

NBC-M8MRD/5,0-93C/R4AC - Network cable



1080545

<https://www.phoenixcontact.com/us/products/1080545>

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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: 5 m

Commercial Data

Item number	1080545
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	BF02
Product Key	BF1BJI
Catalog Page	Page 395 (C-2-2019)
GTIN	4055626804880
Weight per Piece (including packing)	346 g
Weight per Piece (excluding packing)	346 g
Customs tariff number	85444290
Country of origin	PL

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
Number of positions	4
Sensor type	PROFINET
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)
	Nickel-plated brass (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
Ambient temperature (operation)	-25 °C ... 80 °C

Cable/line

Cable length	5 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
Material wire insulation	PE

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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
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

Environmental and real-life conditions

Ambient conditions

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

Standards and regulations

M8

Standards/specifications	IEC 61076-2-114
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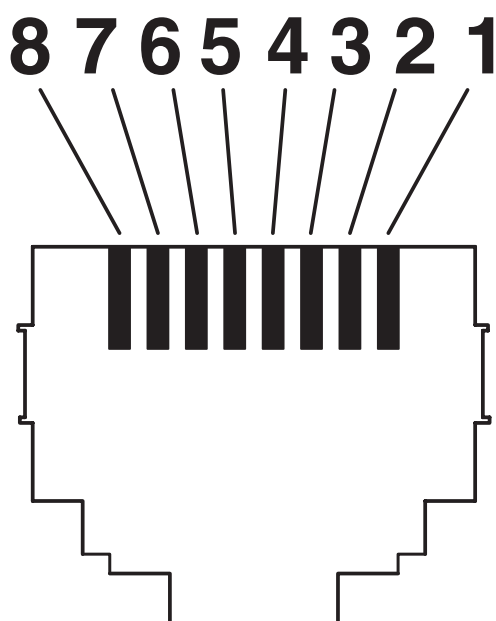
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Drawings

Schematic diagram



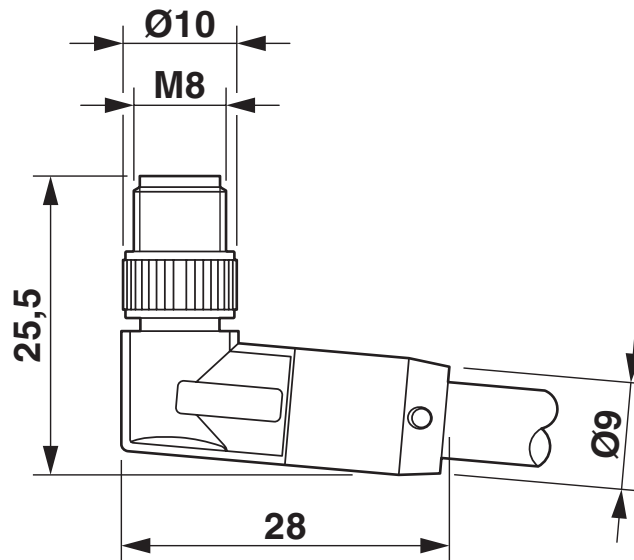
Connector pin assignment plug RJ45

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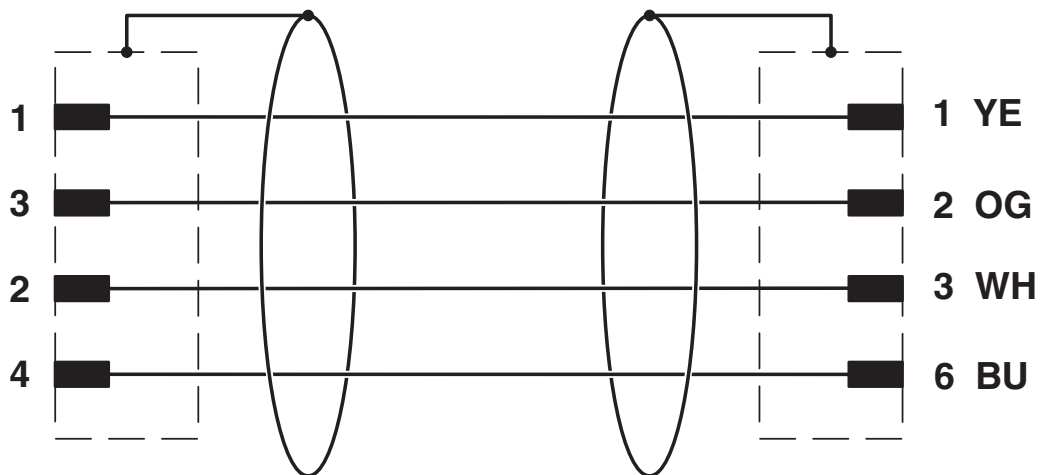
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Dimensional drawing



Plug M8 x 1, angled, shielded

Circuit diagram

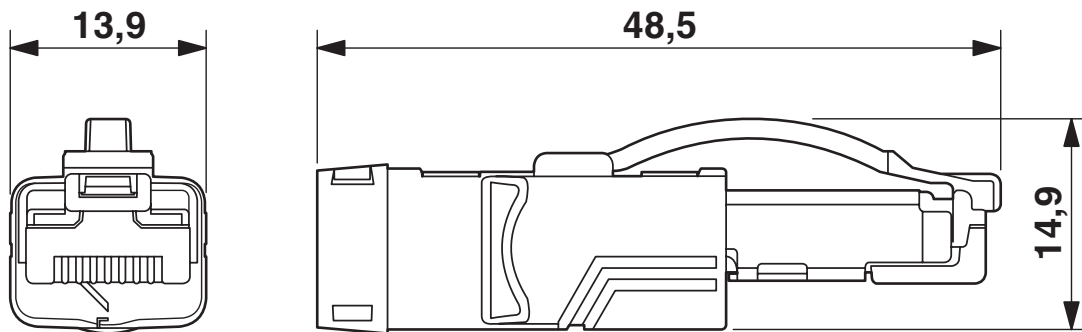


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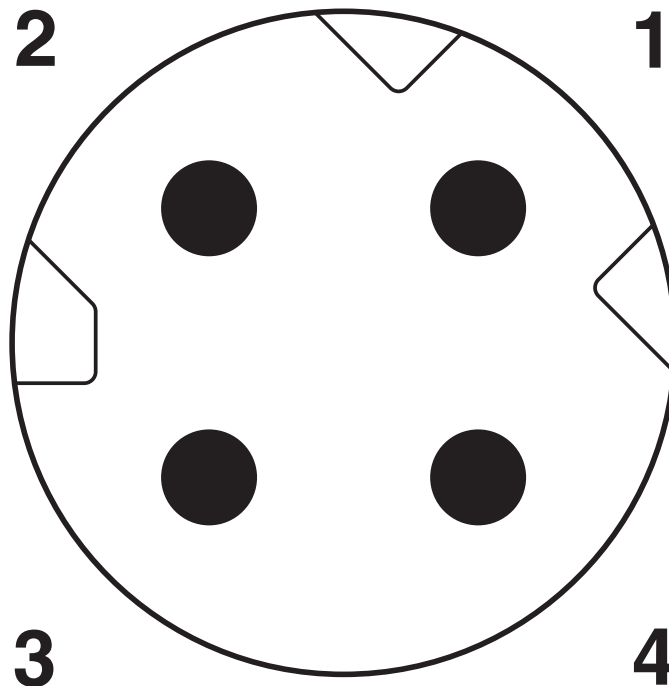
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Dimensional drawing



RJ45 connector, IP20

Schematic diagram



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


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Approvals

 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
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 EAC Approval ID: RU D-DE.HB35.B.00385	
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Classifications

ECLASS

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

ETIM

ETIM 8.0	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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