

# VS-BU/PN-PPC/PL-93C-LI/2,0 - Network cable



1416233

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Assembled PROFINET cable, CAT5e, shielded, star quad, AWG 22 flexible cable conduit capable (7-wire), RAL 6018 (yellow-green), RJ45 socket module/IP20 for Freenet system, 4-pos. on RJ45 plug/IP67 push-pull plastic housing, line, length 2 m

## Commercial data

Item number	1416233
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	ABNABA
GTIN	4046356474825
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
Product family	RJ45 INDUSTRIAL PN4 CAT5
Number of positions	4
No. of cable outlets	1
Shielded	yes
Cable outlet	straight

### Insulation characteristics

Overvoltage category	I
Degree of pollution	2

### Interfaces

Signal type/category	PROFINET CAT5 (IEC 11801:2002), 100 Mbps
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### Electrical properties

Transmission medium	Copper
Transmission speed	100 Mbps
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Transmission speed	100 Mbps
Wave impedance	100 Ω

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	≥ 250
Max. bending cycles	3000000

### Material specifications

Flammability rating according to UL 94	V0
Outer sheath, material	PUR
Conductor material	Tin-plated Cu litz wires

### Connector

#### Connection 1

Type	Socket module straight RJ45
Locking type	Freetnet
Degree of protection	IP20

#### Connection 2

Type	Plug straight RJ45
Locking type	Push Pull
Material	Plastic

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Degree of protection	IP67
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## Cable/line

Cable length	2.00 m
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### PROFINET drag chain CAT5 [93C]

Dimensional drawing	
Shielded	yes
Cable weight	61 kg/km
Cable type	PROFINET drag chain CAT5
Cable type (abbreviation)	93C
Signal type/category	PROFINET CAT5 (IEC 11801), 100 Mbps EtherCAT® CAT5 (IEC 11801), 100 Mbps
Cable structure	1x4xAWG22/7, SF/TQ
External cable diameter	6.50 mm ±0.2 mm
Outer sheath, material	PUR
External sheath, color	green RAL 6018
Thickness, outer sheath	approx. 0.90 mm
Material, inner sheath	FRNC
Conductor material	Tin-plated Cu litz wires
Conductor structure signal line	7x 0.25 mm
AWG signal line	22
Conductor cross-section	4x 0.34 mm <sup>2</sup>
Material wire insulation	PE
Wire diameter incl. insulation	1.5 mm
Single wire, color	white, yellow, blue, orange
Overall twist	Star quad
Shielding	Aluminum-coated foil, tinned copper braided shield
Optical shield covering	85 %
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.)
Cable insulation resistance	≥ 500 MΩ*km
Coupling resistance	≤ 20.00 mΩ/m (at 10 MHz)
Wave impedance	100 Ω ±15 Ω (at 1 ... 100 MHz)
Loop resistance	≤ 120.00 Ω/km
Signal runtime	5.3 ns/m

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Signal speed	0.66 c
Tensile strength	≤ 150 N
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	7.5 x D
Number of bending cycles	3000000
Bending radius	100 mm
Traversing path	10 m
Traversing rate	4 m/s
Acceleration	4 m/s <sup>2</sup>
Torsion force	± 30 °/m
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)
Halogen-free	yes
Resistance to oil	in accordance with DIN EN 60811-2-1
Flame resistance	according to IEC 60332-1-2
	in accordance with UN ECE-R 118.03
Other resistance	UV resistant
Special properties	Electrical properties in accordance with EN 50288-2-2
Ambient temperature (operation)	-40 °C ... 70 °C (Cable, flexible installation)
	-40 °C ... 70 °C (cable, fixed installation)

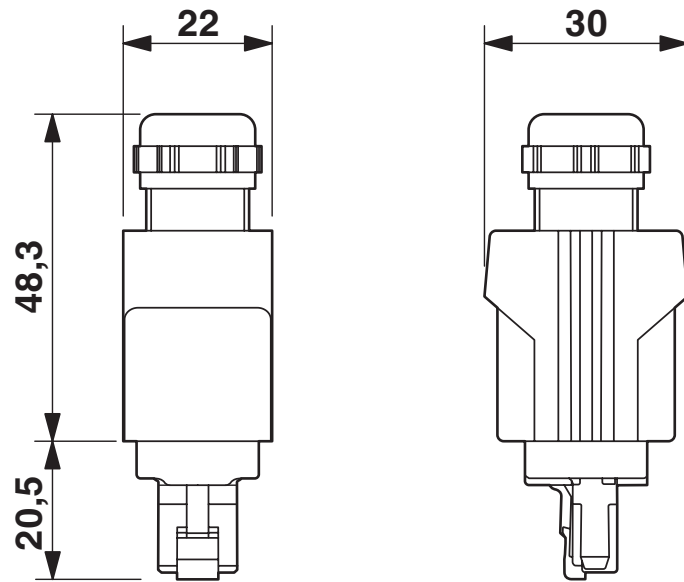
## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
	IP67
	IP67/IP20

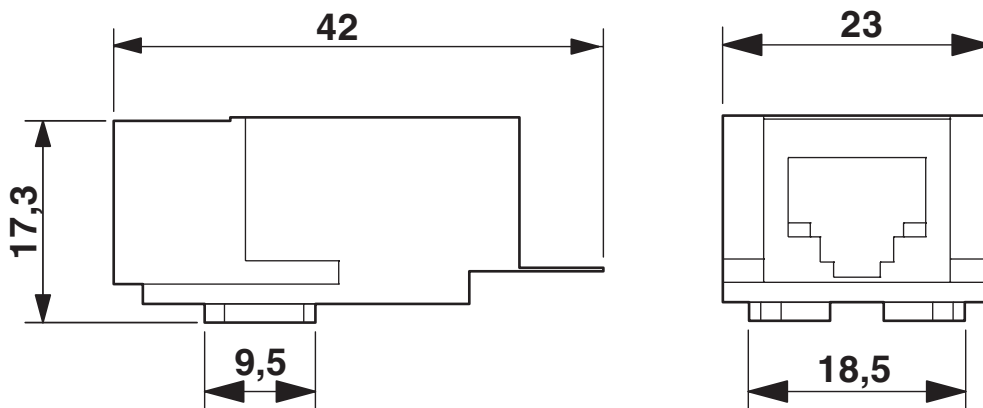
Drawings

Dimensional drawing



Push-pull RJ45 connector IP65/67

Dimensional drawing



RJ45 jack insert

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## Classifications

### ECLASS

ECLASS-13.0	27060307
ECLASS-15.0	27060307

### ETIM

ETIM 9.0	EC001855
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### UNSPSC

UNSPSC 21.0	26121600
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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-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol(CAS: 119-47-1) 2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329)(CAS: 3147-75-9)
SCIP	691a74b1-ef80-4602-b90a-d8433dee86ab

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