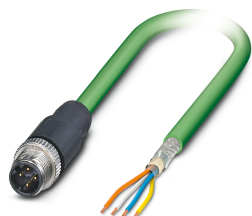


Network cable - VS-OE-M12MS-93B-LI/2,0 - 1416143


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Network cable, PROFINET CAT5 (100 Mbps), 4-position, Plug straight M12, on free cable end, cable length: 2 m



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 474184
GTIN	4046356474184

Technical data

Dimensions

Length of cable	2 m
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Ambient conditions

Degree of protection	IP65
	IP67

General data

Note	This product corresponds to the PROFINET Cabling and Interconnection Technology Guideline for PROFINET regulations, version 2.00, order no: 2.252, Chapter 8.2 Connectors for Outside Environment (Balanced cabling)
Rated current at 40°C	4 A
Rated voltage	48 V AC 60 V DC
Number of positions	4
Signal type/category	PROFINET CAT5 (IEC 11801), 100 Mbps
Flammability rating according to UL 94	V0
Overvoltage category	II
Degree of pollution	3

Network cable - VS-OE-M12MS-93B-LI/2,0 - 1416143

Technical data

General data

Alternative short product description	Bus system cable
Insertion/withdrawal cycles	≥ 100
Contact material	CuSn
Contact carrier material	PA 6.6
Contact surface material	Ni/Au
Transmission characteristics (category)	CAT5
Transmission speed	100 Mbps

Characteristics head 1

Head type	Plug straight M12
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Cable

Cable type	PROFINET PVC stranded CAT5
Cable type (abbreviation)	93B
UL AWM style	21694
Signal type/category	PROFINET CAT5 (IEC 11801), 100 Mbps EtherCAT® CAT5 (IEC 11801), 100 Mbps
Cable structure	1x4xAWG22/7; SF/TQ
Conductor cross section	4x 0.34 mm ²
AWG signal line	22
Conductor structure signal line	7x 0.25 mm
Core diameter including insulation	1.55 mm
Wire colors	White, yellow, blue, orange
Overall twist	Star quad
Shielding	Aluminum-coated foil, tinned copper braided shield
Optical shield covering	85 %
External sheath, color	green RAL 6018
Outer sheath thickness	approx. 0.9 mm
External cable diameter D	6.5 mm ±0.2 mm
Minimum bending radius, fixed installation	3 x D
Minimum bending radius, flexible installation	7 x D
Cable weight	67 kg/km
Outer sheath, material	PVC
Material, inner sheath	PVC
Material conductor insulation	PE
Conductor material	Tin-plated Cu litz wires
Insulation resistance	≥ 500 MΩ*km
Loop resistance	≤ 120.00 Ω/km
Wave impedance	100 Ω ±15 Ω (at 100 MHz)
Near end crosstalk attenuation (NEXT)	80 dB (with 1 MHz) 76 dB (at 4 MHz) 70 dB (at 10 MHz)

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Technical data

Cable

	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)
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)
Signal speed	0.66 c
Signal runtime	5.3 ns/m
Coupling resistance	≤ 20.00 mΩ/m (at 10 MHz)
Nominal voltage, cable	600 V
Test voltage Core/Core	2000 V (50 Hz, 1 min.)
Test voltage Core/Shield	2000 V (50 Hz, 1 min.)
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
Ambient temperature (storage/transport)	-50 °C ... 70 °C
Shielded	yes

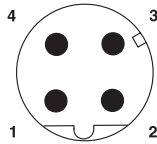
Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Drawings

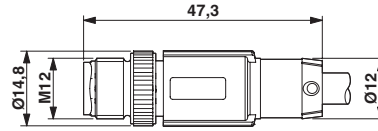
Network cable - VS-OE-M12MS-93B-LI/2,0 - 1416143

Schematic diagram



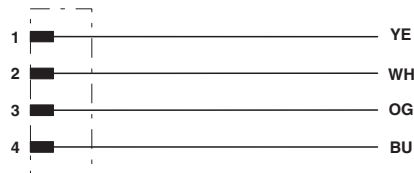
Pin assignment M12 male connector, 4-pos., D-coded, male side

Dimensional drawing



Plug, M12 x 1, straight, shielded

Circuit diagram



Contact assignment of the M12 connector

Network cable - VS-OE-M12MS-93B-LI/2,0 - 1416143

Cable cross section



PROFINET PVC stranded CAT5 [93B]

Classifications

eCl@ss

eCl@ss 11.0	27060307
eCl@ss 4.0	272607xx
eCl@ss 4.1	27260701
eCl@ss 5.0	27260701
eCl@ss 5.1	27060307
eCl@ss 6.0	27061801
eCl@ss 7.0	27061801
eCl@ss 9.0	27060311

ETIM

ETIM 3.0	EC000830
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Classifications

ETIM

ETIM 4.0	EC002599
ETIM 6.0	EC001855

UNSPSC

UNSPSC 6.01	26121616
UNSPSC 7.0901	26121616
UNSPSC 11	26121604
UNSPSC 12.01	31261501
UNSPSC 13.2	31251501
UNSPSC 19.0	31251501

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