

SAC-6P-MS/15,0-970/FS SCO - Bus system cable



1428681

<https://www.phoenixcontact.com/us/products/1428681>

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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 Socket straight M12 SPEEDCON, coding: A, cable length: 15 m

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 1428681 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Note | Made to order (non-returnable) |
| Product key | AF1CMM |
| GTIN | 4046356322966 |
| Weight per piece (including packing) | 1,172.6 g |
| Weight per piece (excluding packing) | 1,172.6 g |
| Country of origin | PL |

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Technical data

Product properties

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

Insulation characteristics

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

Interfaces

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

Signaling

| | |
|------------------------|----|
| Status display | no |
| Status display present | no |

Electrical properties

| | |
|--------------------------------|----------|
| Insulation resistance | ≥ 100 MΩ |
| Nominal voltage U _N | 30 V AC |
| | 30 V DC |
| Nominal current I _N | 2 A |
| Transmission medium | Copper |
| Transmission speed | 100 Mbps |

Material specifications

| | |
|--|---|
| Flammability rating according to UL 94 | HB |
| Seal material | NBR |
| Material of grip body | TPU, hardly inflammable, self-extinguishing |
| Contact material | CuZn |
| Contact surface material | Ni/Au |
| Contact carrier material | TPU GF |
| Material for screw connection | Zinc die-cast, nickel-plated |

Connection data

Connection assignment

| | |
|---|------------------------------------|
| Contact Color (signal designation) Contact (optional) | 1 (Plug) N.C. 1 (Socket) |
| | 2 (Plug) N.C. 2 (Socket) |
| | 6 (Plug) BU (Power) 6 (Socket) |
| | 7 (Plug) BN (Power) 7 (Socket) |

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

Connector

Connection 1

| | |
|---------------------------------|----------------------------|
| Type | Plug straight M12 SPEEDCON |
| Number of positions | 6 |
| Locking type | SPEEDCON |
| Coding type | A (Standard) |
| Ambient temperature (operation) | -25 °C ... 90 °C |

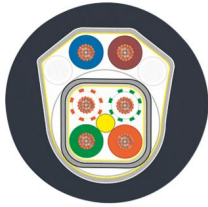
Connection 2

| | |
|---------------------------------|------------------------------|
| Type | Socket straight M12 SPEEDCON |
| Number of positions | 6 |
| Locking type | SPEEDCON |
| Coding type | A (Standard) |
| Ambient temperature (operation) | -25 °C ... 90 °C |

Cable/line

| | |
|--------------|------|
| Cable length | 15 m |
|--------------|------|

VARAN [970]

| | |
|-------------------------------------|--|
| Dimensional drawing |  |
| Cable weight | 81 kg/km |
| Number of positions | 6 |
| Shielded | yes |
| Cable type | VARAN [970] |
| Conductor structure | 1x2xAWG22/19 + 1x4xAWG24/19 |
| Conductor structure signal line | 19x 0.13 mm |
| AWG signal line | 24 |
| Conductor structure, voltage supply | 19x 0.16 mm |
| AWG power supply | 22 |
| Conductor cross-section | 4x 0.25 mm ² (Signal line) 2x 0.38 mm ² (Power supply) |
| Wire diameter incl. insulation | 1.35 mm (Signal line) |

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| | |
|---|---|
| | 1.5 mm (Power supply) |
| External cable diameter | 7.80 mm ±0.2 mm |
| Outer sheath, material | SANTOPRENE halogen-free |
| External sheath, color | black RAL 9005 |
| Conductor material | Bare Cu litz wires |
| Material, filler | Yarn |
| 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) |
| Smallest bending radius, fixed installation | ≥ 93 mm |
| Smallest bending radius, movable installation | ≥ 93 mm |
| Dynamic load capacity (bending) | Max. bending cycles: 3000000, Bending radius: 93 mm, Traversing path: 2 m, Traversing rate: 1 m/s, Acceleration: 2 m/s ² |
| 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 |

Environmental and real-life conditions

Ambient conditions

| | |
|----------------------|------|
| Degree of protection | IP65 |
| | IP67 |

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Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, straight, shielded

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Schematic diagram



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

Schematic diagram



Pin assignment M12 socket, 8-pos., A-coded, view female side

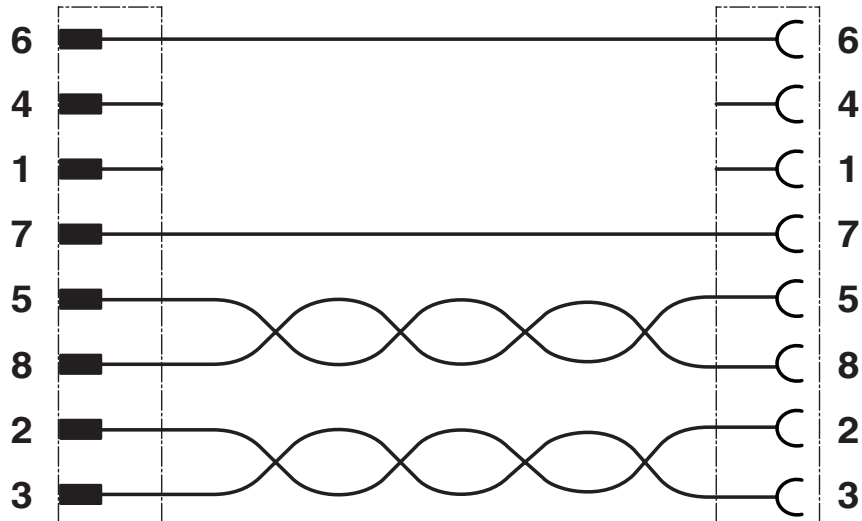
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Circuit diagram



Contact assignment of the M12 connector and the M12 socket

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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-13.0 | 27060307 |
| ECLASS-15.0 | 27060307 |

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% |
|-------------------------------------|----------------------------|

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 13.94 kg CO2e |
|---------|---------------|

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