

NBC-M8MRD/2,0-93C/R4AC - Network cable



1080544

<https://www.phoenixcontact.com/us/products/1080544>

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Network cable, PROFINET CAT5 (100 Mbps), EtherCAT[®] CAT5 (100 Mbps), 4-position halogen-free, shielded (Advanced Shielding Technology), Plug angled M8, coding: D / IP67, on Plug straight RJ45 / IP20, cable length: 2 m

Commercial data

Item number	1080544
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF02
Product key	BF1BJI
Catalog page	Page 395 (C-2-2019)
GTIN	4055626804873
Weight per piece (including packing)	153.4 g
Weight per piece (excluding packing)	153.4 g
Customs tariff number	85444290
Country of origin	PL

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Technical data

Notes

General	This product corresponds to the PROFINET Cabling and Interconnection Technology Guideline for PROFINET regulations, version 2.00, order no: 2.252, Chapter 8.2 Connectors for Outside Environment (Balanced cabling)
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Product properties

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

Interfaces

Signal type/category	PROFINET CAT5 (IEC 11801), 100 Mbps
	EtherCAT® CAT5 (IEC 11801), 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	1 A
Transmission medium	Copper

Connector

Connection 1

Type	Plug angled M8 / IP67
Number of positions	4
Coding type	D (Data)
Shielded	yes
Handle color	black
Material	CuSn (Contact)
	Ni/Au (Contact surface)
	PA 6.6 (Contact carriers)
	TPU, hardly inflammable, self-extinguishing (Grip)
	Brass, nickel-plated (Screw connection)
Insertion/withdrawal cycles	≥ 100

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Contact resistance	≤ 5 mΩ
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 RJ45 / IP20
Number of positions	4 (8)
Handle color	black
Material	CuSn (Contact) Ni/Au (Contact surface) PA (Contact carriers) PA (Housing)
Insertion/withdrawal cycles	≥ 750
Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 80 °C

Cable/line

Cable length	2 m
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PROFINET drag chain CAT5 [93C]

Dimensional drawing	
Cable weight	61 kg/km
Number of positions	4
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 ²
Wire diameter incl. insulation	1.5 mm
External cable diameter	6.5 mm ±0.2 mm
Outer sheath, material	PUR
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
Thickness, outer sheath	approx. 0.9 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)
Test voltage Core/Core	2000 V (50 Hz, 1 min.)
Test voltage Core/Shield	2000 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
Max. bending cycles	3000000
Tensile strength	≤ 150 N
Torsion force	± 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
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

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Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65
	IP67
Ambient temperature (operation)	-25 °C ... 90 °C (M12 connector)

Standards and regulations

M8

Standard designation	M8 connector
Standards/specifications	IEC 61076-2-114

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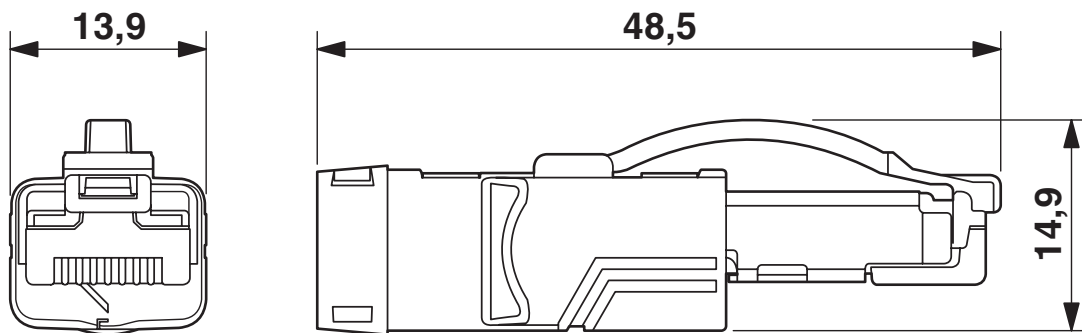


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Drawings

Dimensional drawing



RJ45 connector, IP20

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Schematic diagram



Connector pin assignment plug RJ45

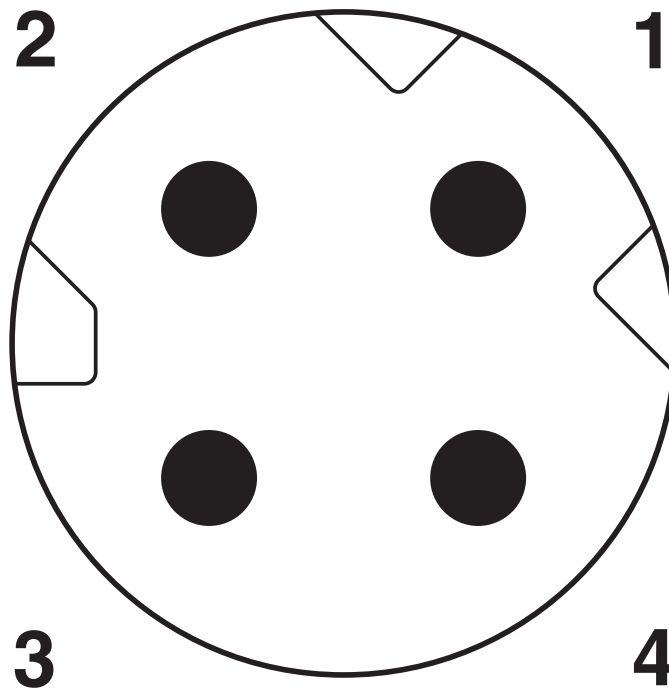
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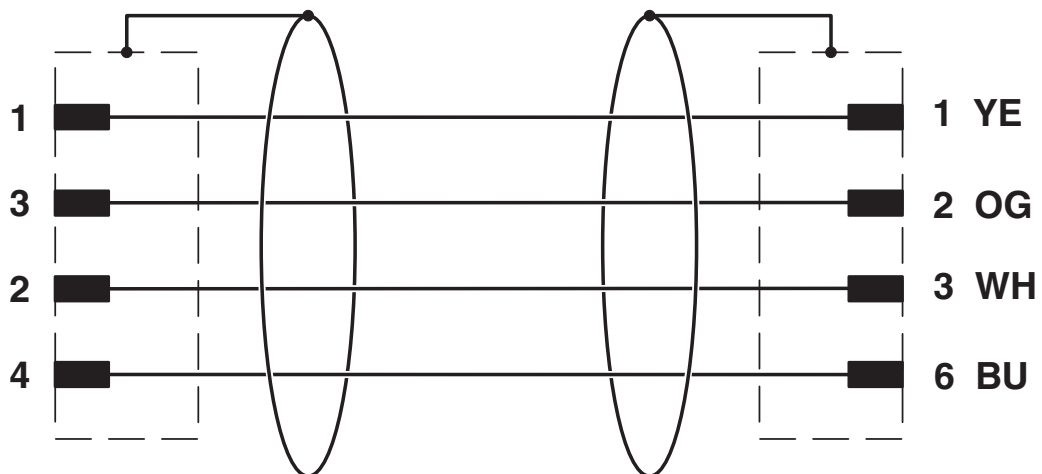


Schematic diagram



Pin assignment M8 male connector, 4-pos., D-coded, view of pin side

Circuit diagram



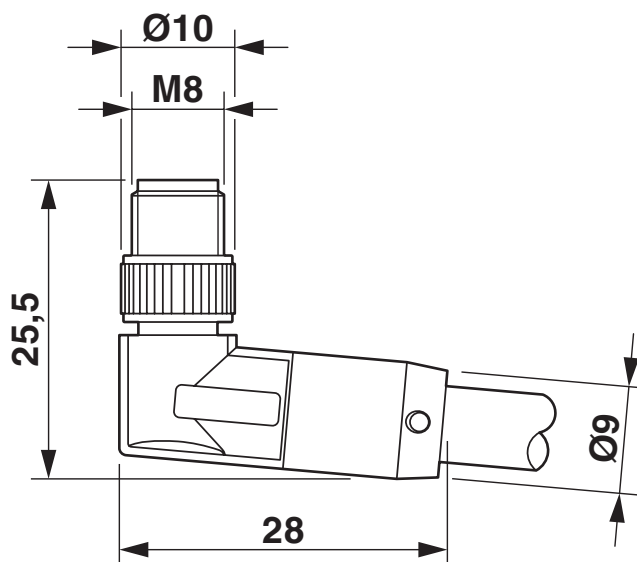
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Dimensional drawing



Plug M8 x 1, angled, shielded

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1080544>

 UL Listed Approval ID: E335024				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	30 V	0.5 A	-	-

 cUL Listed Approval ID: E335024				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	30 V	0.5 A	-	-

cULus Listed				
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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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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com