

# NBC-P12MSX/ 2,0-94F - Network cable



1584464

<https://www.phoenixcontact.com/us/products/1584464>

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Network cable, Ethernet CAT6<sub>A</sub> (10 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded (Advanced Shielding Technology), Plug straight M12, coding: X / IP67, on free cable end, cable length: 2 m

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1584464       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BF04          |
| Product key                          | AF1CMJ        |
| GTIN                                 | 4067923077768 |
| Weight per piece (including packing) | 128 g         |
| Weight per piece (excluding packing) | 128 g         |
| Customs tariff number                | 85444290      |
| Country of origin                    | PL            |

## Technical data

### Product properties

|                     |                         |
|---------------------|-------------------------|
| Product type        | Data cable preassembled |
| Application         | Standard                |
| Number of positions | 8                       |
| Shielded            | yes                     |

### Interfaces

|                      |                                      |
|----------------------|--------------------------------------|
| Bus system           | Ethernet                             |
| Signal type/category | Ethernet CAT6 <sub>A</sub> , 10 Gbps |

### Signaling

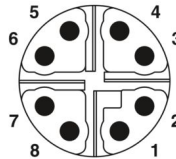
|                        |    |
|------------------------|----|
| Status display         | no |
| Status display present | no |

### Electrical properties

|                       |         |
|-----------------------|---------|
| Nominal voltage $U_N$ | 48 V AC |
|                       | 60 V DC |
| Nominal current $I_N$ | 0.5 A   |
| Transmission medium   | Copper  |
| Transmission speed    | 10 Gbps |

### Connector

#### Connection 1

|                             |                                                                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensional drawing         | <br>Pin assignment of M12 plug, 8-pos., X-coded, pin side view |
| Type                        | M12 Plug, straight, 8-position, shielded (Advanced Shielding Technology), Push Pull, Keying: X                                                     |
| Number of positions         | 8                                                                                                                                                  |
| Shielded                    | yes                                                                                                                                                |
| Shielding                   | Advanced Shielding Technology                                                                                                                      |
| Signal type/category        | Ethernet CAT6 <sub>A</sub> (IEC 11801), 10 Gbps                                                                                                    |
| Insertion/withdrawal cycles | ≥ 100                                                                                                                                              |
| Insulation resistance       | ≥ 100 MΩ                                                                                                                                           |
| Overvoltage category        | II                                                                                                                                                 |
| Degree of pollution         | 3                                                                                                                                                  |
| Material Contact            | CuZn                                                                                                                                               |

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|                                        |                                             |
|----------------------------------------|---------------------------------------------|
| Material Contact surface               | Ni/Au                                       |
| Material Contact carrier               | PA 6.6                                      |
| 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 61076-2-010                             |

## Connection 2

|      |                |
|------|----------------|
| Type | free cable end |
|------|----------------|

## Cable/line

|              |     |
|--------------|-----|
| Cable length | 2 m |
|--------------|-----|

## Ethernet 10 Gbit [94F]

|                                |                                                                                      |
|--------------------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing            |  |
| UL AWM Style                   | 21238 (80 °C / 600 V)                                                                |
| Number of positions            | 8                                                                                    |
| Shielded                       | yes                                                                                  |
| Cable type                     | Ethernet 10 Gbit [94F]                                                               |
| Conductor structure            | 4x2xAWG26/7; S/FTP                                                                   |
| AWG signal line                | 26                                                                                   |
| Conductor cross-section        | 4x 2x 0.14 mm <sup>2</sup>                                                           |
| Wire diameter incl. insulation | 1 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/blue-blue, white/orange-orange, white/green-green, white/brown-brown           |
| Twisted pairs                  | 2 cores to the pair                                                                  |
| Overall twist                  | 4 pairs for core                                                                     |
| Optical shield covering        | 70 %                                                                                 |
| Insulation resistance          | ≥ 500 MΩ*km                                                                          |
| Loop resistance                | ≤ 290.00 Ω/km                                                                        |
| Wave impedance                 | 100 Ω ±5 Ω (at 100 MHz)                                                              |

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|                                               |                                                 |
|-----------------------------------------------|-------------------------------------------------|
| 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              |
|                                               | according to CSA C 22.2 No. 210-FT1             |
| Resistance to oil                             | in accordance with DIN EN 60811-404             |
| Ambient temperature (operation)               | -40 °C ... 80 °C (cable, fixed installation)    |
|                                               | -20 °C ... 80 °C (Cable, flexible installation) |

## Environmental and real-life conditions

### Ambient conditions

|                      |           |
|----------------------|-----------|
| Degree of protection | IP67/IP20 |
|----------------------|-----------|

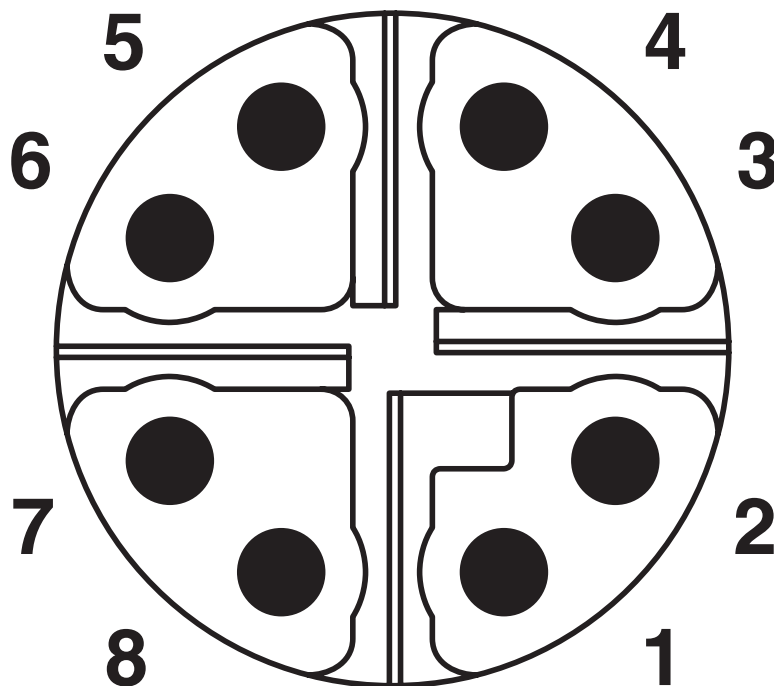
## Drawings

Dimensional drawing



M12 push-pull male connector, straight

Schematic diagram



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

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Circuit diagram



Contact assignment of the M12 plug

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## Classifications

### ECLASS

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

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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%               |

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