

## Bus system cable - SAC-6P-MS/ 2,0-970 SCO - 1428490

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Bus system cable, VARAN, VARAN, 6-position, SANTOPRENE halogen-free, Black RAL 9005, shielded, Plug straight M12 SPEEDCON, A-coded, on Free cable end, Cable length: 2 m



### Key commercial data

|                                      |           |
|--------------------------------------|-----------|
| Packing unit                         | 1 1       |
| Weight per Piece (excluding packing) | 179.0 GRM |
| Custom tariff number                 | 85444290  |
| Country of origin                    | Germany   |

### Technical data

#### Dimensions

|                                            |       |
|--------------------------------------------|-------|
| Length of cable                            | 2 m   |
| Stripping length of the free conductor end | 50 mm |

#### Ambient conditions

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

#### General

|                       |              |
|-----------------------|--------------|
| Rated current at 40°C | 2 A          |
| Rated voltage         | 30 V         |
| Number of positions   | 6            |
| Contact resistance    | ≤ 5 mΩ       |
| Insulation resistance | ≥ 100 MΩ     |
| Coding                | A - standard |

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### Technical data

#### General

|                        |                        |
|------------------------|------------------------|
| Signal type/category   | VARAN                  |
| Status display         | No                     |
| Surge voltage category | II                     |
| Pollution degree       | 3                      |
| Torque                 | 0.4 Nm (M12 connector) |

#### Material

|                                         |                                             |
|-----------------------------------------|---------------------------------------------|
| Inflammability class according to UL 94 | HB                                          |
| Contact material                        | CuZn                                        |
| Contact surface material                | Ni/Au                                       |
| Contact carrier material                | TPU GF                                      |
| Material of grip body                   | TPU, hardly inflammable, self-extinguishing |
| Material, knurls                        | Zinc die-cast, nickel-plated                |

#### Pin assignment

|                                                      |                        |
|------------------------------------------------------|------------------------|
| Position = wire color (signal) = position (optional) | 1 (Plug)               |
|                                                      | 4 (Plug)               |
|                                                      | 6 (Plug) = BU (Power)  |
|                                                      | 7 (Plug) = BN (Power)  |
|                                                      | 5 (Plug) = GN/WH (RD+) |
|                                                      | 8 (Plug) = GN (RD-)    |
|                                                      | 2 (Plug) = OG/WH (TD+) |
|                                                      | 3 (Plug) = OG (TD-)    |

#### Cable

|                                     |                                                       |
|-------------------------------------|-------------------------------------------------------|
| Cable type                          | VARAN                                                 |
| Cable type (abbreviation)           | 970                                                   |
| Cable abbreviation                  | Li9YD12Y                                              |
| Cable structure                     | 1x2xAWG22/19 + 1x4xAWG24/19                           |
| Conductor cross section             | 4x 0.25 mm <sup>2</sup> (signal line)                 |
|                                     | 2x 0.38 mm <sup>2</sup> (Power supply)                |
| AWG signal line                     | 24                                                    |
| AWG power supply                    | 22                                                    |
| Conductor structure signal line     | 19x 0.13 mm                                           |
| Conductor structure, voltage supply | 19x 0.16 mm                                           |
| Core diameter including insulation  | 1.35 mm (signal line)                                 |
|                                     | 1.5 mm (Power supply)                                 |
| Wire colors                         | Brown, blue, white/orange, white/green, green, orange |
| Type of pair shielding              | Tinned copper braided shield, 95 % covering           |

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### Technical data

#### Cable

|                                               |                                                    |
|-----------------------------------------------|----------------------------------------------------|
| Overall twist                                 | 1 star quad and 2 wires with 2 fillers             |
| Shielding                                     | Tinned copper-braided shield, approx. 85% covering |
| External sheath, color                        | Black RAL 9005                                     |
| External cable diameter D                     | 7.8 mm ± 0.2 mm                                    |
| Smallest bending radius, fixed installation   | ≥ 93 mm                                            |
| Smallest bending radius, movable installation | ≥ 93 mm                                            |
| Number of bending cycles                      | 3000000                                            |
| Bending radius                                | 93 mm                                              |
| Traversing path                               | 2 m                                                |
| Traversing rate                               | 1 m/s                                              |
| Acceleration                                  | 2 m/s <sup>2</sup>                                 |
| Cable weight                                  | 81 kg/km                                           |
| Outer sheath, material                        | SANTOPRENE halogen-free                            |
| Material, inner sheath                        | TPE                                                |
| Material, filler                              | Yarn                                               |
| Material conductor insulation                 | PP                                                 |
| Conductor material                            | Bare Cu litz wires                                 |
| Insulation resistance                         | 5 GΩ*km (Data cable)                               |
| Conductor resistance                          | 77 Ω/m (Data cable)                                |
| Transmission characteristics (category)       | CAT5 (IEC 11801:2002), CAT5e (TIA 568B:2001)       |
| Working capacitance                           | 50 nF (Data cable)                                 |
| Wave impedance                                | 100 Ω ±15%                                         |
| Nominal voltage, cable                        | 125 V (Data cable)                                 |
|                                               | 48 V (Power supply)                                |
| Test voltage, cable                           | 2000 V (Power supply)                              |
|                                               | max. 700 V AC (Data cable)                         |
| Halogen-free                                  | in accordance with DIN EN 50267-2-1                |
| Ambient temperature (operation)               | -20 °C ... 80 °C (Cable)                           |

### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27060306 |
| eCl@ss 4.1 | 27060306 |
| eCl@ss 5.0 | 27061801 |
| eCl@ss 5.1 | 27061801 |
| eCl@ss 6.0 | 27061801 |

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### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 7.0 | 27061801 |
| eCl@ss 8.0 | 27061801 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001855 |
| ETIM 4.0 | EC001855 |
| ETIM 5.0 | EC001855 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 31251501 |
| UNSPSC 7.0901 | 31251501 |
| UNSPSC 11     | 31251501 |
| UNSPSC 12.01  | 31251501 |
| UNSPSC 13.2   | 31251501 |

### Approvals

#### Approvals

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Approvals

GOST

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Ex Approvals

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Approvals submitted

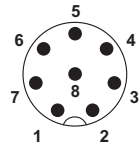
#### Approval details

|                                                                                          |
|------------------------------------------------------------------------------------------|
| GOST  |
|------------------------------------------------------------------------------------------|

### Drawings

## Bus system cable - SAC-6P-MS/ 2,0-970 SCO - 1428490

Schematic diagram



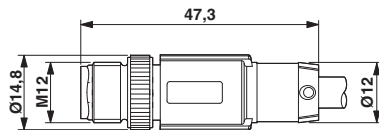
Pin assignment M12 plug, 8-pos., view plug side

Cable cross section



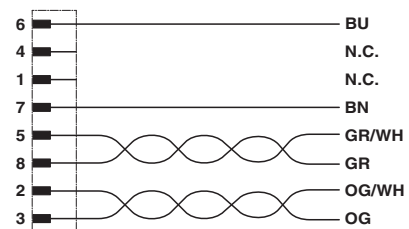
VARAN [970]

Dimensioned drawing



Plug, M12 x 1, straight, shielded

Circuit diagram



Contact assignment of the M12 plug