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Bus system cable - SAC-6P-MR/ 2,0-970/FR SCO - 1428694

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Bus system cable, VARAN (100 Mbps), 6-position, SANTOPRENE halogen-free, black RAL 9005, shielded, Plug angled M12 SPEEDCON, A-coded, on Socket angled M12 SPEEDCON, A-coded, Cable length: 2 m



Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 322973

Technical data

Dimensions

Length of cable	2 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
Number of positions	6
Insulation resistance	≥ 100 MΩ
Coding	A - standard
Signal type/category	VARAN, 100 Mbps
Status display	No
Overvoltage category	II
Degree of pollution	3
Torque	0.4 Nm (M12 connector)

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Technical data

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

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)

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 ² (Signal line)
	2x 0.38 mm ² (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
Smallest bending radius, fixed installation	≥ 93 mm
Smallest bending radius, movable installation	≥ 93 mm

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Technical data

Cable

Number of bending cycles	3000000
Bending radius	93 mm
Traversing path	2 m
Traversing rate	1 m/s
Acceleration	2 m/s ²
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)

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
eCl@ss 8.0	27279218

ETIM

ETIM 3.0	EC001855
ETIM 4.0	EC001855
ETIM 5.0	EC001855

UNSPSC

UNSPSC 6.01	31251501
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Bus system cable - SAC-6P-MR/ 2,0-970/FR SCO - 1428694

Classifications

UNSPSC

UNSPSC 7.0901	31251501
UNSPSC 11	31251501
UNSPSC 12.01	31251501
UNSPSC 13.2	31251501

Approvals

Approvals

Approvals

EAC

Ex Approvals

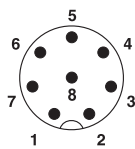
Approvals submitted

Approval details

EAC

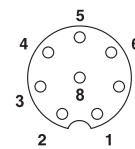
Drawings

Schematic diagram



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

Schematic diagram



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

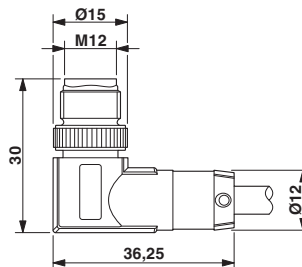
Bus system cable - SAC-6P-MR/ 2,0-970/FR SCO - 1428694

Cable cross section



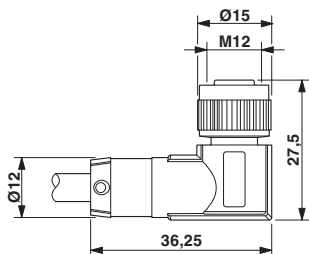
VARAN [970]

Dimensional drawing



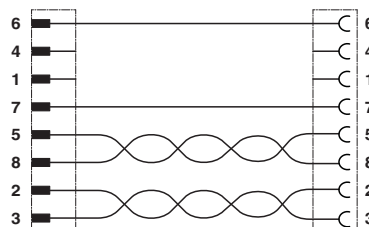
M12 x 1 male plug, angled, shielded

Dimensional drawing



M12 x 1 socket, angled, shielded

Circuit diagram



Contact assignment of the M12 connector and the M12 socket



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