

Network cable - NBC-MSD/ 1,0-93E/MSD SCO



1407376

<https://www.phoenixcontact.com/pc/products/1407376>

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, Ethernet CAT5 (100 Mbps), 4-position, shielded (Advanced Shielding Technology), Plug straight M12 / IP67, coding: D, on Plug straight M12 / IP67, coding: D, cable length: 1 m

Network cable - NBC-MSD/ 1,0-93E/MSD SCO



1407376

<https://www.phoenixcontact.com/pc/products/1407376>

Commercial Data

Item number	1407376
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	BF1CJI
Catalog Page	Page 199 (C-6-2019)
GTIN	4046356775045
Weight per Piece (including packing)	75.6 g
Weight per Piece (excluding packing)	75 g
Customs tariff number	85444290
Country of origin	PL

Network cable - NBC-MSD/ 1,0-93E/MSD SCO



1407376

<https://www.phoenixcontact.com/pc/products/1407376>

Technical Data

Notes

General	Further products with variable cable type and variable cable length can be found in the accessories section
---------	---

Product properties

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

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Interfaces

Bus system	Ethernet
Signal type/category	Ethernet CAT5 (IEC 11801), 100 Mbps

LED 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

Material specifications

Color Handle area	black
Flammability rating according to UL 94	V0

Connector

Header 1

Type	Plug straight M12 / IP67
Number of positions	4
Coding type	D (Data)
Handle color	black
Material	CuZn (Contact) Ni/Au (Contact surface)

Network cable - NBC-MSD/ 1,0-93E/MSD SCO



1407376

<https://www.phoenixcontact.com/pc/products/1407376>

	PA (Contact carriers)
	TPU, hardly inflammable, self-extinguishing (Grip)
	Zinc die-cast, nickel-plated (Screw connection)
	FKM (Seal)
Insertion/withdrawal cycles	≥ 100
Contact resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Tightening torque	0.4 Nm
Degree of protection	IP67
Ambient temperature (operation)	-25 °C ... 90 °C

Head 2

Type	Plug straight M12 / IP67
Number of positions	4
Coding type	D (Data)
Handle color	black
Material	CuZn (Contact)
	Ni/Au (Contact surface)
	PA (Contact carriers)
	TPU, hardly inflammable, self-extinguishing (Grip)
	Zinc die-cast, nickel-plated (Screw connection)
	FKM (Seal)
Insertion/withdrawal cycles	≥ 100
Contact resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Tightening torque	0.4 Nm
Ambient temperature (operation)	-25 °C ... 90 °C

Cable / line

Cable length	1 m
Cable weight	42 kg/km
UL AWM Style	20963 (80°C/30 V)
Number of positions	4
Shielded	yes
Cable type	Ethernet flexible CAT5, 2-pair [93E]
Signal runtime	5.3 ns/m
Conductor structure signal line	7x 0.16 mm
AWG signal line	26
Conductor cross section	2x 2x 0.14 mm ²
Wire diameter incl. insulation	0.98 mm
External cable diameter	6.4 mm ±0.2 mm
Outer sheath, material	PUR
External sheath, color	water blue RAL 5021
Conductor material	Bare Cu litz wires

Network cable - NBC-MSD/ 1,0-93E/MSD SCO



1407376

<https://www.phoenixcontact.com/pc/products/1407376>

Material wire insulation	Foamed PE
Single wire, color	white/orange-orange, white/green-green
Thickness, outer sheath	1.2 mm
Twisted pairs	2 cores to the pair
Overall twist	Two pairs with two fillers to the core
Optical shield covering	70 %
Insulation resistance	$\geq 500 \text{ M}\Omega \cdot \text{km}$
Coupling resistance	$\leq 100.00 \text{ m}\Omega/\text{m}$ (at 10 MHz)
Loop resistance	$\leq 290.00 \text{ }\Omega/\text{km}$
Wave impedance	$100 \text{ }\Omega \pm 5 \text{ }\Omega$ (at 100 MHz)
Cable capacity	approx. 45 nF/km (at 1 kHz)
Nominal voltage, cable	$\leq 100 \text{ V}$ (Peak value, not for high-power applications)
Test voltage Core/Core	700 V (50 Hz, 1 min.)
Test voltage Core/Shield	700 V (50 Hz, 1 min.)
Current carrying capacity of cable	2 A (according to DIN VDE 0891-1)
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	8 x D
Tensile strength	$\leq 80 \text{ N}$
Near end crosstalk attenuation (NEXT)	65.3 dB (with 1 MHz)
	56.3 dB (at 4 MHz)
	50.3 dB (at 10 MHz)
	47.2 dB (at 16 MHz)
	45.8 dB (at 20 MHz)
	42.9 dB (at 31.25 MHz)
	38.4 dB (at 62.5 MHz)
	35.3 dB (at 100 MHz)
Power-summed near end crosstalk attenuation (PSNEXT)	62.3 dB (with 1 MHz)
	53.3 dB (at 4 MHz)
	47.3 dB (at 10 MHz)
	44.2 dB (at 16 MHz)
	42.8 dB (at 20 MHz)
	39.9 dB (at 31.25 MHz)
	35.4 dB (at 62.5 MHz)
	32.3 dB (at 100 MHz)
Return loss (RL)	23 dB (at 4 MHz)
	24.1 dB (at 8 MHz)
	25 dB (at 10 MHz)
	25 dB (at 16 MHz)
	25 dB (at 20 MHz)
	23.6 dB (at 31.25 MHz)
	21.5 dB (at 62.5 MHz)
	20.1 dB (at 100 MHz)
Shield attenuation	3.2 dB (with 1 MHz)
	6 dB (at 4 MHz)

Network cable - NBC-MSD/ 1,0-93E/MSD SCO



1407376

<https://www.phoenixcontact.com/pc/products/1407376>

	9.5 dB (at 10 MHz)
	12.1 dB (at 16 MHz)
	13.6 dB (at 20 MHz)
	17.1 dB (at 31.25 MHz)
	24.8 dB (at 62.5 MHz)
	32 dB (at 100 MHz)
Halogen-free	according to IEC 60754-1
Flame resistance	according to IEC 60332-1-2 in acc. to UL VW1
Resistance to oil	according to EN 60811-2-1
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation) -20 °C ... 80 °C (Cable, flexible installation)
Ambient temperature (installation)	-20 °C ... 80 °C

Cable structure

Signal type/category	Ethernet CAT5 (IEC 11801), 100 Mbps
----------------------	-------------------------------------

Ambient conditions

Degree of protection	IP65 IP67
----------------------	--------------

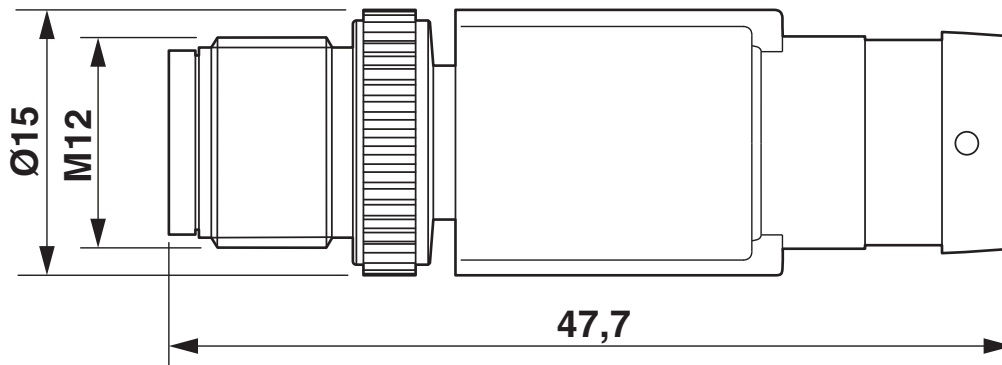
Standards and regulations

M12

Standards/specifications	IEC 61076-2-101
--------------------------	-----------------

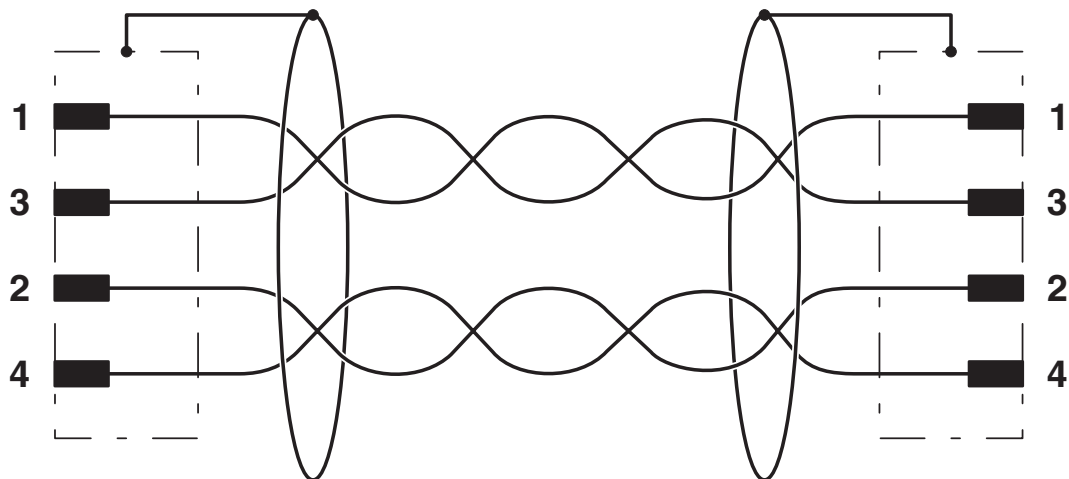
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Circuit diagram



Contact assignment of the M12 plugs

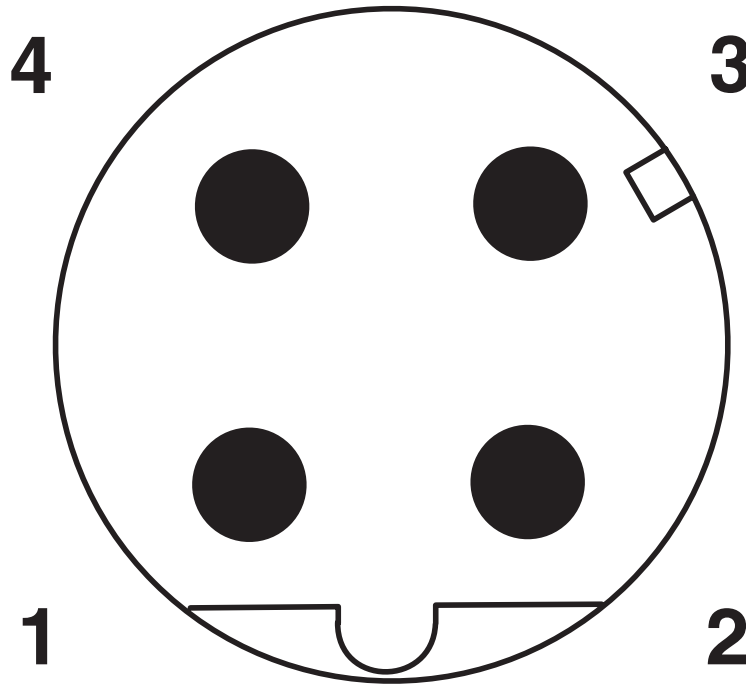
Network cable - NBC-MSD/ 1,0-93E/MSD SCO

1407376

<https://www.phoenixcontact.com/pc/products/1407376>



Schematic diagram



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

Network cable - NBC-MSD/ 1,0-93E/MSD SCO




1407376

<https://www.phoenixcontact.com/pc/products/1407376>

Approvals

 UL Listed Approval ID: FILE E 335024				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	30 V	4 A	-	-

 cUL Listed Approval ID: FILE E 335024				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	30 V	4 A	-	-

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

cULus Listed

Network cable - NBC-MSD/ 1,0-93E/MSD SCO



1407376

<https://www.phoenixcontact.com/pc/products/1407376>

Classifications

ECLASS

ECLASS-9.0	27060308
ECLASS-10.0.1	27060308
ECLASS-11.0	27060307

ETIM

ETIM 8.0	EC001855
----------	----------

UNSPSC

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

Network cable - NBC-MSD/ 1,0-93E/MSD SCO



1407376

<https://www.phoenixcontact.com/pc/products/1407376>

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Network cable - NBC-MSD/ 1,0-93E/MSD SCO



1407376

<https://www.phoenixcontact.com/pc/products/1407376>

Accessories

Network cable

Network cable - NBC-MSD-MSD SCO/.../... - 1408706

<https://www.phoenixcontact.com/pc/products/1408706>



Network cable, Ethernet CAT5 (100 Mbps), 4-position, shielded, Plug straight M12 SPEEDCON / IP67, coding: D, on Plug straight M12 SPEEDCON / IP67, coding: D, cable length: Free input (0.2 ... 40.0 m)

Network cable

Network cable - NBC-MSD-MRD SCO/.../... - 1408700

<https://www.phoenixcontact.com/pc/products/1408700>



Network cable, Ethernet CAT5 (100 Mbps), 4-position, shielded, Plug straight M12 SPEEDCON / IP67, coding: D, on Plug angled M12 SPEEDCON / IP67, coding: D, cable length: Free input (0.2 ... 40.0 m)

Network cable - NBC-MSD/ 1,0-93E/MSD SCO

1407376

<https://www.phoenixcontact.com/pc/products/1407376>

Network cable

Network cable - NBC-MSD-FSD SCO/.../... - 1408692

<https://www.phoenixcontact.com/pc/products/1408692>



Network cable, Ethernet CAT5 (100 Mbps), 4-position, shielded, Plug straight M12 SPEEDCON / IP67, coding: D, on Socket straight M12 SPEEDCON / IP67, coding: D, cable length: Free input (0.2 ... 40.0 m)

Network cable

Network cable - NBC-MSD-FRD SCO/.../... - 1408684

<https://www.phoenixcontact.com/pc/products/1408684>



Network cable, Ethernet CAT5 (100 Mbps), 4-position, shielded, Plug straight M12 SPEEDCON / IP67, coding: D, on Socket angled M12 SPEEDCON / IP67, coding: D, cable length: Free input (0.2 ... 40.0 m)

Network cable - NBC-MSD/ 1,0-93E/MSD SCO

1407376

<https://www.phoenixcontact.com/pc/products/1407376>

Network cable

Network cable - NBC-MRD-MRD SCO/.../... - 1408699

<https://www.phoenixcontact.com/pc/products/1408699>



Network cable, Ethernet CAT5 (100 Mbps), 4-position, shielded, Plug angled M12 SPEEDCON / IP67, coding: D, on Plug angled M12 SPEEDCON / IP67, coding: D, cable length: Free input (0.2 ... 40.0 m)

Network cable

Network cable - NBC-MRD-FSD SCO/.../... - 1408691

<https://www.phoenixcontact.com/pc/products/1408691>



Network cable, Ethernet CAT5 (100 Mbps), 4-position, shielded, Plug angled M12 SPEEDCON / IP67, coding: D, on Socket straight M12 SPEEDCON / IP67, coding: D, cable length: Free input (0.2 ... 40.0 m)

Network cable - NBC-MSD/ 1,0-93E/MSD SCO

1407376

<https://www.phoenixcontact.com/pc/products/1407376>

Network cable

Network cable - NBC-MRD-FRD SCO/.../... - 1408683

<https://www.phoenixcontact.com/pc/products/1408683>



Network cable, Ethernet CAT5 (100 Mbps), 4-position, shielded, Plug angled M12 SPEEDCON / IP67, coding: D, on Socket angled M12 SPEEDCON / IP67, coding: D, cable length: Free input (0.2 ... 40.0 m)

Torque screwdriver

Torque screwdriver - TSD 04 SAC - 1208429

<https://www.phoenixcontact.com/pc/products/1208429>



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

Network cable - NBC-MSD/ 1,0-93E/MSD SCO



1407376

<https://www.phoenixcontact.com/pc/products/1407376>

Torque screwdriver

Torque screwdriver - TSD-M 1,2NM - 1212224

<https://www.phoenixcontact.com/pc/products/1212224>



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

Adapter insert

Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600

<https://www.phoenixcontact.com/pc/products/1212600>



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

1407376

<https://www.phoenixcontact.com/pc/products/1407376>

Locking clip

Locking clip - SAC-M12-EXCLIP-M - 1558988

<https://www.phoenixcontact.com/pc/products/1558988>



Locking clip for the pin side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools

Sealing cap

Sealing cap - PROT-M12 FS-PA-CHAIN - 1430873

<https://www.phoenixcontact.com/pc/products/1430873>



M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs

Network cable - NBC-MSD/ 1,0-93E/MSD SCO



1407376

<https://www.phoenixcontact.com/pc/products/1407376>

Tool

Tool - SAC BIT M12-D15 - 1208432

<https://www.phoenixcontact.com/pc/products/1208432>



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive

Phoenix Contact 2022 © - all rights reserved

<https://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG

Flachsmarktstraße 8

D-32825 Blomberg

+49 (0) 5235-3 00

info@phoenixcontact.com