

Network cable - NBC-R4MC/1,0-93E/R4MC - 1408937

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Assembled Ethernet cable, CAT5e, shielded, 2-pair, 26 AWG stranded (7-wire), RAL 5021 (water blue), RJ45 plug/IP67, gray to RJ45 plug/IP67, gray, line, length: 1 m

RoHS

Ethernet

Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 856669
GTIN	4046356856669

Technical data

Dimensions

Length of cable	1 m
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Ambient conditions

Degree of protection	IP67 (RJ45 connector)
Ambient temperature (operation)	-20 °C ... 70 °C (RJ45 connector)

General data

Rated current at 40°C	1 A
Rated voltage	50 V
Number of positions	4
Degree of pollution	2
Alternative short product description	Ethernet cable
Rated voltage (III/3)	72 V (DC)

Characteristics head 1

Color	gray
Material (component)	CuSn (Contact)
	Ni/Au (Contact surface)
	PC (Contact carriers)

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Technical data

Characteristics head 1

	PA (Housing)
Insertion/withdrawal cycles	≥ 750
Ambient temperature (operation)	-20 °C ... 70 °C

Characteristics head 2

Color	gray
Material (component)	CuSn (Contact)
	Ni/Au (Contact surface)
	PC (Contact carriers)
	PA (Housing)
Insertion/withdrawal cycles	≥ 750
Ambient temperature (operation)	-20 °C ... 70 °C

Standards and Regulations

Flammability rating according to UL 94	V2
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Cable

Cable type	PUR ETHERNET 2x2 FLEX
Cable type (abbreviation)	93E
UL AWM style	20963 (80°C/30 V)
Signal type/category	Ethernet CAT5 (IEC 11801), 100 Mbps
Cable structure	2x2xAWG26/7; SF/UTP
Conductor cross section	2x 2x 0.14 mm ²
AWG signal line	26
Conductor structure signal line	7x 0.16 mm
Core diameter including insulation	0.98 mm
Wire colors	white/orange-orange, white/green-green
Twisted pairs	2 cores to the pair
Overall twist	Two pairs with two fillers to the core
Shielding	Aluminum-coated foil, tinned copper braided shield
Optical shield covering	70 %
External sheath, color	water blue RAL 5021
Outer sheath thickness	1.2 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	≤ 80 N
Cable weight	42 kg/km
Outer sheath, material	PUR
Material conductor insulation	Foamed PE
Conductor material	Bare Cu litz wires
Standards/specifications	Electrical requirements EN 50288-2-2

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Technical data

Cable

Insulation resistance	$\geq 500 \text{ M}\Omega \cdot \text{km}$
Loop resistance	$\leq 290.00 \text{ }\Omega/\text{km}$
Cable capacity	approx. 45 nF/km (at 1 kHz)
Wave impedance	$100 \text{ }\Omega \pm 5 \text{ }\Omega$ (at 100 MHz)
Near end crosstalk attenuation (NEXT)	65.3 dB (with 1 MHz)
	56.3 dB (at 4 MHz)
	50.3 dB (at 10 MHz)
	47.2 dB (at 16 MHz)
	45.8 dB (at 20 MHz)
	42.9 dB (at 31.25 MHz)
	38.4 dB (at 62.5 MHz)
	35.3 dB (at 100 MHz)
	62.3 dB (with 1 MHz)
	53.3 dB (at 4 MHz)
Power-summed near end crosstalk attenuation (PSNEXT)	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)
	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)
Attenuation	13.6 dB (at 20 MHz)
	17.1 dB (at 31.25 MHz)
	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)
	23.6 dB (at 31.25 MHz)
Return loss (RL)	21.5 dB (at 62.5 MHz)
	20.1 dB (at 100 MHz)
	5.3 ns/m
	$\leq 100.00 \text{ m}\Omega/\text{m}$ (at 10 MHz)
Nominal voltage, cable	$\leq 100 \text{ V}$ (Peak value, not for high-power applications)
Test voltage Core/Core	700 V (50 Hz, 1 min.)

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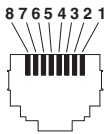
Technical data

Cable

Test voltage Core/Shield	700 V (50 Hz, 1 min.)
Current carrying capacity of cable	2 A (according to DIN VDE 0891-1)
Flame resistance	according to IEC 60332-1-2
	in acc. to UL VW1
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

Drawings

Schematic diagram



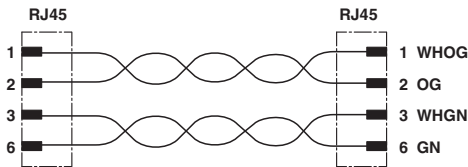
Cable cross section



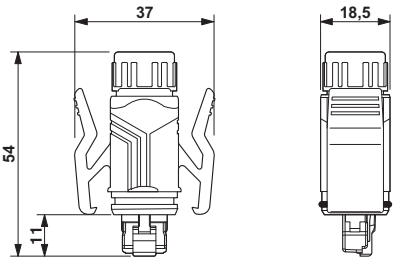
Connector pin assignment plug RJ45

PUR ETHERNET 2x2 FLEX [93E]

Circuit diagram



Dimensional drawing



Contact assignment of RJ45 plugs

RJ45-connector, IP67

Approvals

Approvals

Approvals

EAC

Network cable - NBC-R4MC/1,0-93E/R4MC - 1408937

Approvals

Ex Approvals

Approval details

EAC		B.00767
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