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# Bus system cable - SAC-6P-MS/ 5,0-970 SCO

1428500

https://www.phoenixcontact.com/gb/products/1428500

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Bus system cable, VARAN (100 Mbps), 6-position, SANTOPRENE halogen-free/TPE halogen-free, black RAL 9005, shielded, Plug straight M12 SPEEDCON, coding: A, on free cable end, cable length: 5 m

## Commercial Data

| | |
|---|---|
| Item number | 1428500 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales Key | BF1CMM |
| Product Key | BF1CMM |
| Catalog Page | Page 324 (PC-2011) |
| GTIN | 4046356322782 |
| Weight per Piece (including packing) | 408 g |
| Weight per Piece (excluding packing) | 408 g |
| Customs tariff number | 85444290 |
| Country of origin | PL |

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## Technical Data

### Product properties

| | |
|---|---|
| Product type | Data cable preassembled |
| Number of positions | 6 |
| Application | Standard |
| No. of cable outlets | 1 |
| Coding | A - standard |

Insulation characteristics

| | |
|---|---|
| Overvoltage category | II |
| Degree of pollution | 3 |

### Interfaces

| | |
|---|---|
| Bus system | VARAN |
| Signal type/category | VARAN, 100 Mbps |

### LED signaling

| | |
|---|---|
| Status display | No |
| Status display present | No |

### Electrical properties

| | |
|---|---|
| Contact resistance | ≤ 5 mΩ |
| Insulation resistance | ≥ 100 MΩ |
| Nominal voltage $U_N$ | 30 V AC |
| | 30 V DC |
| Nominal current $I_N$ | 2 A |
| Transmission medium | Copper |

### Material specifications

| | |
|---|---|
| Color Handle area | black |
| Flammability rating according to UL 94 | HB |
| Material of grip body | TPU, hardly inflammable, self-extinguishing |
| Contact material | CuZn |
| Contact surface material | Ni/Au |
| Contact carrier material | TPU GF |
| Cable gland material | Zinc die-cast, nickel-plated |

### Connection data

Pin assignment

| | |
|---|---|
| Contact \| Color (signal designation) \| Contact (optional) | 1 (Plug) |
| | 4 (Plug) |
| | 6 (Plug) = BU (Power) |
| | 7 (Plug) = BN (Power) |

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| | |
|---|---|
| | 5 (Plug) = GNWH (RD+) |
| | 8 (Plug) = GN (RD-) |
| | 2 (Plug) = OGWH (TD+) |
| | 3 (Plug) = OG (TD-) |

## Connector

### Header 1

| | |
|---|---|
| Head design | Plug |
| Head cable outlet | straight |
| Head thread type | M12 |
| Head locking type | SPEEDCON |
| Coding | A |

### Head 2

| | |
|---|---|
| Head design | free cable end |

## Cable / line

| | |
|---|---|
| Cable length | 5 m |
| Cable weight | 81 kg/km |
| Number of positions | 6 |
| Shielded | yes |
| Cable type | VARAN [970] |
| Conductor structure signal line | 19x 0.13 mm |
| AWG signal line | 24 |
| Conductor cross section | 4x 0.25 mm² (Signal line) |
| | 2x 0.38 mm² (Power supply) |
| Wire diameter incl. insulation | 1.35 mm (Signal line) |
| | 1.5 mm (Power supply) |
| External cable diameter | 7.8 mm ±0.2 mm |
| Outer sheath, material | SANTOPRENE halogen-free |
| External sheath, color | black RAL 9005 |
| Conductor material | Bare Cu litz wires |
| Material wire insulation | PP |
| Single wire, color | Brown, blue, white/orange, white/green, green, orange |
| Type of pair shielding | Tinned copper braided shield, 95 % covering |
| Overall twist | 1 star quad and 2 wires with 2 fillers |
| Max. conductor resistance | 77 Ω/m (Data cable) |
| Insulation resistance | 5 GΩ*km (Data cable) |
| Wave impedance | 100 Ω ±15 % |
| Working capacitance | 50 nF (Data cable) |
| Nominal voltage, cable | 125 V (Data cable) |
| | 48 V (Power supply) |
| Test voltage | 2000 V (Power supply) |
| | max. 700 V AC (Data cable) |

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| | |
|---|---|
| Smallest bending radius, fixed installation | ≥ 93 mm |
| Smallest bending radius, movable installation | ≥ 93 mm |
| Max. bending cycles | 3000000 |
| Halogen-free | in accordance with DIN EN 50267-2-1 |
| Ambient temperature (operation) | -20 °C ... 80 °C (Cable) |
| Ambient temperature (installation) | 0 °C ... 50 °C |

Cable structure

| | |
|---|---|
| Signal type/category | VARAN, 100 Mbps |

## Ambient conditions

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

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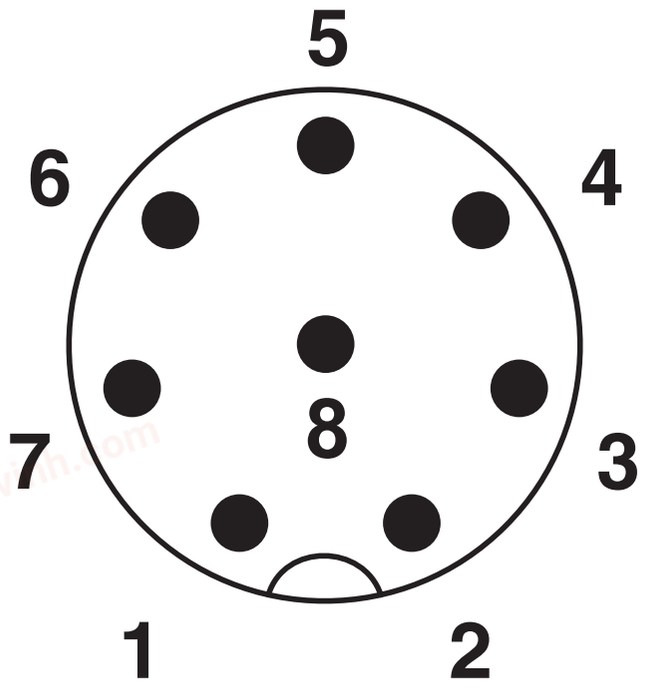
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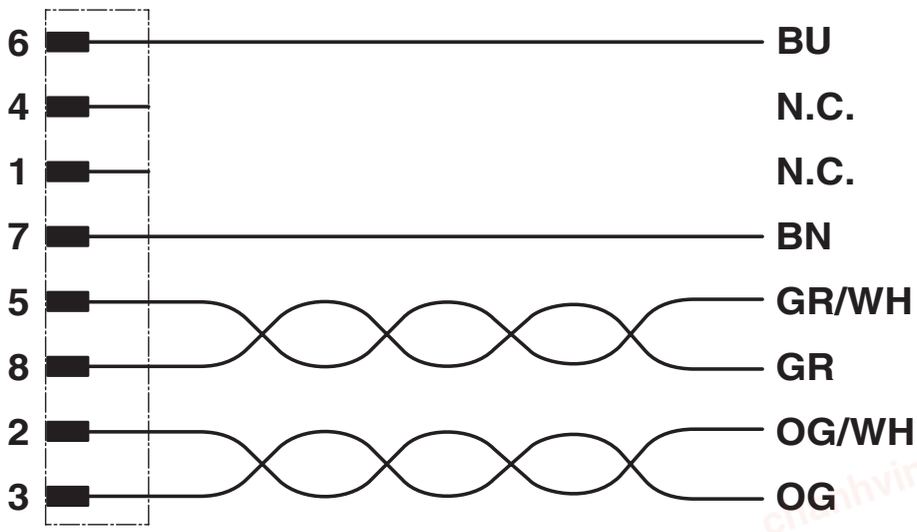
## Drawings

Schematic diagram




Pin assignment M12 plug, 8-pos., view plug side

Circuit diagram




Contact assignment of the M12 plug

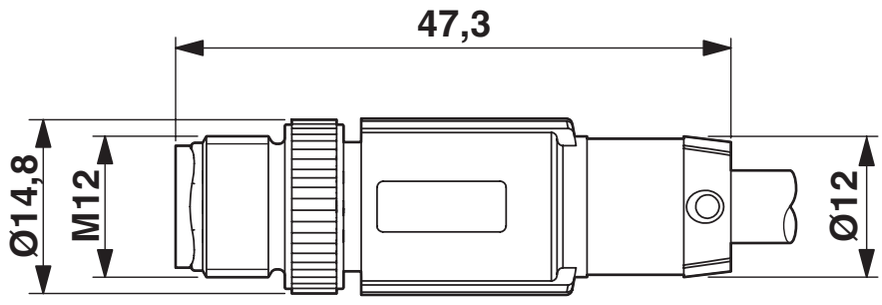
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Dimensional drawing




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 |

### UNSPSC

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

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## Environmental Product Compliance

| | |
|---|---|
| REACh SVHC | Lead 7439-92-1 |

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

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