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## Network cable - NBC-MSX/10,0-94F/R4QC SCO - 1407482

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Network cable, Ethernet CAT6<sub>A</sub> (1 Gbps), 8-position, PUR, water blue RAL 5021, shielded, Plug Straight M12 SPEEDCON / IP67, Coding: X, on Plug Straight RJ45 Push Pull / IP67, Cable length: 10 m



### Key commercial data

|                      |          |
|----------------------|----------|
| Packing unit         | 1 pc     |
| Custom tariff number | 85444210 |
| Country of origin    | Poland   |

### Technical data

#### Dimensions

|                 |      |
|-----------------|------|
| Length of cable | 10 m |
|-----------------|------|

#### Ambient conditions

|                      |                       |
|----------------------|-----------------------|
| Degree of protection | IP65 (M12 connector)  |
|                      | IP67 (M12 connector)  |
|                      | IP67 (RJ45 connector) |

#### General data

|                       |                                     |
|-----------------------|-------------------------------------|
| Rated current at 40°C | 0.5 A                               |
| Rated voltage         | 48 V                                |
| Number of positions   | 8                                   |
| Signal type/category  | Ethernet CAT6 <sub>A</sub> , 1 Gbps |
| Standards/regulations | M12 connector IEC 61076-2-109       |

#### Characteristics head 1

|           |                                   |
|-----------|-----------------------------------|
| Head type | Plug Straight M12 SPEEDCON / IP67 |
|-----------|-----------------------------------|

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### Technical data

#### Characteristics head 1

|  |  |
|--|--|
| No. of positions (pin connector pattern) | 8  |
| Coding                                   | X (Data)   |
| Color                                    | black  |
| Material (component)                     | CuZn (Contact)                                     |
|  | Ni/Au (Contact surface)                            |
|  | PP (Contact carriers)                              |
|  | TPU, hardly inflammable, self-extinguishing (Grip) |
|  | Zinc die-cast, nickel-plated (Screw connection)    |
| Contact resistance                       | ≤ 5 mΩ   |
| Insulation resistance                    | ≥ 100 MΩ   |
| Insertion/withdrawal cycles              | ≥ 100  |
| Torque                                   | 0.4 Nm   |
| Ambient temperature (operation)          | -25 °C ... 90 °C                                   |

#### Characteristics head 2

|  |                                     |
|--|-------------------------------------|
| Head type                                | Plug Straight RJ45 Push Pull / IP67 |
| No. of positions (pin connector pattern) | 8 (8)                               |
| Color                                    | black                               |
| Material (component)                     | CuSn (Contact)                      |
|  | Ni/Au (Contact surface)             |
|  | PC (Contact carriers)               |
|  | PA GF (Housing)                     |
| Insertion/withdrawal cycles              | ≥ 750                               |
| Ambient temperature (operation)          | -40 °C ... 70 °C                    |

#### Cable

|                                    |  |
|------------------------------------|--|
| Cable type                         | Ethernet 10 Gbit   |
| Cable type (abbreviation)          | 94F  |
| UL AWM style                       | 20963 (80°C/30 V)  |
| Signal type/category               | Ethernet CAT6 <sub>A</sub> , 1 Gbps  |
| Cable structure                    | 4x2xAWG26/7; S/FTP   |
| Conductor cross section            | 4x 2x 0.14 mm <sup>2</sup>   |
| AWG signal line                    | 26   |
| Conductor structure signal line    | 7x 0.16 mm   |
| Core diameter including insulation | 1.04 mm  |
| Thickness, insulation              | 0.28 mm (signal line)  |
| Wire colors                        | white/blue-blue, white/orange-orange, white/green-green, white/brown-brown |
| Twisted pairs                      | 2 cores to the pair  |

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### Technical data

#### Cable

|   |   |
|---|---|
| Type of pair shielding                        | Aluminum-lined foil                             |
| Overall twist                                 | 4 pairs   |
| Shielding                                     | Tinned copper braided shield                    |
| Optical shield covering                       | 70 %  |
| External sheath, color                        | water blue RAL 5021                             |
| Outer sheath thickness                        | 0.65 mm   |
| External cable diameter D                     | 6.4 mm ±0.2 mm                                  |
| Minimum bending radius, fixed installation    | 4 x D   |
| Minimum bending radius, flexible installation | 8 x D   |
| Tensile strength short-term/long-term         | ≤ 100 N   |
| Cable weight                                  | 42 kg/km  |
| Outer sheath, material                        | PUR   |
| Material conductor insulation                 | PE  |
| Conductor material                            | Bare Cu litz wires                              |
| Insulation resistance                         | ≥ 500 MΩ*km                                     |
| Loop resistance                               | ≤ 290 Ω (per kilometer)                         |
| Wave impedance                                | 100 Ω ±5 Ω (at 100 MHz)                         |
| Signal runtime                                | 5.13 ns/m                                       |
| Shield attenuation                            | ≥ 80 dB (at 30 ... 100 MHz)                     |
| Nominal voltage, cable                        | ≤ 100 V (at 20 °C)                              |
| Test voltage Core/Core                        | 700 V (50 Hz, 1 min.)                           |
| Test voltage Core/Shield                      | 700 V (50 Hz, 1 min.)                           |
| Flame resistance                              | IEC 60332-1-2                                   |
| Halogen-free                                  | According to IEC 60754-1                        |
| Resistance to oil                             | in accordance with DIN EN 60811-2-1             |
| Ambient temperature (operation)               | -40 °C ... 80 °C (cable, fixed installation)    |
|   | -20 °C ... 80 °C (cable, flexible installation) |
| Ambient temperature (installation)            | -20 °C ... 80 °C                                |
| Ambient temperature (storage/transport)       | -20 °C ... 80 °C                                |

### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27060307 |
| eCl@ss 4.1 | 27060307 |
| eCl@ss 5.0 | 27060307 |
| eCl@ss 5.1 | 27060307 |

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### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 6.0 | 27060390 |
| eCl@ss 7.0 | 27060390 |
| eCl@ss 8.0 | 27060390 |

#### ETIM

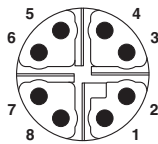
|          |          |
|----------|----------|
| ETIM 3.0 | EC000830 |
| ETIM 4.0 | EC001855 |
| ETIM 5.0 | EC001855 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 26121616 |
| UNSPSC 7.0901 | 26121616 |
| UNSPSC 11     | 26121604 |
| UNSPSC 12.01  | 31261501 |
| UNSPSC 13.2   | 26121616 |

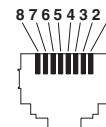
### Drawings

Schematic diagram



Pin assignment of M12 plug, 8-pos., X-coded, pin side view

Schematic diagram



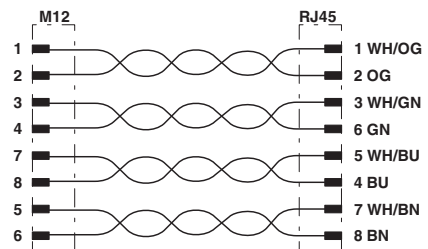
Connector pin assignment plug RJ45

Cable cross section



Ethernet 10 Gbit [94F]

Circuit diagram



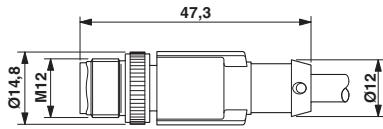
Contact assignment of the M12 and RJ45 plug

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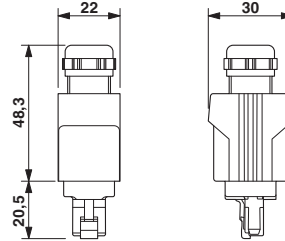
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Dimensioned drawing



Plug, M12 x 1, straight, shielded

Dimensioned drawing



RJ45 Push-Pull connector, IP67