

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



1440588

<https://www.phoenixcontact.com/us/products/1440588>

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), 8-position, PUR halogen-free, water blue RAL 5021 (Advanced Shielding Technology), Plug straight M12, coding: X / IP65, on free cable end, cable length: 20 m

## Commercial data

Item number	1440588
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF04
Product key	AF1CMJ
GTIN	4046356504508
Weight per piece (including packing)	989.6 g
Weight per piece (excluding packing)	918.6 g
Customs tariff number	85444290
Country of origin	PL

1440588

<https://www.phoenixcontact.com/us/products/1440588>

## Technical data

### Product properties

Product type	Data cable preassembled
Application	Standard
Sensor type	Ethernet
Number of positions	8
Number of slots	1
Shielded	yes
Coding	X

### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### Interfaces

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

### Electrical properties

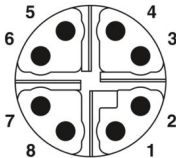
Insulation resistance	100 MΩ
Nominal voltage U <sub>N</sub>	48 V AC
	60 V DC
Nominal current I <sub>N</sub>	0.5 A
Transmission medium	Copper
Transmission speed	10 Gbps
Transmission characteristics (category)	CAT6 <sub>A</sub>

### Material specifications

Flammability rating according to UL 94	HB
----------------------------------------	----

### 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
Shielded	yes
Shielding	Advanced Shielding Technology

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



1440588

<https://www.phoenixcontact.com/us/products/1440588>

Signal type/category	Ethernet CAT6 <sub>A</sub> , 10 Gbps CC-Link IE CAT6 <sub>A</sub> , 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

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

## 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

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



1440588

<https://www.phoenixcontact.com/us/products/1440588>

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
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)

Drawings

Dimensional drawing



Dimens. drawing: M12 connectors

Schematic diagram

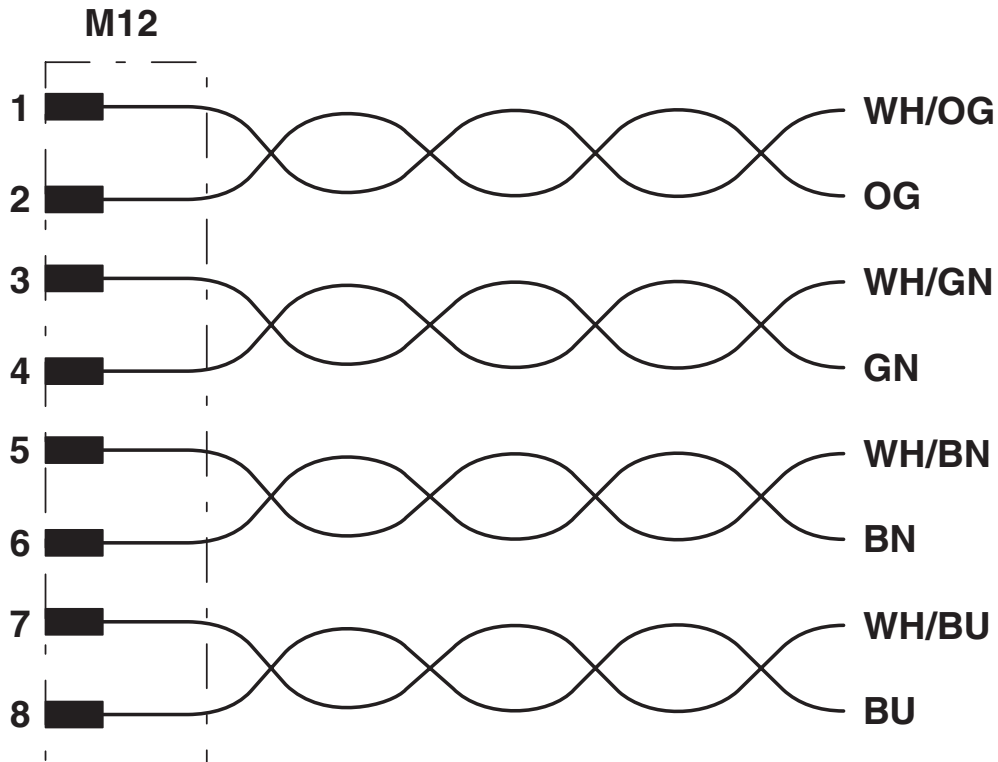


Pin assignment M12 plug, 8-pos., view plug side

1440588

<https://www.phoenixcontact.com/us/products/1440588>

Circuit diagram



Contact assignment of the M12 plugs

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




1440588

<https://www.phoenixcontact.com/us/products/1440588>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1440588>

 <b>UL Recognized</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 CMC - Network cable



1440588

<https://www.phoenixcontact.com/us/products/1440588>

## Classifications

### ECLASS

ECLASS-13.0	27060307
ECLASS-15.0	27060307

### ETIM

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

### UNSPSC

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

1440588

<https://www.phoenixcontact.com/us/products/1440588>

## 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	16.013 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](mailto:info@phoenixcon.com)