

## Network cable - NBC-MSX/10,0-94S SCO RAIL - 1415601

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's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Network cable, Ethernet CAT6<sub>A</sub> (10 Gbps), 8-position, Elastomer electron beam cross-linked halogen-free, black, shielded, Plug straight M12 SPEEDCON / IP67, Coding: X, on free cable end, Cable length: 10 m

### Product Features

- ✓ Easy and safe: 100% electrically tested plug-in components
- ✓ Safety thanks to flame retardancy: PA 6.6 grip and RADOX® cable meet the highest requirements
- ✓ Securely locked by special vibration brake
- ✓ Resistant to temperature influences – tested for an extended temperature range and for resistance to temperature shocks
- ✓ Reliable signal transmission – 360° shielding in environments with electromagnetic interference



Ethernet



### Key Commercial Data

Packing unit	1 pc
Custom tariff number	85444210
Country of origin	Poland

### Technical data

#### Dimensions

Length of cable	10 m
-----------------	------

#### Ambient conditions

Degree of protection	IP65
	IP67

#### General data

Rated current at 40°C	0.5 A
Rated voltage	48 V

## Network cable - NBC-MSX/10,0-94S SCO RAIL - 1415601

### Technical data

#### General data

Number of positions	8
Signal type/category	Ethernet CAT6 <sub>A</sub> , 10 Gbps
Standards/regulations	M12 connector IEC 61076-2-109
	Shock, vibration EN 50155

#### Characteristics head 1

Head type	Plug straight M12 SPEEDCON / IP67
No. of positions (pin connector pattern)	8
Coding	X (Data)
Color	black
Material (component)	CuZn (Contact)
	Ni/Au (Contact surface)
	TPU (Contact carriers)
	PA 6.6 (Grip)
	Zinc die-cast, nickel-plated (Screw connection)
Standards/regulations material	PA 6.6: Fire protection in rail vehicles - requirement sets R22, R23, and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)
Insulation resistance	≥ 100 MΩ
Insertion/withdrawal cycles	≥ 100
Torque	0.4 Nm
Ambient temperature (operation)	-25 °C ... 90 °C

#### Characteristics head 2

Head type	free cable end
Stripping length of the sheath (free conductor end)	0.5 mm

#### Cable

Cable type	Ethernet for rail applications
Cable type (abbreviation)	94S
Signal type/category	Ethernet CAT7, 10 Gbps
Cable structure	4x2xAWG26/7; S/FTP
Conductor cross section	4x 2x 0.14 mm <sup>2</sup>
AWG signal line	26
Conductor structure signal line	7x 0.16 mm
Core diameter including insulation	1.05 mm
Wire colors	White-blue, white-orange, white-green, white-brown
Twisted pairs	2 cores to the pair
Type of pair shielding	Aluminum-lined polyester foil
Overall twist	4 pairs, twisted

## Network cable - NBC-MSX/10,0-94S SCO RAIL - 1415601

### Technical data

#### Cable

Shielding	Tinned copper braided shield
External sheath, color	black
External cable diameter D	6.6 mm ±0.2 mm
Minimum bending radius, fixed installation	6 x D
Cable weight	59 kg/km
Copper weight	28 kg/km
Outer sheath, material	Elastomer electron beam cross-linked
Material conductor insulation	Cell PE
Conductor material	Tin-plated Cu litz wires
Insulation resistance	≥ 5 GΩ*km
Conductor resistance	≤ 145 Ω/km
Working capacitance	44 nF (per kilometer)
Wave impedance	100 Ω ±5 Ω (at 100 MHz)
Signal speed	0.78 c
Signal runtime	4.4 ns/m
Shield attenuation	60 dB (Up to 1000 MHz)
Interference suppression	90 dB (at 1000 MHz)
Coupling resistance	5.00 mΩ/m (At 10 MHz)
Nominal voltage, cable	125 V AC (U <sub>0</sub> )
Test voltage, cable	1000 V AC
Special properties	Fire protection in rail vehicles as per BS 6853 Internal cable Ia, Ib, II/ external cable Ia, Ib, II
	Fire protection in rail vehicles as per DIN 5510-2 Fire protection level 1, 2, 3, 4
	Fire protection in rail vehicles NF F16-101 Internal cable A1, A2, B/external cable A1, A2, B
	Fire protection in rail vehicles NF F16-101 Classification C/F1
	Fire protection in rail vehicles NFPA130
	Fire protection in rail vehicles PN-K-02511
	Fire protection in rail vehicles UIC 564-2 Class A
	Fire protection in rail vehicles EN 45545-2
Flame resistance	According to EN 60332-1-2
	EN 60332-3-25
Halogen-free	According to EN 50267-2-1
	according to EN 60684-2
Resistance to oil	according to EN 60684-2, 72 h at 100 °C, IRM 902
Other resistance	Resistant to fuel according to EN 60684-2, 72 h at 100 °C, IRM 903

# Network cable - NBC-MSX/10,0-94S SCO RAIL - 1415601

## Technical data

### Cable

	Resistant to ozone according to EN 50306-4, 72 h at 40 °C, procedure B, volume concentration $200 \times 10^{-6}$
Concentration of fumes	EN 61034-2
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)

## Classifications

### eCl@ss

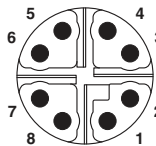
eCl@ss 5.1	27060307
eCl@ss 6.0	27060390

### ETIM

ETIM 4.0	EC000237
ETIM 5.0	EC000237

## Drawings

Schematic diagram



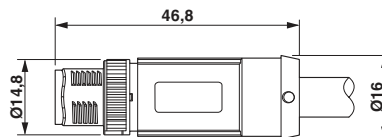
Pin assignment of M12 plug, 8-pos., X-coded, pin side view

Cable cross section



Ethernet for rail applications [94S]

Dimensional drawing



M12 SPEEDCON plug, straight, shielded

