

NBC-M12MSD/10,0-93B/M12FSD CMC - Network cable



1553954

<https://www.phoenixcontact.com/gb/products/1553954>

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, PVC/PVC, green RAL 6018, shielded (Advanced Shielding Technology), Plug straight M12, coding: D / IP67, on Socket straight M12, coding: D / IP67, cable length: 10 m

Commercial data

Item number	1553954
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AF1CJN
Product key	AF1CJN
GTIN	4046356161800
Weight per piece (including packing)	667.2 g
Weight per piece (excluding packing)	660 g
Customs tariff number	85444290
Country of origin	PL

NBC-M12MSD/10,0-93B/M12FSD CMC - Network cable



1553954

<https://www.phoenixcontact.com/gb/products/1553954>

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 10.1 Cord Sets for Balanced Cabling
General	Further products with variable cable type and variable cable length can be found in the accessories section
General	CMC - Conductor marker carrier - PATG

Product properties

Product type	Data cable preassembled
Application	Standard
Sensor type	PROFINET
Number of positions	4
Shielded	yes

Interfaces

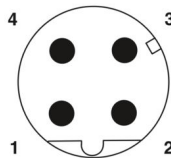
Signal type/category	PROFINET CAT5 (IEC 11801), 100 Mbps
	EtherCAT® CAT5 (IEC 11801), 100 Mbps

Electrical properties

Nominal voltage U_N	48 V AC
	60 V DC
Nominal current I_N	4 A
Transmission medium	Copper

Connector

Connection 1

Dimensional drawing	 Pin assignment M12 male connector, 4-pos., D-coded, male side
Type	M12 Plug, straight, 4-position, shielded (Advanced Shielding Technology), Keying: D
Number of positions	4
Shielded	yes
Shielding	Advanced Shielding Technology
Signal type/category	EtherCAT® CAT5 (IEC 11801), 100 Mbps PROFINET CAT5 (IEC 11801)
Insertion/withdrawal cycles	≥ 100

NBC-M12MSD/10,0-93B/M12FSD CMC - Network cable

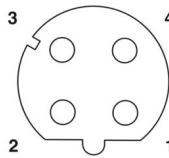


1553954

<https://www.phoenixcontact.com/gb/products/1553954>

Insulation resistance	≥ 100 MΩ
Overvoltage category	II
Degree of pollution	3
Tightening torque	0.4 Nm
Material Contact	CuSn
Material Contact surface	Ni/Au
Material Contact carrier	PA 6.6
Material Screw connection	Die-cast zinc, nickel-plated
Material Grip body	TPU, hardly inflammable, self-extinguishing
Material Seal	FKM
Flammability rating according to UL 94	V0
Degree of protection	IP65 IP67
Ambient temperature (operation)	-25 °C ... 85 °C
Standard designation	M12 connector
Standards/regulations	IEC 61076-2-101

Connection 2

Dimensional drawing	 <p>Pin assignment M12 socket, 4-pos., D-coded, female side</p>
Type	M12 Socket, straight, 4-position, shielded (Advanced Shielding Technology), Keying: D
Number of positions	4
Shielded	yes
Shielding	Advanced Shielding Technology
Signal type/category	EtherCAT® CAT5 (IEC 11801), 100 Mbps PROFINET CAT5 (IEC 11801)
Insertion/withdrawal cycles	≥ 100
Insulation resistance	≥ 100 MΩ
Overvoltage category	II
Degree of pollution	3
Tightening torque	0.4 Nm
Material Contact	CuSn
Material Contact surface	Ni/Au
Material Contact carrier	PA 6.6
Material Screw connection	Die-cast zinc, nickel-plated
Material Grip body	TPU, hardly inflammable, self-extinguishing
Material Seal	FKM
Flammability rating according to UL 94	V0
Degree of protection	IP65

NBC-M12MSD/10,0-93B/M12FSD CMC - Network cable



1553954


<https://www.phoenixcontact.com/gb/products/1553954>

	IP67
Ambient temperature (operation)	-25 °C ... 85 °C
Standard designation	M12 connector
Standards/regulations	IEC 61076-2-101

Cable/line

Cable length	10 m
--------------	------

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 mm²
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.)

NBC-M12MSD/10,0-93B/M12FSD CMC - Network cable



1553954

<https://www.phoenixcontact.com/gb/products/1553954>

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

NBC-M12MSD/10,0-93B/M12FSD CMC - Network cable



1553954

<https://www.phoenixcontact.com/gb/products/1553954>

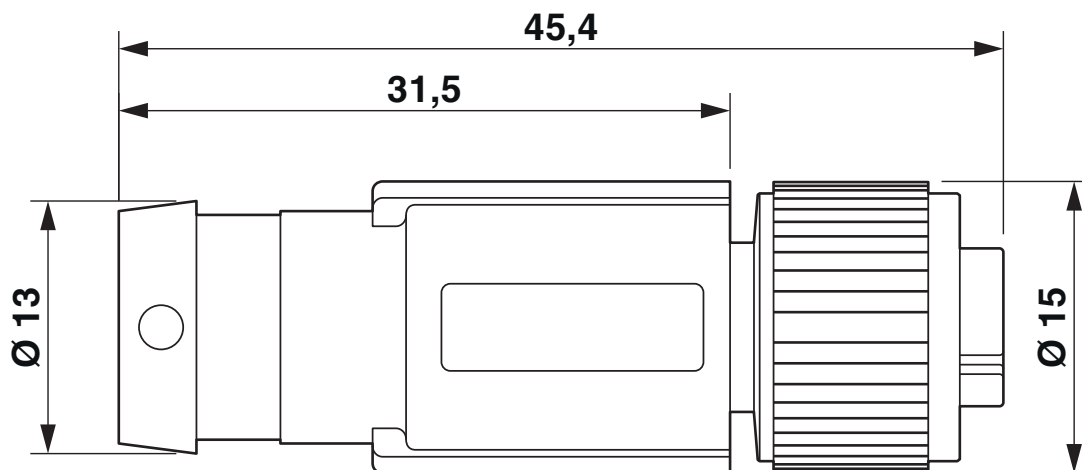
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



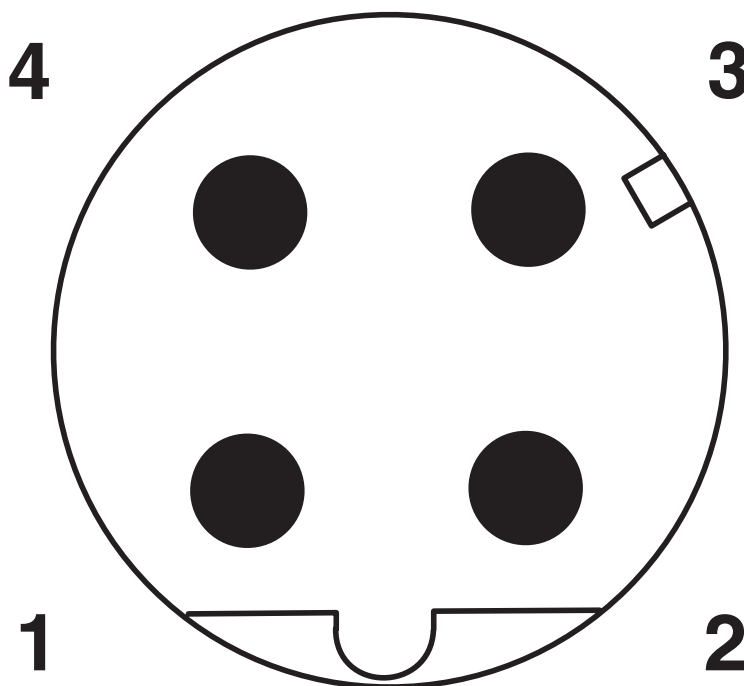
M12 x 1 socket, straight, shielded

NBC-M12MSD/10,0-93B/M12FSD CMC - Network cable

1553954

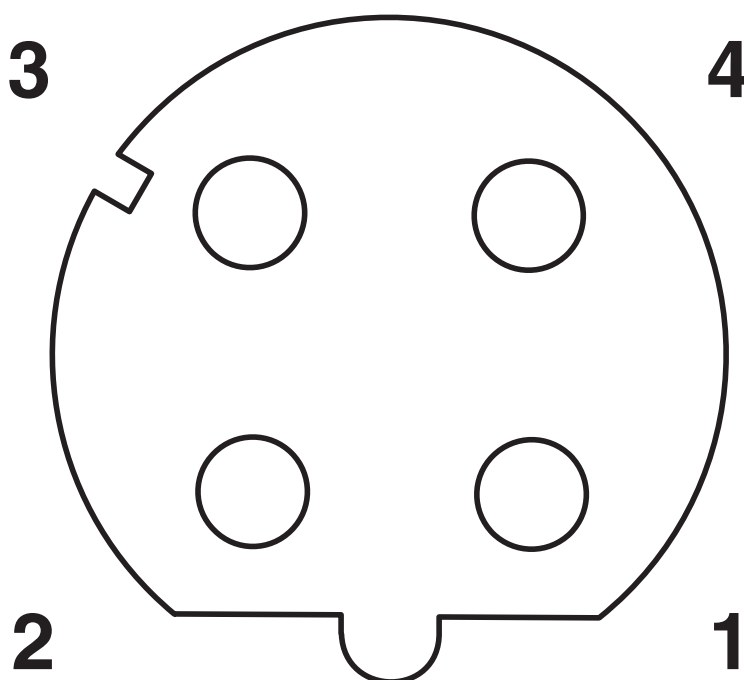
<https://www.phoenixcontact.com/gb/products/1553954>

Schematic diagram



Pin assignment M12 male connector, 4-pos., D-coded, male side

Schematic diagram



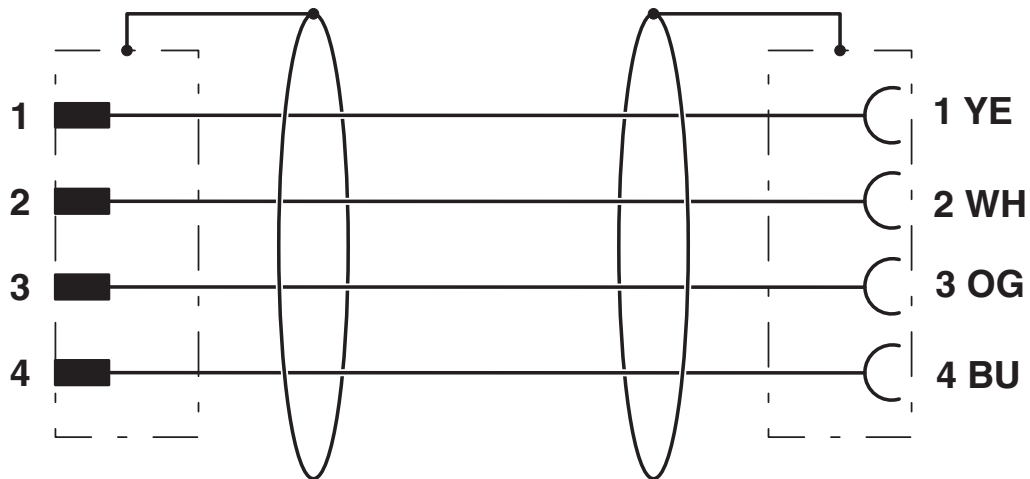
Pin assignment M12 socket, 4-pos., D-coded, female side

NBC-M12MSD/10,0-93B/M12FSD CMC - Network cable

1553954

<https://www.phoenixcontact.com/gb/products/1553954>

Circuit diagram



Contact assignment of the M12 connector and the M12 socket


NBC-M12MSD/10,0-93B/M12FSD CMC - Network cable



1553954

<https://www.phoenixcontact.com/gb/products/1553954>

Approvals

 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/1553954>



EAC-RoHS

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

NBC-M12MSD/10,0-93B/M12FSD CMC - Network cable



1553954
<https://www.phoenixcontact.com/gb/products/1553954>

Classifications

ECLASS

ECLASS-13.0	27060307
-------------	----------

ETIM

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

UNSPSC

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

NBC-M12MSD/10,0-93B/M12FSD CMC - Network cable



1553954

<https://www.phoenixcontact.com/gb/products/1553954>

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 Ltd
Halesfield 13, Telford
Shropshire, TF7 4PG
01952 681700
info@phoenixcontact.co.uk