

# VS-FSDBPS-IP20-93G-LI/2,0 - Bus system cable



1419146

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Assembled EtherCAT® cable, shielded, star quad, AWG 22 stranded (7-wire), RAL 6018 (yellow-green), M12 flush-type socket, SPEEDCON, 4-pos. on RJ45 connector/IP20, length: 2 m

## Commercial data

Item number	1419146
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	AB18
Product key	ABNPAA
Catalog page	Page 385 (C-4-2015)
GTIN	4046356540704
Weight per piece (including packing)	167.2 g
Weight per piece (excluding packing)	173.6 g
Customs tariff number	85444210
Country of origin	PL

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## Technical data

### Product properties

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

### Material specifications

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

### Electrical properties

Transmission medium	Copper
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### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	≥ 100
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### Connector

#### Connection 1

Type	Flush-type female connector straight M12
Locking type	SPEEDCON


#### Connection 2

Type	Plug straight RJ45
Degree of protection	IP20

### Cable/line

Cable length	2.00 m
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#### PROFINET PVC stranded CAT5 [93B]

Dimensional drawing	
Cable weight	67 kg/km

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UL AWM Style	21694
Number of positions	4
Shielded	yes
Cable type	PROFINET PVC stranded CAT5 [93B]
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	1.55 mm
External cable diameter	6.50 mm ±0.2 mm
Outer sheath, material	PVC
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 100 MHz)
Nominal voltage, cable	600 V
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	3 x D
Minimum bending radius, flexible installation	7 x D
Smallest bending radius, fixed installation	20 mm
Smallest bending radius, movable installation	46 mm
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)

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	11.4 dB (at 31.25 MHz)
	16.5 dB (at 62.5 MHz)
	21.3 dB (at 100 MHz)
Flame resistance	according to UL 1685 (CSA FT 4)
Resistance to oil	Resistant to oil to a limited extent
Other resistance	UV resistant (According to UL 1581, Section 1200)
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	IP20 (RJ45 connector)
	IP67 (M12 connector)
	IP20
Ambient temperature (operation)	-10 °C ... 60 °C (cable, fixed installation)
	-5 °C ... 50 °C (Cable, flexible installation)

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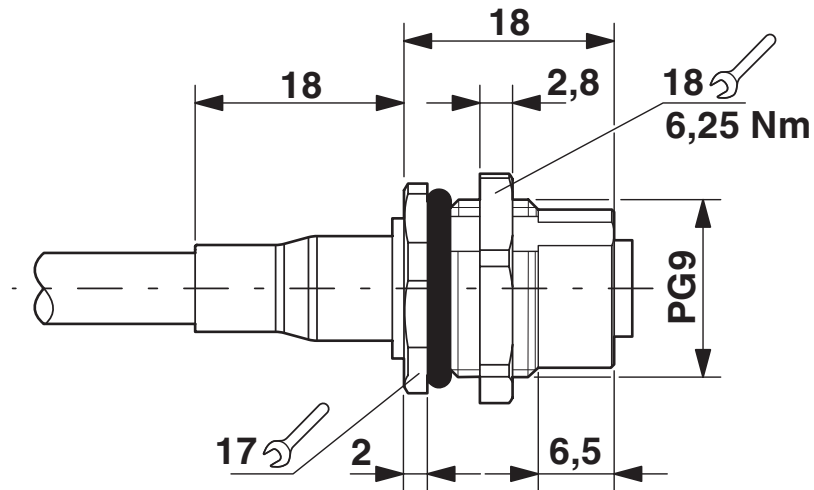


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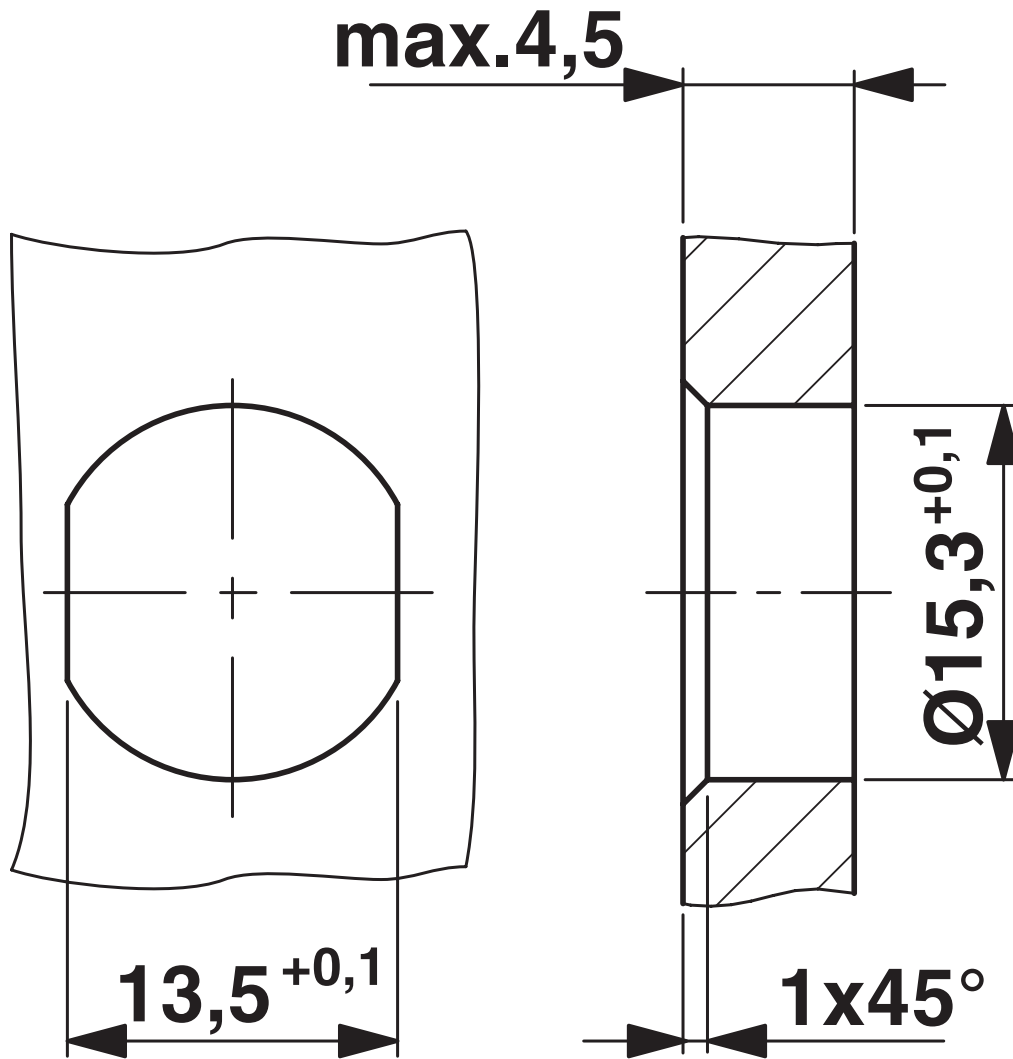
## Drawings

Dimensional drawing



M12 panel feed-through

Dimensional drawing



Housing cutout for Pg9 fastening thread, mounting panel with feed-through hole (alternatively with surface as protection against rotation)

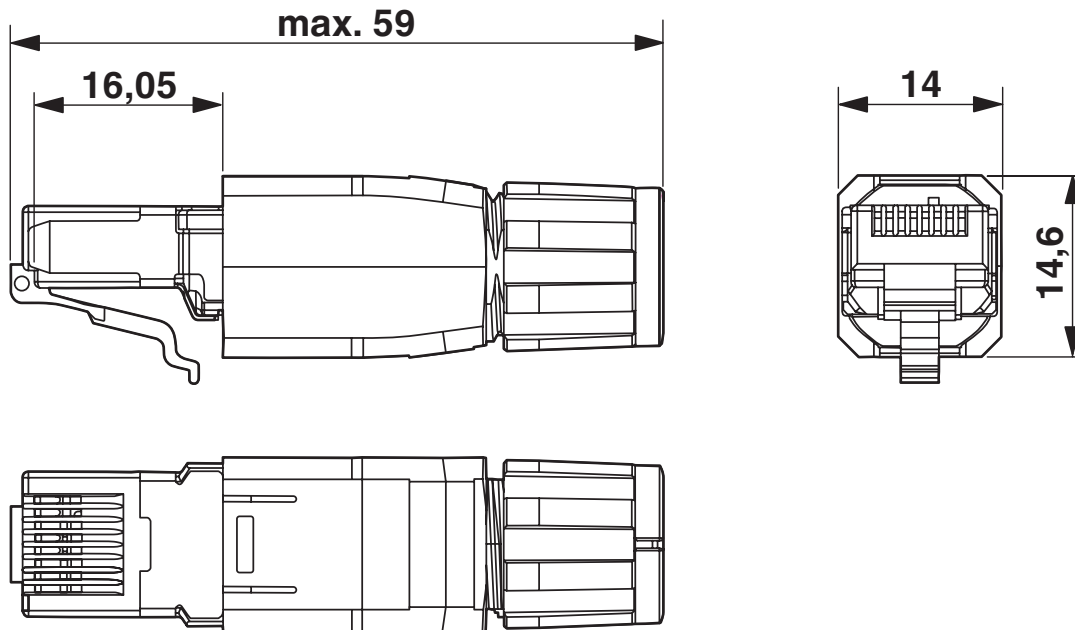
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Dimensional drawing



RJ45 connector

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## Approvals

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**EAC**

Approval ID: 19060508



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## Classifications

### ECLASS

ECLASS-11.0	27440102
ECLASS-12.0	27440116
ECLASS-13.0	27060307

### ETIM

ETIM 9.0	EC002635
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c)

### 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.)	Lead(CAS: 7439-92-1)
SCIP	29ba78a6-a330-43d3-a6d6-d70681d95feb

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