

# NBC-M12MSX/20,0-94F/M12MSX - Network cable



1421858

<https://www.phoenixcontact.com/us/products/1421858>

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<sub>A</sub> (10 Gbps) CAT6<sub>A</sub> (10 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded (Advanced Shielding Technology), Plug straight M12 SPEEDCON, coding: X / IP67, on Plug straight M12 SPEEDCON, coding: X / IP67, cable length: 20 m

## Commercial data

Item number	1421858
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	BF04
Product key	AF1CMJ
GTIN	4055626285702
Weight per piece (including packing)	969.6 g
Weight per piece (excluding packing)	919.8 g
Customs tariff number	85444290
Country of origin	PL

1421858

<https://www.phoenixcontact.com/us/products/1421858>

## Technical data

### 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 <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
Transmission characteristics (category)	CAT6 <sub>A</sub>

### Connector

#### Connection 1

Type	Plug straight M12 SPEEDCON / IP67
Number of positions	8
Locking type	SPEEDCON
Coding type	X (Data)
Handle color	black
Material	CuZn (Contact)
	Ni/Au (Contact surface)
	PP (Contact carrier)
	TPU, hardly inflammable, self-extinguishing (Grip body)
	Zinc die-cast, nickel-plated (Screw connection)
Insertion/withdrawal cycles	≥ 100
Insulation resistance	≥ 100 MΩ
Tightening torque	0.4 Nm
Degree of protection	IP67

# NBC-M12MSX/20,0-94F/M12MSX - Network cable



1421858

<https://www.phoenixcontact.com/us/products/1421858>

Ambient temperature (operation)	-25 °C ... 90 °C
---------------------------------	------------------


## Connection 2

Type	Plug straight M12 SPEEDCON / IP67
Number of positions	8
Locking type	SPEEDCON
Coding type	X (Data)
Handle color	black
Material	CuZn (Contact) Ni/Au (Contact surface) PP (Contact carrier) TPU, hardly inflammable, self-extinguishing (Grip body) Zinc die-cast, nickel-plated (Screw connection)
Insertion/withdrawal cycles	≥ 100
Insulation resistance	≥ 100 MΩ
Tightening torque	0.4 Nm
Degree of protection	IP67
Ambient temperature (operation)	-25 °C ... 90 °C

## Cable/line

Cable length	20 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,

# NBC-M12MSX/20,0-94F/M12MSX - Network cable



1421858

<https://www.phoenixcontact.com/us/products/1421858>

	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
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

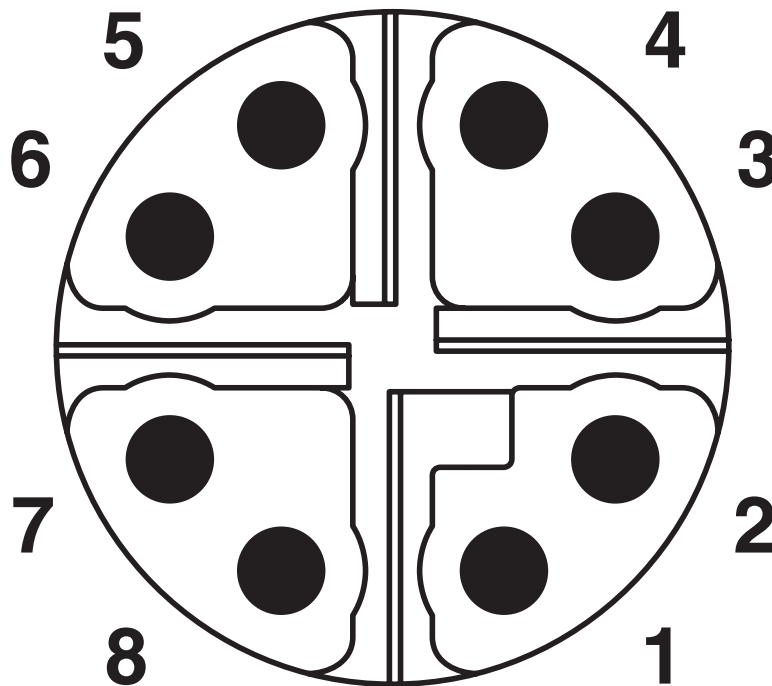
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Schematic diagram

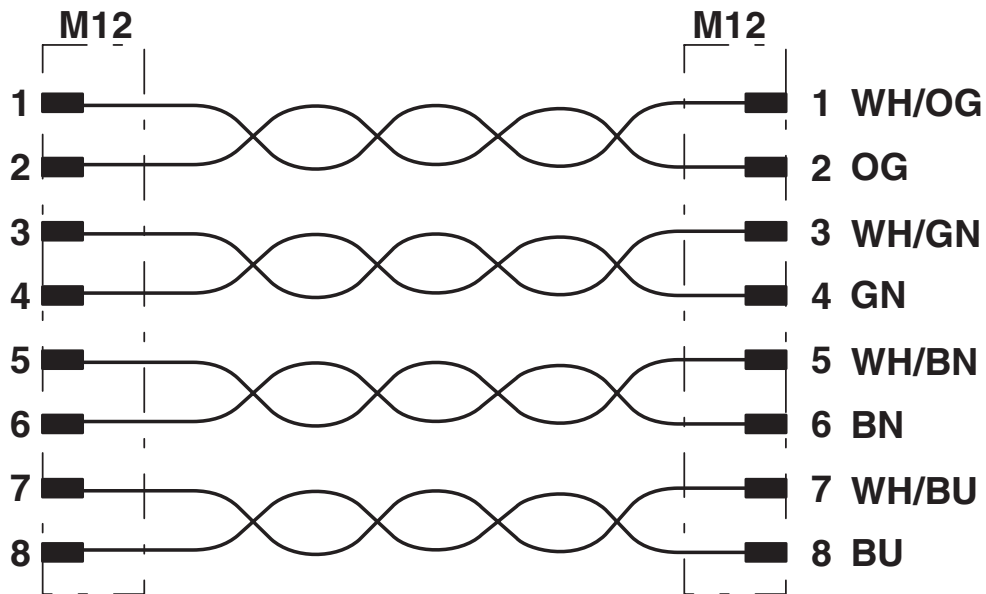


Pin assignment of M12 plug, 8-pos., X-coded, pin side view

1421858

<https://www.phoenixcontact.com/us/products/1421858>

Circuit diagram



Contact assignment of the M12 plugs

# NBC-M12MSX/20,0-94F/M12MSX - Network cable



1421858

<https://www.phoenixcontact.com/us/products/1421858>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1421858>

 <b>UL Listed</b> Approval ID: FILE E 335024				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	30 V	0.5 A	-	-

 <b>cUL Listed</b> Approval ID: FILE E 335024				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	30 V	0.5 A	-	-

# NBC-M12MSX/20,0-94F/M12MSX - Network cable



1421858

<https://www.phoenixcontact.com/us/products/1421858>

## Classifications

### ECLASS

ECLASS-13.0	27060307
ECLASS-15.0	27060307

### ETIM

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

### UNSPSC

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

# NBC-M12MSX/20,0-94F/M12MSX - Network cable



1421858

<https://www.phoenixcontact.com/us/products/1421858>

## 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%
-------------------------------------	----------------------------

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](mailto:info@phoenixcon.com)