

Network cable - VS-M8MS-IP20/93B-5,0 - 1402455

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Assembled Ethernet cable, type B, shielded, star quad, AWG 22 stranded (7-wire), RAL 6018 (yellow-green), M8 Ethernet plug to RJ45 plug/IP20, length: 5.0 m, suitable for PROFINET and EtherCAT

RoHS

Ethernet

Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4046356616126

Technical data

Dimensions

Length of cable	5 m
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Ambient conditions

Degree of protection	IP20 (RJ45 connector)
	IP67 (M8 connectors)

General data

Rated current at 40°C	1 A
Rated voltage	50 V
Number of positions	4
Signal type/category	Ethernet, 100 Mbps
	PROFINET, 100 Mbps
	EtherCAT®, 100 Mbps
Standards/regulations	M8 connector IEC 61076-2-104
Degree of pollution	3
Degree of protection	IP20

Characteristics head 1

Head type	Plug straight M8 / IP67
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Network cable - VS-M8MS-IP20/93B-5,0 - 1402455

Technical data

Characteristics head 1

No. of positions (pin connector pattern)	4 (4)
Color	black
Material (component)	CuSn (Contact)
	Ni/Au (Contact surface)
	TPU GF (Contact carriers)
	TPU, hardly inflammable, self-extinguishing (Grip)
	CuZn (nickel-plated) (Screw connection)
Shielded	yes
Insulation resistance	$\geq 100 \text{ M}\Omega$
Insertion/withdrawal cycles	≥ 100
Torque	0.2 Nm
Ambient temperature (operation)	-25 °C ... 90 °C
Type type, plug side	Plug straight
Type type, socket side	Plug, straight

Standards and Regulations

Standards/specifications	M8 connector IEC 61076-2-104
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Cable

Cable type	PROFINET PVC stranded CAT5
Cable type (abbreviation)	93B
UL AWM style	21694
Signal type/category	PROFINET CAT5 (IEC 11801), 100 Mbps
	EtherCAT® CAT5 (IEC 11801), 100 Mbps
Cable structure	1x4xAWG22/7; SF/TQ
Conductor cross section	4x 0.34 mm²
AWG signal line	22
Conductor structure signal line	7x 0.25 mm
Core diameter including insulation	1.55 mm
Wire colors	White, yellow, blue, orange
Overall twist	Star quad
Shielding	Aluminum-coated foil, tinned copper braided shield
Optical shield covering	85 %
External sheath, color	green RAL 6018
Outer sheath thickness	approx. 0.9 mm
External cable diameter D	6.5 mm $\pm 0.2 \text{ mm}$
Minimum bending radius, fixed installation	3 x D
Minimum bending radius, flexible installation	7 x D
Cable weight	67 kg/km
Outer sheath, material	PVC
Material, inner sheath	PVC
Material conductor insulation	PE

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Technical data

Cable

Conductor material	Tin-plated Cu litz wires
Insulation resistance	$\geq 500 \text{ M}\Omega \cdot \text{km}$
Loop resistance	$\leq 120.00 \text{ }\Omega/\text{km}$
Wave impedance	$100 \text{ }\Omega \pm 15 \text{ }\Omega$ (at 100 MHz)
Near end crosstalk attenuation (NEXT)	80 dB (with 1 MHz)
	76 dB (at 4 MHz)
	70 dB (at 10 MHz)
	65 dB (at 16 MHz)
	63 dB (at 20 MHz)
	60 dB (at 31.25 MHz)
	55 dB (at 62.5 MHz)
	50 dB (at 100 MHz)
Attenuation	2.1 dB (with 1 MHz)
	4 dB (at 4 MHz)
	6.3 dB (at 10 MHz)
	8 dB (at 16 MHz)
	9 dB (at 20 MHz)
	11.4 dB (at 31.25 MHz)
	16.5 dB (at 62.5 MHz)
	21.3 dB (at 100 MHz)
Signal speed	0.66 c
Signal runtime	5.3 ns/m
Coupling resistance	$\leq 20.00 \text{ m}\Omega/\text{m}$ (at 10 MHz)
Nominal voltage, cable	600 V
Test voltage Core/Core	2000 V (50 Hz, 1 min.)
Test voltage Core/Shield	2000 V (50 Hz, 1 min.)
Flame resistance	according to UL 1685 (CSA FT 4)
Resistance to oil	Resistant to oil to a limited extent
Other resistance	UV resistant According to UL 1581, Section 1200
Ambient temperature (operation)	-40 °C ... 70 °C (cable, fixed installation)
	-40 °C ... 70 °C (cable, flexible installation)
Ambient temperature (installation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-50 °C ... 70 °C

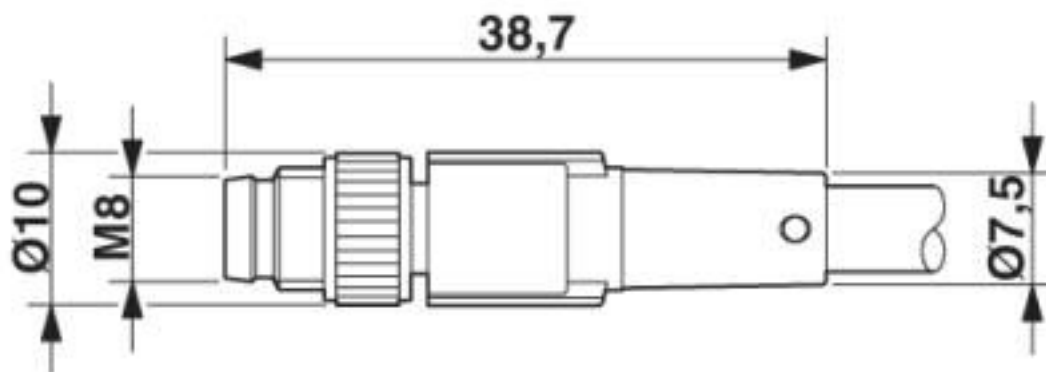
Environmental Product Compliance

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

Drawings

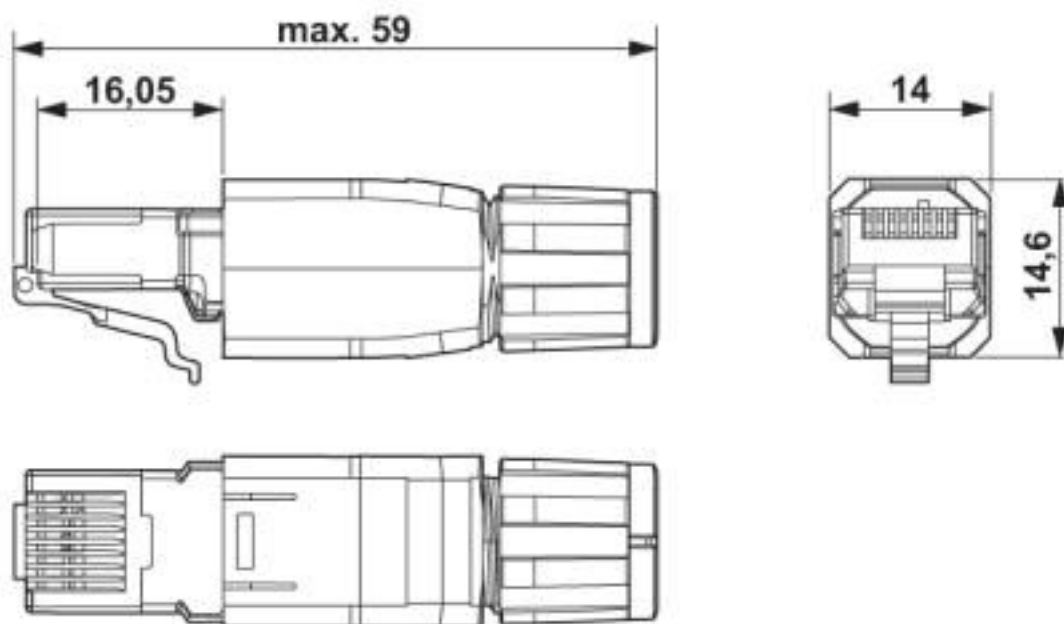
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Dimensional drawing



M8 x 1 male plug, straight version

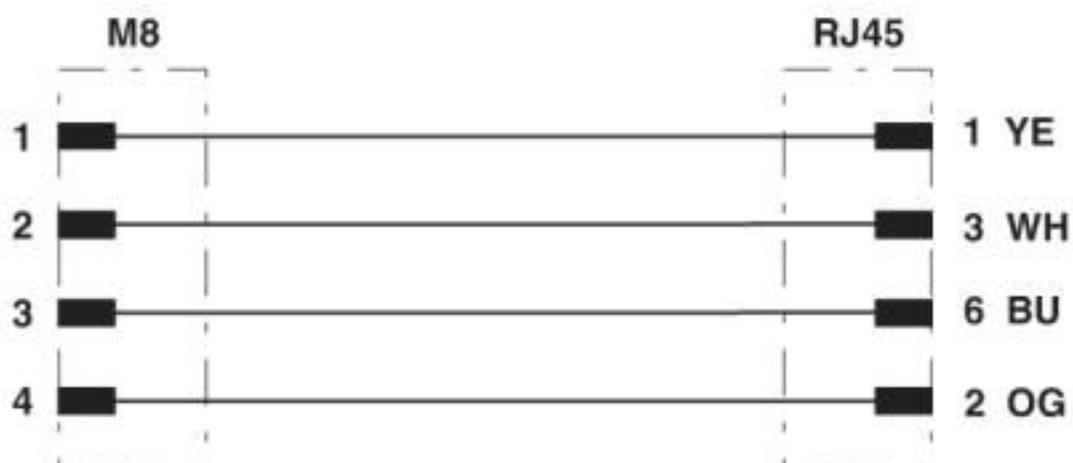
Dimensional drawing



RJ45 connector, IP20

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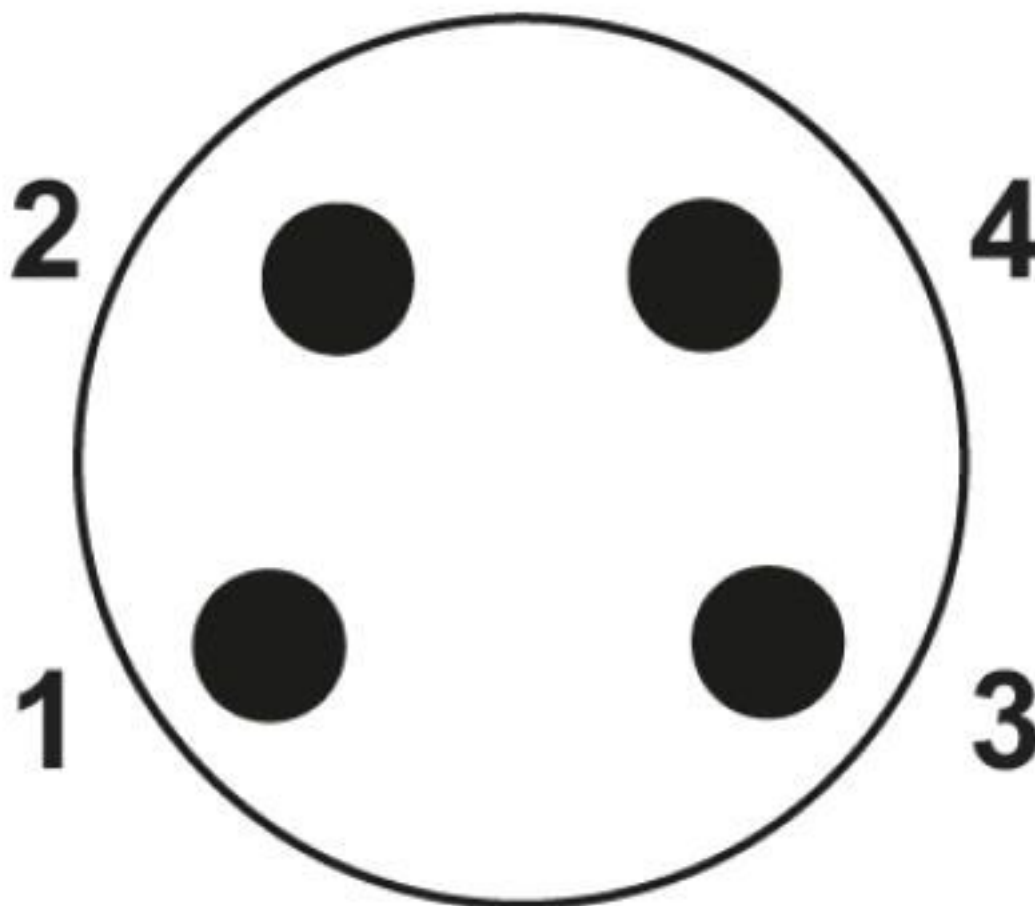
Circuit diagram



Contact assignment of the M8 and RJ45 plug

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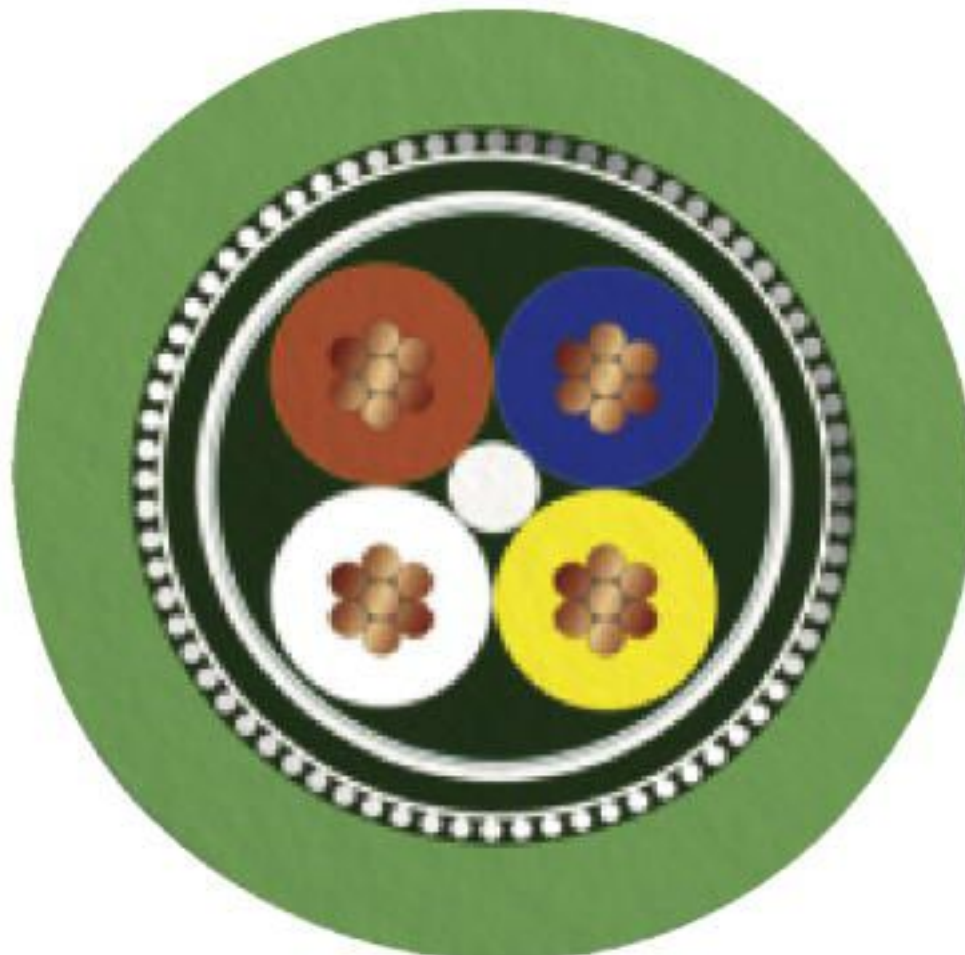
Schematic diagram



Pin assignment M8 plug, 4-pos., view male side

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Cable cross section



PROFINET PVC stranded CAT5 [93B]

Classifications

eCl@ss

eCl@ss 4.0	27060306
eCl@ss 4.1	27060306
eCl@ss 5.0	27061801
eCl@ss 5.1	27060307
eCl@ss 6.0	27060390
eCl@ss 7.0	27060390
eCl@ss 8.0	27060308
eCl@ss 9.0	27060308

Network cable - VS-M8MS-IP20/93B-5,0 - 1402455

Classifications

ETIM

ETIM 4.0	EC002599
ETIM 5.0	EC002599
ETIM 6.0	EC002599

UNSPSC

UNSPSC 6.01	26121609
UNSPSC 7.0901	26121609
UNSPSC 11	26121609
UNSPSC 12.01	26121609
UNSPSC 13.2	26121604
UNSPSC 19.0	26121604

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