

1407396

<https://www.phoenixcontact.com/us/products/1407396>

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 Push Pull / IP67, cable length: 1 m

Commercial data

Item number	1407396
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF04
Product key	AF1CJI
GTIN	4046356775243
Weight per piece (including packing)	88.7 g
Weight per piece (excluding packing)	83.47 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

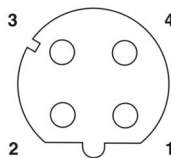
Nominal voltage $U_N$	48 V AC
	60 V DC
Nominal current $I_N$	1 A
Transmission medium	Copper
Transmission speed	100 Mbps
Transmission characteristics (category)	CAT5 (IEC 11801:2002)

### Material specifications

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

### Connector

#### Connection 1

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

# NBC-FSD/ 1,0-93E/R4QC SCO - Network cable

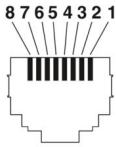


1407396

<https://www.phoenixcontact.com/us/products/1407396>

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, 4-position, Push Pull
Number of positions	4
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-GF
Color (Housing)	black
Flammability rating according to UL 94	V0

# NBC-FSD/ 1,0-93E/R4QC SCO - Network cable



1407396


<https://www.phoenixcontact.com/us/products/1407396>

Degree of protection	IP67
	IP65
Ambient temperature (operation)	-40 °C ... 70 °C

## Cable/line

Cable length	1 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 mm <sup>2</sup>
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)

# NBC-FSD/ 1,0-93E/R4QC SCO - Network cable



1407396

<https://www.phoenixcontact.com/us/products/1407396>

Test voltage Core/Core	700 V (50 Hz, 1 min.)
Test voltage Core/Shield	700.00 V (50 Hz, 1 min.)
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

# NBC-FSD/ 1,0-93E/R4QC SCO - Network cable



1407396

<https://www.phoenixcontact.com/us/products/1407396>

Resistance to oil	in accordance with 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

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP65 (M12 connector)
	IP67 (M12 connector)
	IP67 (RJ45 connector)

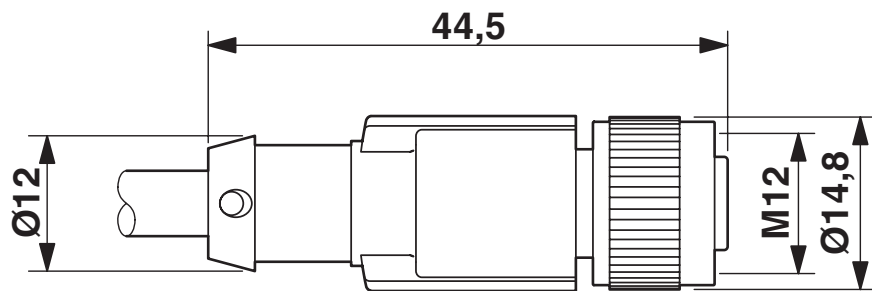
## Standards and regulations

### M12

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

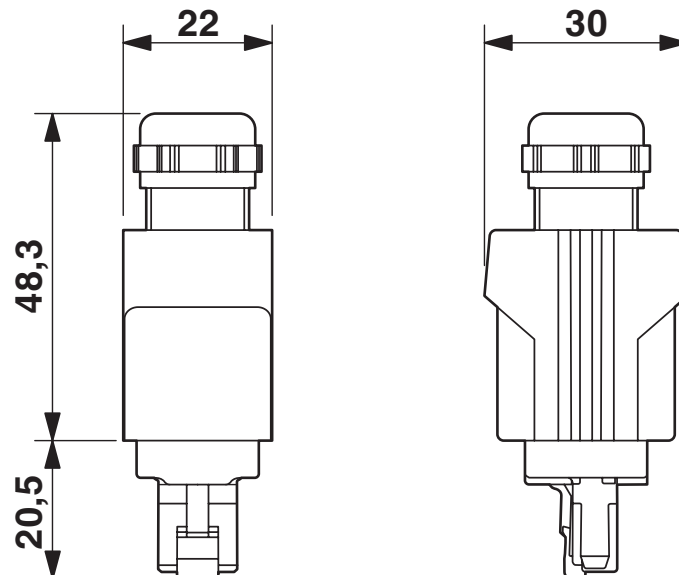
## Drawings

Dimensional drawing



M12 x 1 socket, straight, shielded

Dimensional drawing

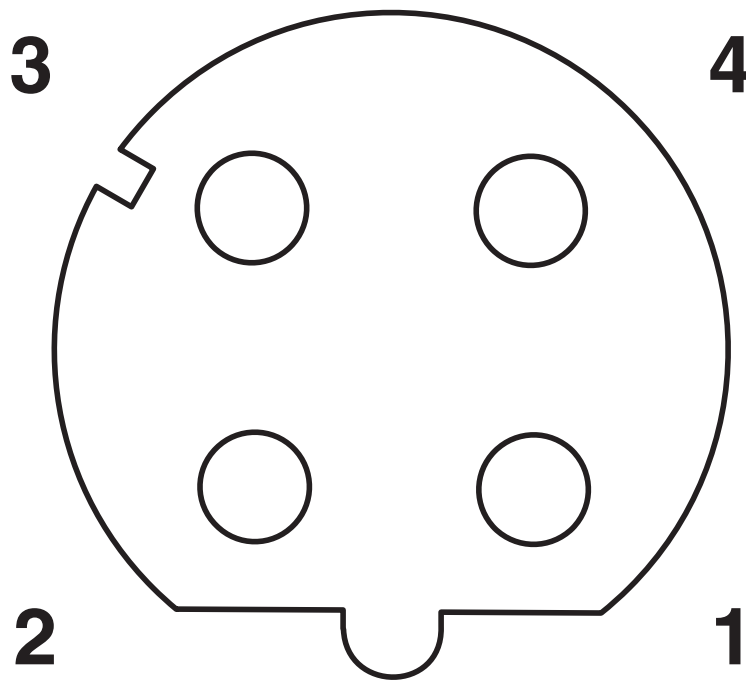


RJ45 Push-Pull connector, IP67

1407396

<https://www.phoenixcontact.com/us/products/1407396>

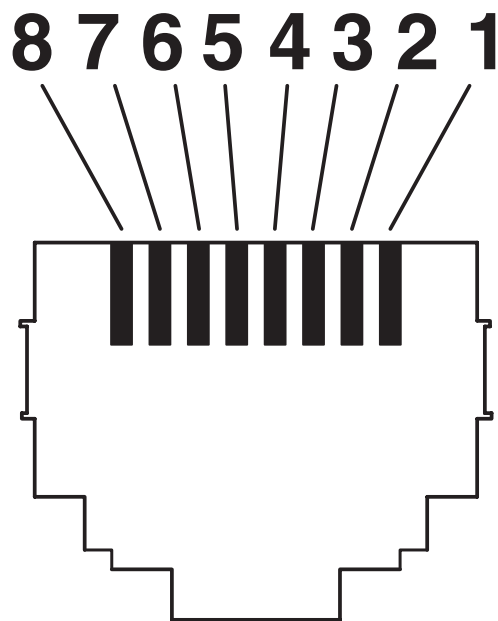
Schematic diagram



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



Schematic diagram

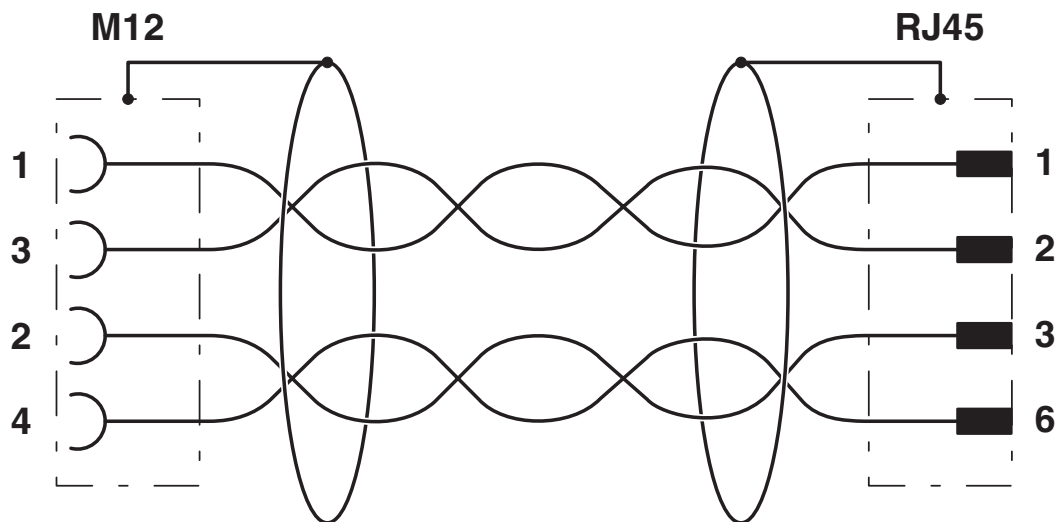


Connector pin assignment plug RJ45

1407396

<https://www.phoenixcontact.com/us/products/1407396>

Circuit diagram



Contact assignment of the M12 socket and the RJ45 plug

1407396

<https://www.phoenixcontact.com/us/products/1407396>

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	22052ba3-7155-49fb-984c-6bf43743da0a