

Network cable - VS-M12FSBP-OE-94C-LI/2,0 - 1412820

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Assembled Ethernet cable, shielded, 4-pair, AWG 26 suitable for drag chain (19-wire), RAL 5021 (sea blue), M12 flush-type socket, rear wall/screw mounting with M16 thread on free cable end, line, length 2 m

Your advantages

- Pre-assembled with cables in various standard lengths for immediate use
- Customer-specific assemblies and cable lengths can be supplied
- Sealed on the cable side for optimum tightness of seal
- Cable designs for all common networks and fieldbuses
- For high transmission safety: shield connection to the housing with optional EMC nut



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 475686
GTIN	4046356475686

Technical data

Ambient conditions

Degree of protection	IP67 (When plugged in)
	IP65 (When plugged in)
Ambient temperature (operation)	-25 °C ... 85 °C (Plug / socket)
	-40 °C ... 85 °C (without mechanical actuation)
	-25 °C ... 85 °C (cable, flexible installation)

General data

Note	The electrical and mechanical data specified assume that the connector pair is correctly locked and mounted. If the connector is unlocked and if there is a danger of contamination, the connector must be sealed using a protective cap > IP54. Influences arising from litz wires, cables or PCB assembly must also be taken into consideration.
Rated current at 40°C	2 A

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General data

Rated voltage	30 V
Rated surge voltage	0.8 kV
Number of positions	8
Overvoltage category	II
Degree of pollution	3
Alternative short product description	Ethernet cable
Contact material	CuZn
Contact carrier material	PA 6.6
Contact surface material	Ni/Au
Degree of protection	IP65/IP67
Transmission characteristics (category)	CAT5

Characteristics head 1

Coding	A (Standard)
Shielded	yes
Outer sheath, material	PUR
External sheath, color	water blue RAL 5021
Type type, plug side	Flush-type socket, straight
Type type, socket side	free cable end

Standards and Regulations

Flammability rating according to UL 94	V0
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Cable

Cable type	Ethernet drag chain CAT5, 4-pair
Cable type (abbreviation)	94C
UL AWM style	20963 (80°C/30 V)
Signal type/category	Ethernet CAT5 (IEC 11801), 1 Gbps
Cable structure	4x2xAWG26/19; S/UTP
Conductor cross section	4x 2x 0.14 mm ²
AWG signal line	26
Conductor structure signal line	19x 0.10 mm
Core diameter including insulation	1 mm
Wire colors	white/blue-blue, white/orange-orange, white/green-green, white/brown-brown
Twisted pairs	2 cores to the pair
Overall twist	Four pairs and four fillers to the core
Shielding	Tinned copper braided shield
Optical shield covering	90 %
External sheath, color	water blue RAL 5021
Outer sheath thickness	0.85 mm
External cable diameter D	6.9 mm +0.1 mm ... 0.2 mm
Minimum bending radius, fixed installation	4 x D

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Minimum bending radius, flexible installation	8 x D
Number of bending cycles	5000000
Minimum bending radius, drag chain applications	7,5 x D
Traversing rate	3 m/s
Acceleration	5 m/s ²
Tensile strength GRP	≤ 100 N
Cable weight	57 kg/km
Outer sheath, material	PUR
Material conductor insulation	PP
Conductor material	Bare Cu litz wires
Insulation resistance	≥ 500 MΩ*km
Loop resistance	≤ 290.00 Ω/km
Cable capacity	approx. 50 nF/km (at 1 kHz)
Wave impedance	100 Ω ±5 Ω (at 100 MHz)
Near end crosstalk attenuation (NEXT)	65.3 dB (with 1 MHz)
	56.3 dB (at 4 MHz)
	50.3 dB (at 10 MHz)
	47.2 dB (at 16 MHz)
	45.8 dB (at 20 MHz)
	42.9 dB (at 31.25 MHz)
	38.4 dB (at 62.5 MHz)
	35.3 dB (at 100 MHz)
Power-summated near end crosstalk attenuation (PSNEXT)	62.3 dB (with 1 MHz)
	53.3 dB (at 4 MHz)
	47.3 dB (at 10 MHz)
	44.2 dB (at 16 MHz)
	42.8 dB (at 20 MHz)
	39.9 dB (at 31.25 MHz)
	35.4 dB (at 62.5 MHz)
	32.3 dB (at 100 MHz)
Attenuation	3.2 dB (with 1 MHz)
	6 dB (at 4 MHz)
	9.5 dB (at 10 MHz)
	12.1 dB (at 16 MHz)
	13.6 dB (at 20 MHz)
	17.1 dB (at 31.25 MHz)
	24.8 dB (at 62.5 MHz)
	32 dB (at 100 MHz)
Return loss (RL)	23 dB (at 4 MHz)
	24.1 dB (at 8 MHz)

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Cable

	25 dB (at 10 MHz)
	25 dB (at 16 MHz)
	25 dB (at 20 MHz)
	23.6 dB (at 31.25 MHz)
	21.5 dB (at 62.5 MHz)
	20.1 dB (at 100 MHz)
Signal runtime	5.3 ns/m
Coupling resistance	≤ 100.00 mΩ/m (at 10 MHz)
Nominal voltage, cable	≤ 100 V
Test voltage Core/Core	700 V (50 Hz, 1 min.)
Test voltage Core/Shield	700 V (50 Hz, 1 min.)
Flame resistance	according to IEC 60332-1-2
Halogen-free	according to IEC 60754-1
Resistance to oil	according to EN 60811-2-1
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-20 °C ... 80 °C (cable, flexible installation)
Ambient temperature (installation)	-20 °C ... 80 °C
Ambient temperature (storage/transport)	-20 °C ... 80 °C

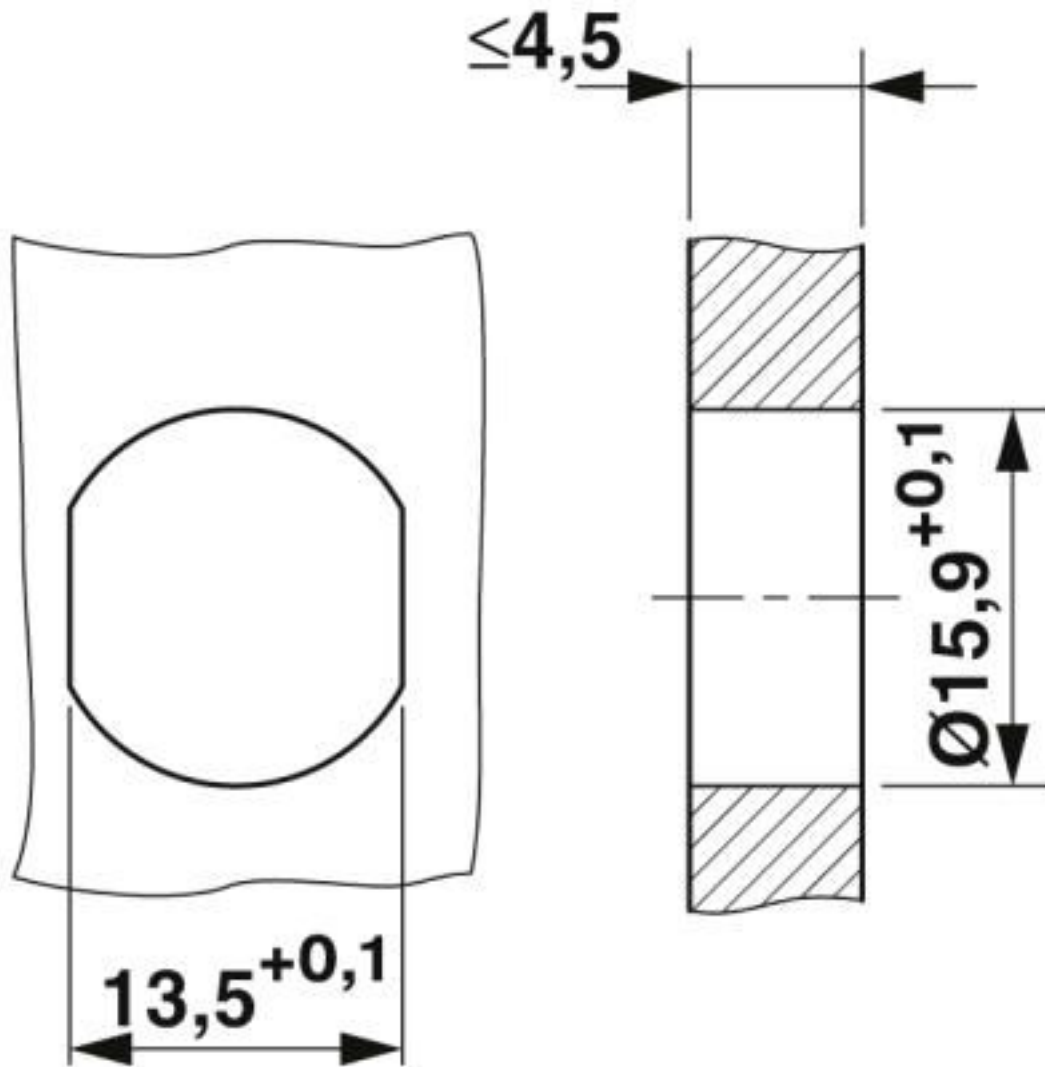
Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Network cable - VS-M12FSBP-OE-94C-LI/2,0 - 1412820

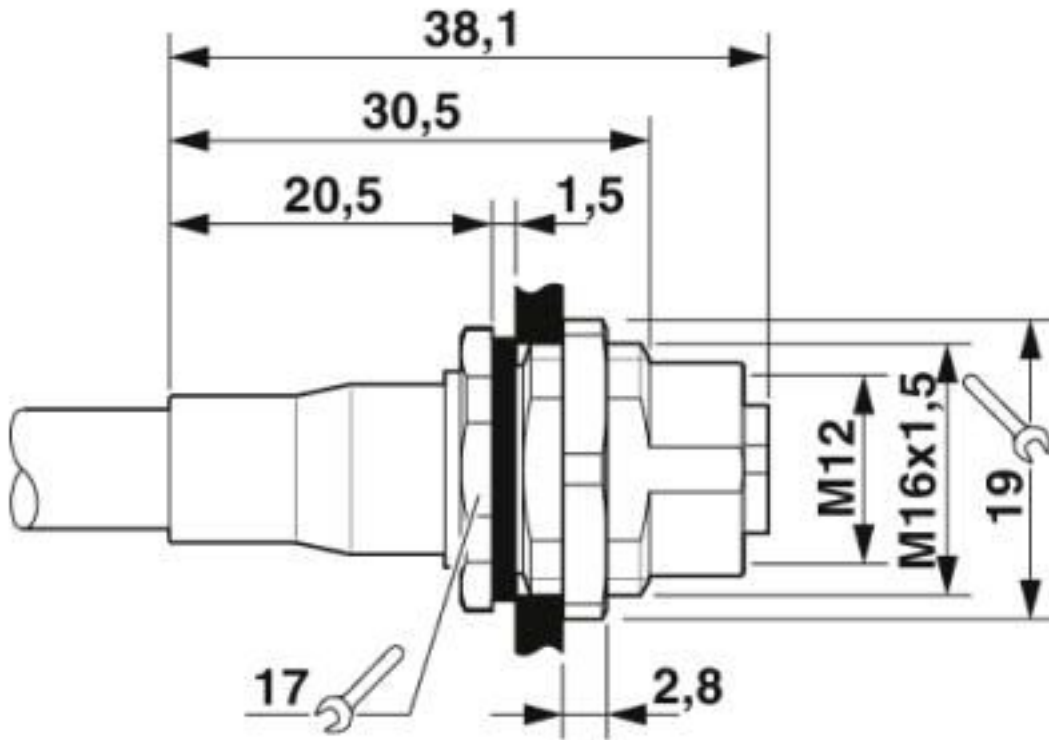
Dimensional drawing



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

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Dimensional drawing



M12 flush-type connector

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Cable cross section



Ethernet drag chain CAT5, 4-pair [94C]

Classifications

eCl@ss

eCl@ss 10.0.1	27060308
eCl@ss 4.0	24010400
eCl@ss 4.1	24010400
eCl@ss 5.0	19030300
eCl@ss 5.1	19030300
eCl@ss 6.0	27060300
eCl@ss 7.0	27060308
eCl@ss 8.0	27060308
eCl@ss 9.0	27060308

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Classifications

ETIM

ETIM 3.0	EC000830
ETIM 4.0	EC002599
ETIM 5.0	EC002599
ETIM 6.0	EC001262
ETIM 7.0	EC001262

UNSPSC

UNSPSC 6.01	26121616
UNSPSC 7.0901	26121616
UNSPSC 11	26121604
UNSPSC 12.01	31261501
UNSPSC 13.2	26121604
UNSPSC 18.0	26121604
UNSPSC 19.0	26121604
UNSPSC 20.0	26121604
UNSPSC 21.0	26121604

Approvals

Approvals

Approvals

EAC

Ex Approvals

Approval details

EAC		19060508
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