

# SPE-T1-M8MSM/2,0-99B/M8MSM - Network cable



1217316

<https://www.phoenixcontact.com/us/products/1217316>

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Network cable, Single Pair Ethernet CAT B (1 Gbps), 2-position halogen-free, shielded (Advanced Shielding Technology), Plug straight M8-SPE / IP67, on Plug 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                          | 1217316                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF02                           |
| Product key                          | BF1BJI                         |
| GTIN                                 | 4063151299699                  |
| Weight per piece (including packing) | 116.4 g                        |
| Weight per piece (excluding packing) | 116.4 g                        |
| Customs tariff number                | 85444290                       |
| Country of origin                    | PL                             |

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## Technical data

### Product properties

|                      |                         |
|----------------------|-------------------------|
| Product type         | Data cable preassembled |
| Sensor type          | Single Pair Ethernet    |
| Number of positions  | 2                       |
| Application          | Standard                |
| 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

|                                 |                             |
|---------------------------------|-----------------------------|
| Type                            | Plug straight M8-SPE / IP67 |
| Shielded                        | yes                         |
| Insertion/withdrawal cycles     | ≤ 100                       |
| Degree of protection            | IP67                        |
| Ambient temperature (operation) | -25 °C ... 85 °C            |

#### Connection 2

|          |                             |
|----------|-----------------------------|
| Type     | Plug straight M8-SPE / IP67 |
| Shielded | yes                         |

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|                                 |                  |
|---------------------------------|------------------|
| Insertion/withdrawal cycles     | ≤ 100            |
| Degree of protection            | IP67             |
| Ambient temperature (operation) | -25 °C ... 85 °C |

## Cable/line

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

Single Pair Ethernet PUR flexible, green [99B]

|  |  |
|--|--|
| Dimensional drawing                        |  |
| Cable weight                               | 42 kg/km   |
| 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  |
| Conductor structure signal line            | 7x   |
| AWG signal line                            | 22   |
| Conductor cross section                    | 2x 0.34 mm <sup>2</sup>  |
| Wire diameter incl. insulation             | 1.8 mm   |
| External cable diameter                    | 5.8 mm ±0.3 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  |
| Thickness, outer sheath                    | 0.8 mm   |
| Twisted pairs                              | 2 cores to the pair  |
| Overall twist                              | 1 pair with fillers twisted horizontally   |
| Optical shield covering                    | 90 %   |
| Insulation resistance                      | ≥ 5 GΩ*km  |
| Loop resistance                            | ≤ 120.00 Ω/km  |
| Wave impedance                             | 100 Ω ±5 Ω (at 100 MHz)  |
| Cable capacity                             | 48 nF/km   |
| Nominal voltage, cable                     | ≤ 100 V  |
| Test voltage Core/Core                     | 1000 V (50 Hz, 1 min.)   |
| Test voltage Core/Shield                   | 1000 V (50 Hz, 1 min.)   |
| Minimum bending radius, fixed installation | 4 x D  |

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|   |   |
|---|---|
| Minimum bending radius, flexible installation | 8 x D   |
| Smallest bending radius, fixed installation   | 24 mm   |
| Smallest bending radius, movable installation | 47 mm   |
| Flame resistance                              | according to IEC 60332-1-2                      |
| 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

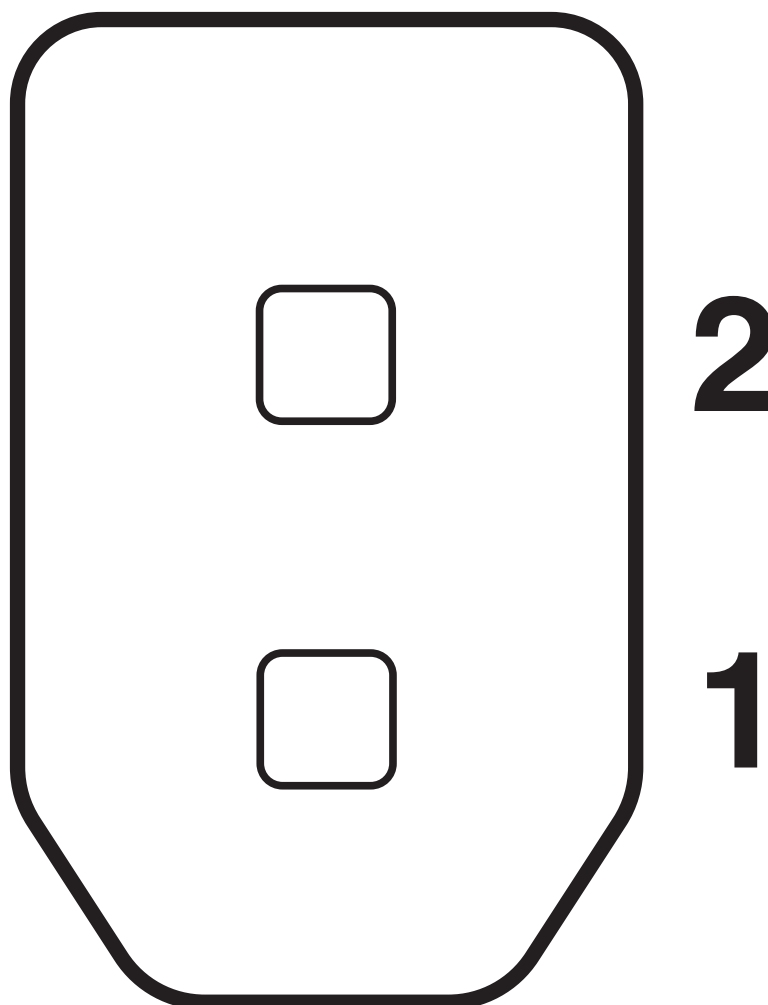
|                          |              |
|--------------------------|--------------|
| Standard designation     | M8 connector |
| Standards/specifications | IEC 63171-5  |
| Note                     | T1-SPE       |

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## Drawings

Schematic diagram

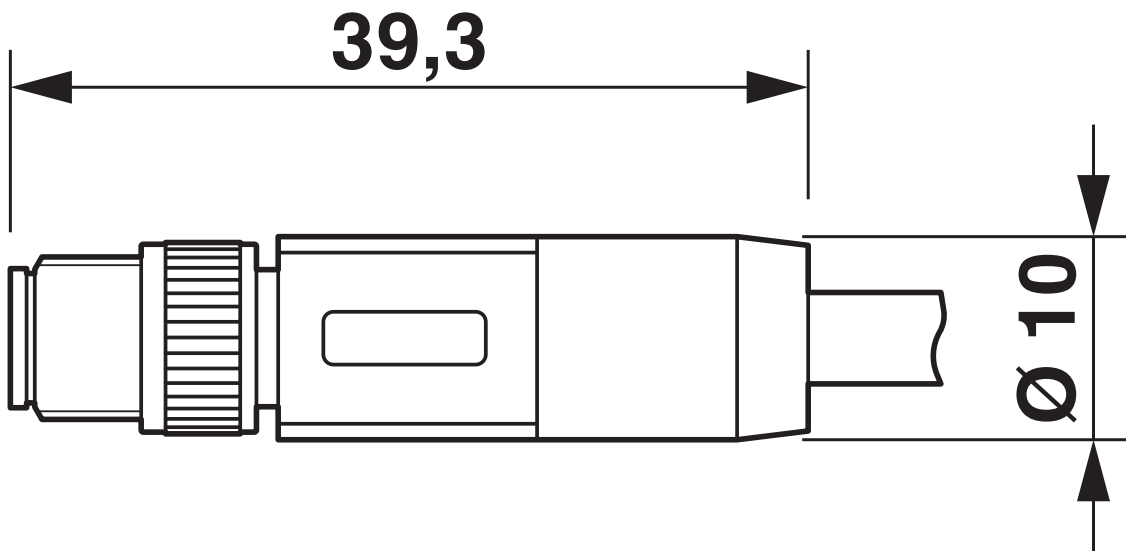


Pin assignment, Single Pair Ethernet, 2 pos.

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Dimensional drawing



M8MSM

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## Classifications

### ECLASS

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

### ETIM

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

### UNSPSC

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

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## Environmental product compliance

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

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