

# VS-FSDBPS-IP20-937-2,0 - Network cable



1402765

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Network cable, cable length: 2 m, number of positions: 4, CAT5, cable outlet: straight, PROFINET, 1x4xAWG22/7, SF/TQ, black RAL 9005

## Commercial data

Item number	1402765
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Product key	ABNPAB
GTIN	4046356631389
Weight per piece (including packing)	162.9 g
Weight per piece (excluding packing)	350.499 g
Country of origin	PL

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## Technical data

### Product properties

Product type	Circular connectors (device side)
Type	M12
Number of positions	4
No. of cable outlets	1
Shielded	yes
Cable outlet	straight

### Insulation characteristics

Overvoltage category	I
Degree of pollution	3

### Material specifications

Flammability rating according to UL 94	V2
Outer sheath, material	PE-X
Conductor material	silver-plated Cu litz wires

### Electrical properties

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

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	$\geq 100$
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### Connector

#### Connection 1

Type	Flush-type female connector straight M12
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#### Connection 2

Type	Plug straight RJ45
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### Cable/line

Cable length	2.00 m
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PROFINET RADOX® railway application CAT5 [937]

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Dimensional drawing	
Cable weight	70 kg/km
Number of positions	4
Shielded	yes
Cable type	PROFINET RADOX® railway application CAT5 [937]
Conductor structure	1x4xAWG22/7, SF/TQ
Signal speed	75 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	approx. 1.5 mm
External cable diameter	6.60 mm ±0.4 mm
Outer sheath, material	PE-X
External sheath, color	black RAL 9005
Conductor material	silver-plated Cu litz wires
Material wire insulation	Foamed PE
Single wire, color	white-blue, orange-yellow
Thickness, outer sheath	approx. 1.00 mm
Overall twist	Star quad
Max. conductor resistance	≤ 54.4 Ω/km
Coupling resistance	200.00 mΩ/m (f ≤ 30 MHz)
Wave impedance	100 Ω ±5 Ω (f = 100 MHz)
Working capacitance	≤ 65 pF (Line-line) ≤ 100 pF (Line-shield)
Nominal voltage, cable	300 V AC
Test voltage	2000 V AC (50 Hz, 5 minutes)
Minimum bending radius, fixed installation	6 x D
Smallest bending radius, fixed installation	40 mm
Near end crosstalk attenuation (NEXT)	73 dB (with 1 MHz) 70 dB (at 4 MHz) 65 dB (at 10 MHz) 57 dB (at 31.5 MHz) 52 dB (at 62.5 MHz) 48 dB (at 100 MHz)
Return attenuation (RL)	25 dB (at 4 MHz) 30 dB (at 10 MHz) 30 dB (at 31.5 MHz)

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	30 dB (at 62.5 MHz)
	28 dB (at 100 MHz)
Remote crosstalk attenuation (FEXT)	78 dB (with 1 MHz)
	77 dB (at 4 MHz)
	70 dB (at 10 MHz)
	65 dB (at 31.5 MHz)
	56 dB (at 62.5 MHz)
	48 dB (at 100 MHz)
Shield attenuation	2 dB (with 1 MHz)
	4.4 dB (at 4 MHz)
	7.4 dB (at 10 MHz)
	14 dB (at 31.5 MHz)
	20 dB (at 62.5 MHz)
	26 dB (at 100 MHz)
	40.00 dB (30 MHz ≤ f ≤ 100 MHz)
Halogen-free	in accordance with EN 50267-2-1
Flame resistance	IEC 60332-1-2
	EN 50266
	EN 60332-3-25
	NF C32-070, 2.1
	NF C32-070, 2.2
	UL 1685, 12 (FT4)
	in accordance with ISO 6722-1 5.22 (UN ECE-R 118.01)
Fume corrosiveness	EN 50267-2-2
Fume toxicity	BS 6853 B.1
	EN 50305, 9.2
Concentration of fumes	BS 6853 D.8.7
	EN 61034-2
	UL 1685, 12 (FT4)
Resistance to oil	according to IRM 902, 72 h at 100 °C
Fire protection in rail vehicles	BS 6853 (Category Ia, Ib, II)
	GM/RT 2130 (Category Ia, Ib, II)
	EN 45545 (Risk level HL1 - HL3)
	DIN 5510 (Fire protection level 1, 2, 3, 4)
	NF F16-101 (Category A1, A2, B)
	NF F16-101 (Class C/F0)
	NFPA 130
UNI CEI 11170 (Risk level LR1 - LR4)	
Other resistance	Resistance to fuels (according to IRM 903, 168 h at 70 °C)
Ambient temperature (operation)	-50 °C ... 90 °C (cable, fixed installation)
	-40 °C ... 90 °C (Cable, flexible installation)
Ambient temperature (installation)	-25 °C ... 90 °C

## Environmental and real-life conditions

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## Ambient conditions

Ambient temperature (operation) (fixed installation)

-40 °C ... 70 °C (Plug / socket)

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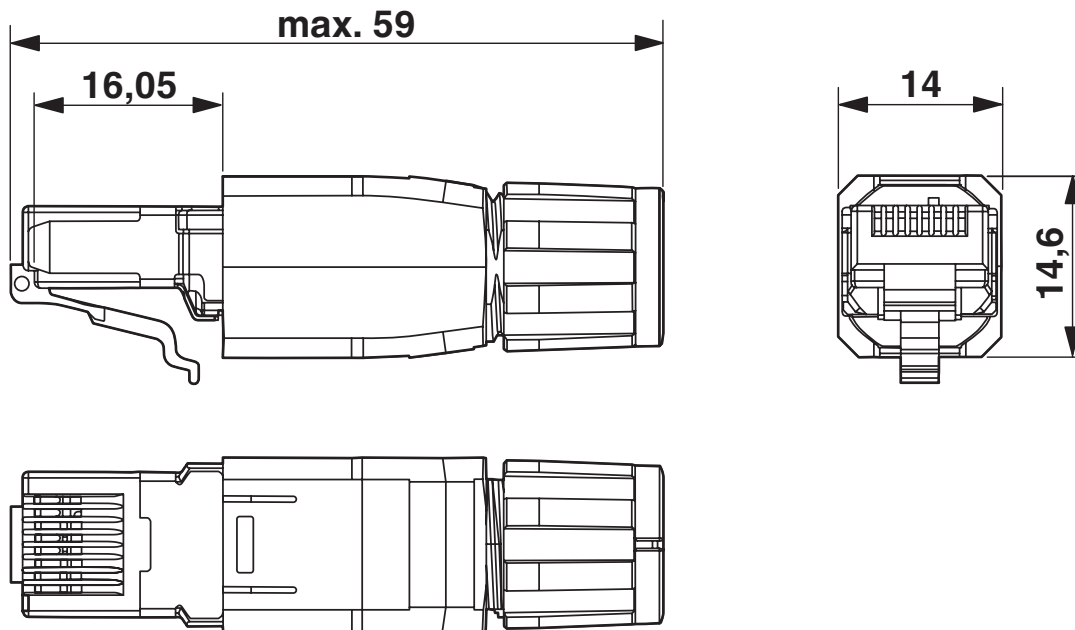


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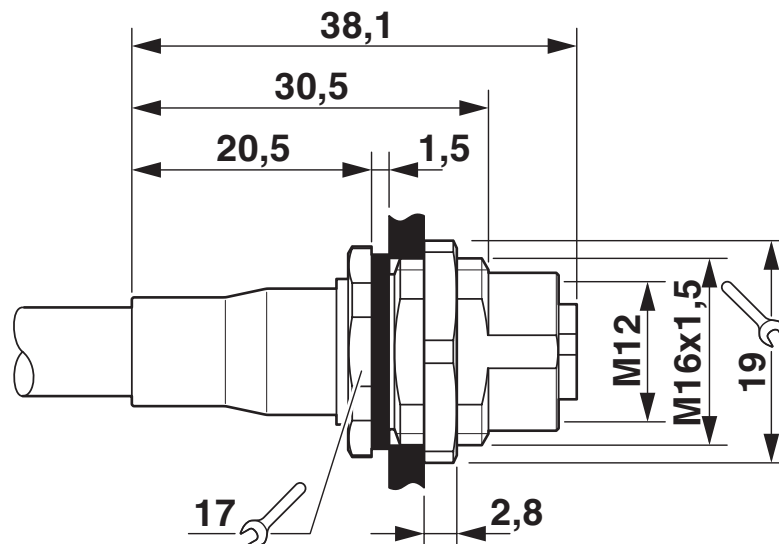
## Drawings

Dimensional drawing



RJ45 connector, IP20

Dimensional drawing



Housing cutout for M16 fastening thread, mounting panel with feed-through hole (alternatively with surface as protection against rotation)

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## Classifications

### ECLASS

ECLASS-13.0	27060307
ECLASS-15.0	27440103

### ETIM

ETIM 9.0	EC001855
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### UNSPSC

UNSPSC 21.0	26121600
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## Environmental product compliance

### 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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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)