

# VS-PPC/PL-M12MS-93C-LI/5,0 - Network cable



1416207

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Assembled PROFINET cable, CAT5e, shielded, star quad, AWG 22 flexible cable conduit capable (7-wire), RAL 6018 (yellow-green), RJ45 plug/IP67 push-pull plastic housing on M12 plug, line, length 5 m

## Commercial data

Item number	1416207
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	AF1CJN
GTIN	4046356474733
Weight per piece (including packing)	222.22 g
Weight per piece (excluding packing)	222.22 g
Country of origin	PL

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## Technical data

### Product properties

Product type	Data cable preassembled
Application	Standard
Number of positions	4
No. of cable outlets	1
Shielded	yes

### Insulation characteristics

Overvoltage category	I
Degree of pollution	3

### Interfaces

Bus system	PROFINET
Signal type/category	PROFINET CAT5 (IEC 11801), 100 Mbps

### Electrical properties

Nominal voltage $U_N$	48 V AC
	60 V DC
Transmission medium	Copper
Transmission speed	100 Mbps
Transmission characteristics (category)	CAT5 (IEC 11801:2002)

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	$\geq 100$
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### Material specifications

Flammability rating according to UL 94	V0
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### Connector

#### Connection 1

Type	Plug straight M12
Handle color	black

#### Connection 2

Type	Plug straight RJ45 Push Pull
Locking type	Push Pull
Handle color	black

### Cable/line

Cable length	5 m
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## PROFINET drag chain CAT5 [93C]

Dimensional drawing	
Cable weight	61 kg/km
Shielded	yes
Cable type	PROFINET drag chain CAT5 [93C]
Conductor structure	1x4xAWG22/7, SF/TQ
Signal runtime	5.3 ns/m
Signal speed	0.66 c
Conductor structure signal line	7x 0.25 mm
AWG signal line	22
Conductor cross-section	4x 0.34 mm <sup>2</sup>
Wire diameter incl. insulation	1.5 mm
External cable diameter	6.50 mm ±0.2 mm
Outer sheath, material	PUR
External sheath, color	green RAL 6018
Conductor material	Tin-plated Cu litz wires
Material wire insulation	PE
Single wire, color	white, yellow, blue, orange
Thickness, outer sheath	approx. 0.90 mm
Overall twist	Star quad
Optical shield covering	85 %
Insulation resistance	≥ 500 MΩ*km
Coupling resistance	≤ 20.00 mΩ/m (at 10 MHz)
Loop resistance	≤ 120.00 Ω/km
Wave impedance	100 Ω ±15 Ω (at 1 ... 100 MHz)
Nominal voltage, cable	600 V (UL rating)
Test voltage Core/Core	2000 V (50 Hz, 1 min.)
Test voltage Core/Shield	2000.00 V (50 Hz, 1 min.)
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	7.5 x D
Smallest bending radius, fixed installation	33 mm
Smallest bending radius, movable installation	49 mm
Dynamic load capacity (bending)	Max. bending cycles: 3000000, Bending radius: 100 mm, Traversing path: 10 m, Traversing rate: 4 m/s, Acceleration: 4 m/s <sup>2</sup>
Tensile strength	≤ 150 N
Dynamic load capacity (torsion)	Torsion: ±30 °/m

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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)
Shield 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)	
Halogen-free	yes
Flame resistance	according to IEC 60332-1-2
	in accordance with UN ECE-R 118.03
Resistance to oil	in accordance with DIN EN 60811-2-1
Other resistance	UV resistant
Special properties	Electrical properties in accordance with EN 50288-2-2
Ambient temperature (operation)	-40 °C ... 70 °C (cable, fixed installation)
	-40 °C ... 70 °C (Cable, flexible installation)
Ambient temperature (installation)	-20 °C ... 60 °C

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP65
	IP67
	IP65/IP67

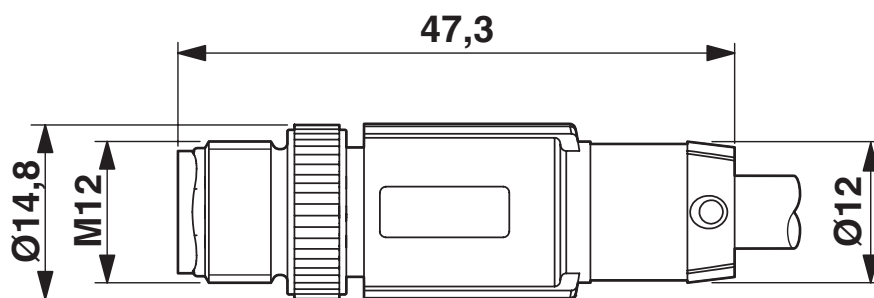
Drawings

Dimensional drawing



Push-pull RJ45 connector IP65/67

Dimensional drawing



Plug, M12 x 1, straight, shielded

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## Classifications

### ECLASS

ECLASS-13.0	27060307
ECLASS-15.0	27060307

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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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