

1517945  
<https://www.phoenixcontact.com/us/products/1517945>

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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 SPEEDCON, coding: B, cable length: 15 m

Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1517945             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | BF04                |
| Product key                          | BF1CKB              |
| Catalog page                         | Page 198 (C-6-2019) |
| GTIN                                 | 4017918968069       |
| Weight per piece (including packing) | 1,067 g             |
| Weight per piece (excluding packing) | 1,014.9 g           |
| Customs tariff number                | 85444290            |
| Country of origin                    | PL                  |

# SAC-5P-15,0-900/FSB SCO - Bus system cable



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## Technical data

### 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                     |

### 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                                       |
| 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 (Socket)   YE ( <u>DQ</u> ) |
|                                                           | 2 (Socket)   GN ( <u>DQ</u> ) |
|                                                           | 3 (Socket)   GY (DI)          |

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|  |                       |
|--|-----------------------|
|  | 4 (Socket)   PK (DI)  |
|  | 5 (Socket)   BN (GND) |

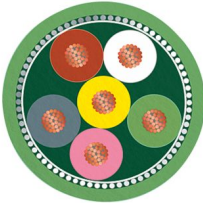
## Connector

|              |                |
|--------------|----------------|
| Connection 1 |                |
| Type         | free cable end |
| Connection 2 |                |
| Type         | free cable end |

## Cable/line

|              |      |
|--------------|------|
| Cable length | 15 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 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                              |
| 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)             |

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|                                               |                                                     |
|-----------------------------------------------|-----------------------------------------------------|
| 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)        |
|                                               | -30 °C ... 70 °C (Cable, flexible installation)     |

## Environmental and real-life conditions

### Ambient conditions

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

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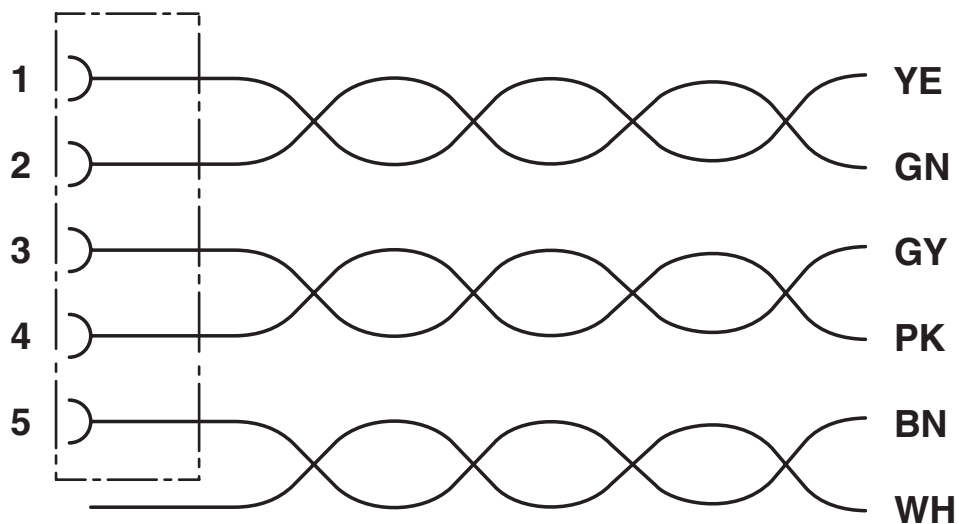
## Drawings

Dimensional drawing

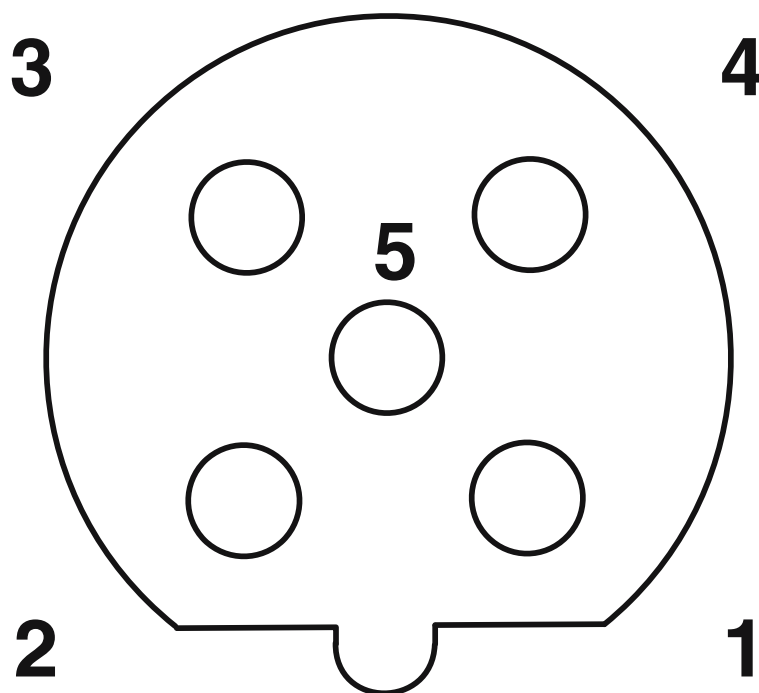


M12 x 1 socket, straight, shielded

Circuit diagram



Schematic diagram



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

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## Approvals

🔗 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1517945>



**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 |
|----------|----------|

### 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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