

NBC-M 8MS-M 8MS/.../... - Network cable



1408718

<https://www.phoenixcontact.com/us/products/1408718>

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Network cable, Ethernet (100 Mbps), PROFINET (100 Mbps), EtherCAT® (100 Mbps), 4-position, Variable cable type, shielded, Plug straight M8, coding: A / IP67, on Plug straight M8, coding: A / IP67, cable length: Free input (0.2 ... 40.0 m)

Commercial data

Item number	1408718
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	BF17
Product key	AF1BJI
Customs tariff number	85444290
Country of origin	PL

Technical data

Notes

General	Further products with fixed cable length can be found in the accessories section
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Product properties

Product type	Data cable preassembled
Application	Standard
Number of positions	4
No. of cable outlets	1
Shielded	yes
Coding	A

Interfaces

Bus system	Ethernet
Signal type/category	Ethernet, 100 Mbps
	PROFINET, 100 Mbps
	EtherCAT®, 100 Mbps

Signaling

Status display	no
Status display present	no

Electrical properties

Nominal voltage U_N	30 V AC
	30 V DC
Nominal current I_N	4 A
Transmission medium	Copper
Transmission speed	100 Mbps

Connector

Connection 1

Type	Plug straight M8 / IP67
Number of positions	4
Coding type	A (Standard)
Handle color	black
Material	CuSn (Contact)
	Ni/Au (Contact surface)
	TPU GF (Contact carrier)
	TPU, hardly inflammable, self-extinguishing (Grip body)
	Zinc die-cast, nickel-plated (Screw connection)
Insertion/withdrawal cycles	≥ 100
Insulation resistance	≥ 100 MΩ

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Tightening torque	0.2 Nm
Degree of protection	IP67
Ambient temperature (operation)	-25 °C ... 90 °C

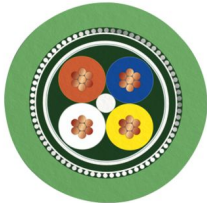
Connection 2

Type	Plug straight M8 / IP67
Number of positions	4
Coding type	A (Standard)
Handle color	black
Material	CuSn (Contact) Ni/Au (Contact surface) TPU GF (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	0.2 Nm
Degree of protection	IP67
Ambient temperature (operation)	-25 °C ... 90 °C

Cable/line

Cable length	Free input (0.2 ... 40.0 m)
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PROFINET PVC stranded CAT5 [93B]

Dimensional drawing	
UL AWM Style	21695 (80 °C / 600 V)
Number of positions	4
Shielded	yes
Cable type	PROFINET PVC stranded CAT5 [93B] PROFINET PVC stranded CAT5 93B
Conductor structure	1x4xAWG22/7, SF/TQ
AWG signal line	22
Conductor cross-section	4x 0.34 mm ²
Wire diameter incl. insulation	1.5 mm ±0.1 mm
External cable diameter	6.50 mm ±0.2 mm
Outer sheath, material	PVC
External sheath, color	green RAL 6018
Conductor material	Tin-plated Cu litz wires

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Material wire insulation	PE
Single wire, color	white, yellow, blue, orange
Overall twist	Star quad
Shielding	Aluminum-coated foil, tinned copper braided shield
Optical shield covering	85 %
Insulation resistance	$\geq 5 \text{ G}\Omega \cdot \text{km}$
Loop resistance	$\leq 120.00 \text{ }\Omega/\text{km}$
Wave impedance	$100 \text{ }\Omega \pm 5 \text{ }\Omega$ (at 100 MHz)
Nominal voltage, cable	$\leq 600 \text{ V}$
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
Flame resistance	UL 1581, Section 1060 and UL 2556, Section 9.3 (FT1)
	UL 1685 (CSA FT 4)
	UL 1581, Section 1100 and UL 2556, Section 9.1 (HFT/FT2)
Resistance to oil	OIL RES I according to UL 2256
Other resistance	UV resistant (according to UL 1581, Section 1200)
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-10 °C ... 70 °C (Cable, flexible installation)

PROFINET drag chain CAT5 [93C]

Dimensional drawing	
UL AWM Style	20233 (80°C/300 V)
Number of positions	4
Shielded	yes
Cable type	PROFINET drag chain CAT5 [93C]
	PROFINET drag chain CAT5 93C
Conductor structure	1x4xAWG22/7, SF/TQ
AWG signal line	22
Conductor cross-section	4x 0.34 mm ²
Wire diameter incl. insulation	1.5 mm $\pm$ 0.05 mm
External cable diameter	6.50 mm $\pm$ 0.2 mm
Outer sheath, material	PUR
External sheath, color	green RAL 6018
Conductor material	Tin-plated Cu litz wires
Material wire insulation	PE

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Single wire, color	white, yellow, blue, orange
Overall twist	Star quad
Shielding	Aluminum-coated foil, tinned copper braided shield
Optical shield covering	85 %
Insulation resistance	$\geq 500 \text{ M}\Omega \cdot \text{km}$
Loop resistance	$\leq 120.00 \text{ }\Omega/\text{km}$
Wave impedance	$100 \text{ }\Omega \pm 15 \text{ }\Omega$ (at 1 ... 100 MHz)
Nominal voltage, cable	$\leq 300 \text{ V}$
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	5 x D
Minimum bending radius, flexible installation	7.5 x D
Dynamic load capacity (bending)	Max. bending cycles: 3000000, Bending radius: 200 mm, Traversing path: 10 m, Traversing rate: 4 m/s, Acceleration: 4 m/s ²
Dynamic load capacity (torsion)	Torsion: $\pm 30 \text{ }^\circ/\text{m}$
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
Other resistance	UV resistant
Special properties	Flexible cable conduit capable
Ambient temperature (operation)	-40 °C ... 70 °C (cable, fixed installation) -40 °C ... 70 °C (Cable, flexible installation)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65 IP67 IP65/IP67
Ambient temperature (operation) (male connector/female connector)	-25 °C ... 90 °C (Plug / socket)

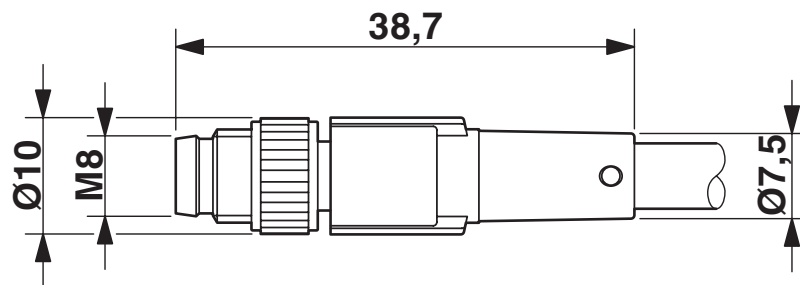
Standards and regulations

M8

Standard designation	M8 connector
Standards/specifications	IEC 61076-2-104

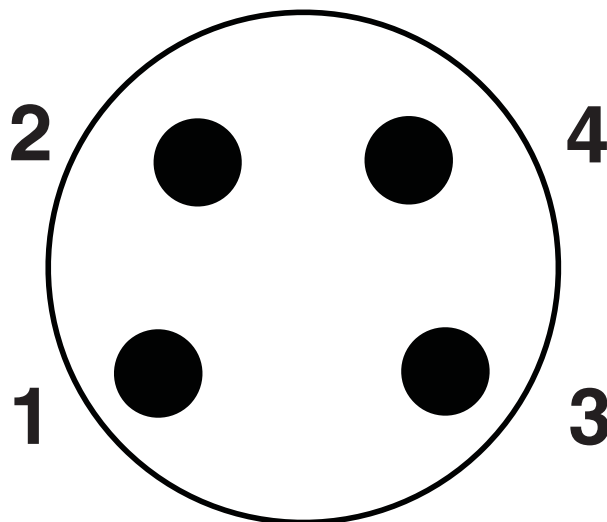
Drawings

Dimensional drawing



M8 x 1 male plug, straight version

Schematic diagram



Pin assignment M8 plug, 4-pos., view male side

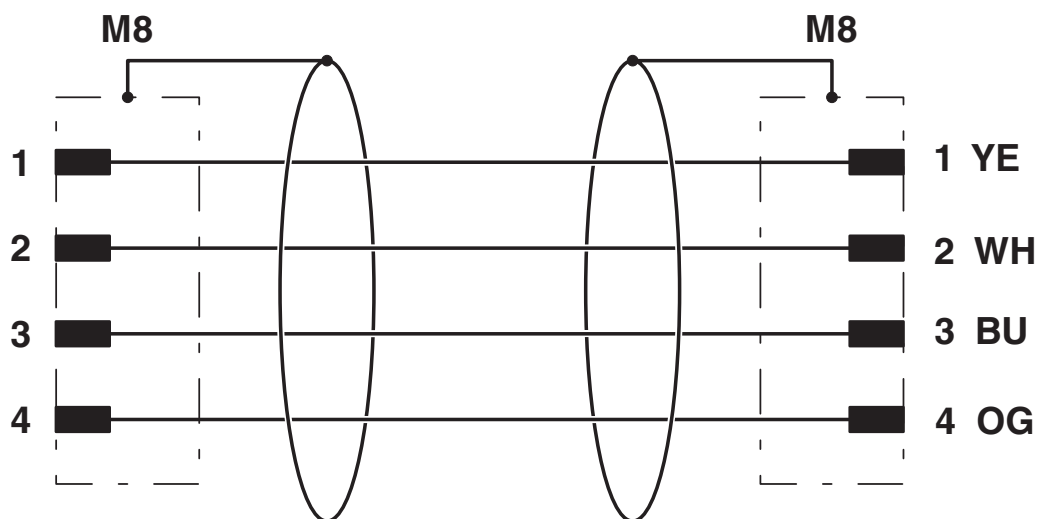
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Circuit diagram



Contact assignment of M8 plugs

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Approvals

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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 10.0	EC002599
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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%

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