

## Network cable - VS-OE-M12MS-93R-LI/2,0 - 1416251

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Bus system cable, PROFINET, 4-pos., green PVC, shielded, straight M12 D-coded plug on the free conductor end, length: 2 m



### Key commercial data

Packing unit	1 pc
Custom tariff number	85444210
Country of origin	Poland

### Technical data

#### Dimensions

Length of cable	2 m
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#### Ambient conditions

Degree of protection	IP65
	IP67

#### General data

Number of positions	4
Signal type/category	PROFINET CAT5 (IEC 11801:2002)
	PROFINET CAT5e (TIA 568B:2001)

#### Characteristics head 1

Head type	Plug Straight M12
No. of positions (pin connector pattern)	4

#### Characteristics head 2

Head type	free cable end
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#### Cable

Cable type	PROFINET robot CAT5e
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## Technical data

### Cable

Cable type (abbreviation)	93R
UL AWM style	20233 (80°C/300 V)
Signal type/category	PROFINET CAT5 (IEC 11801:2002), 100 Mbps
	PROFINET CAT5e (TIA 568B:2001), 100 Mbps
Cable structure	1x4xAWG22/19; S/TQ
Conductor cross section	4x 0.38 mm <sup>2</sup>
AWG signal line	22
Conductor structure signal line	19x 0.16 mm
Core diameter including insulation	approx. 1.5 mm
Wire colors	White, yellow, blue, orange
Overall twist	Star quad
Shielding	Tinned copper braided shield
External sheath, color	Green RAL 6018
Outer sheath thickness	approx. 1 mm
External cable diameter D	6.5 mm ±0.2 mm
Minimum bending radius, fixed installation	5 x D
Torsion force	± 180 °/m (1,000,000 torsion cycles)
Cable weight	55 kg/km
Outer sheath, material	PUR
Material conductor insulation	PE
Conductor material	Tin-plated Cu litz wires
Insulation resistance	≥ 500 MΩ*km
Conductor resistance	≤ 120000000 Ω/km
Working capacitance	52 pF
Wave impedance	100 Ω ±5 Ω (at 1 ... 100 MHz)
Signal runtime	4.8 ns/m
Nominal voltage, cable	300 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 IEC 60332-1-2
Halogen-free	According to IEC 60754-1
Resistance to oil	in accordance with DIN EN 60811-2-1
Other resistance	UV resistant According to UL 1581, Section 1200
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-40 °C ... 80 °C (cable, flexible installation)
Ambient temperature (installation)	-20 °C ... 60 °C

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## Technical data

### Cable

Ambient temperature (storage/transport)	-40 °C ... 80 °C
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## Classifications

### eCl@ss

eCl@ss 4.0	272607xx
eCl@ss 4.1	27260701
eCl@ss 5.0	27260701
eCl@ss 5.1	27060307
eCl@ss 6.0	27060390
eCl@ss 7.0	27060390
eCl@ss 8.0	27060390

### ETIM

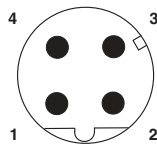
ETIM 4.0	EC002599
ETIM 5.0	EC000830

### UNSPSC

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

## Drawings

Schematic diagram



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

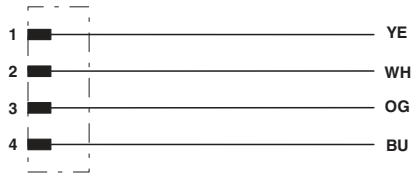
Cable cross section



PROFINET robot CAT5e [93R]

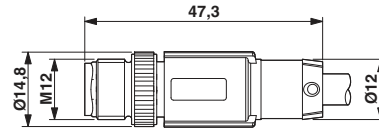
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Circuit diagram



Contact assignment of the M12 connector

Dimensioned drawing



Plug, M12 x 1, straight, shielded