

## Bus system cable - SAC-6P-MS/ 5,0-970/FS SCO - 1428665


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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: 5 m



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 322942
GTIN	4046356322942

### Technical data

#### Dimensions

Length of cable	5 m
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#### 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 AC
	30 V DC
Number of positions	6
Color handle area	black
Insulation resistance	≥ 100 MΩ
Coding	A - standard
Signal type/category	VARAN, 100 Mbps
Status display	No
Overvoltage category	II
Degree of pollution	3

# Bus system cable - SAC-6P-MS/ 5,0-970/FS SCO - 1428665

## Technical data

### General

Torque	0.4 Nm (M12 connector)
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### Material

Flammability rating 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

Contact   Color (signal designation)   Contact (optional)	1 (Plug)   N.C.   1 (Socket)
	4 (Plug)   N.C.   4 (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)

### Standards and Regulations

Flammability rating according to UL 94	HB
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### 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
Shielding	Tinned copper-braided shield, approx. 85% covering
External sheath, color	black RAL 9005
External cable diameter D	7.8 mm ±0.2 mm

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### Technical data

#### Cable

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)
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)

#### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

#### Drawings

# Bus system cable - SAC-6P-MS/ 5,0-970/FS SCO - 1428665

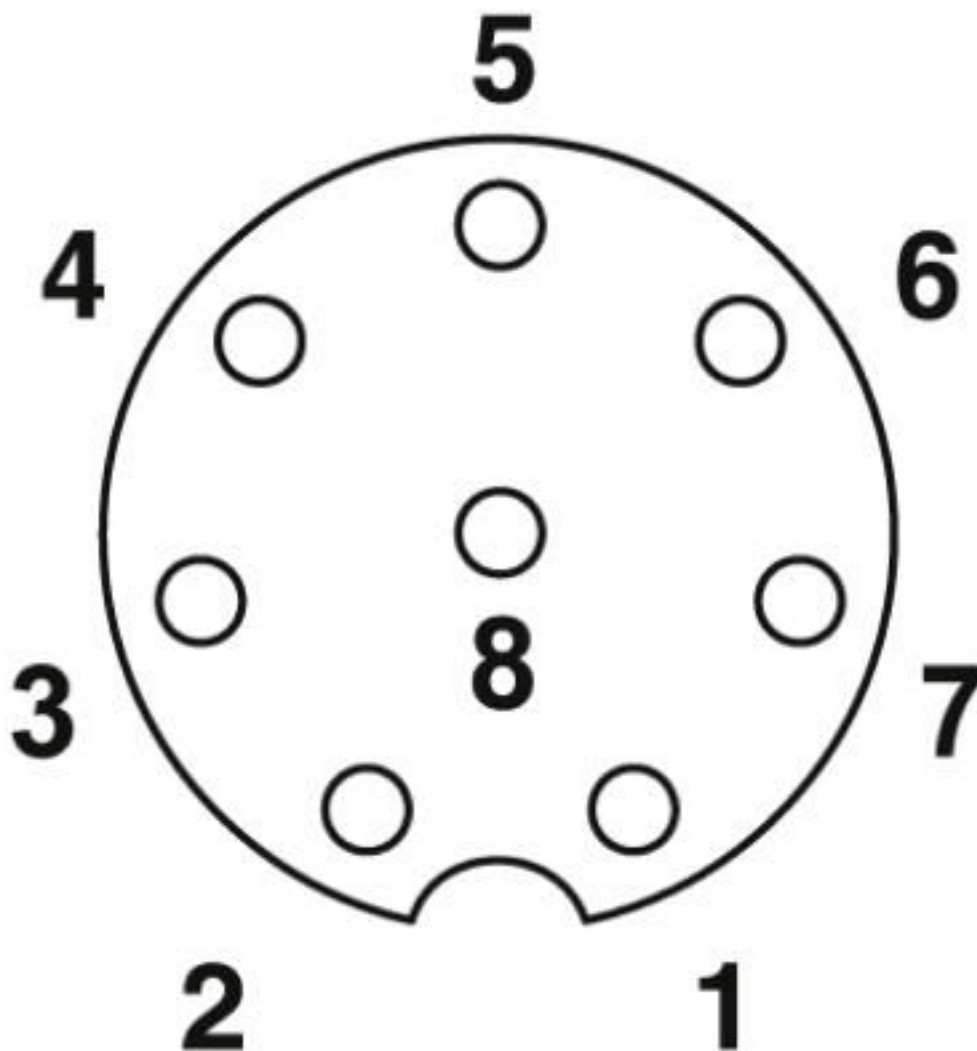
Schematic diagram



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

## Bus system cable - SAC-6P-MS/ 5,0-970/FS SCO - 1428665

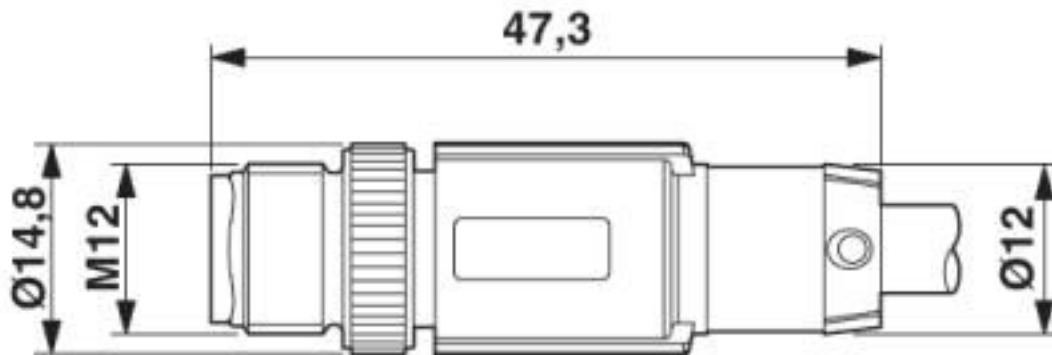
Schematic diagram



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

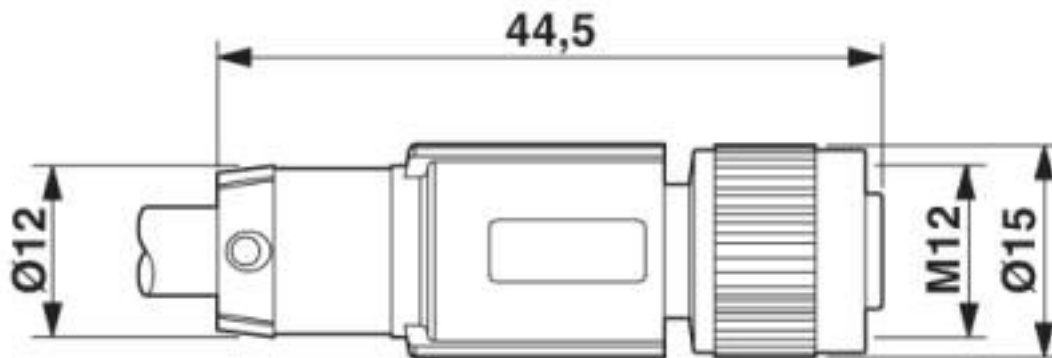
## Bus system cable - SAC-6P-MS/ 5,0-970/FS SCO - 1428665

Dimensional drawing



Plug, M12 x 1, straight, shielded

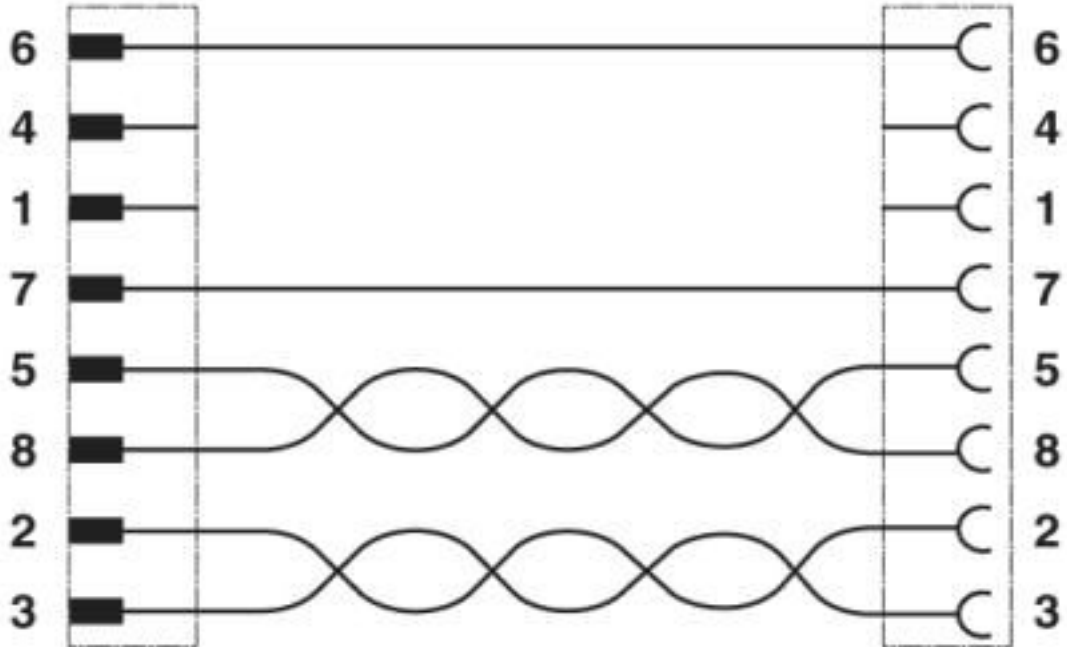
Dimensional drawing



M12 x 1 socket, straight, shielded

# Bus system cable - SAC-6P-MS/ 5,0-970/FS SCO - 1428665

Circuit diagram



Contact assignment of the M12 connector and the M12 socket

## Bus system cable - SAC-6P-MS/ 5,0-970/FS SCO - 1428665

Cable cross section



VARAN [970]

### Classifications

eCl@ss

eCl@ss 10.0.1	27060308
eCl@ss 4.0	27060300
eCl@ss 4.1	27060300
eCl@ss 5.0	27061800
eCl@ss 5.1	27061800
eCl@ss 6.0	27279200
eCl@ss 7.0	27279218
eCl@ss 8.0	27279218
eCl@ss 9.0	27060308



# Bus system cable - SAC-6P-MS/ 5,0-970/FS SCO - 1428665

## Classifications

### ETIM

ETIM 3.0	EC001855
ETIM 4.0	EC001855
ETIM 5.0	EC002599
ETIM 6.0	EC001262
ETIM 7.0	EC001262

### UNSPSC

UNSPSC 6.01	31251501
UNSPSC 7.0901	31251501
UNSPSC 11	31251501
UNSPSC 12.01	31251501
UNSPSC 13.2	31251501
UNSPSC 18.0	26121604
UNSPSC 19.0	26121604
UNSPSC 20.0	26121604
UNSPSC 21.0	26121604

## Approvals

### Approvals

Approvals

EAC-RoHS / EAC

Ex Approvals

### Approval details

EAC-RoHS		RU D- DE.HB35.B.00387
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EAC		RU C- DE.BL08.B.00286
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