

## Hybrid cable - VS-M12MS-94H-HYB/1,0 SCO - 1402442

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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 free cable end, length: 1.0 m



Ethernet

### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 615990
GTIN	4046356615990
Weight per Piece (excluding packing)	120.000 g
Custom tariff number	85444210
Country of origin	Poland

### Technical data

#### Dimensions

Length of cable	1 m
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#### Ambient conditions

Degree of protection	IP65
	IP67

#### General data

Rated current at 40°C	6 A (Power)
	0.5 A (Data)
Rated voltage	30 V (Power and data)
Number of positions	8
Signal type/category	Ethernet hybrid CAT5 (IEC 11801), 100 Mbps

# Hybrid cable - VS-M12MS-94H-HYB/1,0 SCO - 1402442

## Technical data

### General data

Degree of pollution	2
Degree of protection	IP67/IP69K
Transmission characteristics (category)	CAT5

### Characteristics head 1

Head type	Plug straight M12 SPEEDCON / IP67
No. of positions (pin connector pattern)	8 (4+4)
Coding	Y (Hybrid)
Color	black
Material (component)	CuZn (Contact)
	Ni/Au (Contact surface)
	PP (Contact carrier, data)
	PA (Contact carrier, power)
	TPU, hardly inflammable, self-extinguishing (Grip)
	Zinc die-cast, nickel-plated (Screw connection)
Shielded	yes
Insulation resistance	≥ 100 MΩ
Insertion/withdrawal cycles	≥ 100
Torque	0.4 Nm
Ambient temperature (operation)	-25 °C ... 90 °C
Shielded	yes
Outer sheath, material	PUR mixture halogen-free
External sheath, color	black RAL 9005
Type type, plug side	Plug straight
Type type, socket side	free cable end

### Characteristics head 2

Head type	free cable end
No. of positions (pin connector pattern)	8
Shielded	yes

### Standards and Regulations

Flammability rating according to UL 94	V0
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### Cable

Cable type	Ethernet hybrid
Cable type (abbreviation)	94H
UL AWM style	20963 (80°C/30 V)
Signal type/category	Ethernet hybrid CAT5 (IEC 11801), 100 Mbps

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### Technical data

#### Cable

Cable structure	1x4xAWG26+1x4xAWG20
Conductor cross section	4x 0.15 mm <sup>2</sup> (Data)
	4x 0.6 mm <sup>2</sup> (Power)
AWG signal line	26
AWG power supply	20
Conductor structure signal line	19x 0.10 mm
Conductor structure, voltage supply	19x 0.20 mm
Core diameter including insulation	1.05 mm (Data)
	1.4 mm (Power)
Wire colors	White/orange, orange, white/green, green, white, blue, brown, black
Overall twist	1 star quad and 4 wires with 2 fillers
Shielding	Tinned copper braided shield
Optical shield covering	85 %
External sheath, color	black RAL 9005
External cable diameter D	7.6 mm ±0.2 mm
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Number of bending cycles	2000000
Minimum bending radius, drag chain applications	10 x D
Traversing path	4.5 m
Traversing rate	3 m/s
Acceleration	3 m/s <sup>2</sup>
Tensile strength GRP	70 N (in accordance with DIN EN 50565-1 for flexible installation)
	240 N (in accordance with DIN EN 50565-1 for fixed installation)
Cable weight	87 kg/km
Outer sheath, material	PUR
Material conductor insulation	PP (Data)
	PP (Power)
Conductor material	Bare Cu litz wires
Insulation resistance	≥ 5 GΩ*km
Loop resistance	≤ 280.00 Ω/km (Data)
	≤ 34.60 Ω/km (Power)
Working capacitance	nom. 50 nF (per kilometer)
Wave impedance	100 Ω ±15 Ω (4 MHz ... 100 MHz)
Near end crosstalk attenuation (NEXT)	56.3 dB (at 4 MHz)
	50.3 dB (at 10 MHz)
	47.2 dB (at 16 MHz)

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### Technical data

#### Cable

	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)
Attenuation	6 dB (at 4 MHz)
	9.5 dB (at 10 MHz)
	12.1 dB (at 16 MHz)
	13.5 dB (at 20 MHz)
	17.1 dB (at 31.25 MHz)
	24.8 dB (at 62.5 MHz)
	32 dB (at 100 MHz)
Shield attenuation	≥ 80 dB (30 MHz ... 125 MHz)
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 V (50 Hz, 1 min.)
Special properties	Free of substances which would hinder coating with paint or varnish
	Silicone-free
Flame resistance	in acc. with UL 1581, section 1061
Halogen-free	according to IEC 60754
	in accordance with DIN VDE 0472 part 815
Resistance to oil	according to IEC 60811-2-1
	according to VDE 0282 Part 10
Other resistance	Low adhesion
Ambient temperature (operation)	-40 °C ... 90 °C (cable, fixed installation)
	-30 °C ... 70 °C (cable, flexible installation)

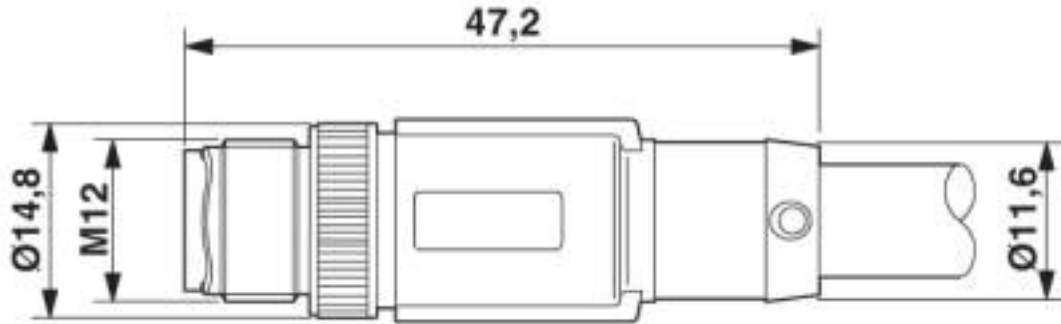
#### Environmental Product Compliance

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

#### Drawings

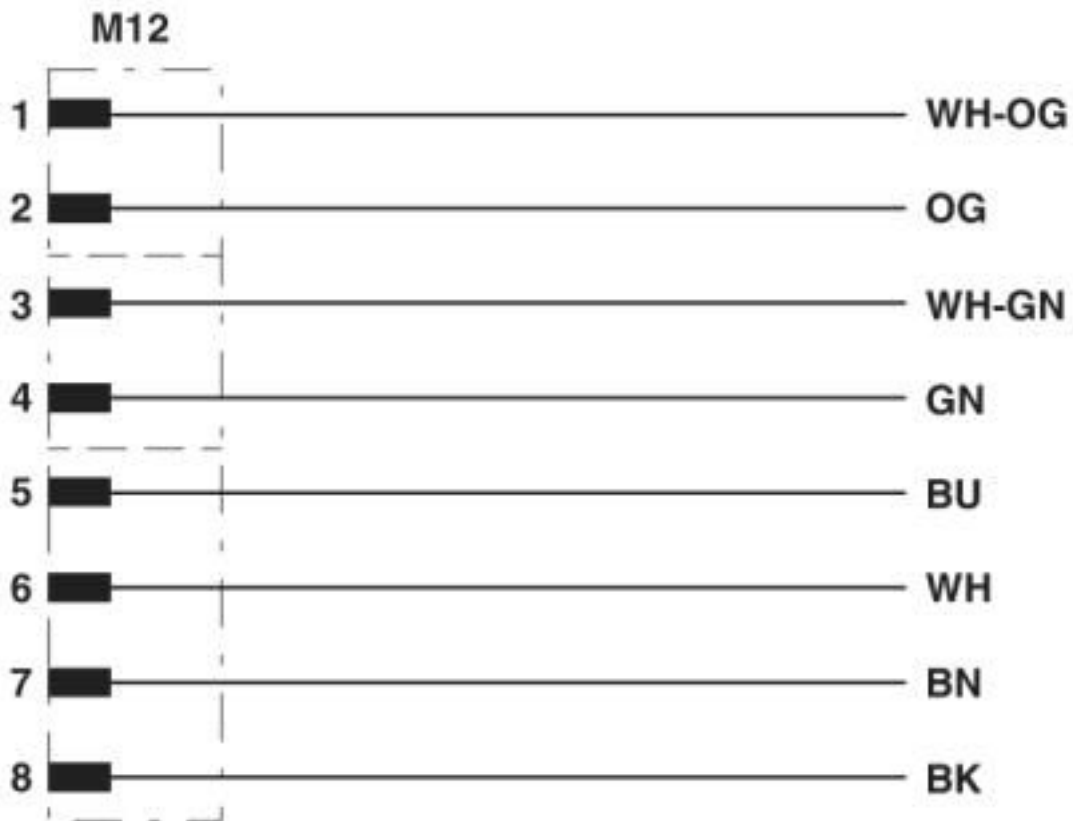
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Dimensional drawing



M12 connector, straight, shielded

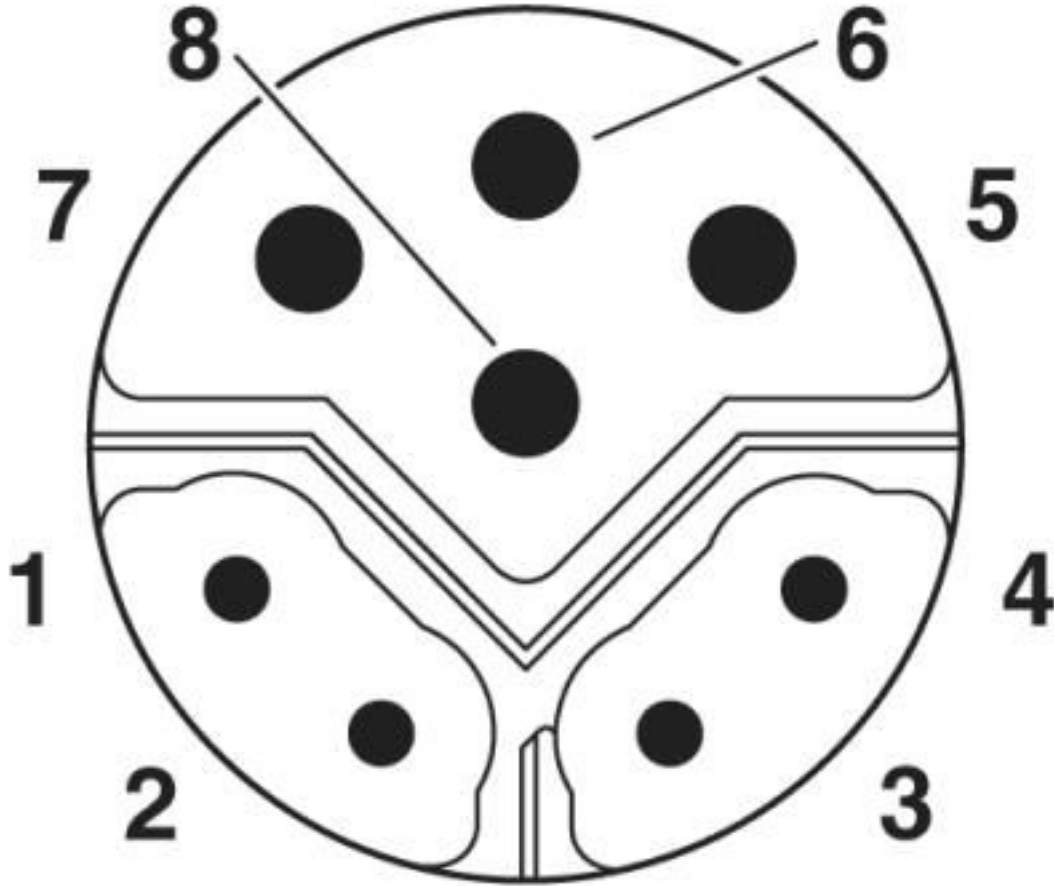
Circuit diagram



Contact assignment of the M12 plug

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Schematic diagram



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

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Cable cross section



Ethernet hybrid [94H]

## Classifications

eCl@ss

eCl@ss 4.0	272607xx
eCl@ss 4.1	27260701
eCl@ss 5.0	27260701
eCl@ss 5.1	27259205
eCl@ss 6.0	27269202
eCl@ss 7.0	27449203
eCl@ss 8.0	27279218

## Hybrid cable - VS-M12MS-94H-HYB/1,0 SCO - 1402442

### Classifications

#### eCl@ss

eCl@ss 9.0	27060311
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#### ETIM

ETIM 4.0	EC002599
ETIM 5.0	EC001855
ETIM 6.0	EC001855

#### UNSPSC

UNSPSC 6.01	26121616
UNSPSC 7.0901	26121616
UNSPSC 11	26121604
UNSPSC 12.01	26121616
UNSPSC 13.2	31251501
UNSPSC 19.0	31251501



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