

# NBC-M8MRD/10,0-93C/M8MRD - Network cable



1080537

<https://www.phoenixcontact.com/us/products/1080537>

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Network cable, PROFINET CAT5 (100 Mbps), EtherCAT® CAT5 (100 Mbps), 4-position, PUR halogen-free, green RAL 6018, shielded (Advanced Shielding Technology), Plug angled M8, coding: D / IP67, on Plug angled M8, coding: D / IP67, cable length: 10 m

## Commercial data

Item number	1080537
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF02
Product key	AF1BJI
GTIN	4055626804811
Weight per piece (including packing)	644.8 g
Weight per piece (excluding packing)	570.66 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
Application	Standard
Sensor type	PROFINET
Number of positions	4
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 $I_N$	4 A
Transmission medium	Copper
Transmission speed	100 Mbps

### 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 carrier) TPU, hardly inflammable, self-extinguishing (Grip body) Brass, nickel-plated (Screw connection)

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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

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 carrier) TPU, hardly inflammable, self-extinguishing (Grip body) Brass, 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	10 m
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]
Conductor structure	1x4xAWG22/7, SF/TQ
AWG signal line	22
Conductor cross section	4x 0.34 mm²
Wire diameter incl. insulation	1.5 mm ±0.05 mm
External cable diameter	6.50 mm ±0.2 mm
Outer sheath, material	PUR

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External sheath, color	green RAL 6018
Conductor material	Tin-plated Cu litz wires
Material wire insulation	PE
Single wire, color	white, yellow, blue, orange
Overall twist	Star quad
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 <sup>2</sup>
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
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

## Standards and regulations

M8

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

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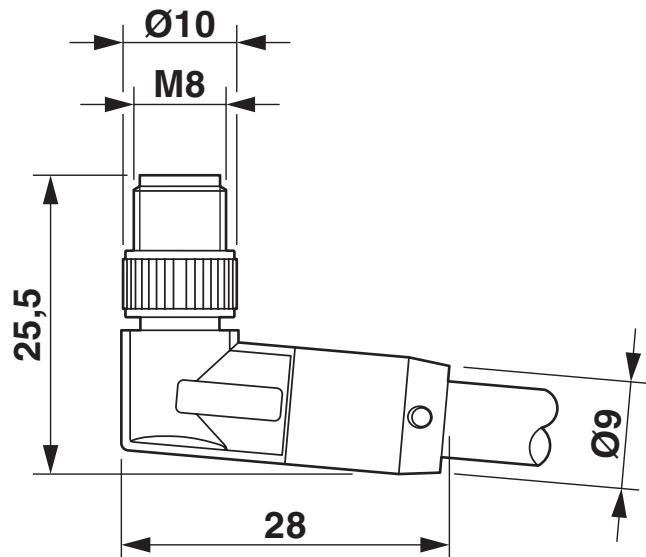


1080537

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## Drawings

Dimensional drawing



Plug M8 x 1, angled, shielded

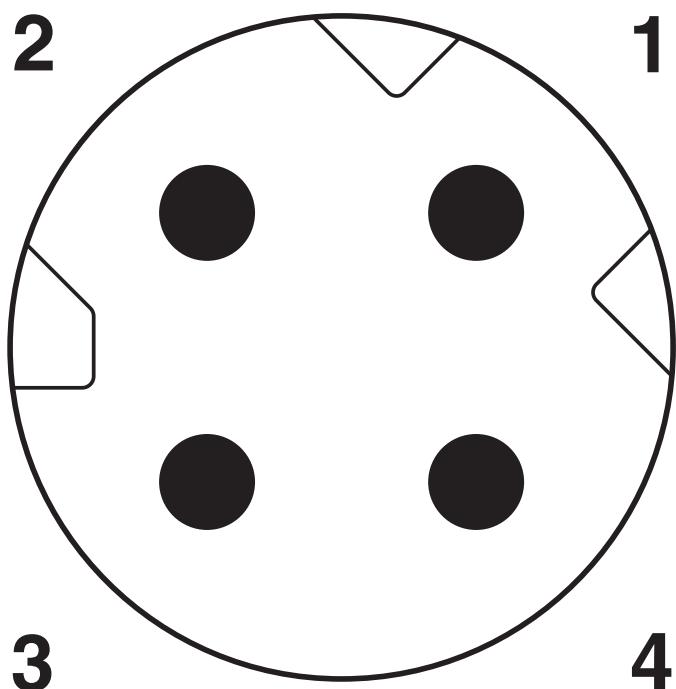
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1080537

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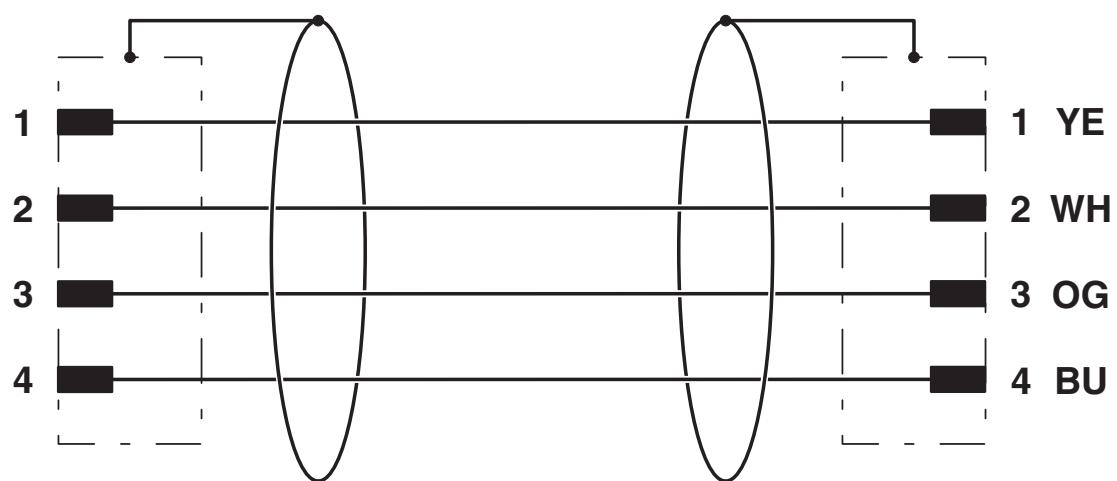


Schematic diagram



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

Circuit diagram



Contact assignment of M8 plugs

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## Approvals

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UL Listed		Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
keine		30 V	0.5 A	-	-

cUL Listed		Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
keine		30 V	0.5 A	-	-

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## Classifications

### ECLASS

ECLASS-13.0	27060307
ECLASS-15.0	27060307

### ETIM

ETIM 9.0	EC001855
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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
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### 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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