

# Bus system cable - SAC-5P-M12MSB/10,0-900



1507081

<https://www.phoenixcontact.com/pc/products/1507081>

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Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, Plug straight M12, coding: B, on free cable end, cable length: 10 m

## Commercial Data

Item number	1507081
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	BF1CKB
Catalog Page	Page 428 (C-2-2019)
GTIN	4017918899950
Weight per Piece (including packing)	717 g
Weight per Piece (excluding packing)	707.4 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
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### Product properties

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

### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### Interfaces

Bus system	INTERBUS
Signal type/category	INTERBUS, 16 Mbps

### LED signaling

Status display	No
Status display present	No

### Electrical properties

Contact resistance	$\leq 5 \text{ m}\Omega$
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	$\geq 100$
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### Material specifications

Flammability rating according to UL 94	V0
Material of grip body	TPU, hardly inflammable, self-extinguishing
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6

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Material for screw connection	Zinc die-cast, nickel-plated
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## Connection data

### Pin assignment

Contact   Color (signal designation)   Contact (optional)	1 (Plug) = YE (DQ)
	2 (Plug) = GN (DQ)
	3 (Plug) = GY (DI)
	4 (Plug) = PK (DI)
	5 (Plug) = BN (GND)

## Connector

### Connection 1

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


### Connection 2

Head design	free cable end
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## Cable / line

Cable length	10 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 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 mm <sup>2</sup>
External cable diameter	8 mm
Outer sheath, material	PUR
External sheath, color	may green RAL 6017

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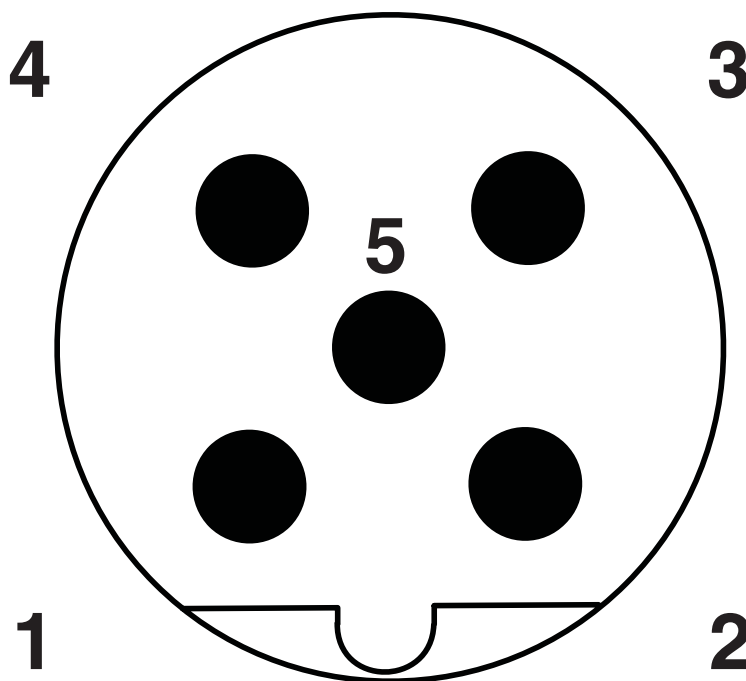
Conductor material	Bare Cu litz wires
Material wire insulation	PE
Single wire, color	Green-yellow, white-brown, gray-pink
Twisted pairs	2 cores to the pair
Overall twist	3 pairs to the core
Insulation resistance	$\geq 5 \text{ G}\Omega \cdot \text{km}$
Coupling resistance	$< 250.00 \text{ m}\Omega/\text{m}$ (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	$\leq 60 \text{ nF}/\text{km}$ (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	$1000 \text{ V}_{\text{rms}}$
Minimum bending radius, fixed installation	$7.5 \times D$
Minimum bending radius, flexible installation	$15 \times D$
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	$\leq 15 \text{ dB}/\text{km}$ (at 256 kHz) $\leq 24 \text{ dB}/\text{km}$ (at 772 kHz) $\leq 27 \text{ dB}/\text{km}$ (with 1 MHz) $\leq 52 \text{ dB}/\text{km}$ (at 4 MHz) $\leq 84 \text{ dB}/\text{km}$ (at 10 MHz) $\leq 112 \text{ dB}/\text{km}$ (at 16 MHz) $\leq 119 \text{ dB}/\text{km}$ (at 20 MHz)
Flame resistance	according to VDE 0472, Part 4, test type B according to IEC 60332-1
Ambient temperature (operation)	$-40 \text{ }^\circ\text{C} \dots 80 \text{ }^\circ\text{C}$ (cable, fixed installation) $-30 \text{ }^\circ\text{C} \dots 70 \text{ }^\circ\text{C}$ (Cable, flexible installation)

## Ambient conditions

Degree of protection	IP65 IP67
Ambient temperature (operation)	$-25 \text{ }^\circ\text{C} \dots 90 \text{ }^\circ\text{C}$ (Plug / socket)

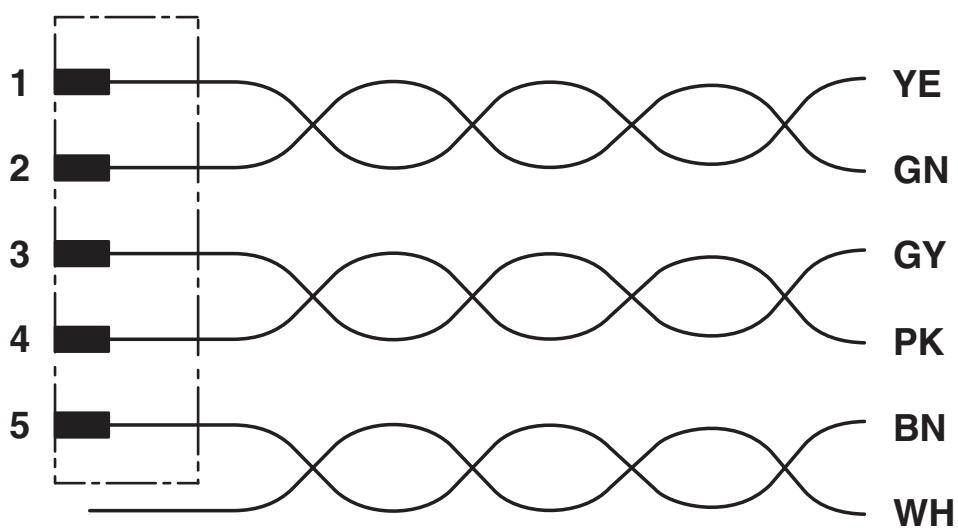
## Drawings

Schematic diagram



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

Circuit diagram

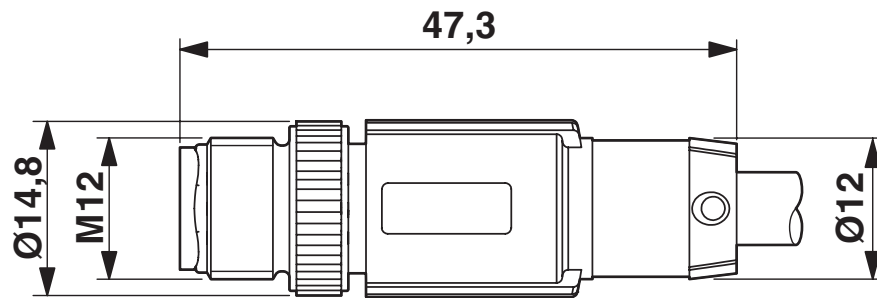


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Dimensional drawing



Plug, M12 x 1, straight, shielded

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## Approvals



**EAC**

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



**EAC**

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

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## Classifications

### ECLASS

ECLASS-9.0	27060308
ECLASS-10.0.1	27060308
ECLASS-11.0	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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## Accessories

### Bus system cable

Bus system cable - SAC-5P-M12MSB/900/... - 1537983

<https://www.phoenixcontact.com/pc/products/1537983>



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

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### Bus system cable

Bus system cable - SAC-5P-M12FSB/900/... - 1538005

<https://www.phoenixcontact.com/pc/products/1538005>



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

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## Bus system cable

Bus system cable - SAC-5P-M12MSB-M12FSB/900/... - 1538021

<https://www.phoenixcontact.com/pc/products/1538021>



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

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## 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

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## 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

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## 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

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## 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

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## 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

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## 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

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## Cable-cutting tool

Cable-cutting tool - CUTFOX 12 - 1212128

<https://www.phoenixcontact.com/pc/products/1212128>



**Cable cutter**, for copper and aluminum up to 12 mm diameter (up to 35 mm<sup>2</sup>)

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## Diagonal cutter

Diagonal cutter - CUTFOX-S VDE - 1212207

<https://www.phoenixcontact.com/pc/products/1212207>



Diagonal cutter for hard (piano wire) and soft wires, VDE 1000 V AC/1500 V DC tested

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## Stripping tool

Stripping tool - VS-CABLE-STRIP-VARIO - 1657407

<https://www.phoenixcontact.com/pc/products/1657407>

Stripping tool, for the multi-level stripping of shielded cables



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## Diagonal cutter

Diagonal cutter - MICROFOX-SP-1 - 1212487

<https://www.phoenixcontact.com/pc/products/1212487>



Electronic diagonal cutter, tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version

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## Stripping tool

Stripping tool - WIREFOX 4 - 1212156

<https://www.phoenixcontact.com/pc/products/1212156>



Stripping tool, for cables and conductors (especially for rubber and silicone insulations) from 0.1 - 4 mm<sup>2</sup>, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm<sup>2</sup> stranded/1.5 mm<sup>2</sup> solid, replaceable stripping blade

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## Stripping tool

Stripping tool - WIREFOX-E 4 - 1212704

<https://www.phoenixcontact.com/pc/products/1212704>



Stripping tool, for cables and conductors (especially for rubber and silicone insulations) from 0.1 - 4 mm<sup>2</sup>, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm<sup>2</sup> stranded/1.5 mm<sup>2</sup> solid, replaceable stripping blade

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## Stripping tool

Stripping tool - WIREFOX 10 - 1212150

<https://www.phoenixcontact.com/pc/products/1212150>



Stripping tool, for cables and conductors from 0.02 - 10 mm<sup>2</sup>, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm<sup>2</sup> stranded/1.5 mm<sup>2</sup> solid, replaceable stripping blade

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## Protective hose adapter

Protective hose adapter - WP-CTA POM 13,0 BK - 1422884

<https://www.phoenixcontact.com/pc/products/1422884>



Protective hose adapter, for corrugated hoses with a nominal size of 13 (10 x 13), corrugated in parallel

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## Protective hose

Protective hose - WP-PA HF 13,0 BK - 3240681

<https://www.phoenixcontact.com/pc/products/3240681>



Protective hose, material: PA 6, UV-resistant: yes, flexible, degree of protection: IP68, color: black, flammability rating in acc. with UL 94: V0, inner diameter: 10 mm, Total length: 50 m

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## Protective hose

Protective hose - WP-PA HF-HB 13,0 BK - 3240839

<https://www.phoenixcontact.com/pc/products/3240839>



Protective hose, material: PA 6, UV-resistant: yes, flexible, degree of protection: IP68, color: black, flammability rating in acc. with UL 94: HB, inner diameter: 10 mm, Total length: 50 m

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## Data connector

Data connector - SACC-M12FSB-5PL SH IB - 1424676

<https://www.phoenixcontact.com/pc/products/1424676>



Data connector, INTERBUS (500 kbps), 5-position, shielded, Socket straight M12, B - inverse, Push-lock spring connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

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## Data connector

Data connector - SACC-M12MSB-5PL SH IB - 1424674

<https://www.phoenixcontact.com/pc/products/1424674>



Data connector, INTERBUS (500 kbps), 5-position, shielded, Plug straight M12, B - inverse, Push-lock spring connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

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## Data connector

Data connector - SACC-M12FRB-5PL SH IB - 1424677

<https://www.phoenixcontact.com/pc/products/1424677>



Data connector, INTERBUS (500 kbps), 5-position, shielded, Socket angled M12, B - inverse, Push-lock spring connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

# Bus system cable - SAC-5P-M12MSB/10,0-900

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## Data connector

Data connector - SACC-M12MRB-5PL SH IB - 1424675

<https://www.phoenixcontact.com/pc/products/1424675>



Data connector, INTERBUS (500 kbps), 5-position, shielded, Plug angled M12, B - inverse, Push-lock spring connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

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## Data connector

Data connector - SACC-M12FSB-5CON-PG9 SH AU - 1507777

<https://www.phoenixcontact.com/pc/products/1507777>



Data connector, PROFIBUS, INTERBUS, 5-position, shielded, Socket straight M12, B - inverse, Screw connection, knurl material: Zinc die-cast, nickel-plated, cable gland Pg9, external cable diameter 6.5 mm ... 8.5 mm

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## Data connector

Data connector - SACC-M12MSB-5CON-PG9 SH AU - 1507764

<https://www.phoenixcontact.com/pc/products/1507764>



Data connector, PROFIBUS, INTERBUS, 5-position, shielded, Plug straight M12, B - inverse, Screw connection, knurl material: Zinc die-cast, nickel-plated, cable gland Pg9, external cable diameter 6.5 mm ... 8.5 mm

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## Data connector

Data connector - SACC-M12FRB-5CON-PG 9-SH - 1430420

<https://www.phoenixcontact.com/pc/products/1430420>



Data connector, PROFIBUS, INTERBUS, 5-position, shielded, Socket angled M12, B - inverse, Screw connection, knurl material: Nickel-plated brass, cable gland Pg9, external cable diameter 6 mm ... 8 mm

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## Data connector

Data connector - SACC-M12MRB-5CON-PG 9-SH - 1430417

<https://www.phoenixcontact.com/pc/products/1430417>

Data connector, PROFIBUS, INTERBUS, 5-position, shielded, Plug angled M12, B - inverse, Screw connection, knurl material: Nickel-plated brass, cable gland Pg9, external cable diameter 6 mm ... 8 mm



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