

NBC-M12MSX/ 1,0-94F/R4AC - Network cable



1407471

<https://www.phoenixcontact.com/us/products/1407471>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Network cable, Ethernet CAT6_A (10 Gbps), CC-Link IE CAT6_A (10 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded (Advanced Shielding Technology), Plug straight M12, coding: X / IP67, on Plug straight RJ45, coding: X / IP20, cable length: 1 m

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1407471 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | BF04 |
| Product key | AF1CMJ |
| GTIN | 4046356776684 |
| Weight per piece (including packing) | 72.2 g |
| Weight per piece (excluding packing) | 73.8 g |
| Customs tariff number | 85444290 |
| Country of origin | US |

1407471

<https://www.phoenixcontact.com/us/products/1407471>

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 |
| Sensor type | Ethernet |
| Number of positions | 8 |
| No. of cable outlets | 1 |
| Shielded | yes |
| Coding | X |

Interfaces

| | |
|----------------------|--|
| Bus system | Ethernet |
| Signal type/category | Ethernet CAT6 _A , 10 Gbps CC-Link IE CAT6 _A , 10 Gbps |

Signaling

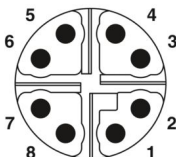
| | |
|------------------------|----|
| Status display | no |
| Status display present | no |

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 |
| Transmission characteristics (category) | CAT6 _A |

Connector

Connection 1

| | |
|---------------------|--|
| Dimensional drawing |  <p>Pin assignment of M12 plug, 8-pos., X-coded, pin side view</p> |
| Type | M12 Plug, straight, 8-position, shielded (Advanced Shielding Technology), Keying: X |
| Number of positions | 8 |

NBC-M12MSX/ 1,0-94F/R4AC - Network cable

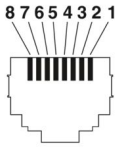


1407471

<https://www.phoenixcontact.com/us/products/1407471>

| | |
|--|--|
| Shielded | yes |
| Shielding | Advanced Shielding Technology |
| Signal type/category | Ethernet CAT6 _A , 10 Gbps CC-Link IE CAT6 _A , 10 Gbps |
| Insertion/withdrawal cycles | ≥ 100 |
| Insulation resistance | ≥ 100 Ω |
| Overvoltage category | II |
| Degree of pollution | 3 |
| Tightening torque | 0.4 Nm (M12 connector) |
| Material Contact | CuZn |
| 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 61076-2-109 |

Connection 2

| | |
|-----------------------------|---|
| Dimensional drawing |  <p>Connector pin assignment plug RJ45</p> |
| Type | RJ45 Plug, straight, 8-position |
| Number of positions | 8 |
| Signal type/category | Ethernet CAT6 _A , 10 Gbps CC-Link IE CAT6 _A , 10 Gbps |
| Insertion/withdrawal cycles | ≥ 750 |
| Insulation resistance | ≥ 100 Ω |
| Overvoltage category | I |
| Degree of pollution | 2 |
| Material Contact | CuSn |
| Material Contact surface | Ni/Au |
| Material Contact carrier | PC |
| Material Housing | PA |

NBC-M12MSX/ 1,0-94F/R4AC - Network cable



1407471

<https://www.phoenixcontact.com/us/products/1407471>

| | |
|--|-----------------------|
| Color (Housing) | gray |
| Flammability rating according to UL 94 | V2 |
| Degree of protection | IP20 (RJ45 connector) |
| Ambient temperature (operation) | -25 °C ... 60 °C |

Cable/line

| | |
|--------------|-----|
| Cable length | 1 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 ² |
| 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) |
| 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 |

NBC-M12MSX/ 1,0-94F/R4AC - Network cable



1407471

<https://www.phoenixcontact.com/us/products/1407471>

| | |
|---|---|
| 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) |

Standards and regulations

M12

| | |
|--------------------------|-----------------|
| Standard designation | M12 connector |
| Standards/specifications | IEC 61076-2-109 |

NBC-M12MSX/ 1,0-94F/R4AC - Network cable



1407471

<https://www.phoenixcontact.com/us/products/1407471>

Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

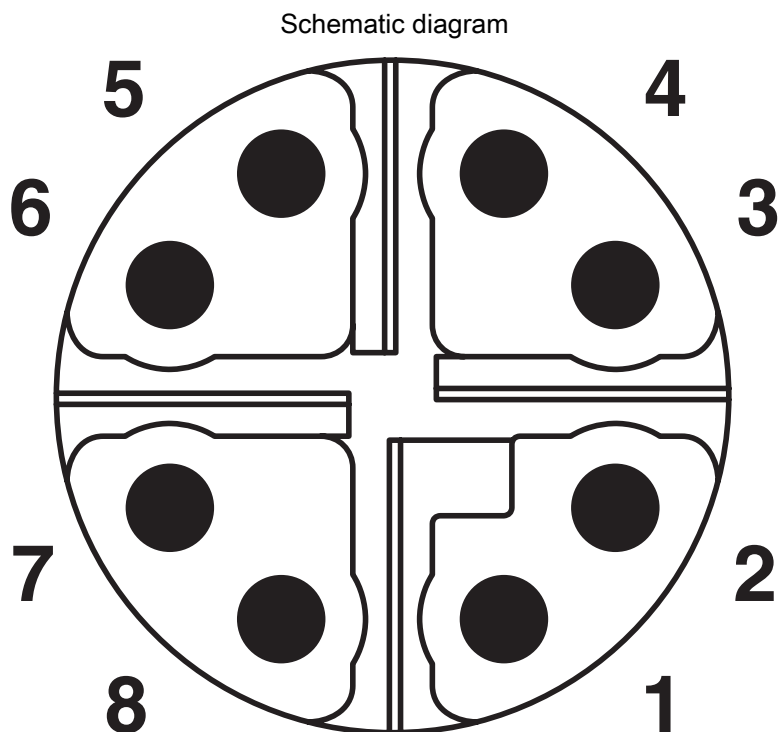
Dimensional drawing



RJ45 connector, IP20

1407471

<https://www.phoenixcontact.com/us/products/1407471>



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

Schematic diagram



Connector pin assignment plug RJ45

NBC-M12MSX/ 1,0-94F/R4AC - Network cable

1407471

<https://www.phoenixcontact.com/us/products/1407471>

Circuit diagram



Contact assignment of the M12 and RJ45 plug

NBC-M12MSX/ 1,0-94F/R4AC - Network cable



1407471

<https://www.phoenixcontact.com/us/products/1407471>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1407471>

|  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 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 | - | - |

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

NBC-M12MSX/ 1,0-94F/R4AC - Network cable



1407471

<https://www.phoenixcontact.com/us/products/1407471>

Classifications

ECLASS

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

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC001855 |
|-----------|----------|

UNSPSC

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

NBC-M12MSX/ 1,0-94F/R4AC - Network cable



1407471

<https://www.phoenixcontact.com/us/products/1407471>

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 | 1.588 kg CO2e |
|---------|---------------|

Phoenix Contact 2026 © - all rights reserved
<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com