

VS-M12FSBPS-IP20-93B/0,5 - Network cable



1404367

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Network cable, degree of protection: IP20, cable length: 0.5 m, number of positions: 4, 100 Mbps, CAT5, material: CuZn/PA, PROFINET, 1x4xAWG22/7, SF/TQ, green RAL 6018

Commercial data

Item number	1404367
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	ABNPAB
Product key	ABNPAB
GTIN	4046356692366
Weight per piece (including packing)	70,5 g
Weight per piece (excluding packing)	63,646 g
Customs tariff number	85444290
Country of origin	PL

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Technical data

Notes

General	This product corresponds to the PROFINET Cabling and Interconnection Technology Guideline for PROFINET regulations, version 2.00, order no: 2.252, Chapter 10.1 Cord Sets for Balanced Cabling
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Product properties

Type	M12
Sensor type	PROFINET
Number of positions	4
Shielded	yes

Insulation characteristics

Overvoltage category	I
Degree of pollution	1

Material specifications

Flammability rating according to UL 94	V2
Seal material, flat gasket	FKM / FPM
Housing material	CuZn/PA
Outer sheath, material	PVC
Conductor material	Tin-plated Cu litz wires

Electrical properties

Rated voltage (III/2)	50 V
Rated voltage (III/3)	50 V
Nominal voltage U_N	48 V
Transmission medium	Copper
Transmission speed	100 Mbps
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Transmission speed	100 Mbps
Wave impedance	100 Ω
Max. conductor resistance	120 Ω /km

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100
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Connector

Connection 1

Type	Flush-type female connector straight M12
Coding type	D

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Degree of protection	IP67
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Connection 2

Type	Plug straight RJ45
Degree of protection	IP20

Cable/line

Cable length	0.50 m
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PROFINET PVC stranded CAT5 [93B]

Dimensional drawing	
Cable weight	67 kg/km
UL AWM Style	21694
Number of positions	4
Shielded	yes
Cable type	PROFINET PVC stranded CAT5 [93B]
Conductor structure	1x4xAWG22/7, SF/TQ
Signal runtime	5.3 ns/m
Signal speed	0.66 c
Conductor structure signal line	7x 0.25 mm
AWG signal line	22
Conductor cross-section	4x 0.34 mm²
Wire diameter incl. insulation	1.55 mm
External cable diameter	6.50 mm ±0.2 mm
Outer sheath, material	PVC
External sheath, color	green RAL 6018
Conductor material	Tin-plated Cu litz wires
Material wire insulation	PE
Single wire, color	white, yellow, blue, orange
Thickness, outer sheath	approx. 0.90 mm
Overall twist	Star quad
Optical shield covering	85 %
Insulation resistance	≥ 500 MΩ*km
Coupling resistance	≤ 20.00 mΩ/m (at 10 MHz)
Loop resistance	≤ 120.00 Ω/km
Wave impedance	100 Ω ±15 Ω (at 100 MHz)
Nominal voltage, cable	600 V
Test voltage Core/Core	2000 V (50 Hz, 1 min.)

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Test voltage Core/Shield	2000.00 V (50 Hz, 1 min.)
Minimum bending radius, fixed installation	3 x D
Minimum bending radius, flexible installation	7 x D
Smallest bending radius, fixed installation	20 mm
Smallest bending radius, movable installation	46 mm
Near end crosstalk attenuation (NEXT)	80 dB (with 1 MHz)
	76 dB (at 4 MHz)
	70 dB (at 10 MHz)
	65 dB (at 16 MHz)
	63 dB (at 20 MHz)
	60 dB (at 31.25 MHz)
	55 dB (at 62.5 MHz)
	50 dB (at 100 MHz)
Shield attenuation	2.1 dB (with 1 MHz)
	4 dB (at 4 MHz)
	6.3 dB (at 10 MHz)
	8 dB (at 16 MHz)
	9 dB (at 20 MHz)
	11.4 dB (at 31.25 MHz)
	16.5 dB (at 62.5 MHz)
	21.3 dB (at 100 MHz)
Flame resistance	according to UL 1685 (CSA FT 4)
Resistance to oil	Resistant to oil to a limited extent
Other resistance	UV resistant (according to UL 1581, Section 1200)
Ambient temperature (operation)	-40 °C ... 70 °C (cable, fixed installation)
	-40 °C ... 70 °C (Cable, flexible installation)
Ambient temperature (installation)	-20 °C ... 60 °C

Environmental and real-life conditions

Ambient conditions

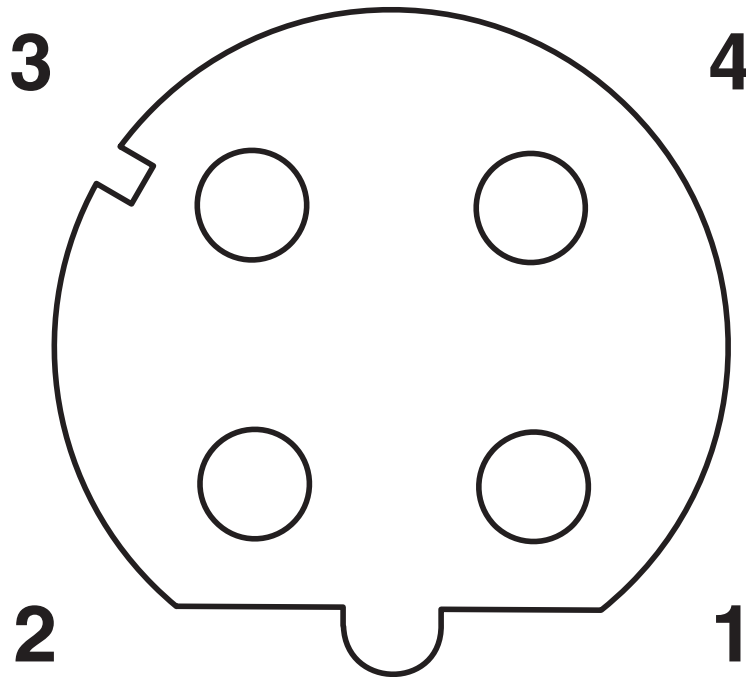
Degree of protection	IP20
	IP20
Ambient temperature (operation)	-40 °C ... 70 °C (cable, fixed installation)
	-5 °C ... 50 °C (Cable, flexible installation)
	Plug / socket
Resistance to oil	limited oil resistance

Standards and regulations

Flame resistance	according to UL 1685 (CSA FT 4)
Resistance to oil	limited oil resistance

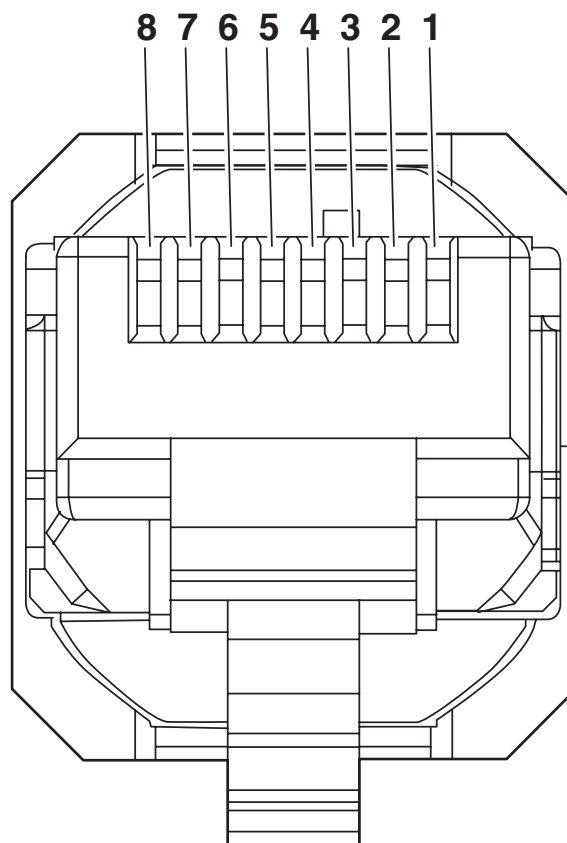
Drawings

Schematic diagram



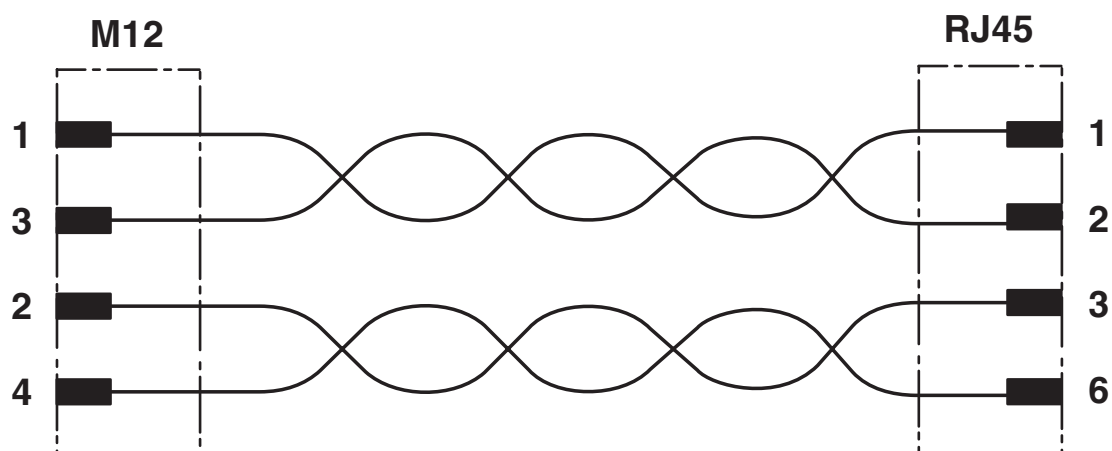
Pin assignment M12 socket, 4-pos., D-coded, female side

Schematic diagram



Connector pin assignment plug RJ45

Circuit diagram



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Approvals

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EAC

Approval ID: 19060508

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Classifications

ECLASS

ECLASS-13.0	27440103
ECLASS-15.0	27440103

ETIM

ETIM 10.0	EC003570
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UNSPSC

UNSPSC 21.0	26121600
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c)

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329)(CAS: 3147-75-9)
SCIP	e212201e-147b-4789-b353-d53998e725ab