

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



1080545

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

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



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 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	AF1BJI
GTIN	4055626804880
Weight per piece (including packing)	328.9 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)
---------	--

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	1 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)

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

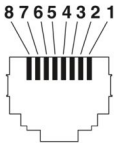


1080545

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

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

Dimensional drawing	 Connector pin assignment plug RJ45
Type	RJ45, straight
Signal type/category	PROFINET CAT5 (IEC 11801), 100 Mbps EtherCAT® CAT5 (IEC 11801)
Insertion/withdrawal cycles	≥ 750
Insulation resistance	≥ 100 MΩ
Overvoltage category	I
Degree of pollution	2
Material Contact	CuSn
Material Contact surface	Ni/Au
Material Contact carrier	PA
Material Housing	PA
Color (Housing)	black
Flammability rating according to UL 94	V2
Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 80 °C

Cable/line

Cable length	5 m
--------------	-----

PROFINET drag chain CAT5 [93C]

Dimensional drawing	
UL AWM Style	20233 (80°C/300 V)

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



1080545

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

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 mm ²
Wire diameter incl. insulation	1.5 mm ±0.05 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
Overall twist	Star quad
Optical shield covering	85 %
Insulation resistance	≥ 500 MΩ*km
Loop resistance	≤ 120.00 Ω/km
Wave impedance	100 Ω ±15 Ω (at 1 ... 100 MHz)
Nominal voltage, cable	≤ 300 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 ²
Dynamic load capacity (torsion)	Torsion: ±30 °/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
Ambient temperature (operation) (male connector/female connector)	-25 °C ... 90 °C (M12 connector)

Standards and regulations

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



1080545

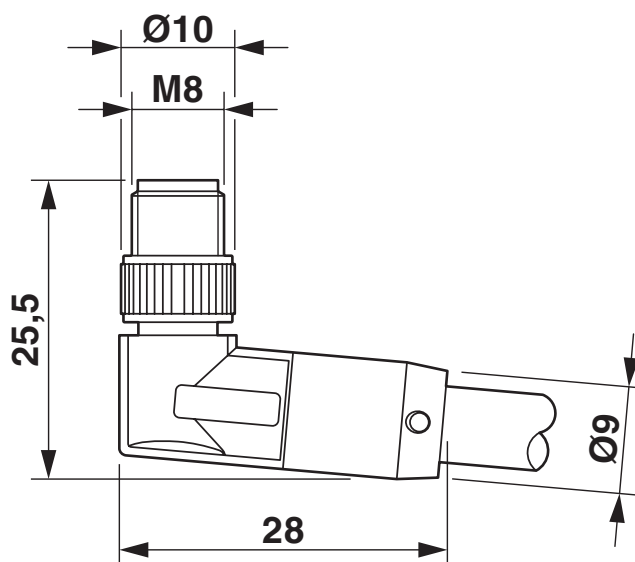
<https://www.phoenixcontact.com/us/products/1080545>

M8

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

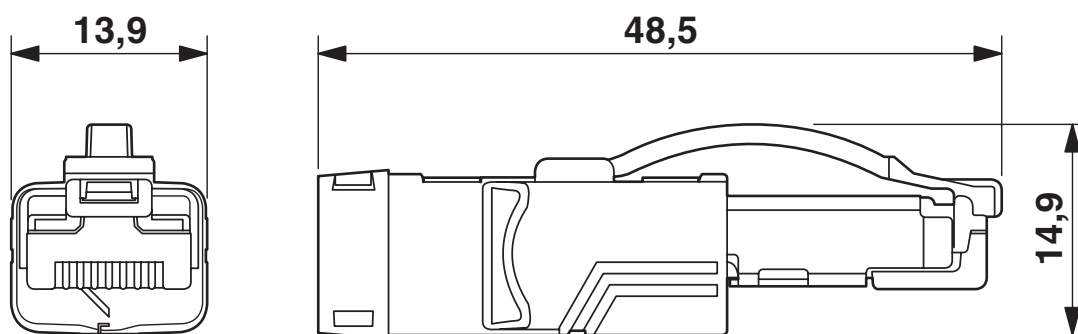
Drawings

Dimensional drawing



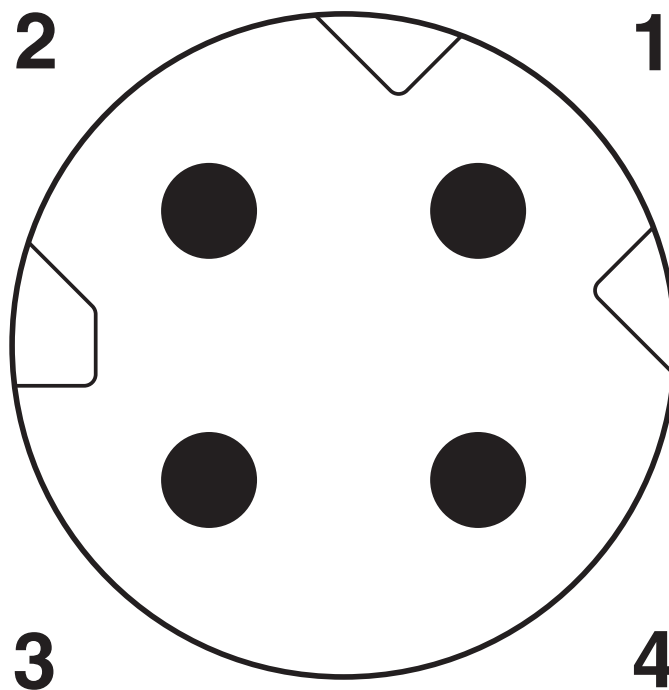
Plug M8 x 1, angled, shielded

Dimensional drawing



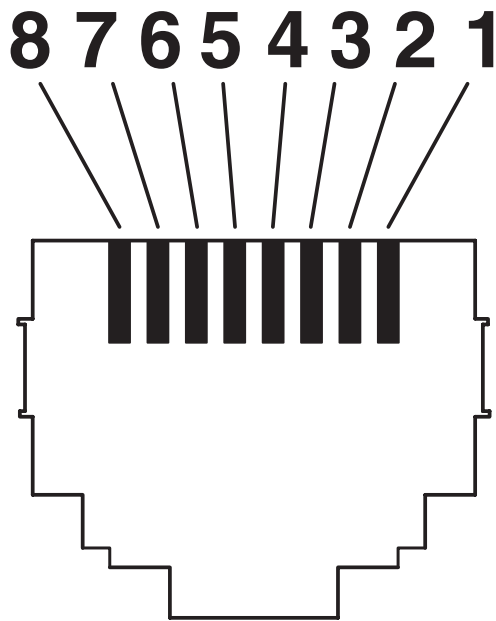
RJ45 connector, IP20

Schematic diagram



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

Schematic diagram



Connector pin assignment plug RJ45

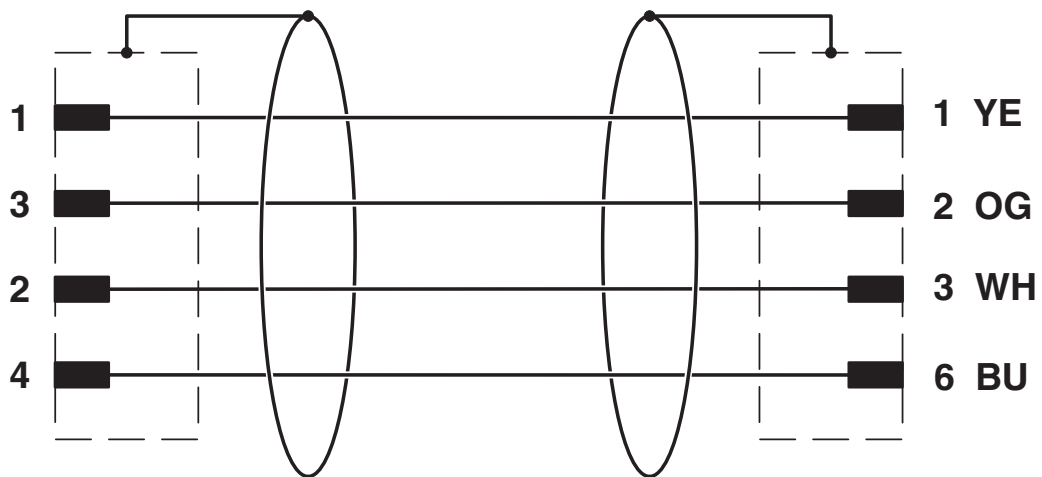
NBC-M8MRD/5,0-93C/R4AC - Network cable

1080545

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



Circuit diagram



Contact assignment of the M8 and RJ45 plug

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



1080545

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

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1080545>

 UL Listed Approval ID: E335024				
	Nominal voltage U _N	Nominal current I _N	Cross section AWG	Cross section mm ²
keine				
	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
keine				
	30 V	0.5 A	-	-

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



1080545

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

Classifications

ECLASS

ECLASS-13.0	27060307
ECLASS-15.0	27060307

ETIM

ETIM 9.0	EC001855
----------	----------

UNSPSC

UNSPSC 21.0	26121600
-------------	----------

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



1080545

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

Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
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%

Phoenix Contact 2025 © - all rights reserved
<https://www.phoenixcontact.com>

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