

## Network cable - NBC-MS/ 0,5-94B/FS SCO US - 1408747


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Network cable, Ethernet CAT5 (1 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded, Plug straight M12 SPEEDCON / IP67, coding: A, on Socket straight M12 SPEEDCON / IP67, coding: A, cable length: 0.5 m



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 828598
GTIN	4046356828598
Weight per Piece (excluding packing)	250.000 g
Custom tariff number	85444210
Country of origin	United States

### Technical data

#### Dimensions

Length of cable	0.5 m
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#### Ambient conditions

Degree of protection	IP65
	IP67
Ambient temperature (operation)	-25 °C ... 85 °C (M12 connector)

#### General data

Rated current at 40°C	2 A
Rated voltage	48 V AC
	60 V DC
Number of positions	8
Signal type/category	Ethernet CAT5 (on the basis of IEC 11801), 1 Gbps

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## Technical data

### General data

Standards/regulations	M12 connector IEC 61076-2-101
Contact material	CuSn
Contact carrier material	TPU GF
Contact surface material	Ni/Au

### Characteristics head 1

Head type	Plug straight M12 SPEEDCON / IP67
Coding	A (Standard)

### Characteristics head 2

Head type	Socket straight M12 SPEEDCON / IP67
Coding	A (Standard)
Color	black

### Standards and Regulations

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

### Cable

Cable type	Ethernet, flexible, CAT5
Cable type (abbreviation)	94B
UL AWM style	20963 (80°C/30 V)
Signal type/category	Ethernet CAT5 (IEC 11801), 1 Gbps
Cable structure	4x2xAWG26/7; SF/UTP
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	0.96 mm
Wire colors	white/blue-blue, white/orange-orange, white/green-green, white/brown-brown
Twisted pairs	2 cores to the pair
Overall twist	4 pairs for core
Shielding	Aluminum-coated foil, tinned copper braided shield
Optical shield covering	70 %
External sheath, color	water blue RAL 5021
Outer sheath thickness	1.05 mm
External cable diameter D	6.4 mm ±0.2 mm
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	8 x D
Tensile strength GRP	≤ 100 N

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### Technical data

#### Cable

Cable weight	47 kg/km	
Outer sheath, material	PUR	
Material conductor insulation	Foamed PE	
Conductor material	Bare Cu litz wires	
Insulation resistance	$\geq 500 \text{ M}\Omega \cdot \text{km}$	
Loop resistance	$\leq 290.00 \text{ }\Omega/\text{km}$	
Cable capacity	48 nF/km (at 1 kHz)	
Wave impedance	100 $\Omega \pm 5 \text{ }\Omega$ (at 100 MHz)	
Near end crosstalk attenuation (NEXT)	71.3 dB (with 1 MHz)	
	62.3 dB (at 4 MHz)	
	56.3 dB (at 10 MHz)	
	53.2 dB (at 16 MHz)	
	51.8 dB (at 20 MHz)	
	48.9 dB (at 31.25 MHz)	
	44.4 dB (at 62.5 MHz)	
	41.3 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)		
Attenuation	32.3 dB (at 100 MHz)	
	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)	
Return loss (RL)	24.8 dB (at 62.5 MHz)	
	32 dB (at 100 MHz)	
	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)	

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## Technical data

### Cable

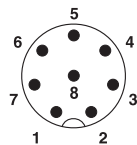
	23.6 dB (at 31.25 MHz)
	21.5 dB (at 62.5 MHz)
	20.1 dB (at 100 MHz)
Signal runtime	5.3 ns/m
Coupling resistance	≤ 100.00 mΩ/m (at 10 MHz)
Nominal voltage, cable	≤ 100 V
Test voltage Core/Core	700 V (50 Hz, 1 min.)
Test voltage Core/Shield	700 V (50 Hz, 1 min.)
Flame resistance	according to IEC 60332-1-2
Halogen-free	According to IEC 60754-1
Resistance to oil	according to 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
Ambient temperature (storage/transport)	-20 °C ... 80 °C

### Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

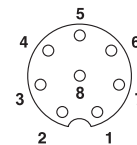
## Drawings

Schematic diagram



Pin assignment M12 plug, 8-pos., A-coded, view plug side

Schematic diagram



Pin assignment M12 socket, 8-pos., A-coded, view female side

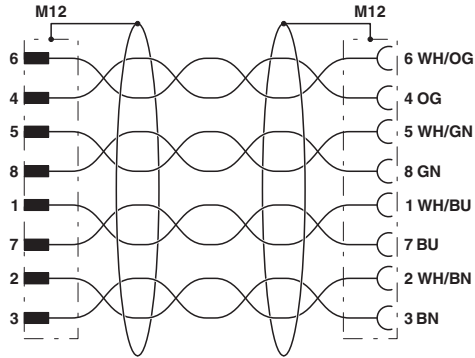
# Network cable - NBC-MS/ 0,5-94B/FS SCO US - 1408747

Cable cross section



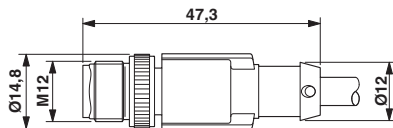
Ethernet, flexible, CAT5 [94B]

Circuit diagram



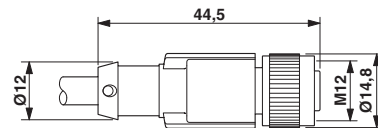
Contact assignment of the M12 connector and the M12 socket

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, straight, shielded

## Classifications

eCl@ss

eCl@ss 4.0	27060306
eCl@ss 4.1	27060306
eCl@ss 5.0	27061801
eCl@ss 5.1	27061801
eCl@ss 6.0	27061801
eCl@ss 7.0	27060308
eCl@ss 8.0	27061801
eCl@ss 9.0	27060308

ETIM

ETIM 3.0	EC001855
ETIM 4.0	EC002599
ETIM 5.0	EC002599

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## Classifications

### ETIM

ETIM 6.0	EC000830
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### UNSPSC

UNSPSC 6.01	31251501
UNSPSC 7.0901	31251501
UNSPSC 11	31251501
UNSPSC 12.01	31251501
UNSPSC 13.2	31251501

## Approvals

### Approvals

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Approvals


UL Listed

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Ex Approvals

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### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 335024
Nominal current IN		1.5 A	
Nominal voltage UN		30 V	

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