

VS-M12MSD-M12FSDX-93E/16,0 - Bus system cable



1420427

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Bus system cable, Ethernet CAT5, 4-position, PUR halogen-free, water blue RAL 5021, shielded, Plug straight M12, coding: D, on Socket straight M12, coding: D, cable length: 16 m, Crossover

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1420427 |
| Packing unit | 1 pc |
| Minimum order quantity | 25 pc |
| Product key | AF1CJI |
| GTIN | 4046356570824 |
| Weight per piece (including packing) | 725.095 g |
| Weight per piece (excluding packing) | 715.172 g |
| Country of origin | PL |

Technical data

Product properties

| | |
|----------------------|-------------------------|
| Product type | Data cable preassembled |
| Number of positions | 4 |
| No. of cable outlets | 1 |
| Shielded | yes |
| Coding | D |

Insulation characteristics

| | |
|----------------------|----|
| Overvoltage category | II |
| Degree of pollution | 3 |

Interfaces

| | |
|----------------------|--------------------------------|
| Bus system | Ethernet |
| Signal type/category | Ethernet CAT5 (IEC 11801:2002) |

Signaling

| | |
|------------------------|----|
| Status display | no |
| Status display present | no |

Electrical properties

| | |
|---|--|
| Insulation resistance | ≥ 100 MΩ |
| Nominal voltage U_N | 48 V AC |
| | 60 V DC |
| Nominal current I_N | 4 A (Plug/socket in accordance with IEC 61076-2-101, cable technical data is to be observed) |
| Transmission characteristics (category) | CAT5 (IEC 11801:2002) |

Material specifications

| | |
|--|-----|
| Flammability rating according to UL 94 | V0 |
| Seal material | NBR |

Connector

Connection 1

| | |
|-------------|---|
| Type | Plug straight M12 |
| Coding type | D (Data) |
| Material | CuZn (Contact) |
| | Ni/Au (Contact surface) |
| | PA (Contact carrier) |
| | TPU, hardly inflammable, self-extinguishing (Grip body) |
| | Zinc die-cast, nickel-plated (Screw connection) |

Connection 2

| | |
|------|---------------------|
| Type | Socket straight M12 |
|------|---------------------|

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| | |
|-------------|----------|
| Coding type | D (Data) |
|-------------|----------|

Cable/line

| | |
|--------------|------|
| Cable length | 16 m |
|--------------|------|

Ethernet flexible CAT5, 2-pair [93E]

| | |
|---------------------------------|--|
| Dimensional drawing |  |
| Cable weight | 42 kg/km |
| UL AWM Style | 20963 (80°C/30 V) |
| Wiring standards/regulations | Electrical requirements EN 50288-2-2 |
| Number of positions | 4 |
| Shielded | yes |
| Cable type | Ethernet flexible CAT5, 2-pair [93E] |
| Conductor structure | 2x2xAWG26/7, SF/UTP |
| Signal runtime | 5.3 ns/m |
| Conductor structure signal line | 7x 0.16 mm |
| AWG signal line | 26 |
| Conductor cross-section | 2x 2x 0.14 mm ² |
| Wire diameter incl. insulation | 0.98 mm |
| External cable diameter | 6.40 mm ±0.2 mm |
| Outer sheath, material | PUR |
| External sheath, color | water blue RAL 5021 |
| Conductor material | Bare Cu litz wires |
| Material wire insulation | Foamed PE |
| Single wire, color | white/orange-orange, white/green-green |
| Thickness, outer sheath | 1.20 mm |
| Twisted pairs | 2 cores to the pair |
| Overall twist | Two pairs with two fillers to the core |
| Optical shield covering | 70 % |
| Insulation resistance | ≥ 500 MΩ*km |
| Coupling resistance | ≤ 100.00 mΩ/m (at 10 MHz) |
| Loop resistance | ≤ 290.00 Ω/km |
| Wave impedance | 100 Ω ±5 Ω (at 100 MHz) |
| Cable capacity | approx. 45 nF/km (at 1 kHz) |
| Nominal voltage, cable | ≤ 100 V (Peak value, not for high-power applications) |
| Test voltage Core/Core | 700 V (50 Hz, 1 min.) |
| Test voltage Core/Shield | 700.00 V (50 Hz, 1 min.) |

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| | |
|--|--|
| Current carrying capacity of cable | 2.00 A (according to DIN VDE 0891-1) |
| Minimum bending radius, fixed installation | 4 x D |
| Minimum bending radius, flexible installation | 8 x D |
| Smallest bending radius, fixed installation | 26 mm |
| Smallest bending radius, movable installation | 52 mm |
| Tensile strength | ≤ 80 N |
| Near end crosstalk attenuation (NEXT) | 65.3 dB (with 1 MHz) |
| | 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) |
| Power-summated near end crosstalk attenuation (PSNEXT) | 62.3 dB (with 1 MHz) |
| | 53.3 dB (at 4 MHz) |
| | 47.3 dB (at 10 MHz) |
| | 44.2 dB (at 16 MHz) |
| | 42.8 dB (at 20 MHz) |
| | 39.9 dB (at 31.25 MHz) |
| | 35.4 dB (at 62.5 MHz) |
| | 32.3 dB (at 100 MHz) |
| Return attenuation (RL) | 23 dB (at 4 MHz) |
| | 24.1 dB (at 8 MHz) |
| | 25 dB (at 10 MHz) |
| | 25 dB (at 16 MHz) |
| | 25 dB (at 20 MHz) |
| | 23.6 dB (at 31.25 MHz) |
| | 21.5 dB (at 62.5 MHz) |
| | 20.1 dB (at 100 MHz) |
| Shield attenuation | 3.2 dB (with 1 MHz) |
| | 6 dB (at 4 MHz) |
| | 9.5 dB (at 10 MHz) |
| | 12.1 dB (at 16 MHz) |
| | 13.6 dB (at 20 MHz) |
| | 17.1 dB (at 31.25 MHz) |
| | 24.8 dB (at 62.5 MHz) |
| | 32 dB (at 100 MHz) |
| Halogen-free | according to IEC 60754-1 |
| Flame resistance | according to IEC 60332-1-2 |
| | in acc. to UL VW1 |
| | in accordance with UN ECE-R 118.03 |
| Resistance to oil | in accordance with EN 60811-2-1 |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation) |

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| | |
|------------------------------------|---|
| | -20 °C ... 80 °C (Cable, flexible installation) |
| Ambient temperature (installation) | -20 °C ... 80 °C |

Environmental and real-life conditions

Ambient conditions

| | |
|---------------------------------|---|
| Degree of protection | IP65 |
| | IP67 |
| | IP65/IP67/IP69K |
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket) |
| | -20 °C ... 70 °C (cable, fixed installation) |
| | 0 °C ... 50 °C (Cable, flexible installation) |

Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing

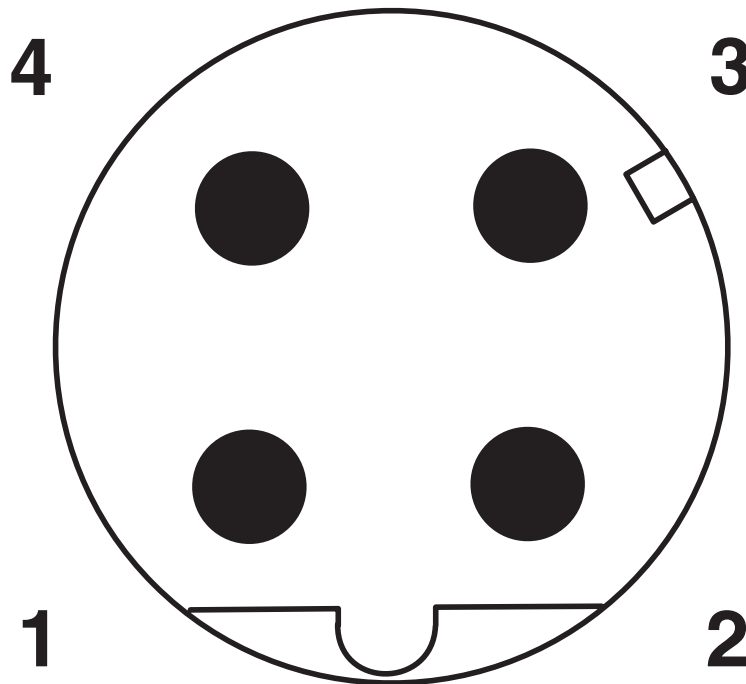


M12 x 1 socket, straight, shielded

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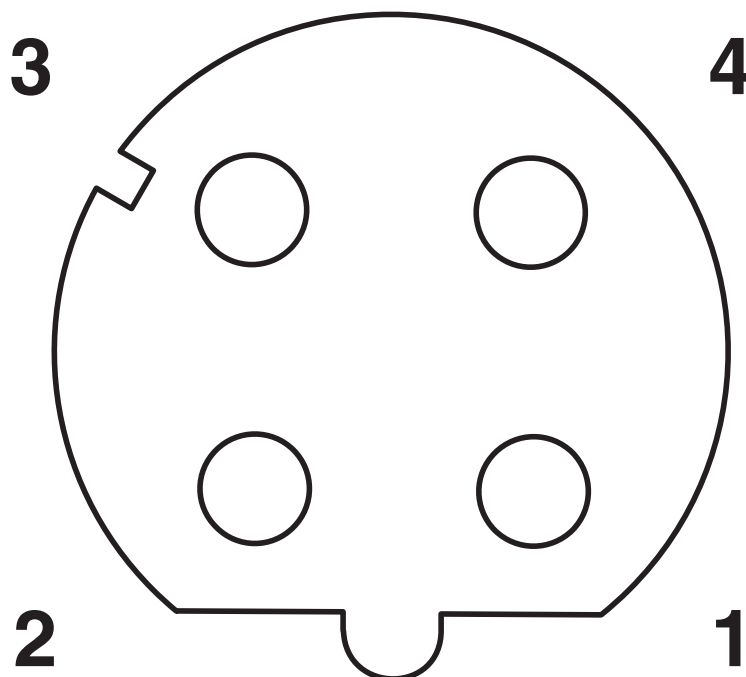
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Schematic diagram



Pin assignment M12 male connector, 4-pos., D-coded, male side

Schematic diagram

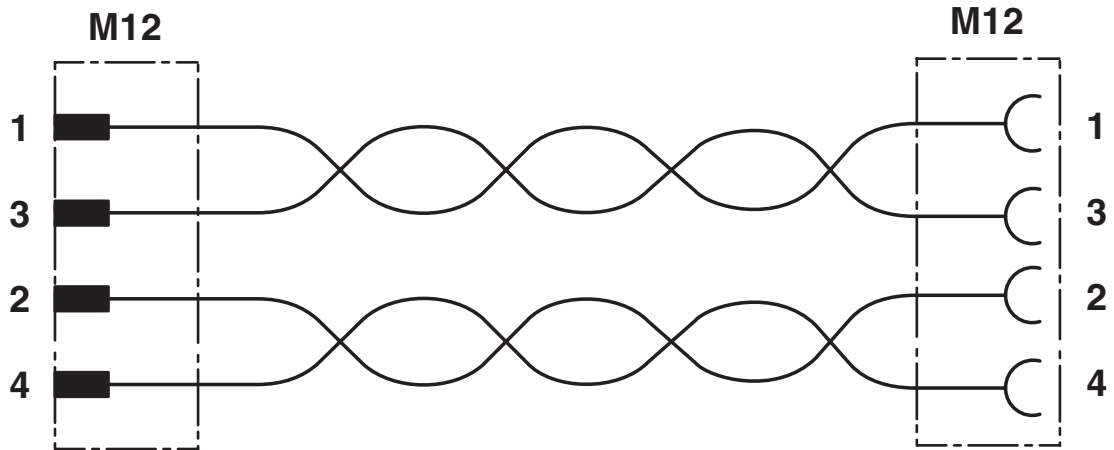


Pin assignment M12 socket, 4-pos., D-coded, female side

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Circuit diagram



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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27060307 |
| ECLASS-15.0 | 27060307 |

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