

Network cable - VS-M8MS-IP20/93B-0,5 - 1402452

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Network cable, Ethernet (100 Mbps), PROFINET (100 Mbps), EtherCAT® (100 Mbps), 4-position, PVC/PVC, green RAL 6018, Plug straight M8 / IP67, coding: A, on Plug straight RJ45 / IP20, cable length: 0.5 m



Ethernet

Key Commercial Data

| | |
|--------------|---|
| Packing unit | 1 pc |
| GTIN |  4 046356 616096 |
| GTIN | 4046356616096 |

Technical data

Dimensions

| | |
|-----------------|-------|
| Length of cable | 0.5 m |
|-----------------|-------|

Ambient conditions

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

General data

| | |
|-----------------------|------------------------------|
| Rated current at 40°C | 1 A |
| Rated voltage | 30 V AC |
| | 30 V DC |
| Number of positions | 4 |
| Signal type/category | Ethernet, 100 Mbps |
| | PROFINET, 100 Mbps |
| | EtherCAT®, 100 Mbps |
| Standards/regulations | M8 connector IEC 61076-2-104 |
| Overvoltage category | II |
| Degree of pollution | 3 |
| Degree of protection | IP20 |

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Technical data

Characteristics head 1

| | |
|--|--|
| Head type | Plug straight M8 / IP67 |
| No. of positions (pin connector pattern) | 4 (4) |
| Coding | A (Standard) |
| 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 | ≥ 100 MΩ |
| Insertion/withdrawal cycles | ≥ 100 |
| Torque | 0.2 Nm |
| Ambient temperature (operation) | -25 °C ... 90 °C |
| Shielded | yes |
| Outer sheath, material | PVC |
| External sheath, color | green RAL 6018 |
| Type type, plug side | Plug straight |
| Type type, socket side | Plug, straight |

Characteristics head 2

| | |
|--|---------------------------|
| Head type | Plug straight RJ45 / IP20 |
| No. of positions (pin connector pattern) | 4 (8) |
| Color | gray |
| Material (component) | CuSn (Contact) |
| | Ni/Au (Contact surface) |
| | PC (Contact carriers) |
| | PA (Housing) |
| Shielded | yes |
| Insertion/withdrawal cycles | ≥ 750 |
| Ambient temperature (operation) | -10 °C ... 60 °C |

Standards and Regulations

| | |
|--|------------------------------|
| Standards/specifications | M8 connector IEC 61076-2-104 |
| Flammability rating according to UL 94 | HB |

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 |

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Technical data

Cable

| | |
|---|--|
| Cable structure | 1x4xAWG22/7; SF/TQ |
| Conductor cross section | 4x 0.34 mm ² |
| 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 ±0.2 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 |
| Conductor material | Tin-plated Cu litz wires |
| Insulation resistance | ≥ 500 MΩ*km |
| Loop resistance | ≤ 120.00 Ω/km |
| Wave impedance | 100 Ω ±15 Ω (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 |

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Technical data

Cable

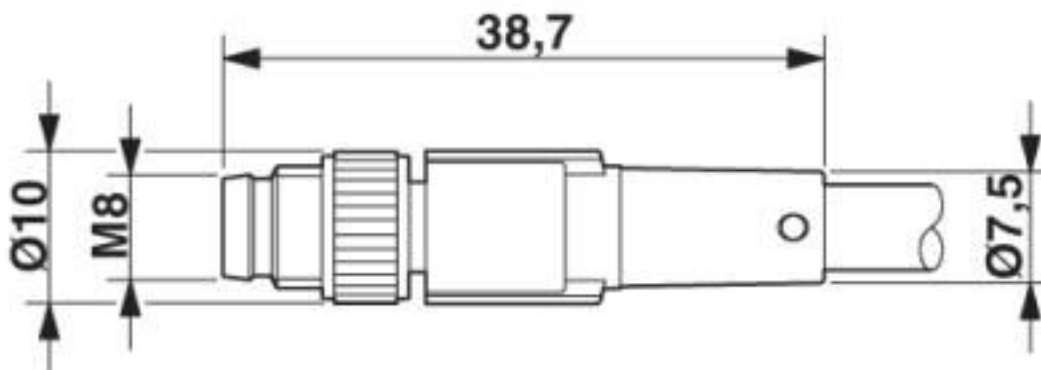
| | |
|---|---|
| Coupling resistance | ≤ 20.00 mΩ/m (at 10 MHz) |
| Nominal voltage, cable | 600 V |
| Test voltage Core/Core | 2000 V (50 Hz, 1 min.) |
| Test voltage Core/Shield | 2000 V (50 Hz, 1 min.) |
| Flame resistance | according to UL 1685 (CSA FT 4) |
| Resistance to oil | Resistant to oil 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

| | |
|------------|---|
| REACH SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally Friendly Use Period = 50 years |
| | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

Drawings

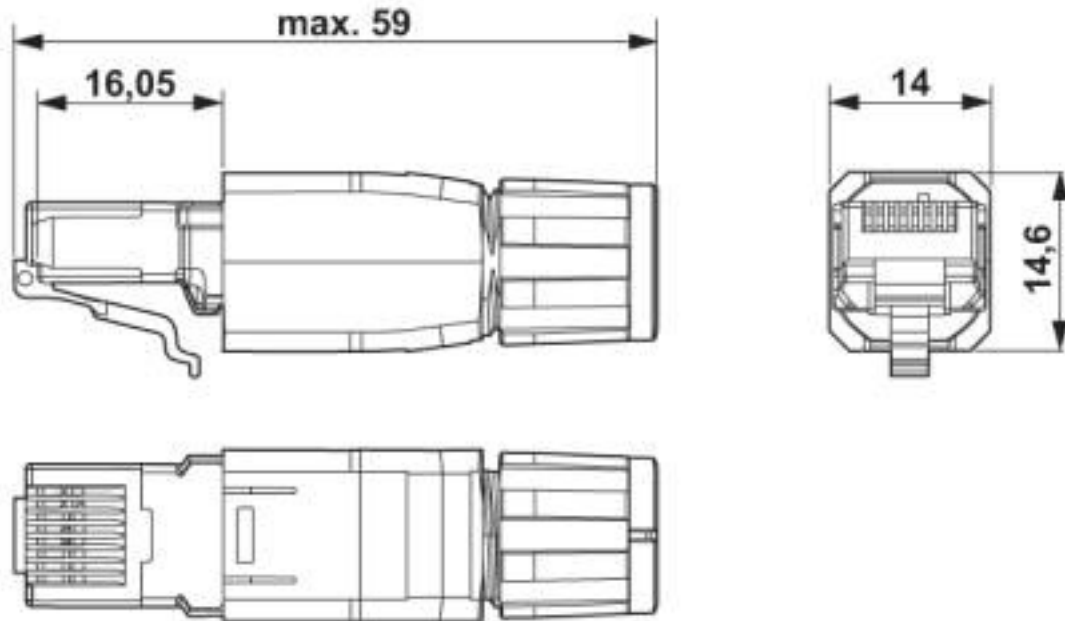
Dimensional drawing



M8 x 1 male plug, straight version

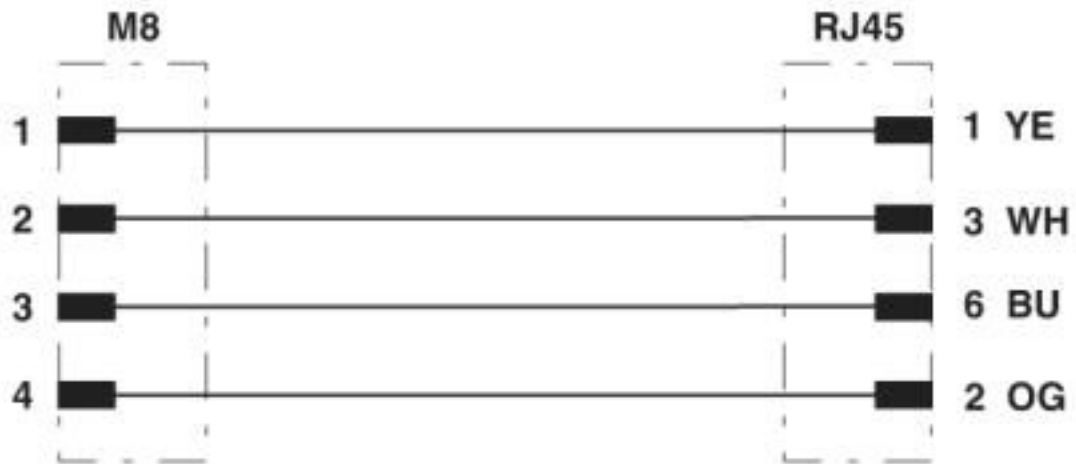
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Dimensional drawing



RJ45 connector, IP20

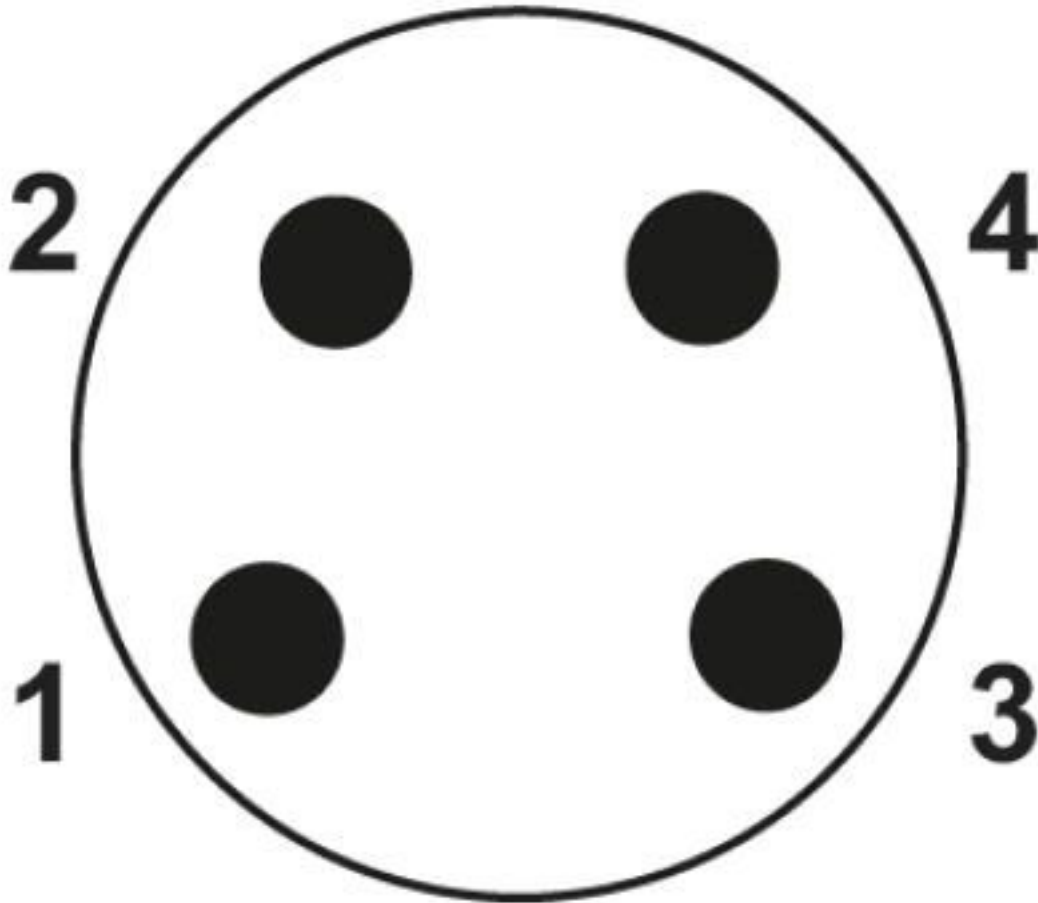
Circuit diagram



Contact assignment of the M8 and RJ45 plug

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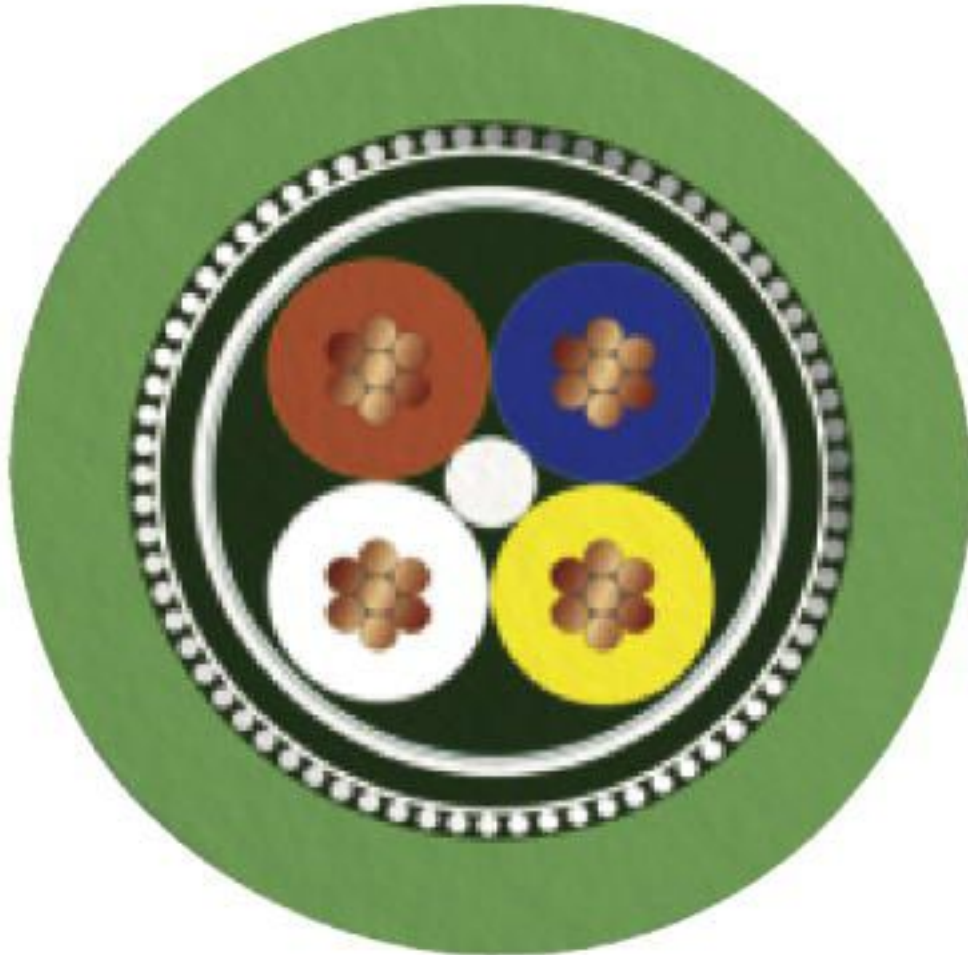
Schematic diagram



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 10.0.1 | 27060308 |
| eCl@ss 4.0 | 24010400 |
| eCl@ss 4.1 | 24010400 |
| eCl@ss 5.0 | 19030300 |
| eCl@ss 5.1 | 19030300 |
| eCl@ss 6.0 | 27060300 |
| eCl@ss 7.0 | 27060308 |
| eCl@ss 8.0 | 27060308 |
| eCl@ss 9.0 | 27060308 |

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Classifications

ETIM

| | |
|----------|----------|
| ETIM 4.0 | EC002599 |
| ETIM 5.0 | EC002599 |
| ETIM 6.0 | EC001262 |
| ETIM 7.0 | EC001262 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 26121609 |
| UNSPSC 7.0901 | 26121609 |
| UNSPSC 11 | 26121609 |
| UNSPSC 12.01 | 26121609 |
| UNSPSC 13.2 | 26121604 |
| UNSPSC 18.0 | 26121604 |
| UNSPSC 19.0 | 26121604 |
| UNSPSC 20.0 | 26121604 |
| UNSPSC 21.0 | 26121604 |

Approvals

Approvals

Approvals

EAC-RoHS

Ex Approvals

Approval details

| | | |
|----------|--|--------------------------|
| EAC-RoHS | | RU D- DE.HB35.B.00385 |
|----------|--|--------------------------|

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