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## Bus system cable - VS-MSDS-MSDS-93G-LI/2,0 - 1419148

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



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 540728

### Technical data

#### Dimensions

Length of cable	2 m
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#### Ambient conditions

Degree of protection	IP65
	IP67

#### General data

Rated current at 40°C	4 A
Rated voltage	250 V
Number of positions	4
Signal type/category	EtherCAT <sup>®</sup> CAT5 (IEC 11801), 100 Mbps
Overvoltage category	II
Degree of pollution	3

#### Characteristics head 1

Head type	Plug straight M12
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#### Characteristics head 2

Head type	Plug straight M12
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#### Standards and Regulations

Flammability rating according to UL 94	V0
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#### Cable

# Bus system cable - VS-MSDS-MSDS-93G-LI/2,0 - 1419148

## Technical data

### Cable

Cable type	PROFINET PVC stranded CAT5
Cable type (abbreviation)	93B
UL AWM style	21694
Signal type/category	PROFINET CAT5 (IEC 11801), 100 Mbps
Cable structure	1x4xAWG22/7; SF/TQ
Conductor cross section	4x 0.34 mm <sup>2</sup>
AWG signal line	22
Conductor structure signal line	7x 0.25 mm
Core diameter including insulation	1.55 mm
Wire colors	White, yellow, blue, orange
Overall twist	Star quad
Shielding	Aluminum-coated foil, tinned copper braided shield
Optical shield covering	85 %
External sheath, color	green RAL 6018
Outer sheath thickness	approx. 0.9 mm
External cable diameter D	6.5 mm ±0.2 mm
Minimum bending radius, fixed installation	3 x D
Minimum bending radius, flexible installation	7 x D
Cable weight	67 kg/km
Outer sheath, material	PVC
Material, inner sheath	PVC
Material conductor insulation	PE
Conductor material	Tin-plated Cu litz wires
Insulation resistance	≥ 500 MΩ*km
Loop resistance	≤ 120 Ω (per kilometer)
Wave impedance	100 Ω ±15 Ω (at 100 MHz)
Signal speed	0.66 c
Signal runtime	5.3 ns/m
Coupling resistance	≤ 20.00 mΩ/m (At 10 MHz)
Nominal voltage, cable	600 V
Test voltage Core/Core	2000 V (50 Hz, 1 min.)
Test voltage Core/Shield	2000 V (50 Hz, 1 min.)
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
Ambient temperature (storage/transport)	-50 °C ... 70 °C

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## Classifications

### eCl@ss

eCl@ss 4.0	27060307
eCl@ss 4.1	27060307
eCl@ss 5.0	27061801
eCl@ss 5.1	27060307
eCl@ss 6.0	27061801
eCl@ss 7.0	27061801
eCl@ss 8.0	27279218

### ETIM

ETIM 2.0	EC000830
ETIM 3.0	EC000830
ETIM 4.0	EC001855
ETIM 5.0	EC001855

### UNSPSC

UNSPSC 6.01	26121616
UNSPSC 7.0901	26121616
UNSPSC 11	26121604
UNSPSC 12.01	26121616
UNSPSC 13.2	26121616

## Approvals

### Approvals

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Approvals

EAC

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Ex Approvals

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Approvals submitted

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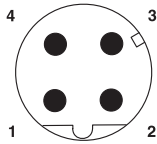
### Approval details

EAC
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## Drawings

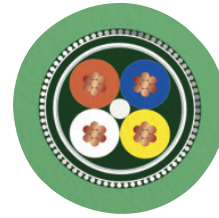
## Bus system cable - VS-MSDS-MSDS-93G-LI/2,0 - 1419148

Schematic diagram



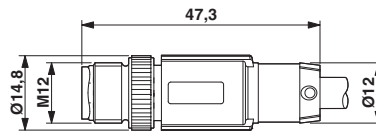
Pin assignment M12 male connector, 4-pos., D-coded, male side

Cable cross section



PROFINET PVC stranded CAT5 [93B]

Dimensional drawing



Plug, M12 x 1, straight, shielded

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