

# NBC-M 8MS/ 0,5-93C/M 8MS - Network cable



1021243

<https://www.phoenixcontact.com/us/products/1021243>

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Network cable, Ethernet (100 Mbps), PROFINET (100 Mbps), EtherCAT® (100 Mbps), 4-position, PUR/FRNC halogen-free, green RAL 6018, shielded, Plug straight M8 / IP67, on Plug straight M8, cable length: 0.5 m

## Commercial data

Item number	1021243
Packing unit	1 pc
Minimum order quantity	50 pc
Product key	AF1BJI
GTIN	4055626513713
Weight per piece (including packing)	55.7 g
Weight per piece (excluding packing)	53.61 g
Country of origin	PL

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## Technical data

### 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 $U_N$	48 V AC
	60 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
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

#### Connection 2

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Type	Plug straight M8
Number of positions	4
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)

## Cable/line

Cable length	0.5 m
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### PROFINET drag chain CAT5 [93C]

Dimensional drawing	
Cable weight	61 kg/km
Shielded	yes
Cable type	PROFINET drag chain CAT5 [93C]
Conductor structure	1x4xAWG22/7, SF/TQ
Signal runtime	5.3 ns/m
Signal speed	0.66 c
Conductor structure signal line	7x 0.25 mm
AWG signal line	22
Conductor cross-section	4x 0.34 mm <sup>2</sup>
Wire diameter incl. insulation	1.5 mm
External cable diameter	6.50 mm ±0.2 mm
Outer sheath, material	PUR
External sheath, color	green RAL 6018
Conductor material	Tin-plated Cu litz wires
Material wire insulation	PE
Single wire, color	white, yellow, blue, orange
Thickness, outer sheath	approx. 0.90 mm
Overall twist	Star quad
Optical shield covering	85 %
Insulation resistance	≥ 500 MΩ*km
Coupling resistance	≤ 20.00 mΩ/m (at 10 MHz)
Loop resistance	≤ 120.00 Ω/km
Wave impedance	100 Ω ±15 Ω (at 1 ... 100 MHz)
Nominal voltage, cable	600 V (UL rating)

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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
Smallest bending radius, fixed installation	33 mm
Smallest bending radius, movable installation	49 mm
Dynamic load capacity (bending)	Max. bending cycles: 3000000, Bending radius: 100 mm, Traversing path: 10 m, Traversing rate: 4 m/s, Acceleration: 4 m/s <sup>2</sup>
Tensile strength	≤ 150 N
Dynamic load capacity (torsion)	Torsion: ±30 °/m
Near end crosstalk attenuation (NEXT)	80 dB (with 1 MHz)
	76 dB (at 4 MHz)
	70 dB (at 10 MHz)
	65 dB (at 16 MHz)
	63 dB (at 20 MHz)
	60 dB (at 31.25 MHz)
	55 dB (at 62.5 MHz)
	50 dB (at 100 MHz)
Shield attenuation	2.1 dB (with 1 MHz)
	4 dB (at 4 MHz)
	6.3 dB (at 10 MHz)
	8 dB (at 16 MHz)
	9 dB (at 20 MHz)
	11.4 dB (at 31.25 MHz)
	16.5 dB (at 62.5 MHz)
	21.3 dB (at 100 MHz)
Halogen-free	yes
Flame resistance	according to IEC 60332-1-2
	in accordance with UN ECE-R 118.03
Resistance to oil	in accordance with DIN EN 60811-2-1
Other resistance	UV resistant
Special properties	Electrical properties in accordance with EN 50288-2-2
Ambient temperature (operation)	-40 °C ... 70 °C (cable, fixed installation)
	-40 °C ... 70 °C (Cable, flexible installation)
Ambient temperature (installation)	-20 °C ... 60 °C

## Environmental and real-life conditions

### Ambient conditions

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

## Standards and regulations

M8

# NBC-M 8MS/ 0,5-93C/M 8MS - Network cable



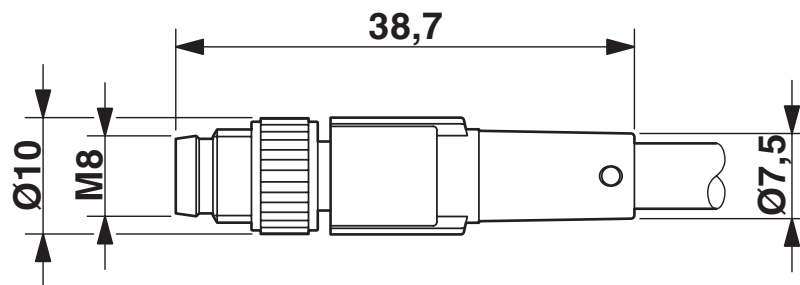
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Standard designation	M8 connector
Standards/specifications	IEC 61076-2-104

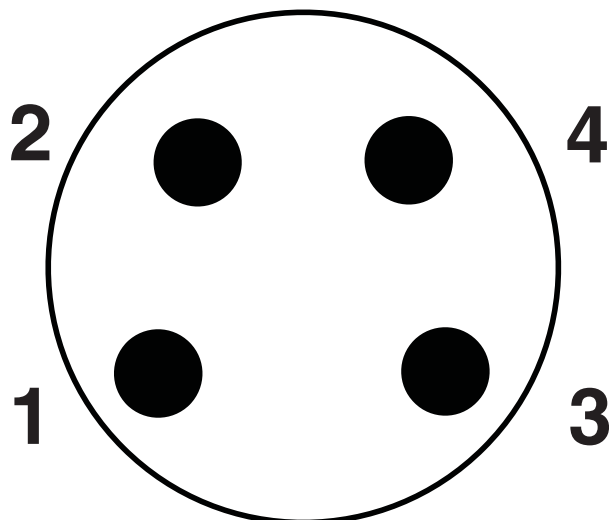
## Drawings

Dimensional drawing



M8 x 1 male plug, straight version

Schematic diagram



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

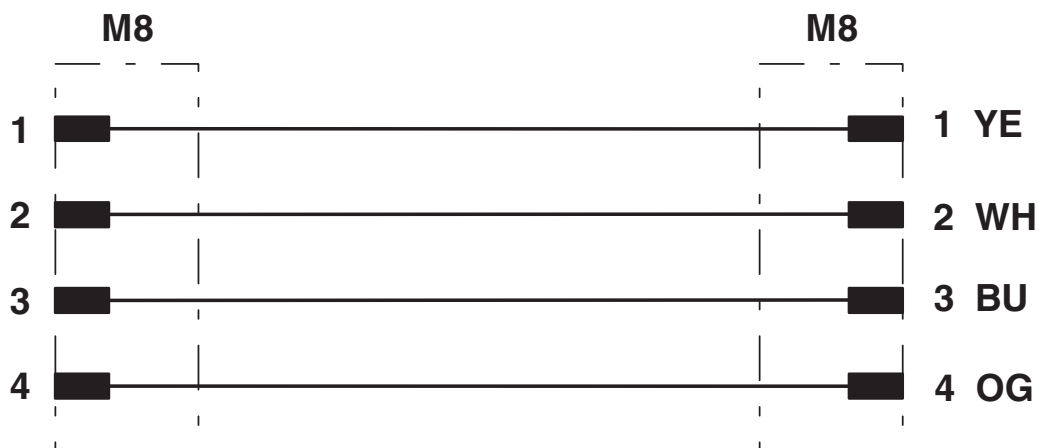
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Circuit diagram



Contact assignment of M8 plugs

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## Classifications

### ECLASS

ECLASS-13.0	27060307
ECLASS-15.0	27060307

### UNSPSC

UNSPSC 21.0	26121604
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