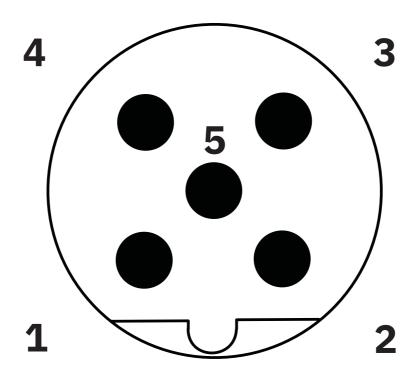
Pin assignment M12 socket, 5-pos., B-coded, female side



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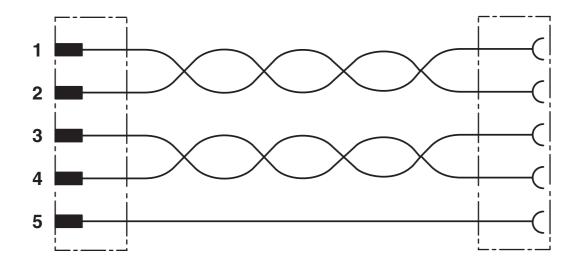
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## Schematic diagram



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

## Circuit diagram





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## **Approvals**

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#### EAC-RoHS

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



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## Classifications

UNSPSC 21.0

### **ECLASS**

ECLASS-11.0	27060307
ECLASS-12.0	27060307
ECLASS-13.0	27060307
ETIM	
ETIM 9.0	EC001855
UNSPSC	

26121600



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## 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%



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#### Accessories

SAC-5P-M12MSB/900/... - Bus system cable

1537983

https://www.phoenixcontact.com/us/products/1537983



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded (Braided copper wires), Plug straight M12, coding: B, on free cable end, cable length: Free input (0.2 ... 40.0 m)

SAC-5P-M12FSB/900/... - Bus system cable

1538005

https://www.phoenixcontact.com/us/products/1538005



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded (Braided copper wires), free cable end, on Socket straight M12, coding: B, cable length: Free input (0.2 ... 40.0 m)



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#### SAC-5P-M12MSB-M12FSB/900/... - Bus system cable

1538021

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Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded (Braided copper wires), Plug straight M12, coding: B, on Socket straight M12, coding: B, 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

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

1430899

https://www.phoenixcontact.com/us/products/1430899

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





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### SAC-M12-EXCLIP-F - Locking clip

1558991

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

### 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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### 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

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