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# SPE-T1-M8FSF/2,0-99B/M8FSF - Network cable

1217320

https://www.phoenixcontact.com/gb/products/1217320

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Network cable, Single Pair Ethernet CAT B (1 Gbps), 2-position, PUR halogen-free, green, shielded (Advanced Shielding Technology), Socket straight M8-SPE / IP67, on Socket straight M8-SPE / IP67, cable length: 2 m

## Product description

Single Pair Ethernet M8 patch cable

## Your advantages

- Future-proof: standardized connectors in accordance with IEC 63171-5 (IP67)
- Easily integrated: Male and female versions for established inductive sensors and flying leads
- Efficient: Device connectors for SMD, THR, and wave soldering processes enable automated processing
- Straightforward servicing: M8 connectors are compatible with IP20 connectors for SPE
- Safely shielded: patch cables with Advanced Shielding Technology

## Commercial data

| | |
|---|---|
| Item number | 1217320 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | AF1BJI |
| Product key | AF1BJI |
| GTIN | 4063151299378 |
| Weight per piece (including packing) | 115.8 g |
| Weight per piece (excluding packing) | 115.7 g |
| Country of origin | PL |

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## Technical data

### Product properties

| | |
|---|---|
| Product type | Data cable preassembled |
| Application | Standard |
| Sensor type | Single Pair Ethernet |
| Number of positions | 2 |
| No. of cable outlets | 1 |
| Shielded | yes |

Insulation characteristics

| | |
|---|---|
| Overvoltage category | I |

### Interfaces

| | |
|---|---|
| Bus system | Ethernet |
| Signal type/category | Single Pair Ethernet CAT B (ISO/IEC 63171), 1 Gbps |

### Signaling

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

### Electrical properties

| | |
|---|---|
| Nominal voltage $U_N$ | 72 V DC |
| Transmission medium | Copper |

### Material specifications

| | |
|---|---|
| Flammability rating according to UL 94 | V0 |

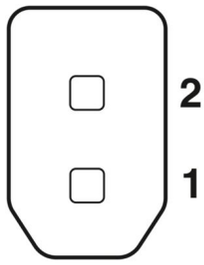
### Connection data

Pin assignment

| | |
|---|---|
| Contact \| Color (signal designation) \| Contact (optional) | 1 \| WH (RX/TX+) \| 1 |
| | 2 \| BU (RX/TX-) \| 2 |

### Connector

Connection 1

| | |
|---|---|
| Dimensional drawing |  |

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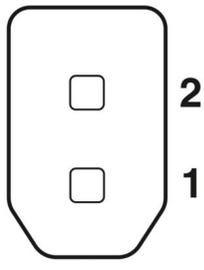
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| | |
|---|---|
| | Pin assignment, Single Pair Ethernet, 2 pos. |
| Type | M8 Socket, straight, 2-position, shielded (Advanced Shielding Technology), Keying: SPE |
| Number of positions | 2 |
| Shielded | yes |
| Shielding | Advanced Shielding Technology |
| Signal type/category | Single Pair Ethernet CAT B (IEC 63171) |
| Insertion/withdrawal cycles | ≥ 100 |
| Insulation resistance | ≥ 100 MΩ |
| Overvoltage category | II |
| Degree of pollution | 3 |
| Tightening torque | 0.2 Nm |
| Material Contact | Cu |
| Material Contact surface | Ni/Au |
| Material Contact carrier | PP |
| Material Screw connection | Die-cast zinc, nickel-plated |
| Material Grip body | TPU, hardly inflammable, self-extinguishing |
| Material Seal | FKM |
| Flammability rating according to UL 94 | V0 |
| Degree of protection | IP65 |
| | IP67 |
| Ambient temperature (operation) | -25 °C ... 85 °C |
| Standard designation | M8 connector |
| Standards/regulations | IEC 63171-5 |

Connection 2

| | |
|---|---|
| Dimensional drawing | <br>Pin assignment, Single Pair Ethernet, 2 pos. |
| Type | M8 Socket, straight, 2-position, shielded (Advanced Shielding Technology), Keying: SPE |
| Number of positions | 2 |
| Shielded | yes |
| Shielding | Advanced Shielding Technology |
| Signal type/category | Single Pair Ethernet CAT B (IEC 63171) |
| Insertion/withdrawal cycles | ≥ 100 |
| Insulation resistance | ≥ 100 MΩ |

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| | IP67 |
| Ambient temperature (operation) | -25 °C ... 85 °C |
| Standard designation | M8 connector |
| Standards/regulations | IEC 63171-5 |

## Cable/line

| | |
|---|---|
| Cable length | 2 m |

Single Pair Ethernet PUR flexible, green [99B]

| | |
|---|---|
| Dimensional drawing |  |
| UL AWM Style | 20233 (80°C/300 V) |
| Number of positions | 2 |
| Shielded | yes |
| Cable type | Single Pair Ethernet PUR flexible, green [99B] |
| Conductor structure | 1 x 2 x AWG 22/7, S/FTP |
| AWG signal line | 22 |
| Conductor cross section | 2x 0.34 mm² |
| Wire diameter incl. insulation | 1.6 mm |
| External cable diameter | 5.50 mm ±0.1 mm |
| Outer sheath, material | PUR |
| External sheath, color | green |
| Conductor material | Bare Cu litz wires |
| Material wire insulation | Foamed PE |
| Single wire, color | white, blue |
| Twisted pairs | 2 cores to the pair |
| Overall twist | 1 pair with fillers twisted horizontally |

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| | |
|---|---|
| Optical shield covering | 90 % |
| Insulation resistance | ≥ 5 GΩ*km |
| Loop resistance | ≤ 120.00 Ω/km |
| Wave impedance | 100 Ω ±5 Ω (at 100 MHz) |
| Nominal voltage, cable | ≤ 100 V |
| Test voltage Core/Core | 2000 V (50 Hz, 1 min.) |
| Test voltage Core/Shield | 2000.00 V (50 Hz, 1 min.) |
| Minimum bending radius, fixed installation | 4 x D |
| Minimum bending radius, flexible installation | 8 x D |
| Smallest bending radius, fixed installation | 22 mm |
| Smallest bending radius, movable installation | 44 mm |
| Halogen-free | according to IEC 60754-1 |
| Flame resistance | according to IEC 60332-1-2 |
| | UL 1581, Sec. 1061 (Cable Flame) |
| | according to CSA FT1 |
| Resistance to oil | in accordance with DIN EN 60811-404 |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation) |
| | -25 °C ... 80 °C (Cable, flexible installation) |
| | -25 °C ... 80 °C (for installation) |

## Environmental and real-life conditions

### Ambient conditions

| | |
|---|---|
| Degree of protection | IP65 |
| | IP67 |

## Standards and regulations

### M8

| | |
|---|---|
| Standard designation | M8 connector |
| Standards/specifications | IEC 63171-5 |
| Note | T1-SPE |

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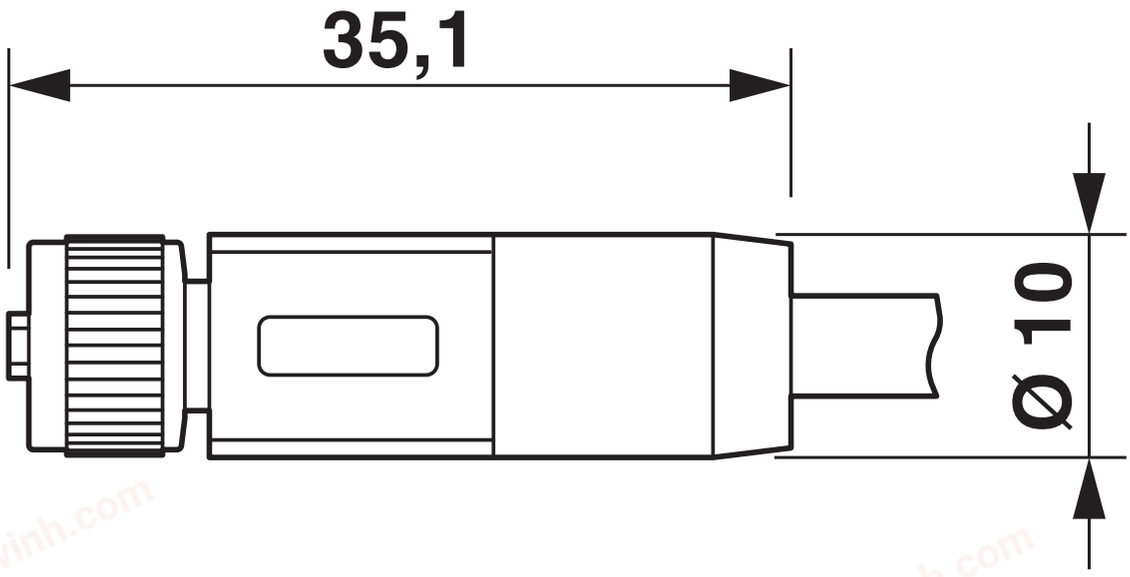
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## Drawings

Dimensional drawing




M8FSF

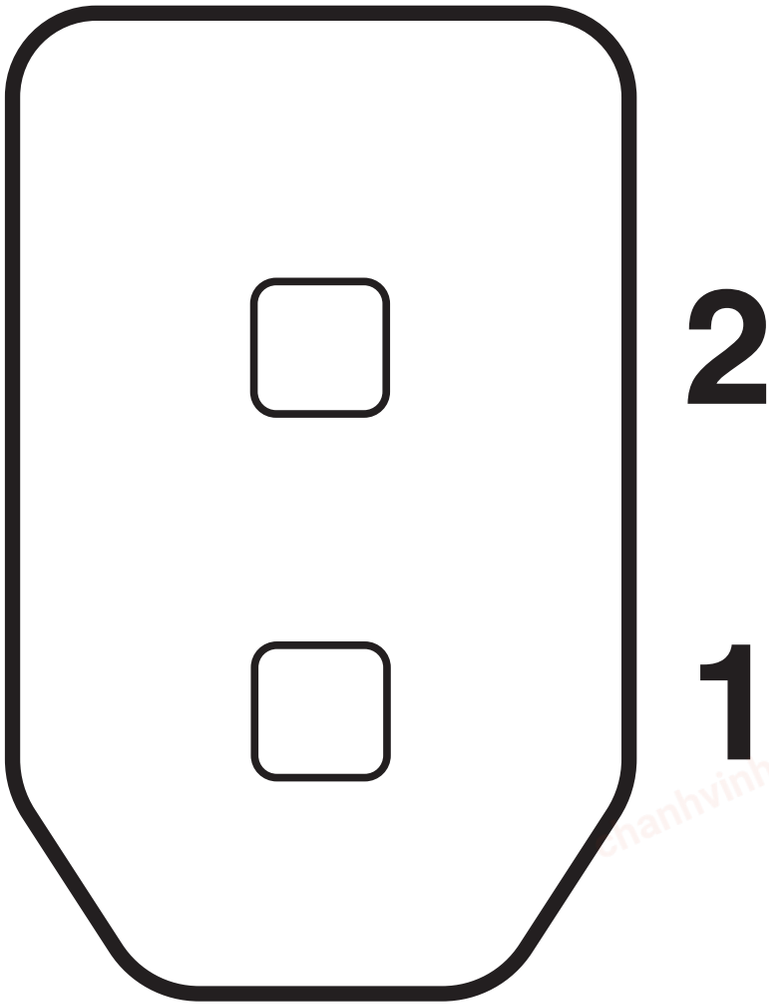
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Schematic diagram




Pin assignment, Single Pair Ethernet, 2 pos.

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## Classifications

### ECLASS

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

### ETIM

| | |
|---|---|
| ETIM 9.0 | EC001855 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 26121600 |

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## Environmental product compliance

EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |

China RoHS

| | |
|---|---|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|---|---|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |

EF3.0 Climate Change

| | |
|---|---|
| CO2e kg | 9.575 kg CO2e |

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