

## Network cable - VS-M12MS-IP20-93B-LI/3,0 - 1403496


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Network cable, Ethernet CAT5 (1 Gbps), 4-position, PVC, green RAL 6018, Plug straight M12, on Plug straight RJ45, cable length: 3 m



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 656160
GTIN	4046356656160

### Technical data

#### Mechanical characteristics

Number of positions	4
Shielded	yes
Insertion/withdrawal cycles	≥ 100
Cable diameter	6.50 mm
Cable outlet	straight
Cable structure	1x4xAWG22/7; SF/TQ
Length of cable	3 m
No. of cable outlets	1

#### Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C (cable, fixed installation)
	-5 °C ... 50 °C (cable, flexible installation)
Degree of protection	IP65 (M12 connector)
	IP20 (RJ45 connector)

#### Material data

Flammability rating according to UL 94	V0
Outer sheath, material	PVC
External sheath, color	green RAL 6018

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## Technical data

### Electrical characteristics

Transmission characteristics (category)	CAT5 (IEC 11801:2002)
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### Standards and Regulations

Flammability rating according to UL 94	V0
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### Line characteristics

Cable type	PROFINET PVC stranded CAT5
Cable abbreviation	2YY(ST)CY
UL AWM style	21694
Cable structure	1x4xAWG22/7; SF/TQ
Conductor cross section	4x 0.34 mm <sup>2</sup>
AWG signal line	22
Conductor structure signal line	7x 0.25 mm
Core diameter including insulation	1.55 mm
External cable diameter	6.5 mm ±0.2 mm
Wire colors	White, yellow, blue, orange
External sheath, color	green RAL 6018
Transmission medium	Copper
Insulation resistance	≥ 500 MΩ*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)
	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)
Wave 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.)

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## Technical data

### Line characteristics

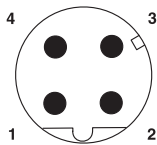
Overall twist	Star quad
Shielding	Aluminum-coated foil, tinned copper braided shield
Optical shield covering	85 %
Outer sheath, material	PVC
Material, inner sheath	PVC
Material conductor insulation	PE
Conductor material	Tin-plated Cu litz wires
Cable weight	67 kg/km
Minimum bending radius, fixed installation	3 x D
Minimum bending radius, flexible installation	7 x D
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)

### Environmental Product Compliance

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

## Drawings

Schematic diagram



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

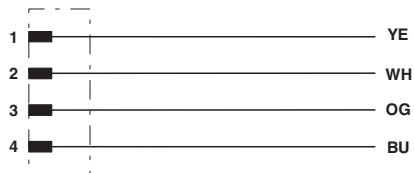
Cable cross section



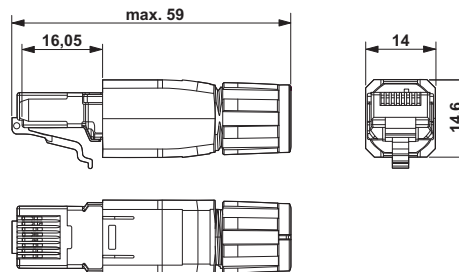
PROFINET PVC stranded CAT5 [93B]

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Circuit diagram



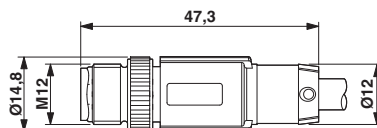
Dimensional drawing



Contact assignment of the M12 connector

RJ45 connector, IP20

Dimensional drawing



Plug, M12 x 1, straight, shielded

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