

## Bus system cable - VS-M12MS-M12FS-94B-LI/15,0 - 1401519

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Assembled Ethernet cable, shielded, 4-pair, AWG 26 stranded (7-wire), RAL 5021 (sea blue), M12 plug to M12 socket, line, length 15 m

RoHS

Ethernet

### Key Commercial Data

Packing unit	1 pc
Minimum order quantity	50 pc
GTIN	 4 046356 560207
GTIN	4046356560207
Weight per Piece (excluding packing)	700.000 g
Custom tariff number	85444290
Country of origin	Poland

### Technical data

#### Dimensions

Length of cable	15 m
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#### Ambient conditions

Degree of protection	IP65
	IP67
	IP68
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)
	-40 °C ... 70 °C (cable, fixed installation)
	-10 °C ... 50 °C (cable, flexible installation)

#### General data

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### Technical data

#### General data

Rated current at 40°C	2 A
Rated voltage	30 V AC
	30 V DC
Number of positions	8
Overvoltage category	II
Degree of pollution	3
Contact material	CuZn
Contact carrier material	TPU GF
Contact surface material	Ni/Au

#### Standards and Regulations

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

Cable type	Ethernet, flexible, CAT5
Cable type (abbreviation)	94B
UL AWM style	20963 (80°C/30 V)
Signal type/category	Ethernet CAT5 (IEC 11801), 1 Gbps
Cable structure	4x2xAWG26/7; SF/UTP
Conductor cross section	4x 2x 0.14 mm <sup>2</sup>
AWG signal line	26
Conductor structure signal line	7x 0.16 mm
Core diameter including insulation	0.96 mm
Wire colors	white/blue-blue, white/orange-orange, white/green-green, white/brown-brown
Twisted pairs	2 cores to the pair
Overall twist	4 pairs for core
Shielding	Aluminum-coated foil, tinned copper braided shield
Optical shield covering	70 %
External sheath, color	water blue RAL 5021
Outer sheath thickness	1.05 mm
External cable diameter D	6.4 mm ±0.2 mm
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	8 x D
Tensile strength GRP	≤ 100 N
Cable weight	47 kg/km
Outer sheath, material	PUR
Material conductor insulation	Foamed PE
Conductor material	Bare Cu litz wires

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### Technical data

#### Cable

Insulation resistance	$\geq 500 \text{ M}\Omega \cdot \text{km}$	
Loop resistance	$\leq 290.00 \text{ }\Omega/\text{km}$	
Cable capacity	48 nF/km (at 1 kHz)	
Wave impedance	100 $\Omega \pm 5 \text{ }\Omega$ (at 100 MHz)	
Near end crosstalk attenuation (NEXT)	71.3 dB (with 1 MHz)	
	62.3 dB (at 4 MHz)	
	56.3 dB (at 10 MHz)	
	53.2 dB (at 16 MHz)	
	51.8 dB (at 20 MHz)	
	48.9 dB (at 31.25 MHz)	
	44.4 dB (at 62.5 MHz)	
	41.3 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)	
	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	

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#### Cable

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

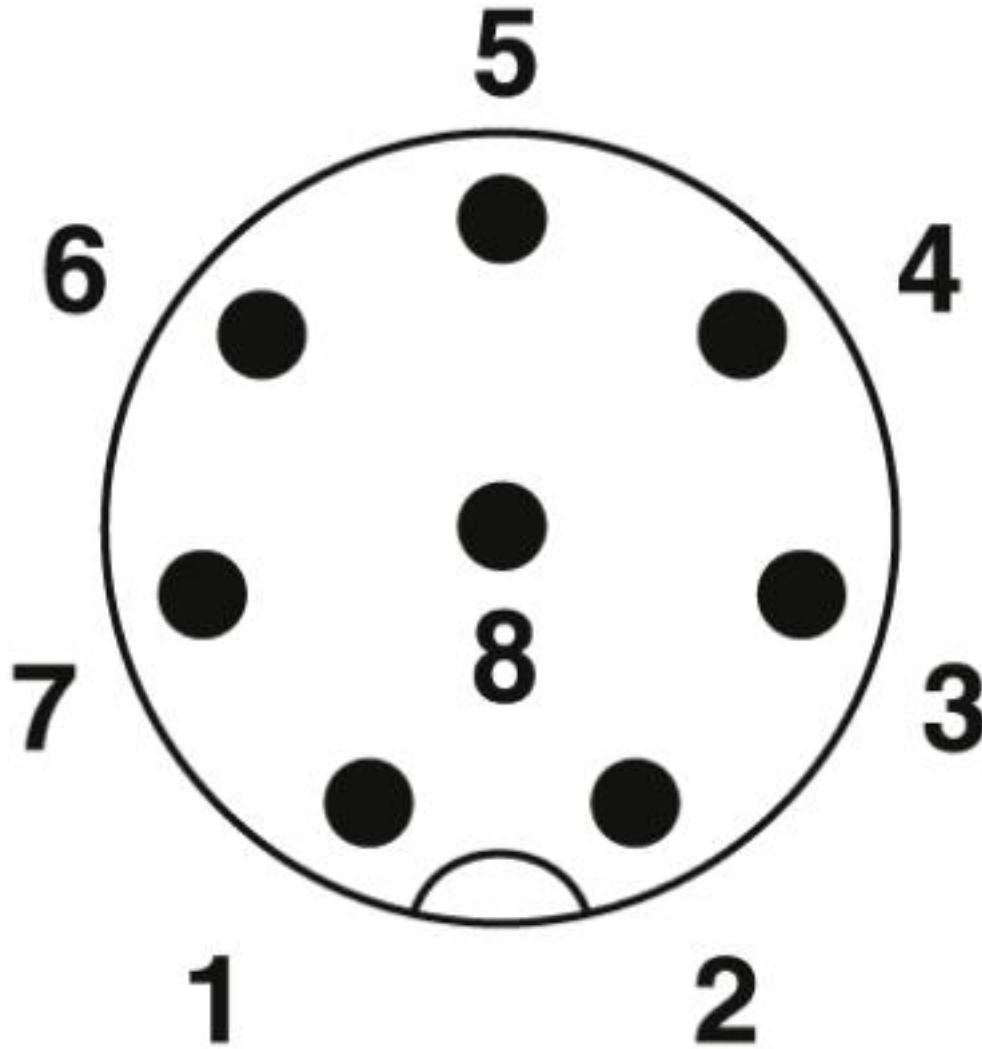
#### Environmental Product Compliance

	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

### Drawings

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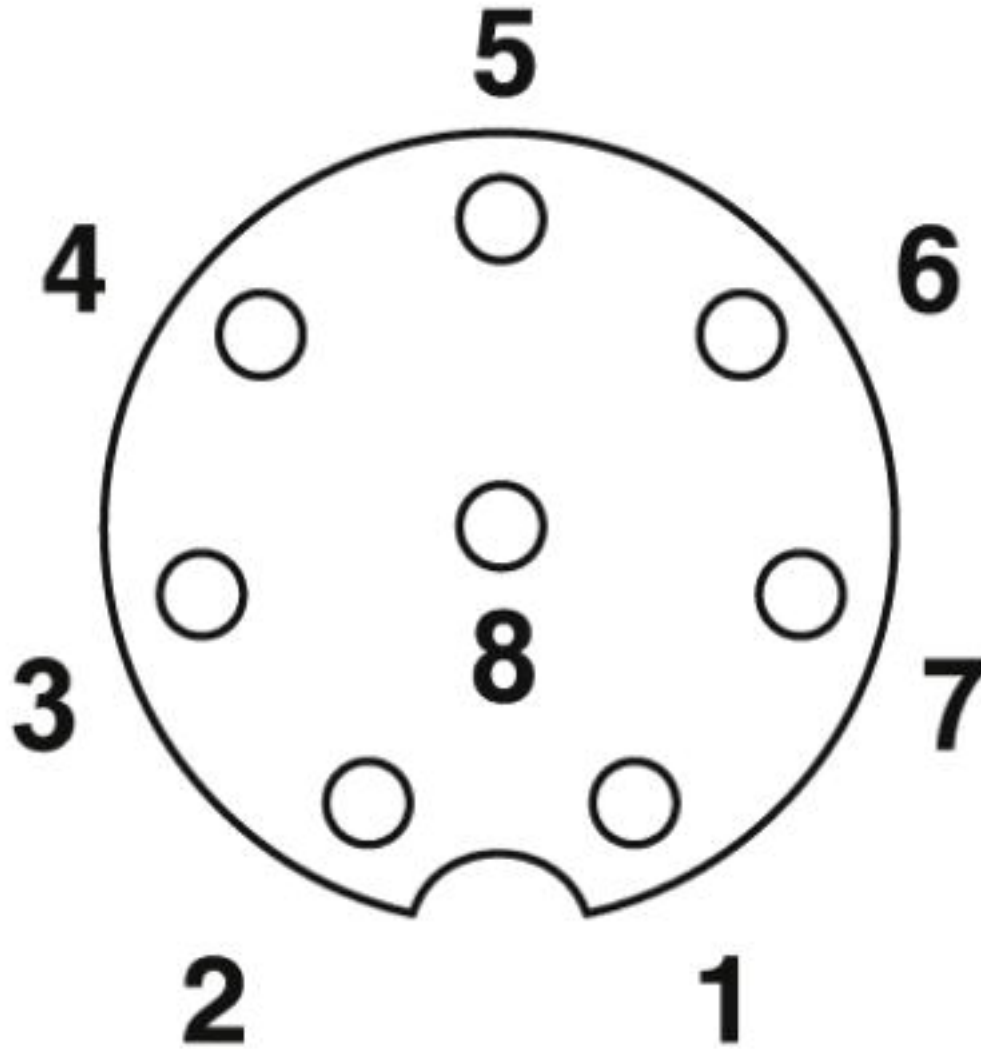
Schematic diagram



Pin assignment M12 plug, 8-pos., view plug side

# Bus system cable - VS-M12MS-M12FS-94B-LI/15,0 - 1401519

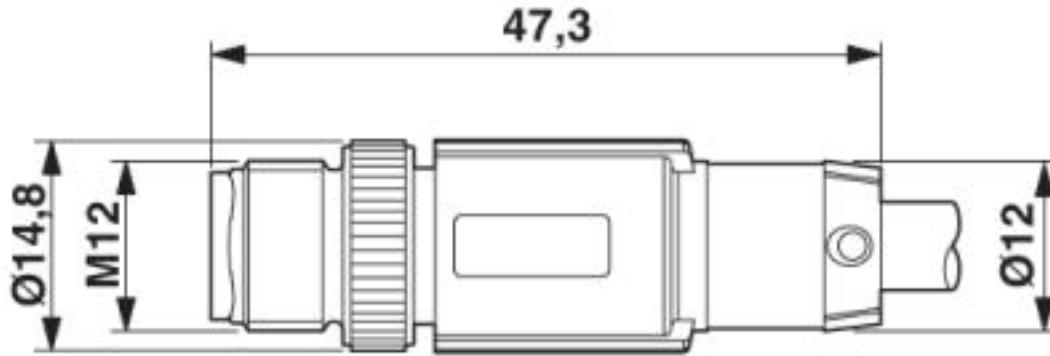
Schematic diagram



Pin assignment M12 socket, 8-pos., A-coded, view female side

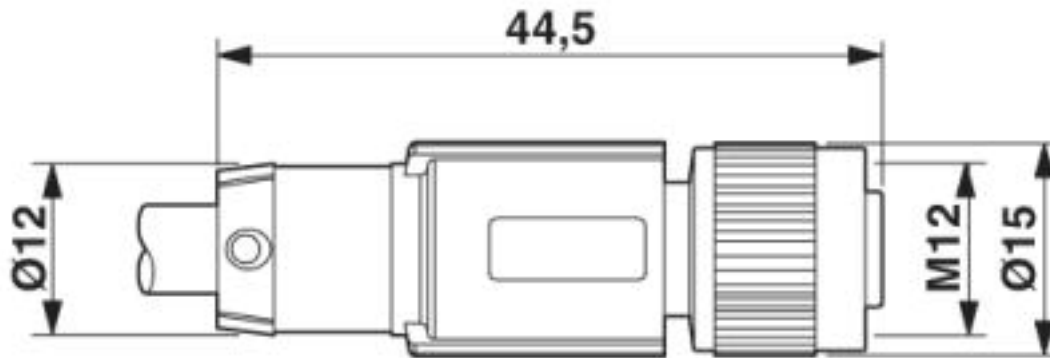
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Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, straight, shielded

# Bus system cable - VS-M12MS-M12FS-94B-LI/15,0 - 1401519

Cable cross section



Ethernet, flexible, CAT5 [94B]

## Classifications

eCl@ss

eCl@ss 4.0	27060306
eCl@ss 4.1	27060306
eCl@ss 5.0	27061801
eCl@ss 5.1	27061800
eCl@ss 6.0	27279200
eCl@ss 7.0	27279218
eCl@ss 8.0	27279218

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### Classifications

#### eCl@ss

eCl@ss 9.0	27060311
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#### ETIM

ETIM 3.0	EC000830
ETIM 4.0	EC002599
ETIM 5.0	EC001855
ETIM 6.0	EC001855
ETIM 7.0	EC001855

#### UNSPSC

UNSPSC 6.01	30211824
UNSPSC 7.0901	39121413
UNSPSC 11	39121413
UNSPSC 12.01	39121413
UNSPSC 13.2	31251501
UNSPSC 19.0	31251501