

VS-M12MS-M12MS-94H-HYB/2,0 SCO - Hybrid cable

1402427

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Assembled Ethernet cable, CAT5e, shielded, 8-wire, 4 x 26 AWG (data) and 4 x 20 AWG (power), RAL 9005 (black), M12 hybrid plug to M12 hybrid plug, length: 2.0 m

Commercial data

Item number	1402427
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	BF1CML
Catalog page	Page 323 (PC-2011)
GTIN	4046356615945
Weight per piece (including packing)	220.2 g
Weight per piece (excluding packing)	220.2 g
Customs tariff number	85444210
Country of origin	PL

Technical data

Product properties

Product type	Data cable preassembled
Application	Standard
Sensor type	Ethernet hybrid
Number of positions	8
No. of cable outlets	1
Shielded	yes
Coding	Y

Insulation characteristics

Degree of pollution	2
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Interfaces

Signal type/category	Ethernet hybrid CAT5 (IEC 11801), 100 Mbps
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Signaling

Status display	No
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Electrical properties

Nominal voltage U_N	30 V (Power and data)
Nominal current I_N	6 A (Power) 0.5 A (Data)
Transmission medium	Copper
Transmission characteristics (category)	CAT5 (IEC 11801:2002)

Material specifications

Flammability rating according to UL 94	V0
Material for screw connection	Zinc die-cast, nickel-plated

Connector

Connection 1	
Type	Plug straight M12 SPEEDCON / IP65
Number of positions	8 (4+4)
Locking type	SPEEDCON
Coding type	Y (Hybrid)
Shielded	yes
Handle color	black
Material	CuZn (Contact) Ni/Au (Contact surface) PP (Contact carrier, data) PA (Contact carrier, power) TPU, hardly inflammable, self-extinguishing (Grip)

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	Zinc die-cast, nickel-plated (Screw connection)
Insertion/withdrawal cycles	≥ 100
Insulation resistance	≥ 100 MΩ
Tightening torque	0.4 Nm
Degree of protection	IP65
	IP67
Ambient temperature (operation)	-25 °C ... 90 °C

Connection 2

Type	Plug straight M12 SPEEDCON / IP65
Number of positions	8 (4+4)
Locking type	SPEEDCON
Coding type	Y (Hybrid)
Shielded	yes
Handle color	black
Material	CuZn (Contact) Zinc die-cast, nickel-plated (Screw connection) Ni/Au (Contact surface) PP (Contact carrier, data) PA (Contact carrier, power) TPU, hardly inflammable, self-extinguishing (Grip)
Insertion/withdrawal cycles	≥ 100
Insulation resistance	≥ 100 MΩ
Tightening torque	0.4 Nm
Degree of protection	IP65
	IP67
Ambient temperature (operation)	-25 °C ... 90 °C

Cable/line

Cable length	2 m
Ethernet hybrid [94H]	
Dimensional drawing	
Cable weight	87 kg/km
UL AWM Style	20963 (80°C/30 V)
Number of positions	8
Shielded	yes
Cable type	Ethernet hybrid [94H]

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Conductor structure	1x4xAWG26 + 1x4xAWG20
Conductor structure signal line	19x 0.10 mm
AWG signal line	26
Conductor cross section	4x 0.15 mm ² (Data) 4x 0.6 mm ² (Power)
Wire diameter incl. insulation	1.05 mm (Data) 1.4 mm (Power)
External cable diameter	7.60 mm ±0.2 mm
Outer sheath, material	PUR
External sheath, color	black RAL 9005
Conductor material	Bare Cu litz wires
Material wire insulation	PP (Data) PP (Power)
Single wire, color	white/orange, orange, white/green, green, white, blue, brown, black
Overall twist	1 star quad and 4 wires with 2 fillers
Optical shield covering	85 %
Insulation resistance	≥ 5 GΩ*km
Loop resistance	≤ 280.00 Ω/km (Data) ≤ 34.60 Ω/km (Power)
Wave impedance	100 Ω ±15 Ω (4 MHz ... 100 MHz)
Working capacitance	nom. 50 nF (per kilometer)
Differential impedance	100 Ω ±5 % (at 100 MHz)
Nominal voltage, cable	≤ 50 V (Peak value, not for high-power applications)
Test voltage Core/Core	1500 V (50 Hz, 1 min.)
Test voltage Core/Shield	1500.00 V (50 Hz, 1 min.)
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Smallest bending radius, fixed installation	38 mm
Smallest bending radius, movable installation	76 mm
Max. bending cycles	2000000
Tensile strength	70 N (in accordance with DIN EN 50565-1 for flexible installation) 240 N (in accordance with DIN EN 50565-1 for fixed installation)
Near end crosstalk attenuation (NEXT)	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)
Shield attenuation	6 dB (at 4 MHz) 9.5 dB (at 10 MHz) 12.1 dB (at 16 MHz) 13.5 dB (at 20 MHz)

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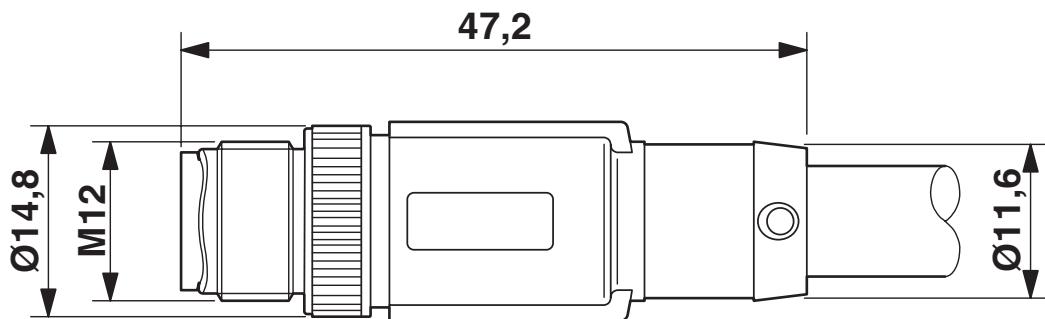
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	17.1 dB (at 31.25 MHz)
	24.8 dB (at 62.5 MHz)
	32 dB (at 100 MHz)
	≥ 80.00 dB (30 MHz ... 125 MHz)
Halogen-free	according to IEC 60754
	in accordance with DIN VDE 0472 part 815
Flame resistance	in acc. with UL 1581, section 1061
	in acc. with UL 1581, section 1061
Resistance to oil	according to IEC 60811-2-1
	according to VDE 0282 Part 10
Other resistance	Low adhesion
Special properties	Free of substances which would hinder coating with paint or varnish
	Silicone-free
Ambient temperature (operation)	-40 °C ... 90 °C (cable, fixed installation)
	-30 °C ... 70 °C (Cable, flexible installation)

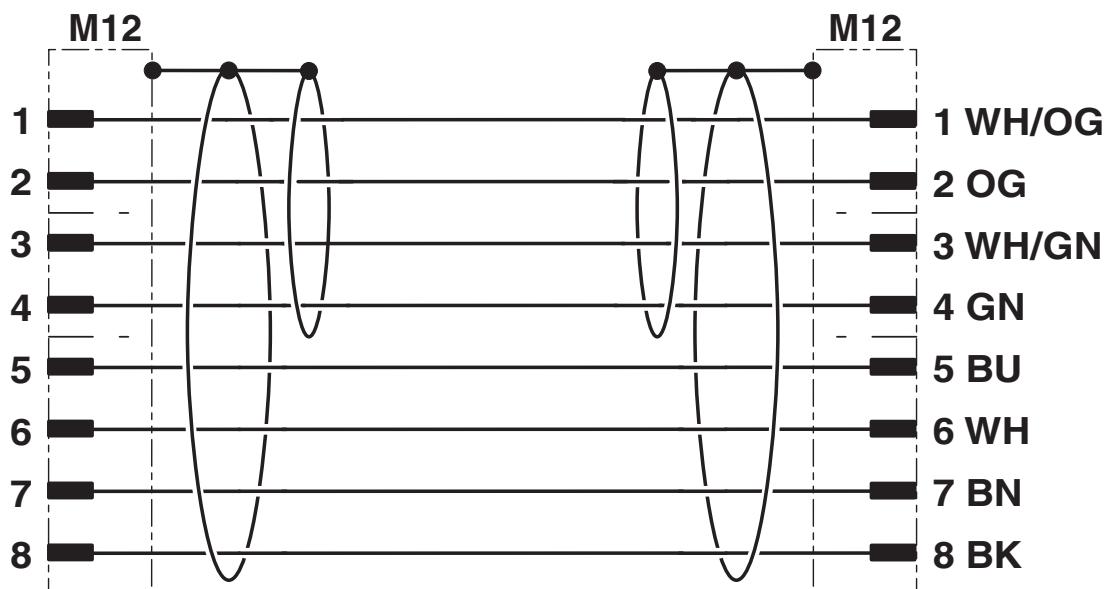
Drawings

Dimensional drawing

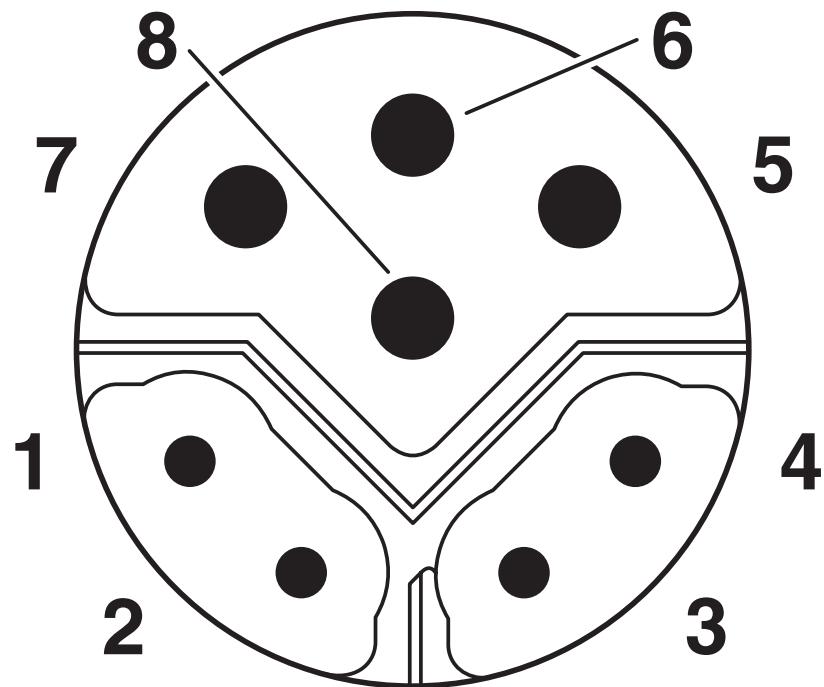


M12 connector, straight, shielded

Circuit diagram



Schematic diagram



M12 hybrid connector pin assignment, 8-pos., pin side view

Classifications

ECLASS

ECLASS-11.0	27060307
ECLASS-13.0	27060307

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)
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