

SAC-6P-MR/ 5,0-970/FR SCO - Bus system cable



1428704

<https://www.phoenixcontact.com/us/products/1428704>

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 documentation. Our general terms of use for downloads are valid.



Bus system cable, VARAN (100 Mbps), 6-position, SANTOPRENE halogen-free/TPE halogen-free, black RAL 9005, shielded, Plug angled M12 SPEEDCON, coding: A, on Socket angled M12 SPEEDCON, coding: A, cable length: 5 m

Commercial data

Item number	1428704
Packing unit	1 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Product key	AF1CMM
GTIN	4046356322980
Weight per piece (including packing)	417.1 g
Weight per piece (excluding packing)	417.1 g
Country of origin	PL

SAC-6P-MR/ 5,0-970/FR SCO - Bus system cable



1428704

<https://www.phoenixcontact.com/us/products/1428704>

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)

SAC-6P-MR/ 5,0-970/FR SCO - Bus system cable



1428704

<https://www.phoenixcontact.com/us/products/1428704>

	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 angled M12 SPEEDCON
Number of positions	6
Locking type	SPEEDCON
Coding type	A (Standard)


Connection 2

Type	Socket angled M12 SPEEDCON
Number of positions	6
Locking type	SPEEDCON
Coding type	A (Standard)

Cable/line

Cable length	5 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) 1.5 mm (Power supply)
External cable diameter	7.80 mm ±0.2 mm

SAC-6P-MR/ 5,0-970/FR SCO - Bus system cable



1428704

<https://www.phoenixcontact.com/us/products/1428704>

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
Ambient temperature (operation) (male connector/female connector)	-25 °C ... 90 °C (Plug / socket)

Drawings

Dimensional drawing



M12 x 1 male plug, angled, shielded

Dimensional drawing



M12 x 1 socket, angled, shielded

1428704

<https://www.phoenixcontact.com/us/products/1428704>

Schematic diagram



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

Schematic diagram



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

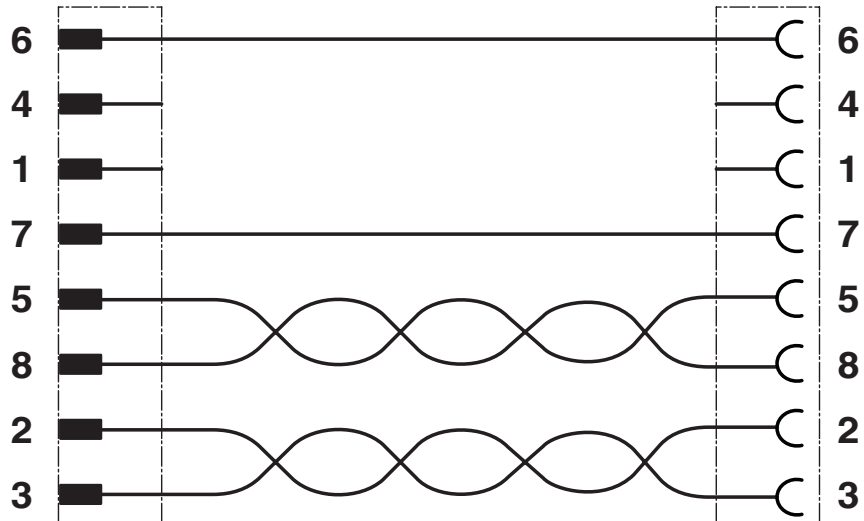
SAC-6P-MR/ 5,0-970/FR SCO - Bus system cable



1428704

<https://www.phoenixcontact.com/us/products/1428704>

Circuit diagram



Contact assignment of the M12 connector and the M12 socket

SAC-6P-MR/ 5,0-970/FR SCO - Bus system cable



1428704

<https://www.phoenixcontact.com/us/products/1428704>

Classifications

ECLASS

ECLASS-13.0	27060307
ECLASS-15.0	27060307

ETIM

ETIM 9.0	EC001855
----------	----------

UNSPSC

UNSPSC 21.0	26121600
-------------	----------

SAC-6P-MR/ 5,0-970/FR SCO - Bus system cable



1428704

<https://www.phoenixcontact.com/us/products/1428704>

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%
-------------------------------------	----------------------------

Phoenix Contact 2026 © - all rights reserved
<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com