

## Network cable - NBC-MSX/ 5,0-94F/MSX SCO - 1407485

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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: 5 m



### Key commercial data

|                                      |           |
|--------------------------------------|-----------|
| Packing unit                         | 1 pc      |
| Weight per Piece (excluding packing) | 260.0 GRM |
| Custom tariff number                 | 85444290  |
| Country of origin                    | Poland    |

### Technical data

#### Dimensions

|                 |     |
|-----------------|-----|
| Length of cable | 5 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                       | $\leq 5 \text{ m}\Omega$                           |
| Insulation resistance                    | $\geq 100 \text{ M}\Omega$                         |
| Insertion/withdrawal cycles              | $\geq 100$                                         |
| 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                       | $\leq 5 \text{ m}\Omega$                           |
| Insulation resistance                    | $\geq 100 \text{ M}\Omega$                         |
| Insertion/withdrawal cycles              | $\geq 100$                                         |
| 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 $\pm$ 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         | $\leq$ 100 N                                                               |
| Cable weight                                  | 42 kg/km                                                                   |
| Outer sheath, material                        | PUR                                                                        |
| Material conductor insulation                 | PE                                                                         |
| Conductor material                            | Bare Cu litz wires                                                         |
| Insulation resistance                         | $\geq$ 500 M $\Omega$ *km                                                  |
| Loop resistance                               | $\leq$ 290 $\Omega$ (per kilometer)                                        |
| Wave impedance                                | 100 $\Omega$ $\pm$ 5 $\Omega$ (at 100 MHz)                                 |
| Signal runtime                                | 5.13 ns/m                                                                  |
| Shield attenuation                            | $\geq$ 80 dB (at 30 ... 100 MHz)                                           |
| Nominal voltage, cable                        | $\leq$ 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

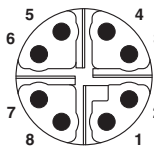
Network cable - NBC-MSX/ 5,0-94F/MSX SCO - 1407485

Approvals

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

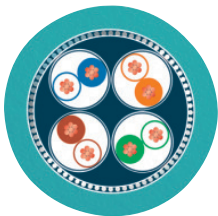
Drawings

Schematic diagram



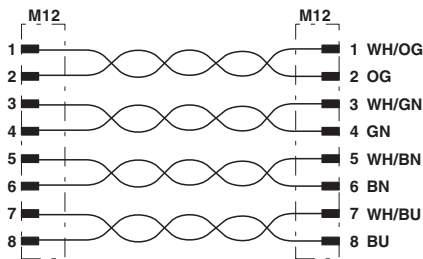
Pin assignment of M12 plug, 8-pos., X-coded, pin side view

Cable cross section



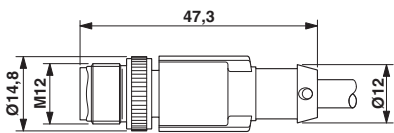
Ethernet 10 Gbit [94F]

Circuit diagram



Contact assignment of the M12 plugs

Dimensioned drawing



Plug, M12 x 1, straight, shielded