

NBC- 1,0-94B/M12FS - Network cable



1407439

<https://www.phoenixcontact.com/us/products/1407439>

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Network cable, Ethernet CAT5 (1 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded (Advanced Shielding Technology), free cable end, on Socket straight M12, coding: A / IP67, cable length: 1 m

Commercial data

Item number	1407439
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF04
Product key	AF1CMI
GTIN	4046356775601
Weight per piece (including packing)	61.4 g
Weight per piece (excluding packing)	71.1 g
Customs tariff number	85444210
Country of origin	PL

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Technical data

Notes

General	Further products with variable cable type and variable cable length can be found in the accessories section
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Product properties

Product type	Data cable preassembled
Application	Standard
Sensor type	Ethernet
Number of positions	8
Shielded	yes

Interfaces

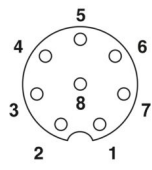
Signal type/category	Ethernet CAT5 (IEC 11801), 1 Gbps
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Electrical properties

Nominal voltage U_N	48 V AC
	60 V DC
Nominal current I_N	2 A
Transmission medium	Copper
Transmission speed	1 Gbps

Connector

Connection 1

Dimensional drawing	 Pin assignment M12 socket, 8-pos., A-coded, view female side
Type	M12 Socket, angled, 8-position, shielded (Advanced Shielding Technology), Keying: A
Number of positions	8
Shielded	yes
Shielding	Advanced Shielding Technology
Signal type/category	Ethernet CAT5, 1 bps
Insertion/withdrawal cycles	≥ 100
Insulation resistance	$\geq 100 \Omega$
Overvoltage category	II
Degree of pollution	3
Tightening torque	0.4 Nm (M12 connector)
Material Contact	CuZn

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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
Ambient temperature (operation)	-25 °C ... 85 °C
Standard designation	M12 connector
Standards/regulations	IEC 61076-2-101


Connection 2

Type	free cable end
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Cable/line

Cable length	1 m
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Ethernet flexible CAT5, 4-pair [94B]

Dimensional drawing	
Cable weight	47 kg/km
UL AWM Style	20963 (80°C/30 V)
Number of positions	8
Shielded	yes
Cable type	Ethernet flexible CAT5, 4-pair [94B]
Conductor structure	4x2xAWG26/7, SF/UTP
Signal runtime	5.3 ns/m
Conductor structure signal line	7x 0.16 mm
AWG signal line	26
Conductor cross section	4x 2x 0.14 mm ²
Wire diameter incl. insulation	0.96 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
Thickness, outer sheath	1.05 mm
Twisted pairs	2 cores to the pair

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Overall twist	4 pairs for core
Optical shield covering	70 %
Insulation resistance	$\geq 5 \text{ G}\Omega \cdot \text{km}$
Coupling resistance	$\leq 100.00 \text{ m}\Omega/\text{m}$ (at 10 MHz)
Loop resistance	$\leq 290.00 \text{ }\Omega/\text{km}$
Wave impedance	$100 \text{ }\Omega \pm 5 \text{ }\Omega$ (at 100 MHz)
Cable capacity	48 nF/km (at 1 kHz)
Nominal voltage, cable	$\leq 100 \text{ V}$
Test voltage Core/Core	700 V (50 Hz, 1 min.)
Test voltage Core/Shield	700.00 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	52 mm
Tensile strength	$\leq 100 \text{ N}$
Near end crosstalk attenuation (NEXT)	71.3 dB (with 1 MHz)
	62.3 dB (at 4 MHz)
	56.3 dB (at 10 MHz)
	53.2 dB (at 16 MHz)
	51.8 dB (at 20 MHz)
	48.9 dB (at 31.25 MHz)
	44.4 dB (at 62.5 MHz)
	41.3 dB (at 100 MHz)
Power-summated near end crosstalk attenuation (PSNEXT)	62.3 dB (with 1 MHz)
	53.3 dB (at 4 MHz)
	47.3 dB (at 10 MHz)
	44.2 dB (at 16 MHz)
	42.8 dB (at 20 MHz)
	39.9 dB (at 31.25 MHz)
	35.4 dB (at 62.5 MHz)
	32.3 dB (at 100 MHz)
Return attenuation (RL)	23 dB (at 4 MHz)
	24.1 dB (at 8 MHz)
	25 dB (at 10 MHz)
	25 dB (at 16 MHz)
	25 dB (at 20 MHz)
	23.6 dB (at 31.25 MHz)
	21.5 dB (at 62.5 MHz)
	20.1 dB (at 100 MHz)
Shield attenuation	3.2 dB (with 1 MHz)
	6 dB (at 4 MHz)
	9.5 dB (at 10 MHz)
	12.1 dB (at 16 MHz)
	13.6 dB (at 20 MHz)

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	17.1 dB (at 31.25 MHz)
	24.8 dB (at 62.5 MHz)
	32 dB (at 100 MHz)
Halogen-free	according to IEC 60754-1
Flame resistance	according to IEC 60332-1-2
Resistance to oil	in accordance with EN 60811-2-1
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-20 °C ... 80 °C (Cable, flexible installation)
Ambient temperature (installation)	-20 °C ... 80 °C

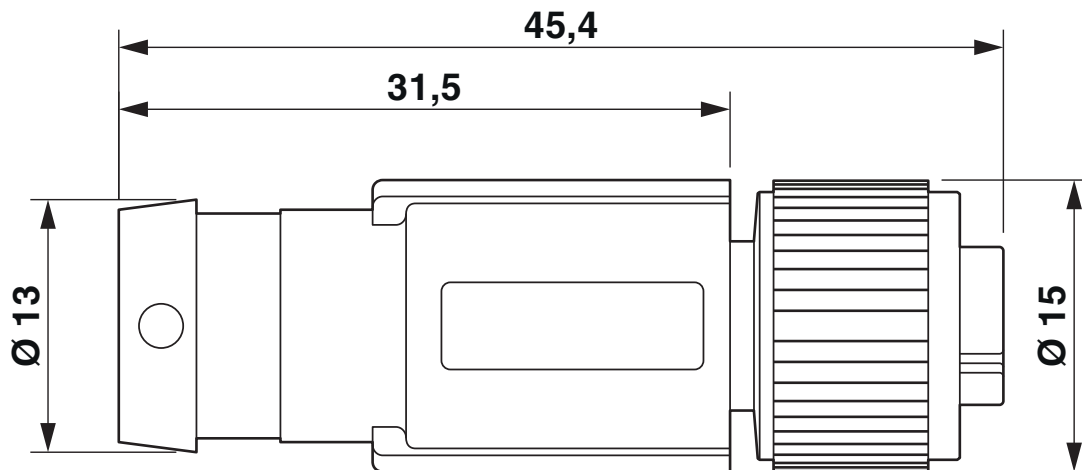
Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65
	IP67

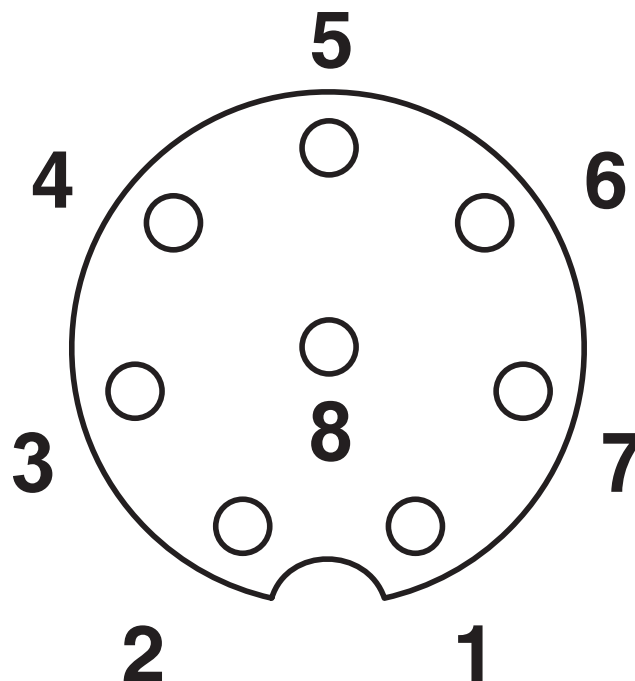
Drawings

Dimensional drawing



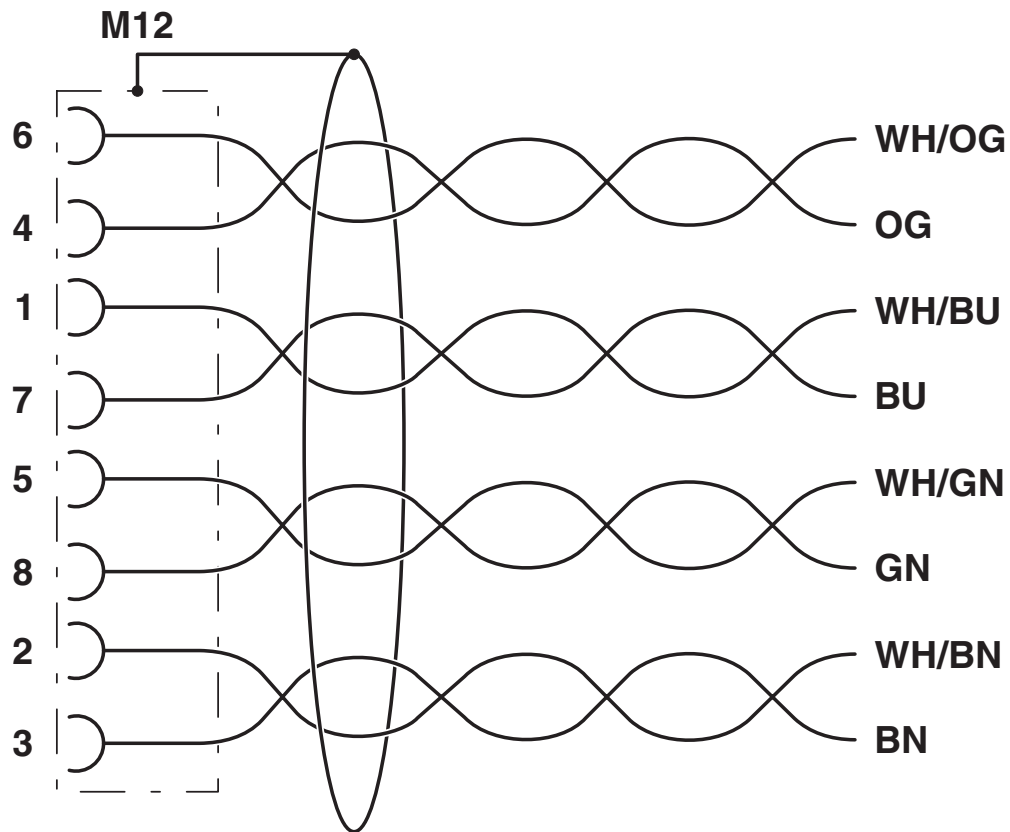
M12 x 1 socket, straight, shielded

Schematic diagram



Pin assignment M12 socket, 8-pos., A-coded, view female side

Circuit diagram



Contact assignment of the M12 socket

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1407439>

 cUL Recognized Approval ID: FILE E 335024				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	30 V	1.5 A	-	-

 UL Recognized Approval ID: FILE E 335024				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	30 V	1.5 A	-	-

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

ECLASS

ECLASS-13.0	27060307
ECLASS-15.0	27060307

ETIM

ETIM 9.0	EC001855
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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	1.35 kg CO2e

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