

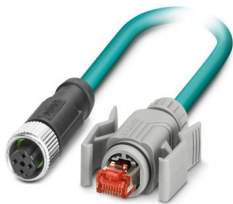
NBC-FSD/ 2,0-93E/R4MC SCO - Network cable



1407389

<https://www.phoenixcontact.com/us/products/1407389>

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, PUR halogen-free, water blue RAL 5021, shielded, Socket straight M12 SPEEDCON, coding: D / IP67, on Plug straight RJ45 Clip locking / IP67, cable length: 2 m

Commercial data

Item number	1407389
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF04
Product key	AF1CJI
GTIN	4046356775175
Weight per piece (including packing)	129.8 g
Weight per piece (excluding packing)	129.8 g
Customs tariff number	85444210
Country of origin	PL

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
Application	Standard
Sensor type	Ethernet
Number of positions	4
Shielded	yes
Coding	D

Interfaces

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

Signaling

Status display	no
Status display present	no

Electrical properties

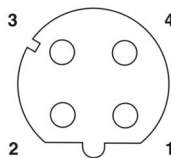
Nominal voltage U_N	48 V AC
	60 V DC
Nominal current I_N	1 A
Transmission medium	Copper
Transmission speed	100 Mbps
Transmission characteristics (category)	CAT5 (IEC 11801:2002)

Material specifications

Seal material	NBR
---------------	-----

Connector

Connection 1

Dimensional drawing	 Pin assignment M12 socket, 4-pos., D-coded, female side
Type	M12 Socket, straight, 4-position, shielded (Advanced Shielding Technology), Keying: D

NBC-FSD/ 2,0-93E/R4MC SCO - Network cable

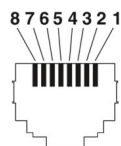


1407389

<https://www.phoenixcontact.com/us/products/1407389>

Number of positions	4
Shielded	yes
Shielding	Advanced Shielding Technology
Signal type/category	Ethernet CAT5 (IEC 11801), 100 Mbps
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
	IP67
Ambient temperature (operation)	-25 °C ... 85 °C
Standard designation	M12 connector
Standards/regulations	IEC 61076-2-101

Connection 2

Dimensional drawing	 <p>Connector pin assignment plug RJ45</p>
Type	RJ45 Plug, straight
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	PC
Material Housing	PA
Color (Housing)	gray
Flammability rating according to UL 94	V2
Degree of protection	IP67

NBC-FSD/ 2,0-93E/R4MC SCO - Network cable



1407389

<https://www.phoenixcontact.com/us/products/1407389>

Ambient temperature (operation)

-20 °C ... 70 °C

Cable/line

Cable length

2 m

Ethernet flexible CAT5, 2-pair [93E]

Dimensional drawing



Cable weight

42 kg/km

UL AWM Style

20963 (80°C/30 V)

Wiring standards/regulations

Electrical requirements EN 50288-2-2

Number of positions

4

Shielded

yes

Cable type

Ethernet flexible CAT5, 2-pair [93E]

Conductor structure

2x2xAWG26/7, SF/UTP

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 mm²

Wire diameter incl. insulation

0.98 mm

External cable diameter

6.40 mm ±0.2 mm

Outer sheath, material

PUR

External sheath, color

water blue RAL 5021

Conductor material

Bare Cu litz wires

Material wire insulation

Foamed PE

Single wire, color

white/orange-orange, white/green-green

Thickness, outer sheath

1.20 mm

Twisted pairs

2 cores to the pair

Overall twist

Two pairs with two fillers to the core

Optical shield covering

70 %

Insulation resistance

≥ 500 MΩ*km

Coupling resistance

≤ 100.00 mΩ/m (at 10 MHz)

Loop resistance

≤ 290.00 Ω/km

Wave impedance

100 Ω ±5 Ω (at 100 MHz)

Cable capacity

approx. 45 nF/km (at 1 kHz)

Nominal voltage, cable

≤ 100 V (Peak value, not for high-power applications)

Test voltage Core/Core

700 V (50 Hz, 1 min.)

Test voltage Core/Shield

700.00 V (50 Hz, 1 min.)

NBC-FSD/ 2,0-93E/R4MC SCO - Network cable



1407389

<https://www.phoenixcontact.com/us/products/1407389>

Current carrying capacity of cable	2.00 A (according to DIN VDE 0891-1)
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	8 x D
Smallest bending radius, fixed installation	26 mm
Smallest bending radius, movable installation	52 mm
Tensile strength	≤ 80 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-summated 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 attenuation (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)
	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
	in accordance with UN ECE-R 118.03
Resistance to oil	in accordance with EN 60811-2-1
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)

1407389

<https://www.phoenixcontact.com/us/products/1407389>

	-20 °C ... 80 °C (Cable, flexible installation)
Ambient temperature (installation)	-20 °C ... 80 °C

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65 (M12 connector)
	IP67 (M12 connector)
	IP67 (RJ45 connector)
	IP65/IP67
Ambient temperature (operation) (male connector/female connector)	-25 °C ... 85 °C (M12 connector)
	-25 °C ... 60 °C (RJ45 connector)

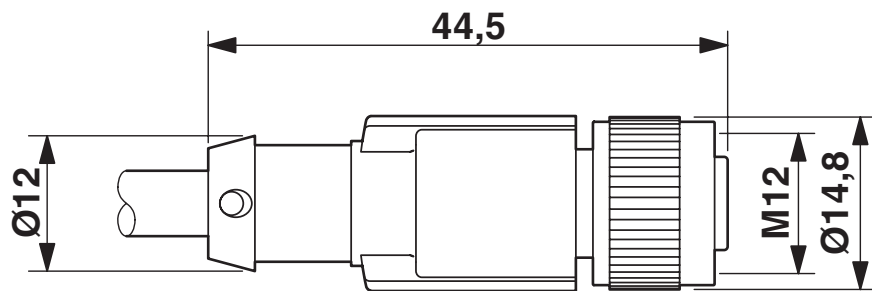
Standards and regulations

M12

Standard designation	M12 connector
Standards/specifications	IEC 61076-2-101

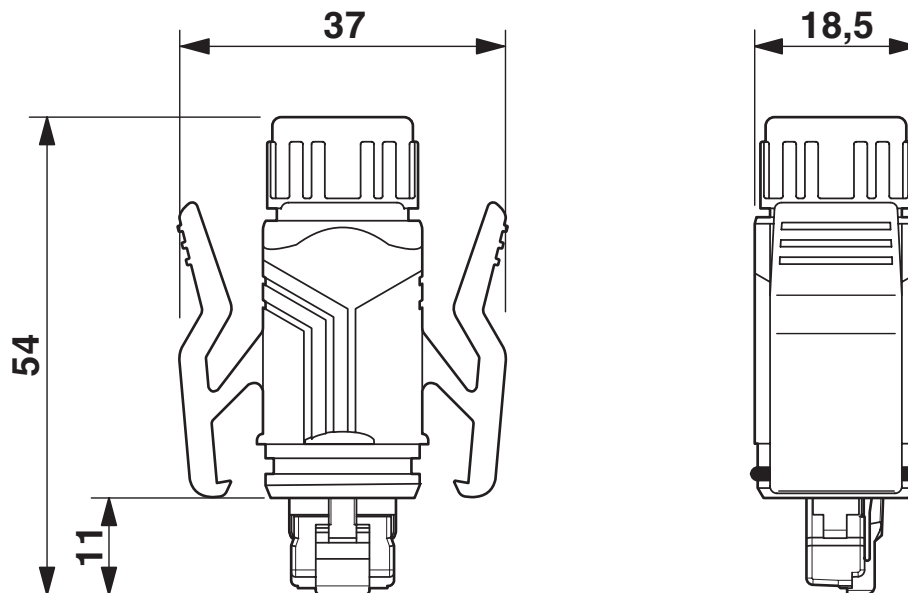
Drawings

Dimensional drawing



M12 x 1 socket, straight, shielded

Dimensional drawing

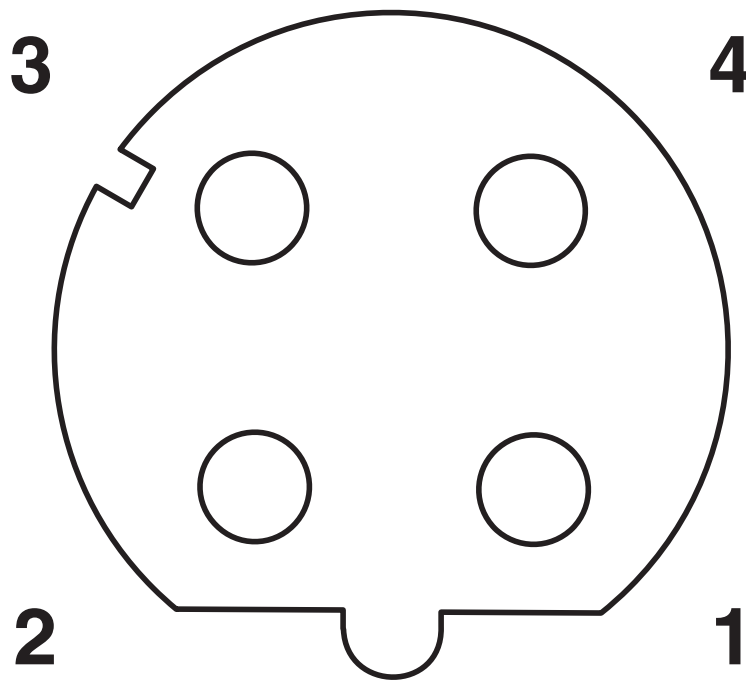


RJ45-connector, IP67

1407389

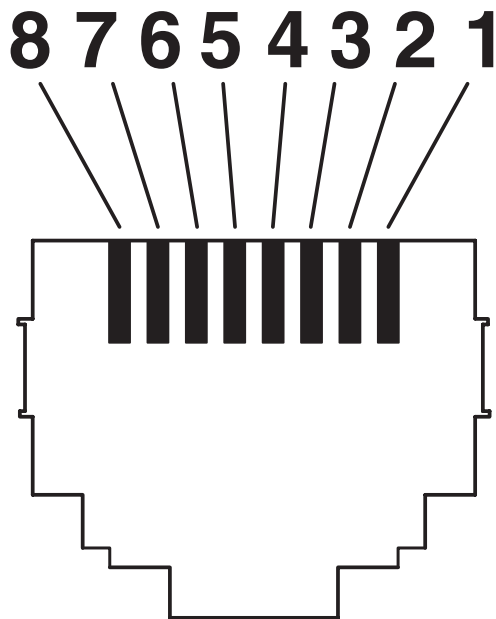
<https://www.phoenixcontact.com/us/products/1407389>

Schematic diagram



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

Schematic diagram

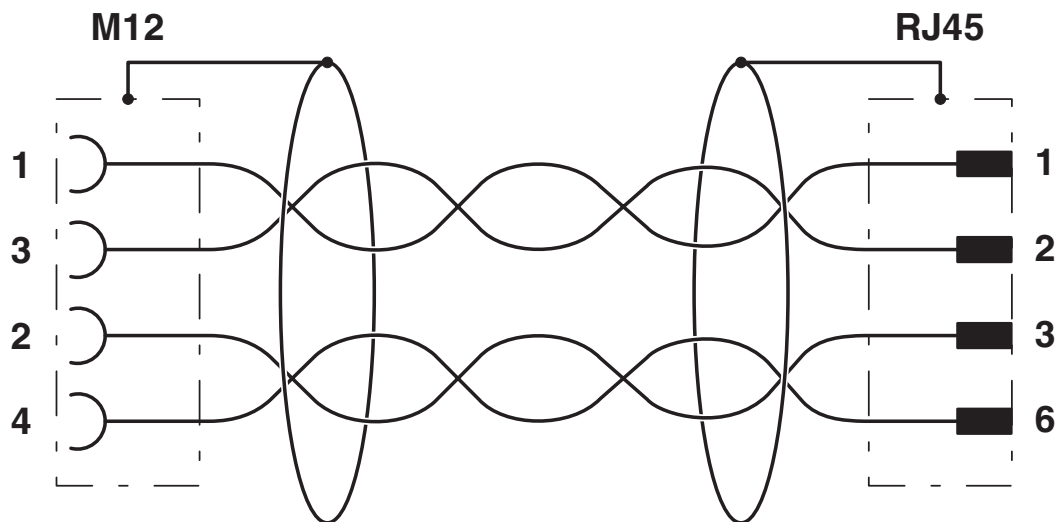


Connector pin assignment plug RJ45

1407389

<https://www.phoenixcontact.com/us/products/1407389>

Circuit diagram



Contact assignment of the M12 socket and the RJ45 plug

NBC-FSD/ 2,0-93E/R4MC SCO - Network cable



1407389

<https://www.phoenixcontact.com/us/products/1407389>

Classifications

ECLASS

ECLASS-13.0	27060307
ECLASS-15.0	27060307

ETIM

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

UNSPSC

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

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.)	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol(CAS: 119-47-1)
SCIP	2d549382-41a4-4f59-9687-ff5248c8c4c7