

Hybrid cable - VS-M12MS-94H-HYB/20,0 SCO - 1402447


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Hybrid cable, Ethernet hybrid CAT5 (100 Mbps), 8-position, Plug straight M12 SPEEDCON / IP67, coding: Y, on free cable end, cable length: 20 m, Power with Ethernet (PWE)



Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 616041
GTIN	4046356616041

Technical data

Dimensions

Length of cable	20 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 AC (Power and data)
	30 V DC
Number of positions	8
Signal type/category	Ethernet hybrid CAT5 (IEC 11801), 100 Mbps
Degree of pollution	2

Characteristics head 1

Head type	Plug straight M12 SPEEDCON / IP67
No. of positions (pin connector pattern)	8 (4+4)
Coding	Y (Hybrid)

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Technical data

Characteristics head 1

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

Characteristics head 2

Head type	free cable end
No. of positions (pin connector pattern)	8
Color	black
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
Cable structure	1x4xAWG26+1x4xAWG20
Conductor cross section	4x 0.15 mm ² (Data)
	4x 0.6 mm ² (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

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Technical data

Cable

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 ²
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) 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

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Technical data

Cable

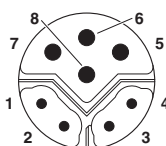
Flame resistance	in acc. with UL 1581, section 1061
Halogen-free	according to IEC 60754
	in accordance with DIN VDE 0472 part 815
Resistance to oil	according to IEC 60811-2-1
	according to VDE 0282 Part 10
Other resistance	Low adhesion
Ambient temperature (operation)	-40 °C ... 90 °C (cable, fixed installation)
	-30 °C ... 70 °C (cable, flexible installation)

Environmental Product Compliance

REACH SVHC	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

Schematic diagram



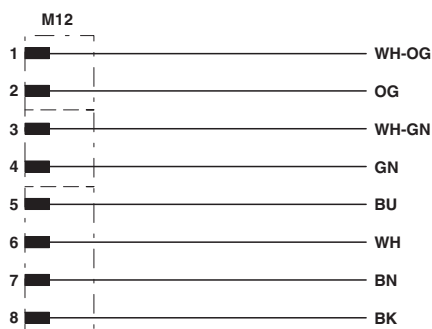
M12 hybrid connector pin assignment, 8-pos., pin side view

Cable cross section

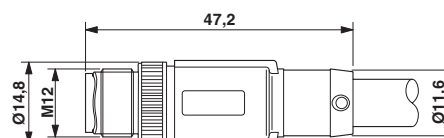


Ethernet hybrid [94H]

Circuit diagram



Dimensional drawing



M12 connector, straight, shielded

Approvals

Approvals

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Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 335024
Nominal voltage UN		56.5 V	
Nominal current IN		0.175 A	

cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 335024
Nominal voltage UN		56.5 V	
Nominal current IN		0.175 A	

cULus Listed			
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