# NBC-M12MSD/ 1,0-93E/R4AC - Network cable

1407360

https://www.phoenixcontact.com/us/products/1407360

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Network cable, Ethernet CAT5 (100 Mbps), 4-position, PUR halogen-free, water blue RAL 5021, shielded (Advanced Shielding Technology), Plug straight M12, coding: D / IP67, on Plug straight RJ45 / IP20, cable length: 1 m

## Commercial data

| | |
|---|---|
| Item number | 1407360 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | BF04 |
| Product key | AF1CJI |
| GTIN | 4046356774888 |
| Weight per piece (including packing) | 66 g |
| Weight per piece (excluding packing) | 70 g |
| Customs tariff number | 85444290 |
| Country of origin | PL |

## Technical data

### Notes

| | |
|---|---|
| General | Further products with variable cable type and variable cable length can be found in the accessories section |

### Product properties

| | |
|---|---|
| Product type | Data cable preassembled |
| Application | Standard |
| Number of positions | 4 |
| Shielded | yes |

### Interfaces

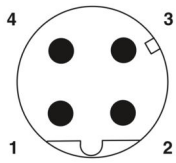
| | |
|---|---|
| Signal type/category | Ethernet CAT5 (IEC 11801), 100 Mbps |

### Electrical properties

| | |
|---|---|
| Nominal voltage $U_N$ | 48 V AC |
| | 60 V DC |
| Nominal current $I_N$ | 1 A |
| Transmission medium | Copper |
| Transmission speed | 100 Mbps |

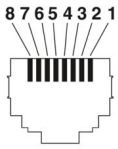
### Connector

Connection 1

| | |
|---|---|
| Dimensional drawing |  Pin assignment M12 male connector, 4-pos., D-coded, male side |
| Type | M12 Plug, straight, 4-position, shielded (Advanced Shielding Technology), Keying: D, Ethernet |
| Number of positions | 4 |
| Shielded | yes |
| Shielding | Advanced Shielding Technology |
| Signal type/category | Ethernet CAT5 (IEC 11801), 100 Mbps |
| Insertion/withdrawal cycles | ≥ 100 |
| Insulation resistance | ≥ 100 MΩ |
| Overvoltage category | II |
| Degree of pollution | 3 |
| Tightening torque | 0.4 Nm |
| Material Contact | CuSn |
| Material Contact surface | Ni/Au |

| | |
|---|---|
| Material Contact carrier | PA 6.6 |
| 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 | M12 connector |
| Standards/regulations | IEC 61076-2-101 |

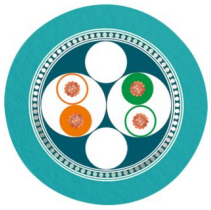
Connection 2

| | |
|---|---|
| Dimensional drawing |  Connector pin assignment plug RJ45 |
| Type | RJ45 Plug, straight, Ethernet |
| Signal type/category | Ethernet CAT5 (IEC 11801), 100 Mbps |
| Insertion/withdrawal cycles | ≥ 750 |
| Insulation resistance | ≥ 100 MΩ |
| Overvoltage category | I |
| Degree of pollution | 2 |
| Material Contact | CuSn |
| Material Contact surface | Ni/Au |
| Material Contact carrier | PC |
| Material Housing | PA |
| Color (Housing) | gray |
| Flammability rating according to UL 94 | V2 |
| Degree of protection | IP20 |
| Ambient temperature (operation) | -25 °C ... 60 °C |

## Cable/line

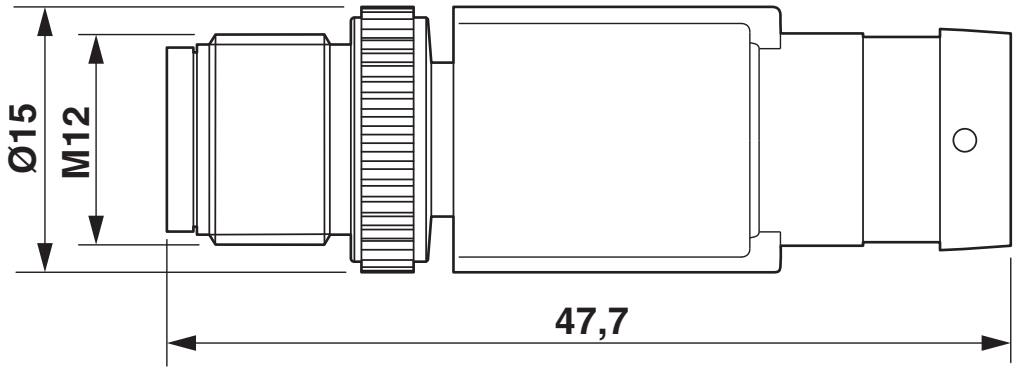
| | |
|---|---|
| Cable length | 1 m |

Ethernet flexible CAT5, 2-pair [93E]

| | |
|---|---|
| Dimensional drawing |  |
| UL AWM Style | 21238 (80 °C / 600 V) |
| Number of positions | 4 |
| Shielded | yes |
| Cable type | Ethernet flexible CAT5, 2-pair [93E] |
| Conductor structure | 2x2xAWG26/7, SF/UTP |
| AWG signal line | 26 |
| Conductor cross-section | 2x 2x 0.14 mm² |
| Wire diameter incl. insulation | 0.95 mm ±0.05 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 |
| Twisted pairs | 2 cores to the pair |
| Overall twist | Two pairs with two fillers to the core |
| Optical shield covering | 70 % |
| Insulation resistance | ≥ 5 GΩ*km |
| Loop resistance | ≤ 280.00 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 | 26 mm |
| Smallest bending radius, movable installation | 51 mm |
| Halogen-free | according to IEC 60754-1 |
| Flame resistance | according to IEC 60332-1-2 |
| | in accordance with UN ECE-R 118.03 |
| | UL 1581, Section 1060 and UL 2556, Section 9.3 (FT1) |
| | UL 1581, Section 1100 and UL 2556, Section 9.1 (HFT/FT2) |
| Resistance to oil | in accordance with IEC 60811-404 |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation) |
| | -30 °C ... 70 °C (Cable, flexible installation) |

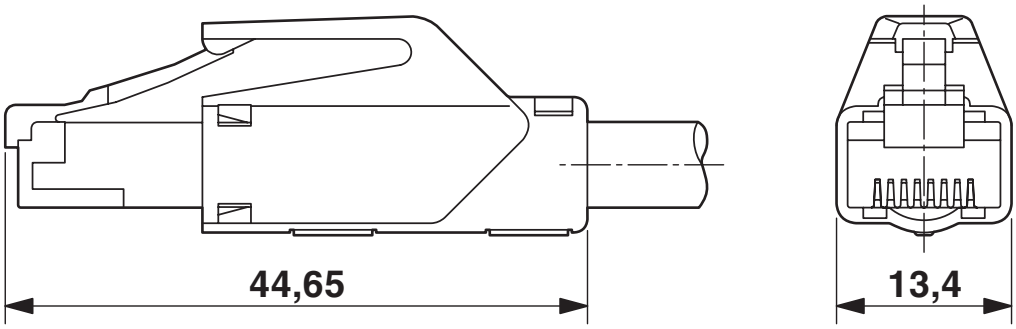
## Drawings

Dimensional drawing



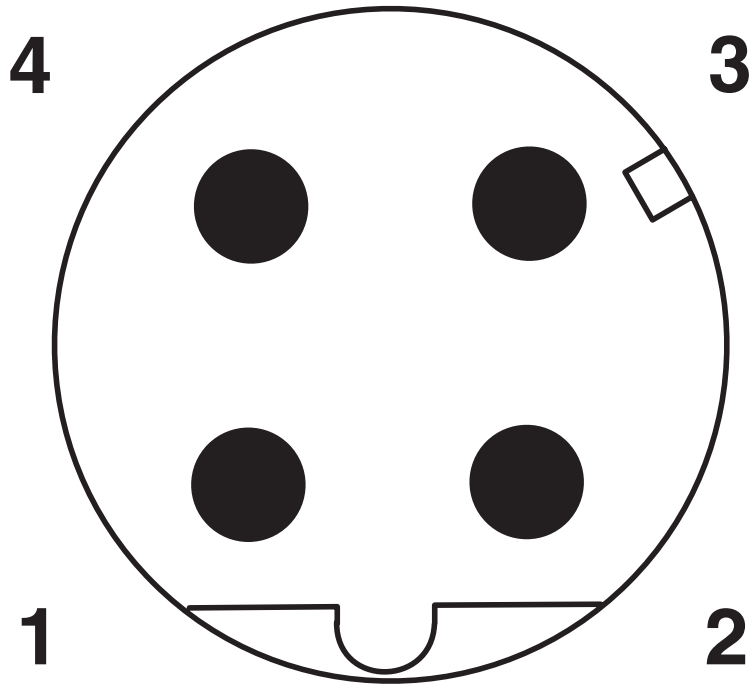

Plug, M12 x 1, straight, shielded

Dimensional drawing



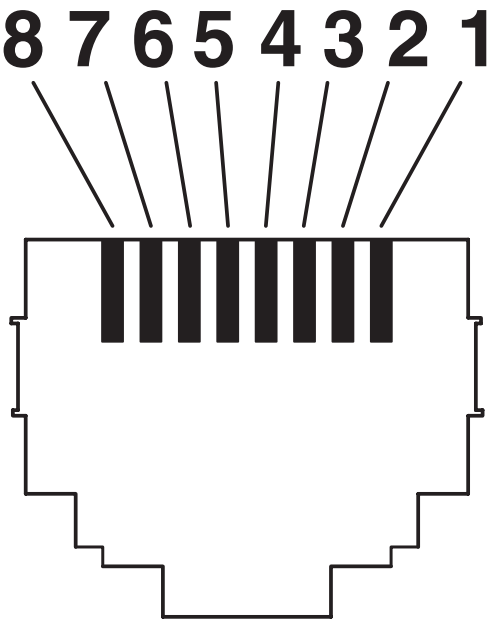

RJ45 connector, IP20

Schematic diagram



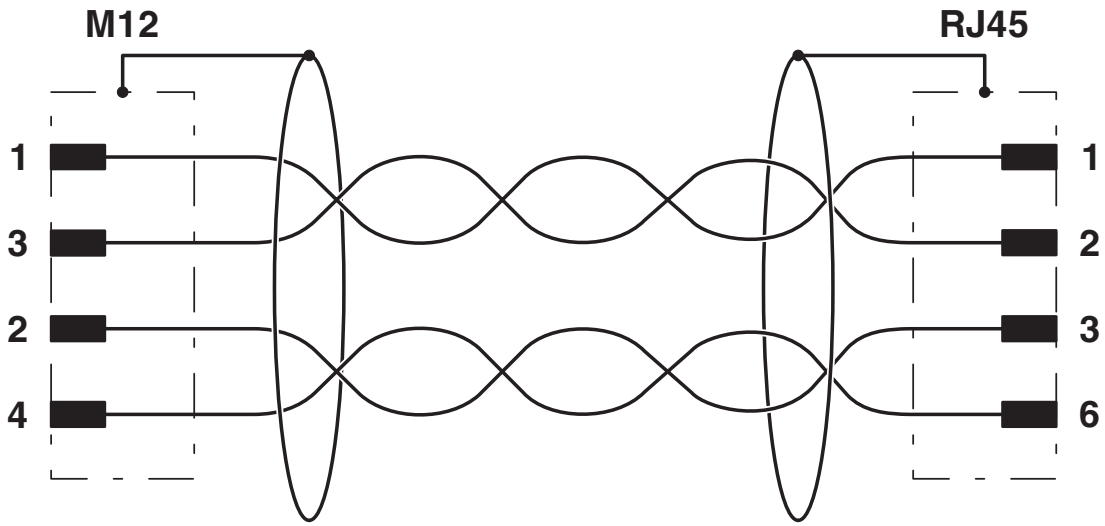

Pin assignment M12 male connector, 4-pos., D-coded, male side

Schematic diagram




Connector pin assignment plug RJ45

Circuit diagram




Contact assignment of the M12 and RJ45 plug

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1407360

**UL Listed**
Approval ID: FILE E 335024

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 30 V | 0.5 A | - | - |

**cUL Listed**
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| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 30 V | 0.5 A | - | - |

**EAC-RoHS**
Approval ID: RU D-DE.HB35.B.00387

## Classifications

### ECLASS

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

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC002599 |

### UNSPSC

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

## 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% |

EF3.1 Climate Change

| | |
|---|---|
| CO2e kg | 5.609 kg CO2e |


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