

## Bus system cable - SAC-6P-MS/ 2,0-970/FS SCO - 1428652

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://download.phoenixcontact.com>)



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



### Key commercial data

Packing unit	1 1
Custom tariff number	85444290
Country of origin	Germany

### Technical data

#### Dimensions

Length of cable	2 m
-----------------	-----

#### 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
Signal type/category	VARAN
Status display	No

## Bus system cable - SAC-6P-MS/ 2,0-970/FS SCO - 1428652

### Technical data

#### General

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
Sealing material	NBR

#### Pin assignment

Position = wire color (signal) = position (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)
	5 (Plug) = GN/WH (RD+) = 5 (Socket)
	8 (Plug) = GN (RD-) = 8 (Socket)
	2 (Plug) = OG/WH (TD+) = 2 (Socket)
	3 (Plug) = OG (TD-) = 3 (Socket)

#### 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
Overall twist	1 star quad and 2 wires with 2 fillers

## Bus system cable - SAC-6P-MS/ 2,0-970/FS SCO - 1428652

### Technical data

#### Cable

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
eCl@ss 7.0	27061801

# Bus system cable - SAC-6P-MS/ 2,0-970/FS SCO - 1428652

## Classifications

eCl@ss

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

---

Approvals

GOST

---


Ex Approvals

---

Approvals submitted

---

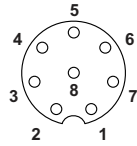
### Approval details

GOST 
--

## Drawings

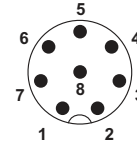
# Bus system cable - SAC-6P-MS/ 2,0-970/FS SCO - 1428652

Schematic diagram



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

Schematic diagram



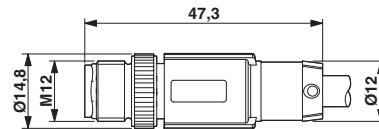
Pin assignment M12 plug, 8-pos., view plug side

Cable cross section



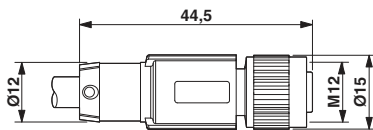
VARAN [970]

Dimensioned drawing



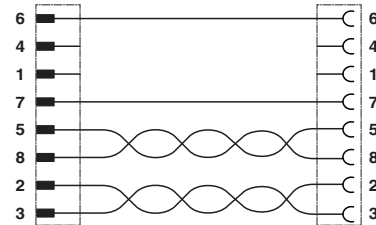
Plug, M12 x 1, straight, shielded

Dimensioned drawing



M12 x 1 socket, straight, shielded

Circuit diagram



Contact assignment of the M12 connector and the M12 socket