Network cable - NBC-MSX/ 5,0-94S/MSX SCO RAIL - 1415598

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Network cable, Ethernet CAT6$_A$ (10 Gbps), 8-position, Elastomer electron beam cross-linked halogen-free, black, shielded, Plug straight M12 SPEEDCON / IP67, Coding: X, on Plug straight M12 SPEEDCON / IP67, Coding: X, Cable length: 5 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

Key Commercial Data

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

Technical data

Dimensions

Length of cable	5 m

Ambient conditions

Degree of protection	IP65
	IP67

General data

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

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Technical data

General data

Number of positions	8
Signal type/category	Ethernet $CAT6_A$, 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	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

Cable

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Technical data

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 mm²
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
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 (Uo)
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

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Technical data

Cable

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

Classifications

eCl@ss

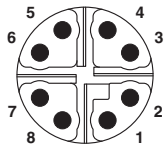
eCl@ss 5.1	27060307
eCl@ss 6.0	27060390

ETIM

ETIM 4.0	EC000237
ETIM 5.0	EC000237

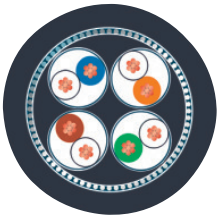
Drawings

Schematic diagram



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

Cable cross section



Ethernet for rail applications [94S]

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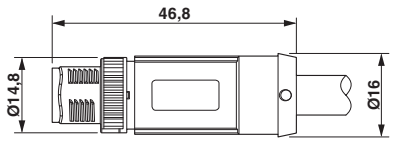
Dimensional drawing



M12 SPEEDCON plug, straight, shielded