



Automatización Eléctrica
Especialistas en Automatización

At the end of this document you will find links to products related to this catalog. You can go directly to our shop by clicking [HERE](#). [HERE](#)

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

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_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

Why buy this product

- Easy and safe: 100% electrically tested plug-in components
- Safety thanks to flame retardancy: PA 6.6 grip and radiation-cross-linked cables satisfy the most stringent 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 STK
GTIN	 4 055626 047652

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
Number of positions	8
Signal type/category	Ethernet CAT6 _A , 10 Gbps
Standards/regulations	M12 connector IEC 61076-2-109

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

Technical data

General data

	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

Standards and Regulations

Standard designation	M12 connector
Standards/regulations	IEC 61076-2-109
Standard designation	Shock, vibration
Standards/regulations	EN 50155

Cable

Cable type	Ethernet for rail applications
------------	--------------------------------

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

Technical data

Cable

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 ²
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 (U _o)
Test voltage, cable	1000 V AC
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
	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 (Class A)
	UIC 564-2 (Class A)

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

Technical data

Cable

Flame resistance	According to EN 60332-1-2
	EN 60332-3-25
	according to ISO 14572 5.21 (UN ECE-R 118.01)
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 200×10^{-6}
Concentration of fumes	EN 61034-2
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)

Classifications

eCl@ss

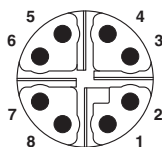
eCl@ss 5.1	27060307
eCl@ss 6.0	27060390
eCl@ss 8.0	27249205

ETIM

ETIM 4.0	EC000237
ETIM 5.0	EC000237

Drawings

Schematic diagram



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

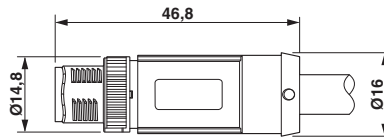
Cable cross section



Ethernet for rail applications [94S]

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

Dimensional drawing



M12 SPEEDCON plug, straight, shielded

Phoenix Contact 2016 © - all rights reserved
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>

Below is a list of articles with direct links to our shop Electric Automation Network where you can see:

- Quote per purchase volume in real time.
- Online documentation and datasheets of all products.
- Estimated delivery time enquiry in real time.
- Logistics systems for the shipment of materials almost anywhere in the world.
- Purchasing management, order record and tracking of shipments.

To access the product, [click on the green button.](#)

Product	Code	Reference	Product link
Network cable, Ethernet CAT6A (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	1415598	NBC-MSX/ 5,0-94S/MSX SCO RAIL	Buy on EAN