

SPE-T1-M12MS/ 5,0-99B/M12FS - Network cable



1478373

<https://www.phoenixcontact.com/us/products/1478373>

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Network cable, Single Pair Ethernet CAT B (1 Gbps), 2-position, PUR halogen-free, green, shielded (Advanced Shielding Technology), Plug straight M12-SPE / IP67, on Socket straight M12-SPE / IP67, cable length: 5 m

Product description

Single Pair Ethernet M12 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
- Straightforward servicing: M12 connectors are compatible with IP20 connectors for SPE
- Safely shielded: patch cables with Advanced Shielding Technology

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 1478373 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | BF02 |
| Product key | AF1BJI |
| GTIN | 4063151893279 |
| Weight per piece (including packing) | 270 g |
| Weight per piece (excluding packing) | 22.22 g |
| Customs tariff number | 85444290 |
| Country of origin | PL |

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

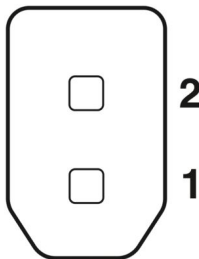
| | |
|-----------------------|--------------|
| Nominal voltage U_N | 72 V DC |
| Transmission medium | Copper |
| Transmission speed | up to 1 Gbps |

Material specifications

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

Connector

Connection 1

| | |
|---------------------|--|
| Dimensional drawing |  <p>Pin assignment, Single Pair Ethernet, 2 pos.</p> |
| Type | Plug, 2-position, shielded (Advanced Shielding Technology) |
| Number of positions | 2 |
| Shielded | yes |

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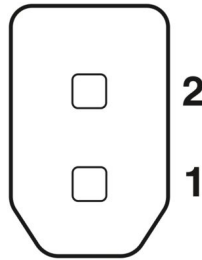


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| | |
|--|--|
| Shielding | Advanced Shielding Technology |
| Signal type/category | Single Pair Ethernet CAT B (ISO/IEC 63171), 1 Gbps |
| Overvoltage category | II |
| Degree of pollution | 3 |
| Tightening torque | 0.4 Nm |
| Material Contact | 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 |
| Ambient temperature (operation) | -25 °C ... 85 °C |
| Standard designation | M12 connector |
| Standards/regulations | IEC 63171-5 |

Connection 2

| | |
|--|--|
| Dimensional drawing |  <p>Pin assignment, Single Pair Ethernet, 2 pos.</p> |
| Type | Socket, 2-position, shielded (Advanced Shielding Technology) |
| Number of positions | 2 |
| Shielded | yes |
| Shielding | Advanced Shielding Technology |
| Signal type/category | Single Pair Ethernet CAT B (ISO/IEC 63171), 1 Gbps |
| Overvoltage category | II |
| Degree of pollution | 3 |
| Tightening torque | 0.4 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 |
| Ambient temperature (operation) | -25 °C ... 85 °C |
| Standard designation | M12 connector |
| Standards/regulations | IEC 63171-5 |

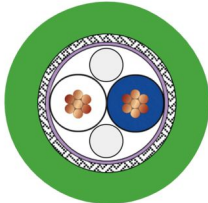
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Cable/line

| | |
|--|--|
| Cable length | 5 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 mm ² |
| 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 |
| 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 |

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| | |
|---------------------------------|---|
| 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

| | |
|--------------------------|---------------|
| Standard designation | M12 connector |
| Standards/specifications | IEC 63171-5 |
| Note | T1-SPE |

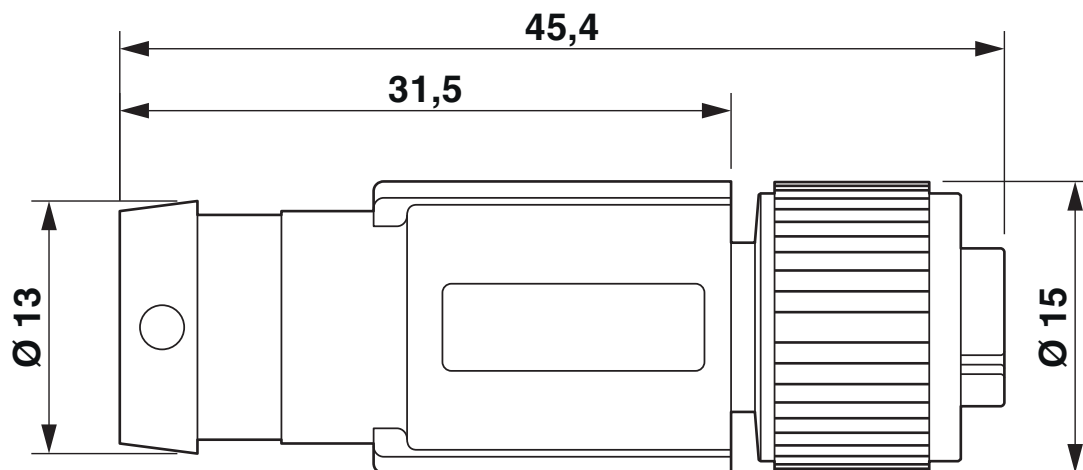
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing

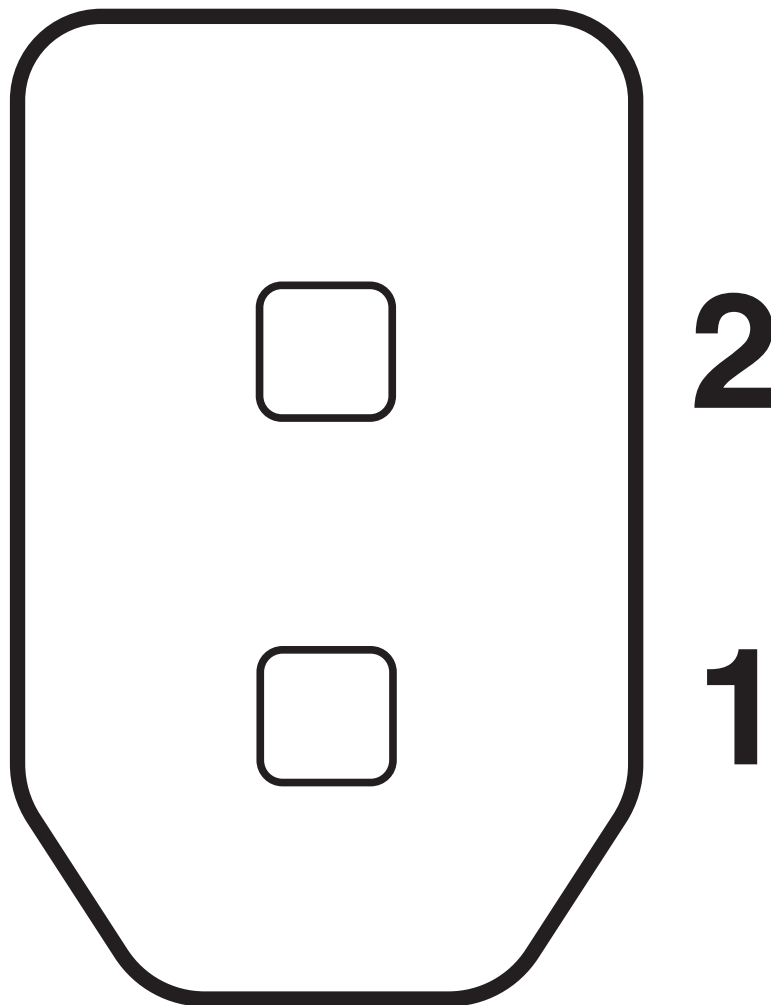


M12 x 1 socket, straight, shielded

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Schematic diagram



Pin assignment, Single Pair Ethernet, 2 pos.

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Classifications

ECLASS

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

ETIM

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

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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 | 21.162 kg CO2e |
|---------|----------------|

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