

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

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Network cable, PROFINET CAT5 (100 Mbps), 4-position, PUR, green RAL 6018, Plug straight M12 / IP67, coding: D, on free cable end, cable length: 2 m

RoHS



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 473415
GTIN	4046356473415

Technical data

Dimensions

Length of cable	2 m
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Ambient conditions

Degree of protection	IP65
	IP67

General data

Rated voltage	48 V AC
	60 V DC
Number of positions	4
Signal type/category	PROFINET CAT5 (IEC 11801), 100 Mbps
Degree of protection	IP65/IP67/IP69K
Transmission characteristics (category)	CAT5

Characteristics head 1

Head type	Plug straight M12 / IP67
No. of positions (pin connector pattern)	4
Coding	D (Data)
Color	black

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Technical data

Characteristics head 1

Shielded	yes
Outer sheath, material	PUR
External sheath, color	green RAL 6018

Characteristics head 2

Head type	free cable end
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Cable

Cable type	PROFINET robot CAT5
Cable type (abbreviation)	93R
UL AWM style	20233 (80°C/300 V)
Signal type/category	PROFINET CAT5 (IEC 11801), 100 Mbps
	EtherCAT® CAT5 (IEC 11801), 100 Mbps
Cable structure	1x4xAWG22/19; S/TQ
Conductor cross section	4x 0.34 mm²
AWG signal line	22
Conductor structure signal line	19x 0.15 mm
Core diameter including insulation	1.5 mm
Wire colors	White, yellow, blue, orange
Overall twist	Star quad
Shielding	Tinned copper braided shield
Optical shield covering	85 %
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	Foamed PE
Conductor material	Tin-plated Cu litz wires
Insulation resistance	≥ 500 MΩ*km
Loop resistance	≤ 120.00 Ω/km
Wave impedance	100 Ω ±5 Ω (at 100 MHz)
Attenuation	2.9 dB (with 1 MHz)
	5 dB (at 4 MHz)
	8.1 dB (at 10 MHz)
	10.4 dB (at 16 MHz)
	11.9 dB (at 20 MHz)
	15.5 dB (at 31.25 MHz)
	26.5 dB (at 62.5 MHz)
	41 dB (at 100 MHz)

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Technical data

Cable

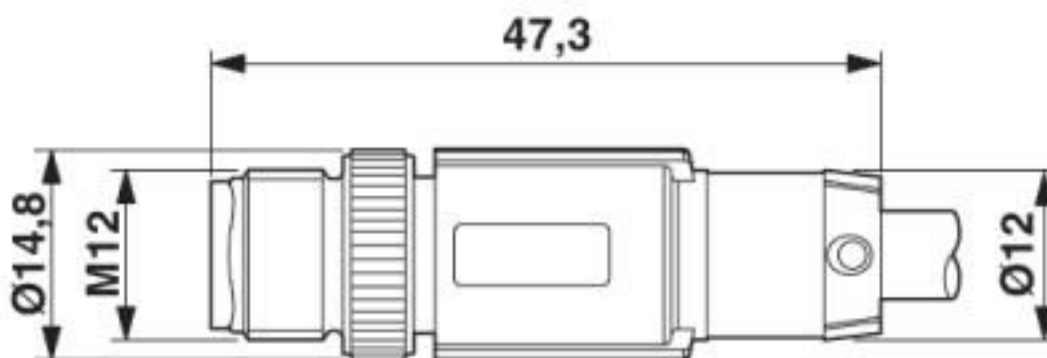
Signal runtime	4.8 ns/m
Nominal voltage, cable	300 V
Test voltage Core/Core	2000 V (50 Hz, 1 min.)
Test voltage Core/Shield	2000 V (50 Hz, 1 min.)
Flame resistance	according to IEC 60332-1-2
Halogen-free	according to IEC 60754-1
Resistance to oil	in accordance with DIN EN 60811-2-1
Other resistance	UV resistant According to UL 1581, Section 1200
Ambient temperature (operation)	-40 °C ... 80 °C
	-40 °C ... 80 °C
Ambient temperature (installation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C

Environmental Product Compliance

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

Drawings

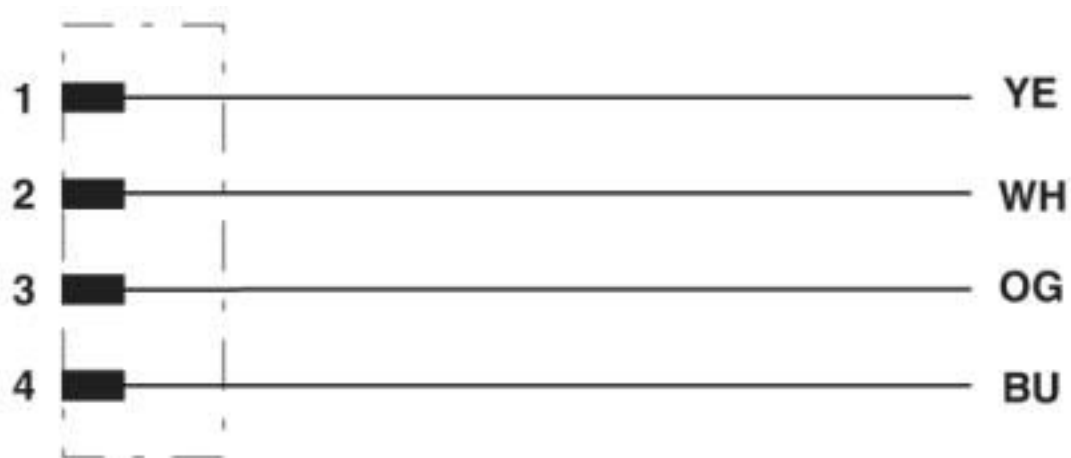
Dimensional drawing



Plug, M12 x 1, straight, shielded

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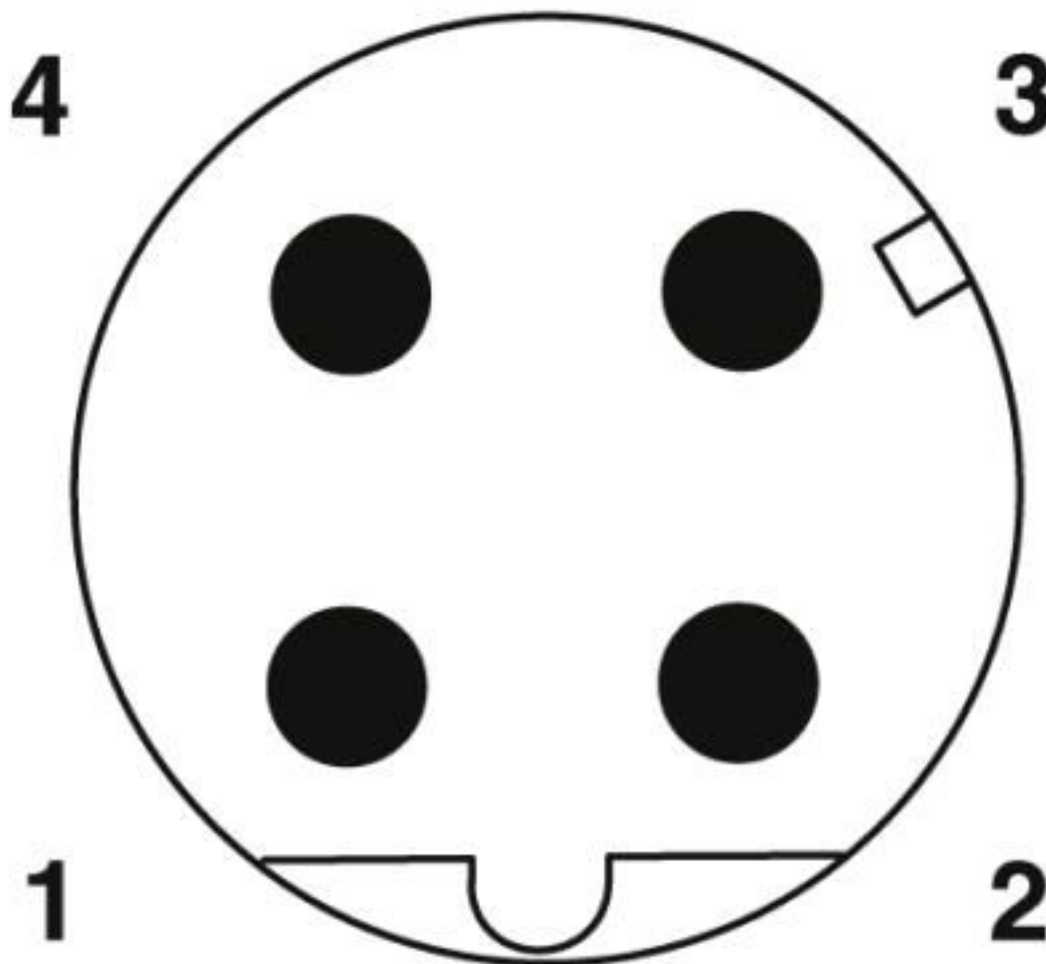
Circuit diagram



Contact assignment of the M12 connector

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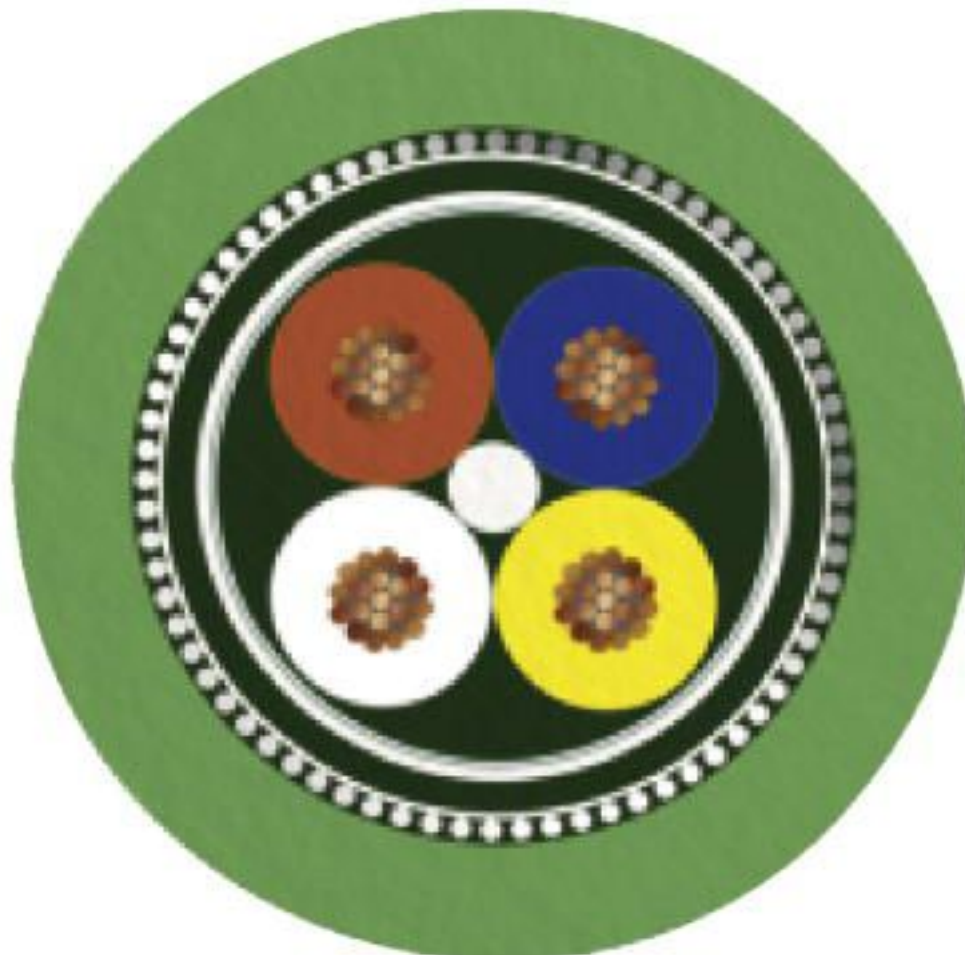
Schematic diagram



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

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Cable cross section



PROFINET robot CAT5 [93R]

Classifications

eCl@ss

eCl@ss 10.0.1	27060308
eCl@ss 4.0	24010400
eCl@ss 4.1	24010400
eCl@ss 5.0	19030300
eCl@ss 5.1	19030300
eCl@ss 6.0	27061800
eCl@ss 7.0	27061801
eCl@ss 8.0	27061801
eCl@ss 9.0	27060308

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Classifications

ETIM

ETIM 4.0	EC002599
ETIM 5.0	EC002599
ETIM 6.0	EC001262
ETIM 7.0	EC001262

UNSPSC

UNSPSC 6.01	26121616
UNSPSC 7.0901	26121616
UNSPSC 11	26121604
UNSPSC 12.01	31261501
UNSPSC 13.2	31251501
UNSPSC 18.0	26121604
UNSPSC 19.0	26121604
UNSPSC 20.0	26121604
UNSPSC 21.0	26121604

Approvals

Approvals

Approvals

EAC-RoHS

Ex Approvals

Approval details

EAC-RoHS		RU D- DE.HB35.B.00385
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