

# NBC-R4RC/5,0-94B/R4RC - Network cable



1408959

<https://www.phoenixcontact.com/us/products/1408959>

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Assembled Ethernet cable, shielded, 4-pair, AWG 26 stranded (7-wire), RAL 5021 (sea blue), RJ45 connector/IP67 push/pull metal housing to RJ45 connector/IP67 push/pull metal housing, line, length 5 m

## Your advantages

- Compact angle
- Perfect for industrial applications
- PVC cable for flexible installations
- Worldwide approval with CE, UL, WEEE, and EAC
- Secure connection and disconnection with reliable locking clip protection
- Ideal EMC properties, thanks to 360° shielding
- Simultaneous power transmission with PoE++
- Resistant to shock and vibrations, thanks to robust molding
- High-speed data transmission with up to 1 Gbps (CAT5)

## Commercial data

Item number	1408959
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	AB11
Product key	ABNABE
Catalog page	Page 400 (C-2-2019)
GTIN	4046356856881
Weight per piece (including packing)	380.5 g
Weight per piece (excluding packing)	238.95 g
Customs tariff number	85444210
Country of origin	PL

1408959

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## Technical data

### Product properties

Product type	Data cable preassembled
Sensor type	Ethernet
Number of positions	8
Connection profile	RJ45
No. of cable outlets	1
Number of slots	1
Shielded	yes
Cable outlet	straight

### Insulation characteristics

Degree of pollution	2
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### Signaling

Status display	No
Status display present	No

### Electrical properties

Rated voltage (III/3)	72 V (DC)
Nominal voltage $U_N$	48 V
Nominal current $I_N$	1 A
Transmission medium	Copper
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Transmission speed	1 Gbps
Wave impedance	100 $\Omega$

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	$\geq 200$
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### Material specifications

Flammability rating according to UL 94	V2
Outer sheath, material	PUR
Conductor material	Bare Cu litz wires

### Connector

#### Connection 1

Type	Plug straight RJ45
Locking type	Push Pull
Handle color	silver
	CuSn (Contact)

# NBC-R4RC/5,0-94B/R4RC - Network cable



1408959

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Material	Ni/Au (Contact surface)
	PC (Contact carriers)
	Zinc die-cast, nickel-plated (Housing)
Insertion/withdrawal cycles	≥ 750
Degree of protection	IP67
Ambient temperature (operation)	-40 °C ... 70 °C


## Connection 2

Type	Plug straight RJ45
Locking type	Push Pull
Handle color	silver
Material	CuSn (Contact)
	Ni/Au (Contact surface)
	PC (Contact carriers)
	Zinc die-cast, nickel-plated (Housing)
Insertion/withdrawal cycles	≥ 750
Degree of protection	IP67
Ambient temperature (operation)	-40 °C ... 70 °C

## Cable/line

Cable length	5.00 m
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## Ethernet flexible CAT5, 4-pair [94B]

Dimensional drawing	
Shielded	yes
UL AWM Style	20963 (80°C/30 V)
Cable weight	47 kg/km
Cable type	Ethernet flexible CAT5, 4-pair
Short symbol	02YS(ST)C11Y
Cable type (abbreviation)	94B
Signal type/category	Ethernet CAT5 (IEC 11801), 1 Gbps
Cable structure	4x2xAWG26/7, SF/UTP
External cable diameter	6.4 mm ±0.2 mm
Outer sheath, material	PUR
External sheath, color	water blue RAL 5021
Thickness, outer sheath	1.05 mm
Conductor material	Bare Cu litz wires
Conductor structure signal line	7x 0.16 mm

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AWG signal line	26
Conductor cross section	4x 2x 0.14 mm <sup>2</sup>
Material wire insulation	Foamed PE
Wire diameter incl. insulation	0.96 mm
Single wire, color	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 %
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.)
Cable insulation resistance	≥ 5 GΩ*km
Coupling resistance	≤ 100.00 mΩ/m (at 10 MHz)
Wave impedance	100 Ω ±5 Ω (at 100 MHz)
Loop resistance	≤ 290.00 Ω/km
Cable capacity	48 nF/km (at 1 kHz)
Signal runtime	5.3 ns/m
Tensile strength	≤ 100 N
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	8 x D
Damping	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)
	24.8 dB (at 62.5 MHz)
	32 dB (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-summed 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)

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1408959

<https://www.phoenixcontact.com/us/products/1408959>

	35.4 dB (at 62.5 MHz)
	32.3 dB (at 100 MHz)
Return attenuation (RL)	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)
	21.5 dB (at 62.5 MHz)
	20.1 dB (at 100 MHz)
	Halogen-free
Resistance to oil	in accordance with EN 60811-2-1
Flame resistance	according to IEC 60332-1-2
Ambient temperature (operation)	-20 °C ... 80 °C (Cable, flexible installation)
	-40 °C ... 80 °C (cable, fixed installation)

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP67 (RJ45 connector)
	IP65/IP67
Ambient temperature (operation)	-40 °C ... 70 °C (RJ45 connector)

## Standards and regulations

Standards/specifications	IEC PAS 61076-3-117
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1408959

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## Drawings

### Schematic diagram



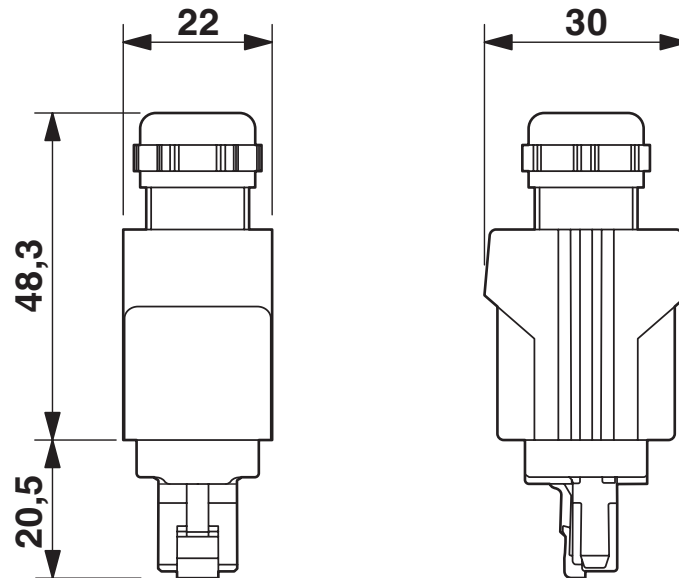
Connector pin assignment plug RJ45

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1408959

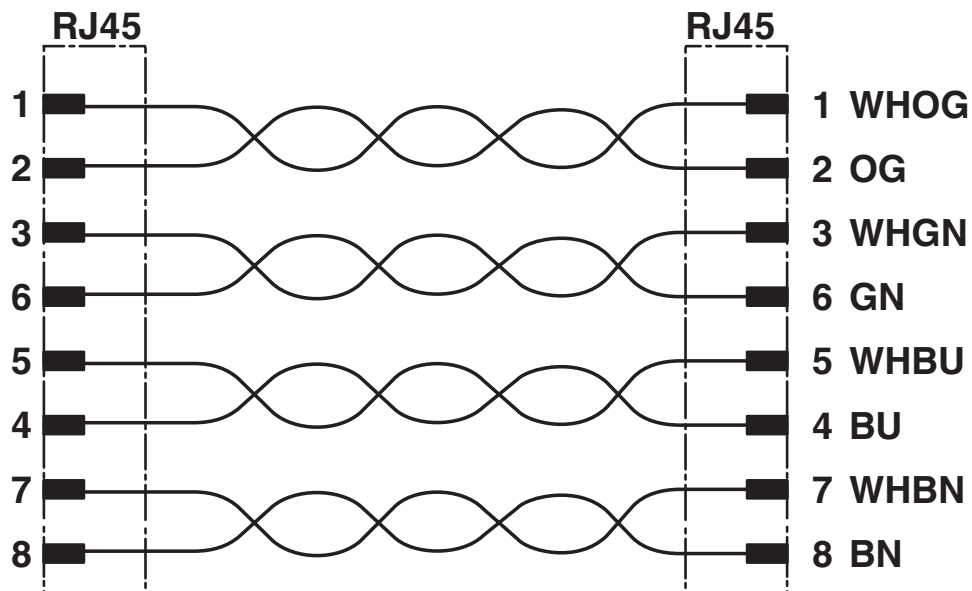
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Dimensional drawing



RJ45 Push-Pull connector, IP67

Circuit diagram



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## Approvals

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**EAC**

Approval ID: 19060508

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## Classifications

### ECLASS

ECLASS-11.0	27060308
ECLASS-12.0	27060308
ECLASS-13.0	27060307

### ETIM

ETIM 9.0	EC002599
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### UNSPSC

UNSPSC 21.0	26121600
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## Environmental product compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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