

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

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Assembled PROFINET cable, CAT5e, shielded, star quad, AWG 22 stranded (7-wire), RAL 6018 (yellow-green), M12 plug to RJ45 plug/IP20, line, length: 3 m



## Key commercial data

package_quantity	1
GTIN	4046356656160

## Technical data

### Mechanical characteristics

Number of positions	4
Shielded	Yes
Insertion/withdrawal cycles	≥ 100
Cable diameter	6.50 mm
Cable exit	Straight
Cable structure	1x4xAWG22/7; SF/TQ
Length of cable	3 m

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C (cable, fixed installation)
Ambient temperature (operation)	-5 °C ... 50 °C (cable, flexible installation)

### Material data

Inflammability class according to UL 94	V0
Outer sheath, material	PVC
External sheath, color	Green RAL 6018

### Electrical characteristics

Transmission characteristics (category)	CAT5 (IEC 11801:2002), CAT5e (TIA 568B:2001)
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### Line characteristics

Cable type	PROFINET PVC stranded CAT5e
UL AWM style	21694
Cable structure	1x4xAWG22/7; SF/TQ
Conductor cross section	4x 0.34 mm <sup>2</sup>

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## Technical data

### Line characteristics

<b>AWG signal line</b>	22
<b>Conductor structure signal line</b>	7x 0.25 mm
<b>Core diameter including insulation</b>	approx. 1.5 mm
<b>External cable diameter</b>	6.5 mm ± 0.2 mm
<b>Wire colors</b>	White, yellow, blue, orange
<b>External sheath, color</b>	Green RAL 6018
<b>Transmission medium</b>	Copper
<b>Insulation resistance</b>	≥ 500 MΩ*km
<b>Conductor resistance</b>	≤ 120 Ω/km
<b>Transmission characteristics (category)</b>	CAT5 (IEC 11801:2002), CAT5e (TIA 568B:2001)
<b>Working capacitance</b>	52 pF
<b>Wave impedance</b>	100 Ω ± 15 Ω (At 100 MHz)
<b>Signal runtime</b>	5.3 ns/m
<b>Coupling resistance</b>	≤ 20.00 mΩ/m
<b>Nominal voltage, cable</b>	600 V
<b>Test voltage Core/Core</b>	2000 V (50 Hz, 1 min.)
<b>Test voltage Core/Shield</b>	2000 V (50 Hz, 1 min.)
<b>Overall twist</b>	Star quad
<b>Shielding</b>	Aluminum-coated foil, tinned copper braided shield
<b>Optical shield covering</b>	85 %
<b>Outer sheath, material</b>	PVC
<b>Material, inner sheath</b>	PVC
<b>Material conductor insulation</b>	PE
<b>Conductor material</b>	Tin-plated Cu litz wires
<b>Cable weight</b>	67 kg/km
<b>Minimum bending radius, fixed installation</b>	3 x D
<b>Minimum bending radius, flexible installation</b>	7 x D
<b>Torsion force</b>	± 180 °/m (30,000 torsion cycles)
<b>Flame resistance</b>	According to UL 1685 (CSA FT 4)
<b>Resistance to oil</b>	Resistant to oil to a limited extent
<b>Other resistance</b>	UV resistant According to UL 1581, Section 1200
<b>Ambient temperature (operation)</b>	-40 °C ... 70 °C (cable, fixed installation)
<b>Ambient temperature (operation)</b>	-40 °C ... 70 °C (cable, flexible installation)

## classifications

### eCl@ss

<b>eCl@ss 4.0</b>	27060306
<b>eCl@ss 4.1</b>	27060306
<b>eCl@ss 5.0</b>	27061801
<b>eCl@ss 5.1</b>	27061801

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

## classifications

### eCl@ss

eCl@ss 6.0	27061801
eCl@ss 7.0	27061801
eCl@ss 8.0	27061801

### ETIM

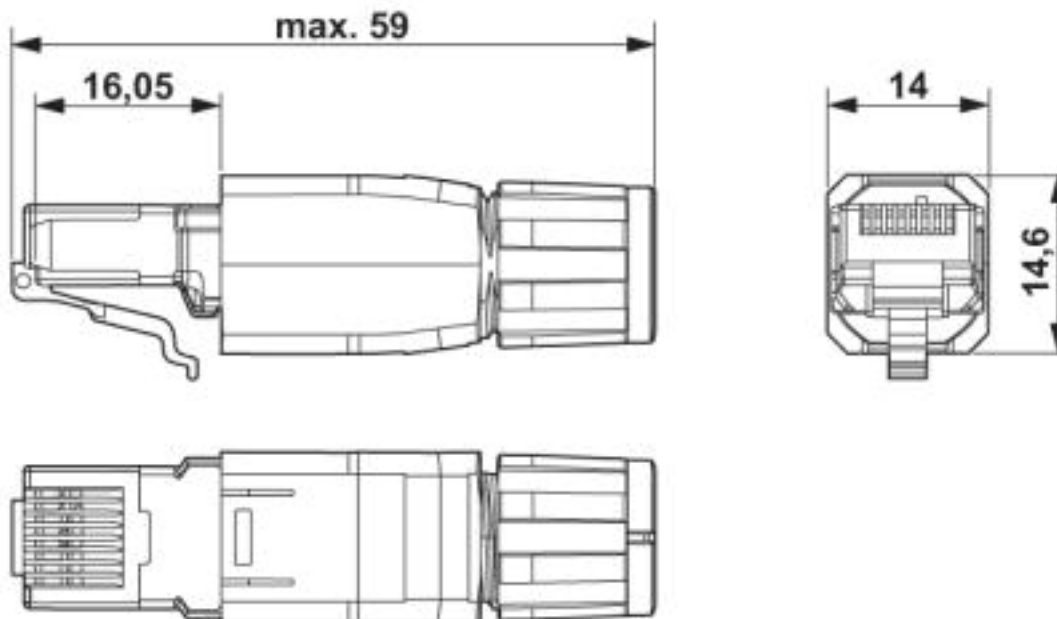
ETIM 4.0	EC000830
ETIM 5.0	EC000830

### UNSPSC

UNSPSC 6.01	31261501
UNSPSC 7.0901	31261501
UNSPSC 11	31261501
UNSPSC 12.01	31261501
UNSPSC 13.2	31261501

## Drawings

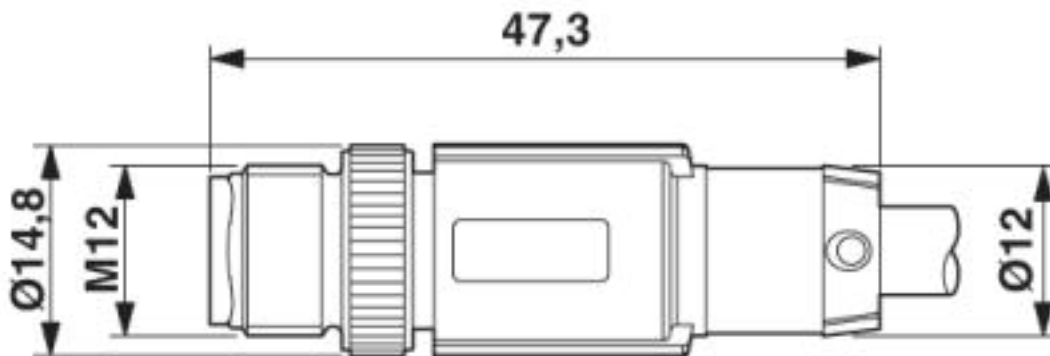
### Dimensioned drawing



RJ45 connector, IP20

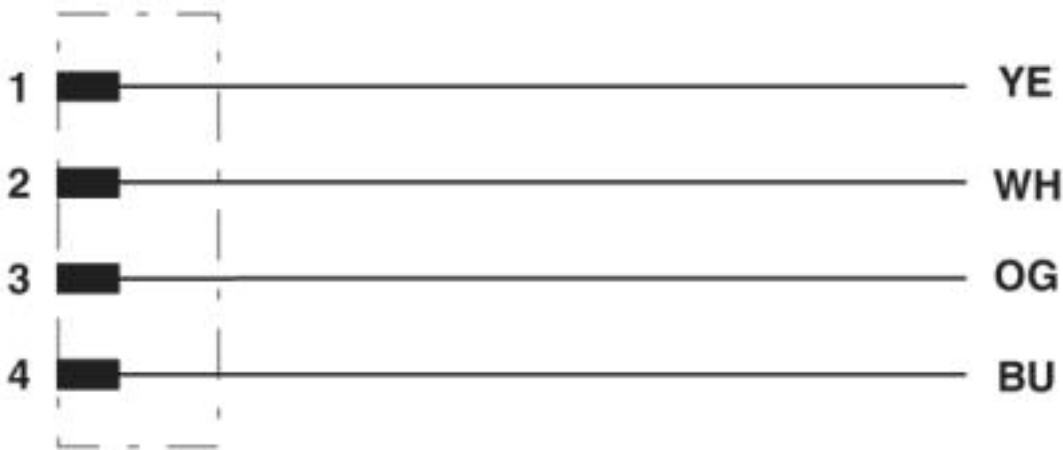
# Network cable - VS-M12MS-IP20-93B-LI/3,0 - 1403496

Dimensioned drawing



Plug, M12 x 1, straight, shielded

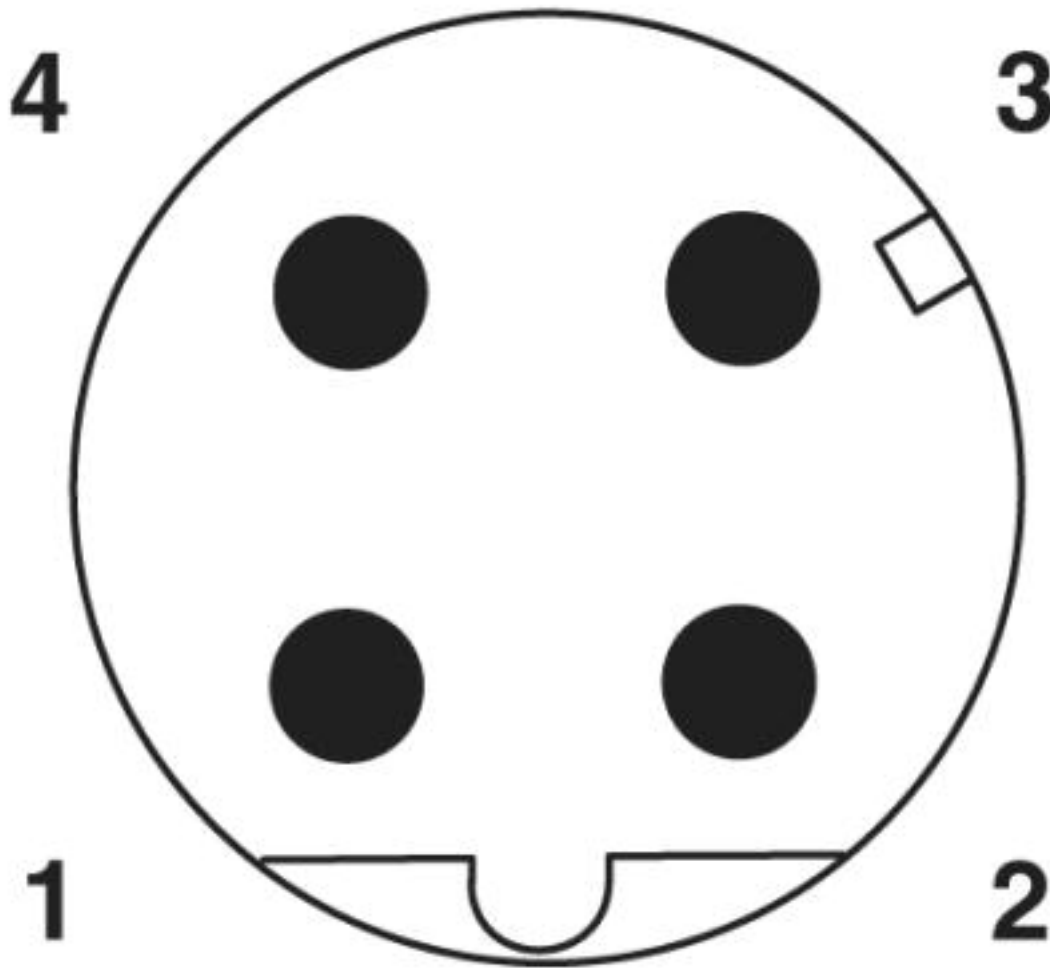
Circuit diagram



Contact assignment of the M12 connector

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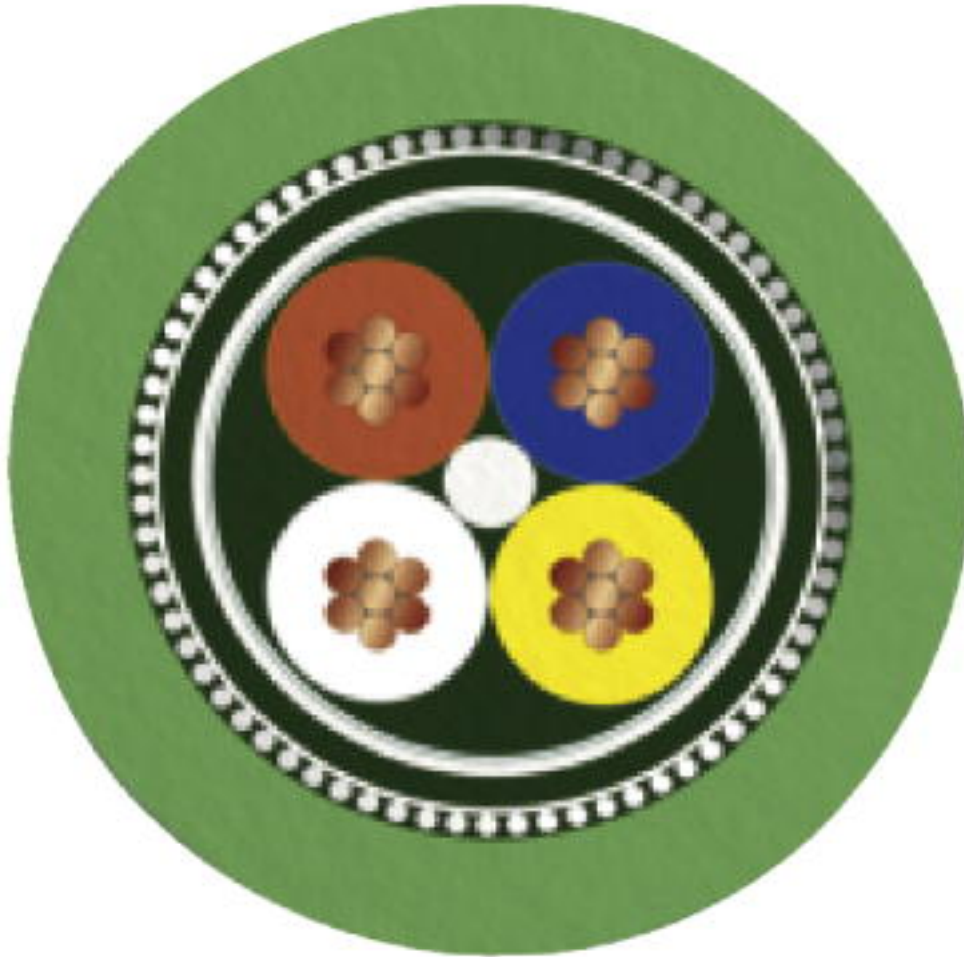
Schematic diagram



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

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

Cable cross section



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