

# NBC-M 8MS/ 2,0-93B/M 8MS - Network cable



1407349

<https://www.phoenixcontact.com/us/products/1407349>

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Network cable, Ethernet (100 Mbps), PROFINET (100 Mbps), EtherCAT<sup>®</sup> (100 Mbps), 4-position, shielded, Plug straight M8, coding: A / IP67, on Plug straight M8, coding: A / IP67, cable length: 2 m

## Commercial data

Item number	1407349
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF02
Product key	BF1BJI
Catalog page	Page 394 (C-2-2019)
GTIN	4046356774772
Weight per piece (including packing)	152.3 g
Weight per piece (excluding packing)	152.3 g
Customs tariff number	85444290
Country of origin	PL

## 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
Sensor type	Ethernet
Number of positions	4
Application	Standard
No. of cable outlets	1
Shielded	yes
Coding	A

### Interfaces

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

### 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 carriers)
	TPU, hardly inflammable, self-extinguishing (Grip)
	Zinc die-cast, nickel-plated (Screw connection)
Insertion/withdrawal cycles	≥ 100
Contact resistance	≤ 5 mΩ

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Insulation resistance	≥ 100 MΩ
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 carriers) TPU, hardly inflammable, self-extinguishing (Grip) Zinc die-cast, nickel-plated (Screw connection)
Insertion/withdrawal cycles	≥ 100
Contact resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Tightening torque	0.2 Nm
Degree of protection	IP67
Ambient temperature (operation)	-25 °C ... 90 °C

## Cable/line

Cable length	2 m
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## PROFINET PVC stranded CAT5 [93B]

Dimensional drawing	
Cable weight	67 kg/km
UL AWM Style	21694
Number of positions	4
Shielded	yes
Cable type	PROFINET PVC stranded CAT5 [93B]
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>

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Wire diameter incl. insulation	1.55 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
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 100 MHz)
Nominal voltage, cable	600 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	3 x D
Minimum bending radius, flexible installation	7 x D
Smallest bending radius, fixed installation	20 mm
Smallest bending radius, movable installation	46 mm
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)
Flame resistance	according to UL 1685 (CSA FT 4)
Resistance to oil	Resistant to oil to a limited extent
Other resistance	UV resistant (According to UL 1581, Section 1200)
Ambient temperature (operation)	-40 °C ... 70 °C (cable, fixed installation) -40 °C ... 70 °C (Cable, flexible installation)
Ambient temperature (installation)	-20 °C ... 60 °C

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## Environmental and real-life conditions

### Ambient conditions

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

## Standards and regulations

### M8

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

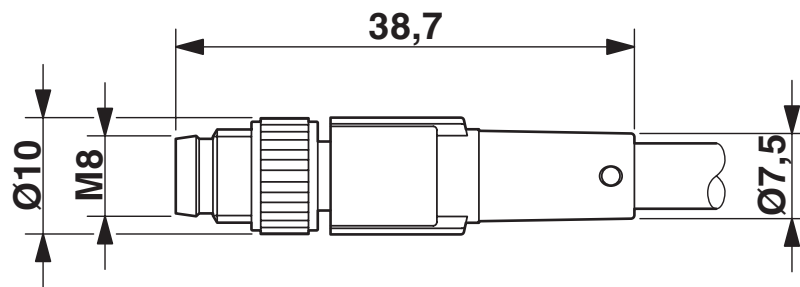
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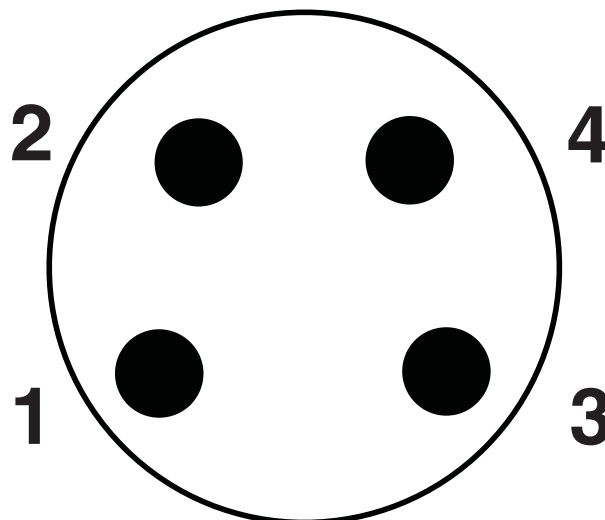
## Drawings

Dimensional drawing



M8 x 1 male plug, straight version

Schematic diagram



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

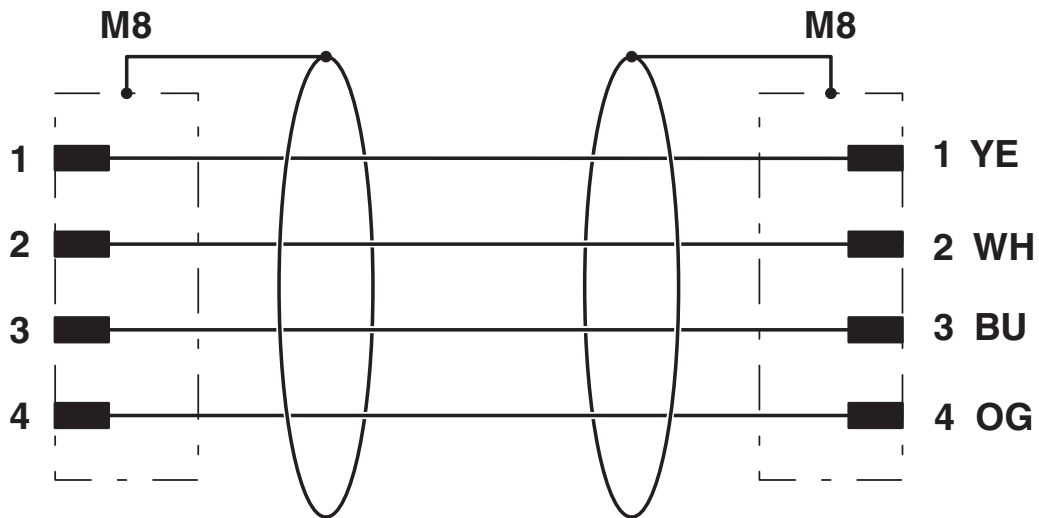
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Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1407349>



**EAC-RoHS**

Approval ID: RU D-DE.HB35.B.00387

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## Classifications

### ECLASS

ECLASS-11.0	27060307
ECLASS-12.0	27060307
ECLASS-13.0	27060307

### ETIM

ETIM 9.0	EC001855
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### UNSPSC

UNSPSC 21.0	26121600
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## Environmental product compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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## Accessories

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

1408718

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



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)

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### NBC-M 8MS-R4AC/.../... - Network cable

1408717

<https://www.phoenixcontact.com/us/products/1408717>



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 RJ45 / IP20, cable length: Free input (0.2 ... 40.0 m)

## NBC-M 8MS/ 2,0-93B/M 8MS - Network cable

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

1408715

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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 Socket straight M8, coding: A / IP67, cable length: Free input (0.2 ... 40.0 m)

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## NBC-M 8FS-R4AC/.../... - Network cable

1408714

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Network cable, Ethernet (100 Mbps), PROFINET (100 Mbps), EtherCAT® (100 Mbps), 4-position, Variable cable type, shielded, Plug straight RJ45 / IP20, on Socket straight M8, coding: A / IP67, cable length: Free input (0.2 ... 40.0 m)

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## PROT-M 8 FS-PA-CHAIN - Sealing cap

1430857

<https://www.phoenixcontact.com/us/products/1430857>

M8 sealing cap made of plastic with fixing band for sensor cables, for M8 plugs



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## TSD 02 SAC - Torque screwdriver

1208487

<https://www.phoenixcontact.com/us/products/1208487>

Torque screwdriver, with preset torque of 0.2 Nm and 4 mm hexagonal drive for M8 connectors



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## SAC BIT M8-D10 - Tool

1208461

<https://www.phoenixcontact.com/us/products/1208461>



Nut for assembling M8 connectors with longitudinal knurl and a knurl diameter of 10 mm, for 4 mm hexagonal drive

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