

# NBC- 7,6-937/FSD SCO - Network cable



1423147

<https://www.phoenixcontact.com/us/products/1423147>

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), 4-position, PE-X halogen-free, black, shielded, free cable end, on Socket straight M12 SPEEDCON, coding: D / IP65, cable length: 7.6 m, Product tested according to customer specification/rail application

## Commercial data

Item number	1423147
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	AF1CJI
GTIN	4055626326269
Weight per piece (including packing)	497.5 g
Weight per piece (excluding packing)	497.5 g
Country of origin	PL

1423147

<https://www.phoenixcontact.com/us/products/1423147>

## Technical data

### Product properties

Product type	Data cable preassembled
Sensor type	PROFINET
Number of positions	4
No. of cable outlets	1
Shielded	yes
Coding	D

### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### Interfaces

Bus system	PROFINET
Signal type/category	PROFINET 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 $I_N$	4 A
Transmission medium	Copper
Transmission speed	100 Mbps
Transmission characteristics (category)	CAT5 (IEC 11801:2002)

### Material specifications

Flammability rating according to UL 94	V0
--	----

### Connector

#### Connection 1

Type	free cable end
------	----------------

#### Connection 2

Type	Socket straight M12 SPEEDCON / IP65
Number of positions	4
Locking type	SPEEDCON
Coding type	D (Data)
Shielded	yes
Handle color	black

# NBC- 7,6-937/FSD SCO - Network cable



1423147


<https://www.phoenixcontact.com/us/products/1423147>

Material	CuSn (Contact)
	Ni/Au (Contact surface)
	PA (Contact carrier)
	TPU, hardly inflammable, self-extinguishing (Grip body)
	Zinc die-cast, nickel-plated (Screw connection)
Insertion/withdrawal cycles	≥ 100 (Quantity: 500 with Phoenix Contact mating connector)
Insulation resistance	≥ 100 MΩ
Tightening torque	0.4 Nm
Degree of protection	IP65
Ambient temperature (operation)	-40 °C ... 90 °C

## Cable/line

Cable length	7.6 m
--------------	-------

### PROFINET BETAtrans® railway application CAT5 [939]

Dimensional drawing	
Cable weight	71 kg/km
Number of positions	4
Shielded	yes
Cable type	PROFINET BETAtrans® railway application CAT5 [939]
Conductor structure	1x4xAWG22/7, SF/TQ
Signal runtime	4.4 ns/m
Signal speed	0.75 c
Conductor structure signal line	7x 0.25 mm
AWG signal line	22
Conductor cross-section	4x 0.34 mm <sup>2</sup>
Wire diameter incl. insulation	1.4 mm ±0.1 mm
External cable diameter	6.60 mm ±0.2 mm
Outer sheath, material	PE-X
External sheath, color	black
Conductor material	Tin-plated Cu litz wires
Material wire insulation	Cell PE
Single wire, color	white-blue, orange-yellow
Thickness, outer sheath	1.00 mm
Overall twist	Star quad
Max. conductor resistance	≤ 54.4 Ω/km
Insulation resistance	≥ 5 GΩ*km

# NBC- 7,6-937/FSD SCO - Network cable



1423147

<https://www.phoenixcontact.com/us/products/1423147>

Coupling resistance	< 13.00 mΩ/m (f = 1 MHz)
	< 8.00 mΩ/m (f = 10 MHz ... 100 MHz)
Wave impedance	100 Ω ±5 Ω (f = 100 MHz)
Cable capacity	44 nF/km (Line-line)
Cable impedance	100 Ω ±15 Ω (f = 0.5 MHz ... 3 MHz)
Nominal voltage, cable	125 V
Test voltage Core/Core	1000 V AC (50 Hz, 1 min.)
Test voltage Core/Shield	1000.00 V AC (50 Hz, 1 min.)
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	6 x D
Smallest bending radius, fixed installation	33 mm
Smallest bending radius, movable installation	40 mm
Tensile strength	≤ 60 N (temporary)
	≤ 15 N (Permanent)
Near end crosstalk attenuation (NEXT)	76 dB (with 1 MHz)
	71 dB (at 4 MHz)
	64 dB (at 10 MHz)
	60 dB (at 16 MHz)
	56 dB (at 31.25 MHz)
	52 dB (at 62.5 MHz)
	48 dB (at 100 MHz)
	45 dB (at 155 MHz)
	42 dB (at 200 MHz)
Power-summated near end crosstalk attenuation (PSNEXT)	73 dB (with 1 MHz)
	68 dB (at 4 MHz)
	61 dB (at 10 MHz)
	57 dB (at 16 MHz)
	53 dB (at 31.25 MHz)
	49 dB (at 62.5 MHz)
	45 dB (at 100 MHz)
	42 dB (at 155 MHz)
	39 dB (at 200 MHz)
Return attenuation (RL)	25 dB (with 1 MHz)
	25 dB (at 4 MHz)
	28 dB (at 10 MHz)
	28 dB (at 16 MHz)
	27 dB (at 31.25 MHz)
	26 dB (at 62.5 MHz)
	25 dB (at 100 MHz)
	25 dB (at 155 MHz)
	23 dB (at 200 MHz)
Shield attenuation	1.5 dB (with 1 MHz)
	3.3 dB (at 4 MHz)
	5.3 dB (at 10 MHz)

# NBC- 7,6-937/FSD SCO - Network cable



1423147

<https://www.phoenixcontact.com/us/products/1423147>

	6.9 dB (at 16 MHz)
	9.9 dB (at 31.25 MHz)
	14.5 dB (at 62.5 MHz)
	18.8 dB (at 100 MHz)
	23.6 dB (at 155 MHz)
	27.3 dB (at 200 MHz)
	60.00 dB (up to 1000 MHz)
Halogen-free	in accordance with EN 50267-2-1
	in accordance with EN 60684-2
Flame resistance	in accordance with EN 60332-1-2
	in accordance with EN 50266-2-5
	in accordance with ISO 14572 5.21 (UN ECE-R 118.01)
Concentration of fumes	EN 61034-2
Resistance to oil	in accordance with EN 50306-4, 72 hours at 100°C, IRM 902
Fire protection in rail vehicles	BS 6853 (Internal cable Ia, Ib, II/external cable Ia, Ib, II)
	DIN 5510-2 (Fire protection level 1, 2, 3, 4)
	EN 45545-2 (Risk level HL1 - HL3)
	EN 50306-4
	NF F16-101 (Classification C/F1)
	NF F16-101 (Internal cable A1, A2, B/external cable A1, A2, B)
	NFPA 130
	PN-K-02511
	UIC 564-2 (Class A)
Other resistance	Resistant to fuel (in accordance with EN 50306-4, 168 hours at 70°C, IRM 903)
	Resistant to ozone (in accordance with EN 50306-4, 72 hours at 40°C, method B, volumetric concentration of 200 x 10 <sup>-6</sup> )
Ambient temperature (operation)	-40 °C ... 85 °C (cable, fixed installation)
	-25 °C ... 70 °C (Cable, flexible installation)
	160 °C (Short circuit)

## Standards and regulations

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

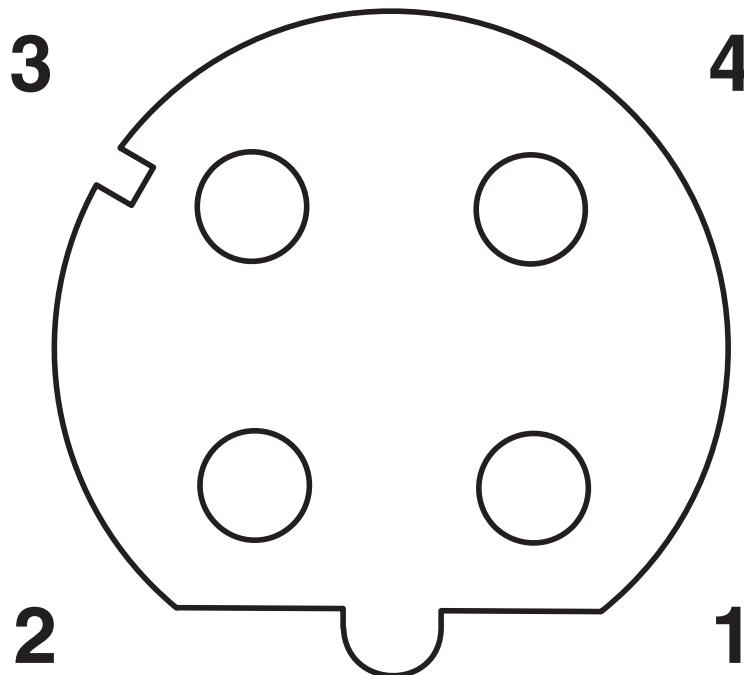
Drawings

Dimensional drawing



Socket M12-SPEEDCON, straight, shielded

Schematic diagram



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

# NBC- 7,6-937/FSD SCO - Network cable



1423147

<https://www.phoenixcontact.com/us/products/1423147>

## Classifications

### ECLASS

ECLASS-13.0	27060307
ECLASS-15.0	27060307

# NBC- 7,6-937/FSD SCO - Network cable



1423147

<https://www.phoenixcontact.com/us/products/1423147>

## 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 2026 © - 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](mailto:info@phoenixcon.com)