

SAC-5P-M12MSB/ 5,0-900/M12FSB - Bus system cable

1507201
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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: 5 m

Commercial data

Item number	1507201
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF04
Product key	BF1CKB
Catalog page	Page 428 (C-2-2019)
GTIN	4017918900052
Weight per piece (including packing)	375.7 g
Weight per piece (excluding packing)	373.3 g
Customs tariff number	85444290
Country of origin	PL

SAC-5P-M12MSB/ 5,0-900/M12FSB - Bus system cable



1507201

<https://www.phoenixcontact.com/us/products/1507201>

Technical data

Notes

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

Product type	Data cable preassembled
Application	Standard
Sensor type	INTERBUS
Number of positions	5
No. of cable outlets	1
Shielded	yes
Coding	B

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	$\geq 100 \text{ M}\Omega$
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	V0
Seal material	NBR
Material of grip body	TPU, hardly inflammable, self-extinguishing
Contact material	CuSn
Contact surface material	Ni/Au

SAC-5P-M12MSB/ 5,0-900/M12FSB - Bus system cable



1507201
<https://www.phoenixcontact.com/us/products/1507201>

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

Connection data

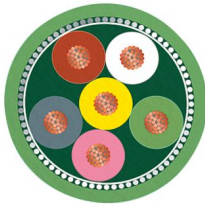
Pin assignment	
Contact Color (signal designation) Contact (optional)	1 (Plug) YE (<u>DO</u>) 1 (Socket)
	2 (Plug) GN (<u>DO</u>) 2 (Socket)
	3 (Plug) GY (DI) 3 (Socket)
	4 (Plug) PK (<u>DI</u>) 4 (Socket)
	5 (Plug) BN (GND) 5 (Socket)

Connector

Connection 1	
Type	Plug straight M12
Number of positions	5
Coding type	B (inverse)
Connection 2	
Type	Socket straight M12
Number of positions	5
Coding type	B

Cable/line

Cable length	5 m
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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 mm²
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

SAC-5P-M12MSB/ 5,0-900/M12FSB - Bus system cable



1507201

<https://www.phoenixcontact.com/us/products/1507201>

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	$\geq 5 \text{ G}\Omega \cdot \text{km}$
Coupling resistance	$< 250.00 \text{ m}\Omega/\text{m}$ (at 30 MHz)
Loop resistance	$\leq 159.80 \text{ }\Omega/\text{km}$
Wave impedance	$120 \text{ }\Omega \pm 20 \%$ (at 64 kHz)
	$100 \text{ }\Omega \pm 15 \%$ (with 1 MHz)
Cable capacity	$\leq 60 \text{ nF/km}$ (At 800 Hz)
Nominal voltage, cable	250 V (Peak value, not for high-power applications)
Test voltage Core/Core	$1500 \text{ V}_{\text{rms}}$
Test voltage Core/Shield	$1000.00 \text{ V}_{\text{rms}}$
Minimum bending radius, fixed installation	$7.5 \times D$
Minimum bending radius, flexible installation	$15 \times D$
Smallest bending radius, fixed installation	60 mm
Smallest bending radius, movable installation	120 mm
Max. bending cycles	5000000
Near end crosstalk attenuation (NEXT)	$\geq 61 \text{ dB}$ (at 772 kHz)
	$\geq 59 \text{ dB}$ (with 1 MHz)
	$\geq 55 \text{ dB}$ (at 2 MHz)
	$\geq 50 \text{ dB}$ (at 4 MHz)
	$\geq 46 \text{ dB}$ (at 8 MHz)
	$\geq 44 \text{ dB}$ (at 10 MHz)
	$\geq 41 \text{ dB}$ (at 16 MHz)
	$\geq 40 \text{ dB}$ (at 20 MHz)
Shield attenuation	$\leq 15 \text{ dB/km}$ (at 256 kHz)
	$\leq 24 \text{ dB/km}$ (at 772 kHz)
	$\leq 27 \text{ dB/km}$ (with 1 MHz)
	$\leq 52 \text{ dB/km}$ (at 4 MHz)
	$\leq 84 \text{ dB/km}$ (at 10 MHz)
	$\leq 112 \text{ dB/km}$ (at 16 MHz)
	$\leq 119 \text{ dB/km}$ (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)
	-30 °C ... 70 °C (Cable, flexible installation)

Environmental and real-life conditions

Ambient conditions

SAC-5P-M12MSB/ 5,0-900/M12FSB - Bus system cable



1507201
<https://www.phoenixcontact.com/us/products/1507201>

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

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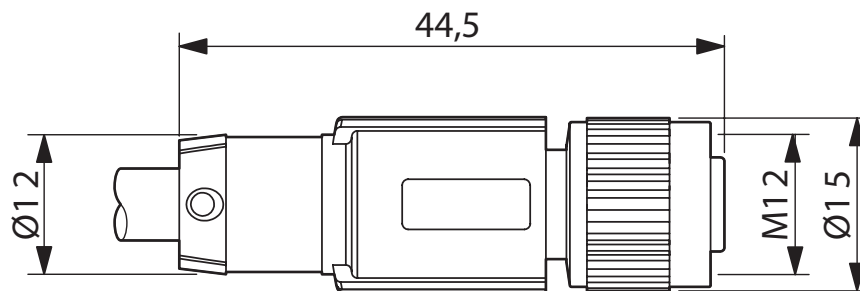


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Drawings

Dimensional drawing



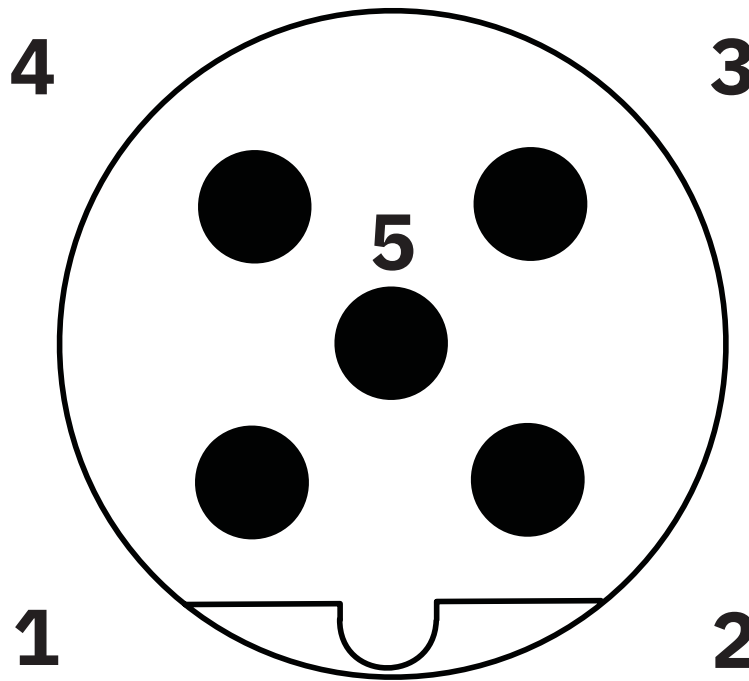
M12 x 1 socket, straight, shielded

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Schematic diagram



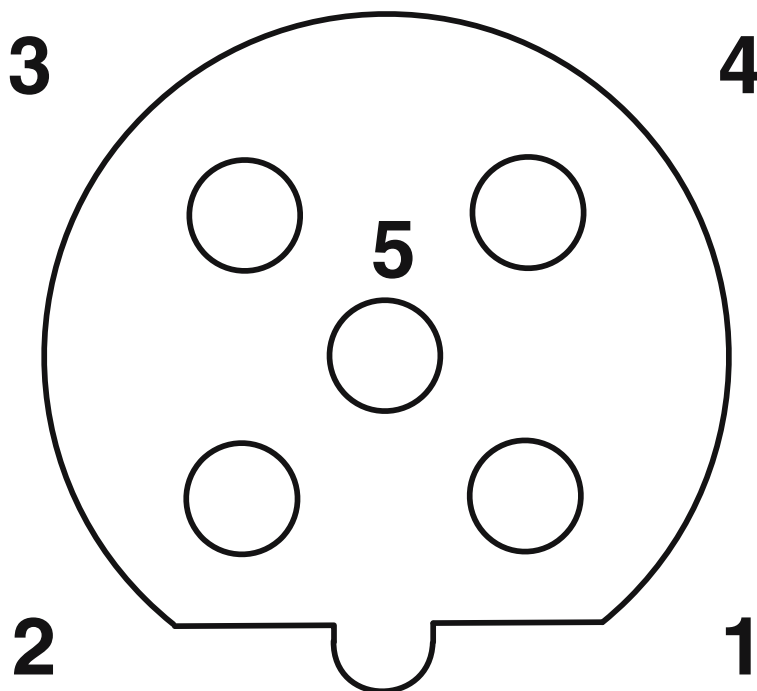
Pin assignment M12 male connector, 5-pos., B-coded, male side

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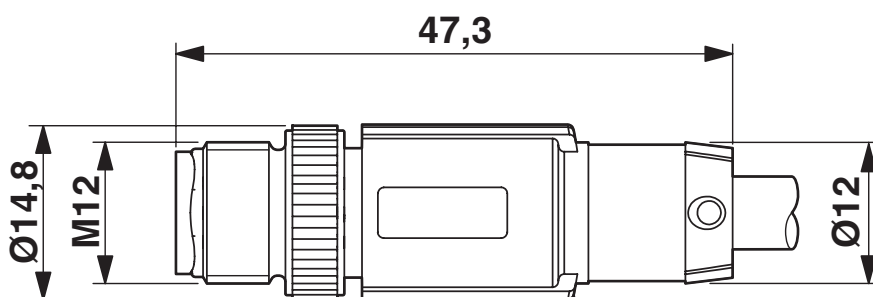
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Schematic diagram



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

Dimensional drawing



Plug, M12 x 1, straight, shielded

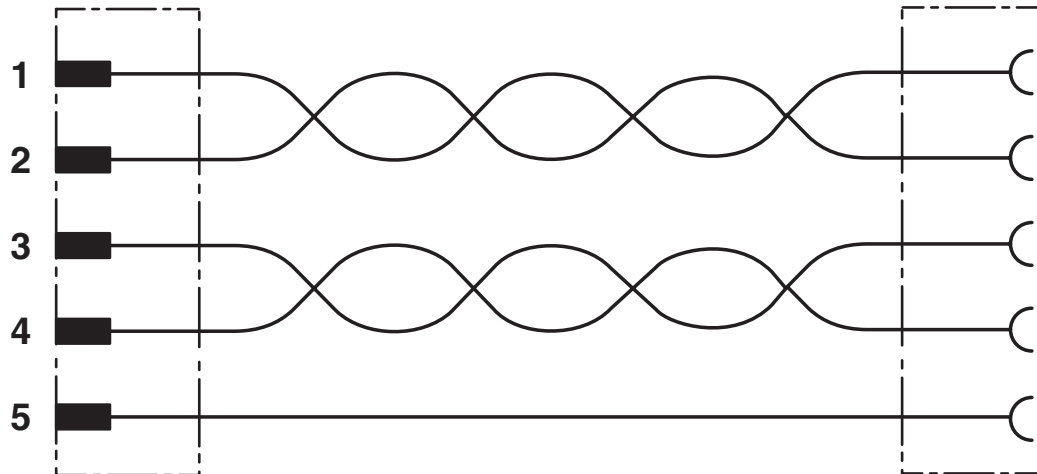
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Circuit diagram



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Approvals

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EAC-RoHS

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

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Classifications

ECLASS

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

ETIM

ETIM 9.0	EC001855
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UNSPSC

UNSPSC 21.0	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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1507201

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Accessories

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

1537983

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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 free cable end, cable length: Free input (0.2 ... 40.0 m)

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1538005

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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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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

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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

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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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