

## Network cable - NBC-MSX/ 2,0-94F/MSX SCO - 1407484

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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 M12 SPEEDCON / IP67, Coding: X, Cable length: 2 m



### Key commercial data

|                                      |           |
|--------------------------------------|-----------|
| Packing unit                         | 1 pc      |
| Weight per Piece (excluding packing) | 140.0 GRM |
| Custom tariff number                 | 85444210  |
| Country of origin                    | Poland    |

### Technical data

#### Dimensions

|                 |     |
|-----------------|-----|
| Length of cable | 2 m |
|-----------------|-----|

#### Ambient conditions

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

#### 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 M12 SPEEDCON / IP67                  |
| 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                                   |

#### 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                                  |

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### Technical data

#### Cable

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

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### Classifications

#### eCl@ss

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

### Approvals

#### Approvals

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Approvals

UL Listed

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Ex Approvals

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Approvals submitted

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Approval details

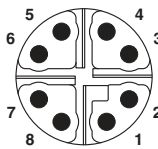
# Network cable - NBC-MSX/ 2,0-94F/MSX SCO - 1407484

## Approvals

|                    |       |
|--------------------|-------|
| UL Listed          |       |
| Nominal current IN | 0.5 A |
| Nominal voltage UN | 60 V  |

## Drawings

Schematic diagram



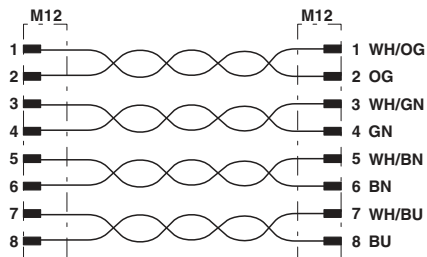
Pin assignment of M12 plug, 8-pos., X-coded, pin side view

Cable cross section



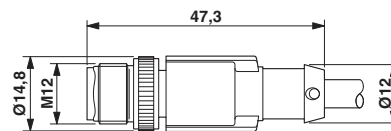
Ethernet 10 Gbit [94F]

Circuit diagram



Contact assignment of the M12 plugs

Dimensioned drawing



Plug, M12 x 1, straight, shielded