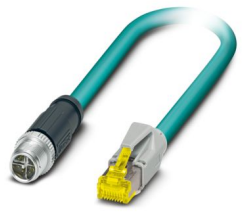
NBC-M12MSX/15,0-94F/R4AC CMC - Network cable

1440643

https://www.phoenixcontact.com/us/products/1440643

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Network cable, Ethernet CAT6$_A$ (10 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, Plug straight M12, coding: X / IP65, on Plug straight RJ45 / IP20, cable length: 15 m

Commercial data

Item number	1440643
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF04
Product key	AF1CMJ
GTIN	4046356504560
Weight per piece (including packing)	725 g
Weight per piece (excluding packing)	711 g
Customs tariff number	85444290
Country of origin	PL

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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	I
Degree of pollution	1

Interfaces

Signal type/category	Ethernet $CAT6_A$, 10 Gbps

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)	$CAT6_A$

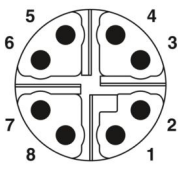
Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100

Connector

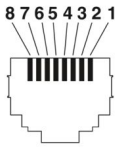
Connection 1

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

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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	 Connector pin assignment plug RJ45
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
Color (Housing)	gray

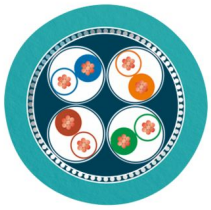
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Flammability rating according to UL 94	V2
Degree of protection	IP20 (RJ45 connector)
Ambient temperature (operation)	-25 °C ... 60 °C

Cable/line

Cable length	15 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 mm²
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
Smallest bending radius, movable installation	51 mm

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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

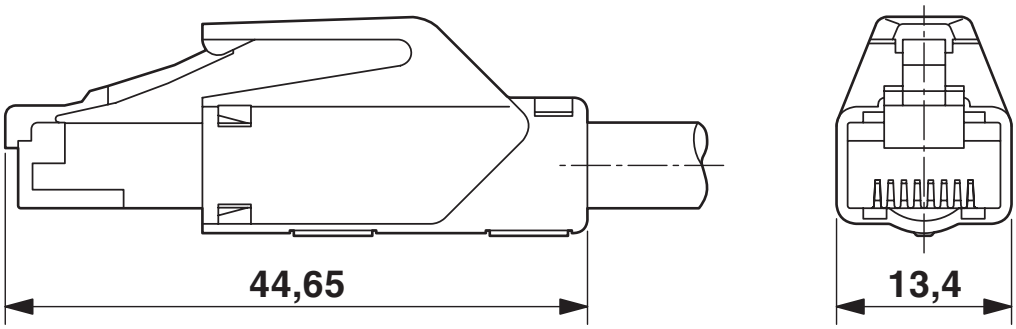
Ambient conditions

Degree of protection	IP65 (M12 connector)
	IP67 (M12 connector)
	IP20 (RJ45 connector)

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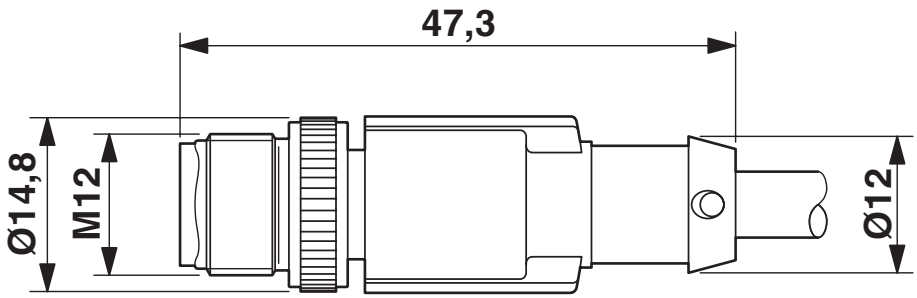
Drawings

Dimensional drawing



RJ45 connector dimensional drawing

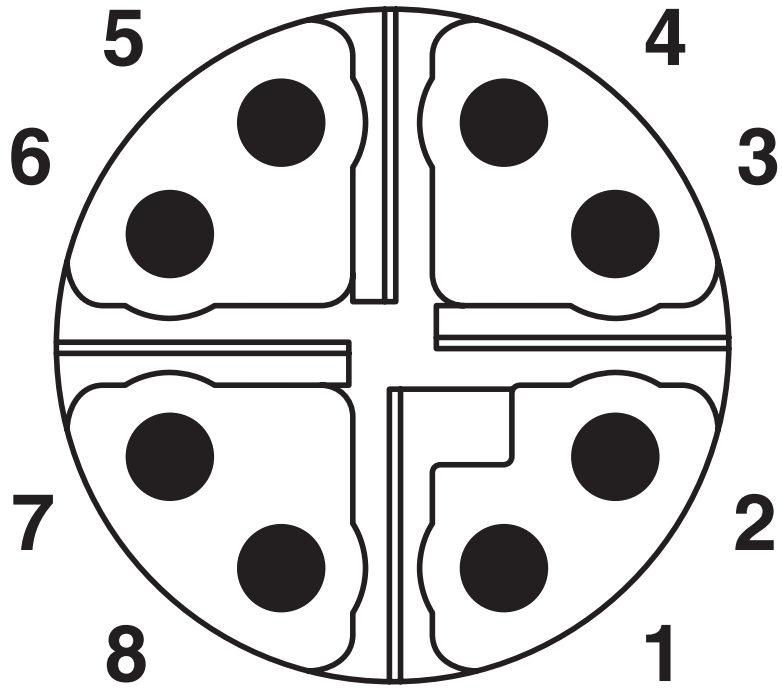
Dimensional drawing



M12 connector dimensional drawing

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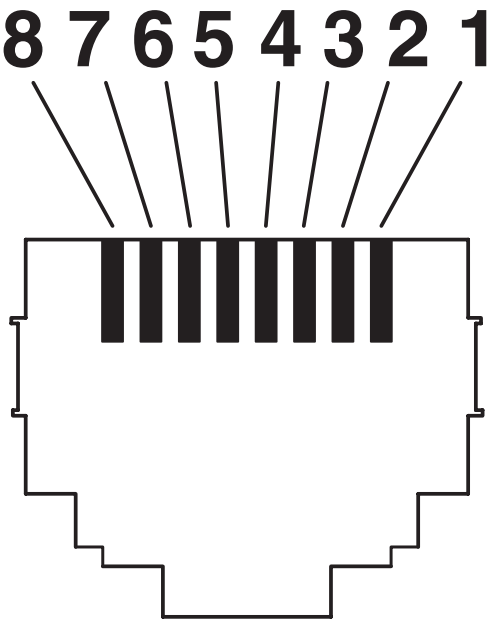
Schematic diagram



M12 Cat6$_A$, 8-pos. plug pin assignment, pin side view

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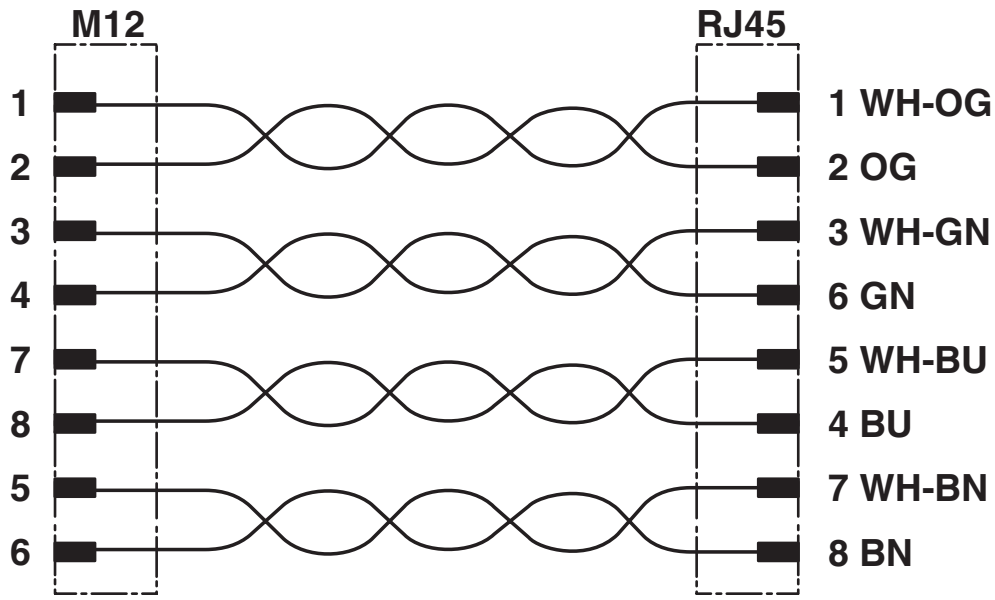
Schematic diagram



Connector pin assignment plug RJ45

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Circuit diagram



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Approvals

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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	-	-

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Classifications

ECLASS

ECLASS-13.0	27060307
ECLASS-15.0	27060307

ETIM

ETIM 9.0	EC001855

UNSPSC

UNSPSC 21.0	26121600

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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%

EF3.0 Climate Change

CO2e kg	12.417 kg CO2e

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