

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



1402452

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Network cable, Ethernet (100 Mbps), PROFINET (100 Mbps), EtherCAT® (100 Mbps), 4-position, Plug straight M8, coding: A / IP67, on Plug straight RJ45 / IP20, cable length: 0.5 m

## Commercial data

Item number	1402452
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF02
Product key	BF1BJI
Catalog page	Page 322 (PC-2011)
GTIN	4046356616096
Weight per piece (including packing)	59.5 g
Weight per piece (excluding packing)	59.2 g
Customs tariff number	85444290
Country of origin	PL

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## Technical data

### Product properties

Product type	Data cable preassembled
Sensor type	Ethernet
Number of positions	4
Application	Standard
No. of cable outlets	1
Shielded	yes

### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### Interfaces

Signal type/category	Ethernet, 100 Mbps
	PROFINET, 100 Mbps
	EtherCAT <sup>®</sup> , 100 Mbps

### Signaling

Status display	No
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### Electrical properties

Nominal voltage $U_N$	30 V AC
	30 V DC
Nominal current $I_N$	1 A
Transmission medium	Copper
Transmission characteristics (category)	CAT5

### Material specifications

Flammability rating according to UL 94	HB
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### Connector

#### Connection 1

Type	Plug straight M8 / IP67
Number of positions	4 (4)
Coding type	A (Standard)
Shielded	yes
Handle color	black
Material	CuSn (Contact)
	Ni/Au (Contact surface)
	TPU GF (Contact carriers)
	TPU, hardly inflammable, self-extinguishing (Grip)
	CuZn (nickel-plated) (Screw connection)

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Insertion/withdrawal cycles	≥ 100
Contact resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Tightening torque	0.2 Nm
Degree of protection	IP67
Ambient temperature (operation)	-25 °C ... 90 °C
Number of positions	4
Insertion/withdrawal cycles	100

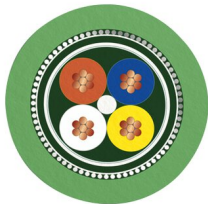
## Connection 2

Type	Plug straight RJ45 / IP20
Number of positions	4 (8)
Shielded	yes
Handle color	gray
Material	CuSn (Contact) Ni/Au (Contact surface) PC (Contact carriers) PA (Housing)
Insertion/withdrawal cycles	≥ 750
Ambient temperature (operation)	-10 °C ... 60 °C
Number of positions	4
Degree of protection	IP20

## Cable/line

Cable length	0.5 m
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## PROFINET PVC stranded CAT5 [93B]

Dimensional drawing	
Cable weight	67 kg/km
UL AWM Style	21694
Number of positions	4
Shielded	yes
Cable type	PROFINET PVC stranded CAT5 [93B]
Conductor structure	1x4xAWG22/7, SF/TQ
Signal runtime	5.3 ns/m
Signal speed	0.66 c
Conductor structure signal line	7x 0.25 mm
AWG signal line	22

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Conductor cross section	4x 0.34 mm <sup>2</sup>
Wire diameter incl. insulation	1.55 mm
External cable diameter	6.5 mm ±0.2 mm
Outer sheath, material	PVC
External sheath, color	green RAL 6018
Conductor material	Tin-plated Cu litz wires
Material wire insulation	PE
Single wire, color	white, yellow, blue, orange
Thickness, outer sheath	approx. 0.9 mm
Overall twist	Star quad
Optical shield covering	85 %
Insulation resistance	≥ 500 MΩ*km
Coupling resistance	≤ 20.00 mΩ/m (at 10 MHz)
Loop resistance	≤ 120.00 Ω/km
Wave impedance	100 Ω ±15 Ω (at 100 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.)
Minimum bending radius, fixed installation	3 x D
Minimum bending radius, flexible installation	7 x D
Smallest bending radius, fixed installation	20 mm
Smallest bending radius, movable installation	46 mm
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)
Shield 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)
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

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## Environmental and real-life conditions

### Ambient conditions

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

## Standards and regulations

### M8

Standard designation	M8 connector
Standards/specifications	IEC 61076-2-104

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

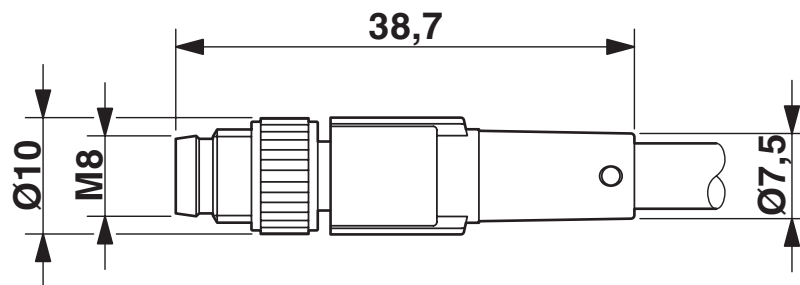


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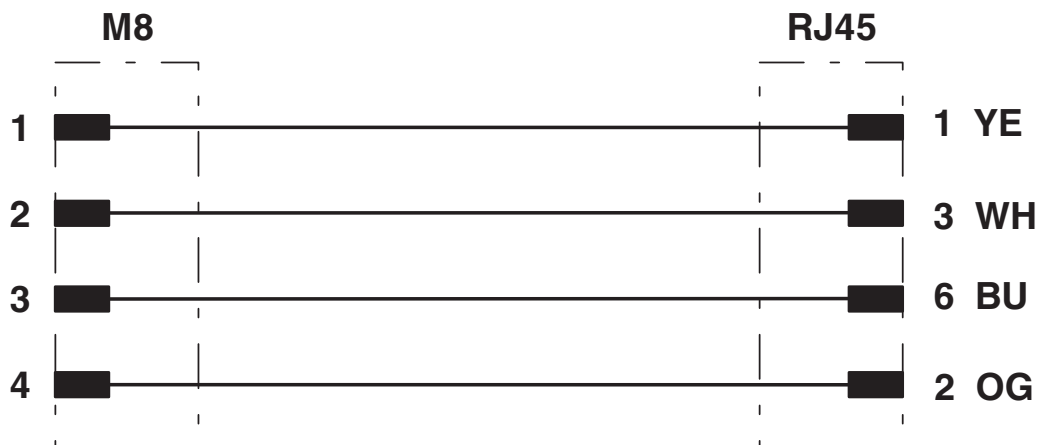
## Drawings

Dimensional drawing



M8 x 1 male plug, straight version

Circuit diagram



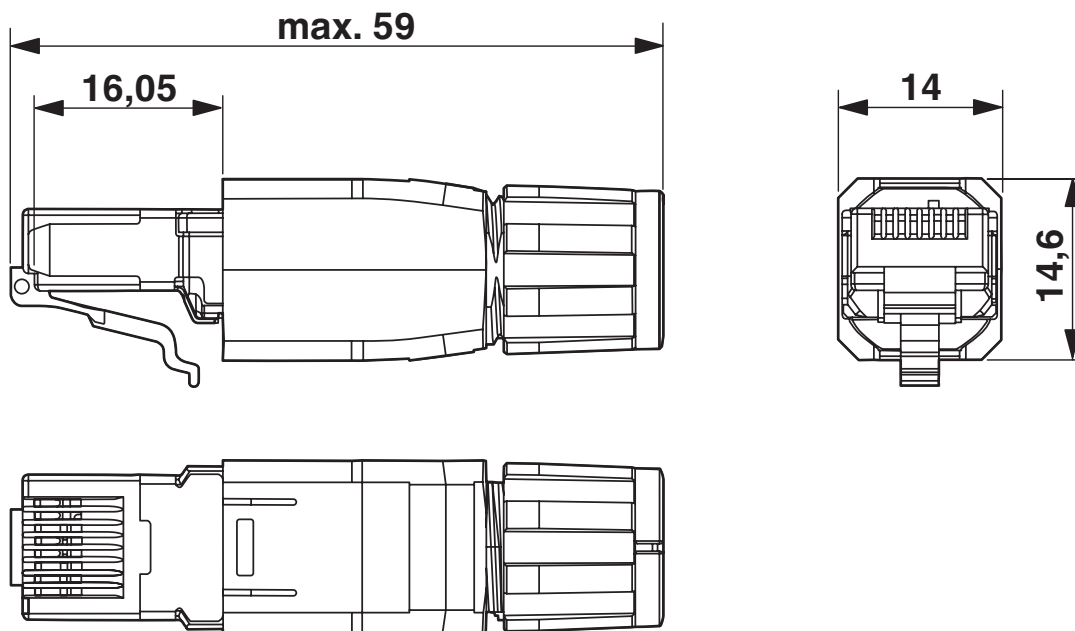
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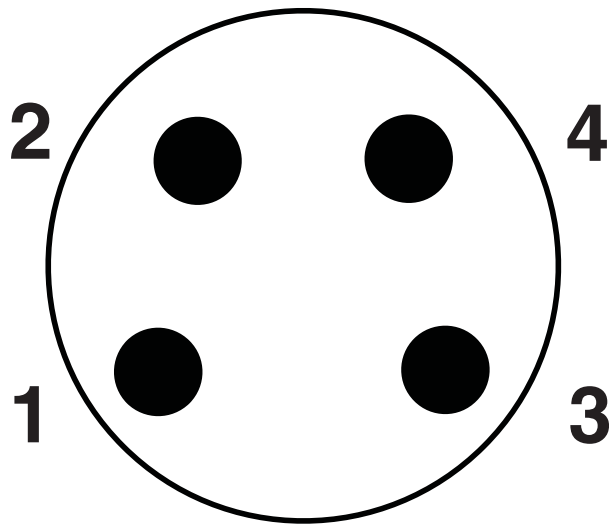


Dimensional drawing



RJ45 connector, IP20

Schematic diagram



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



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## Approvals

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**EAC-RoHS**

Approval ID: RU D-DE.HB35.B.00385

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## Classifications

### ECLASS

ECLASS-11.0	27060307
ECLASS-12.0	27060307
ECLASS-13.0	27060307

### ETIM

ETIM 8.0	EC001855
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### UNSPSC

UNSPSC 21.0	26121600
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## Environmental product compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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