

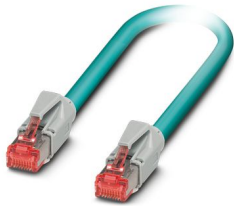
# NBC-R4AC/2,0-94B/R4AC - Network cable



1408951

<https://www.phoenixcontact.com/us/products/1408951>

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Network cable, degree of protection: IP20, cable length: 2 m, number of positions: 8, 1 Gbps, CAT5, cable outlet: straight, Ethernet

## 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	1408951
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB11
Product key	ABNABE
Catalog page	Page 400 (C-2-2019)
GTIN	4046356856782
Weight per piece (including packing)	122.4 g
Weight per piece (excluding packing)	112.376 g
Customs tariff number	85444210
Country of origin	PL

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## Technical data

### Product properties

Product type	Data cable preassembled
Sensor type	Ethernet
Number of positions	8
No. of cable outlets	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

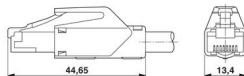
#### Mechanical data

Insertion/withdrawal cycles	$\geq 750$
Insertion force per signal contact	50.00 N
Extraction force per signal contact	30 N

### Material specifications

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

### Dimensions

Dimensional drawing	
Width	13.4 mm

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Height	12.9 mm
Length	44.7 mm

## Connector

### Connection 1

Type	Plug straight RJ45
Shielded	yes
Handle color	gray
Material	CuSn (Contact) Ni/Au (Contact surface) PC (Contact carriers) PA (Housing)
Insertion/withdrawal cycles	≥ 750
Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 60 °C


### Connection 2

Type	Plug straight RJ45
Shielded	yes
Handle color	gray
Material	CuSn (Contact) Ni/Au (Contact surface) PC (Contact carriers) PA (Housing)
Insertion/withdrawal cycles	≥ 750
Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 60 °C

## Cable/line

Cable length	2.00 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

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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
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)

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	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)
	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	according to IEC 60754-1
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	IP20 (RJ45 connector)
	IP20
Ambient temperature (operation)	-20 °C ... 70 °C (RJ45 connector)

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## Drawings

### Schematic diagram



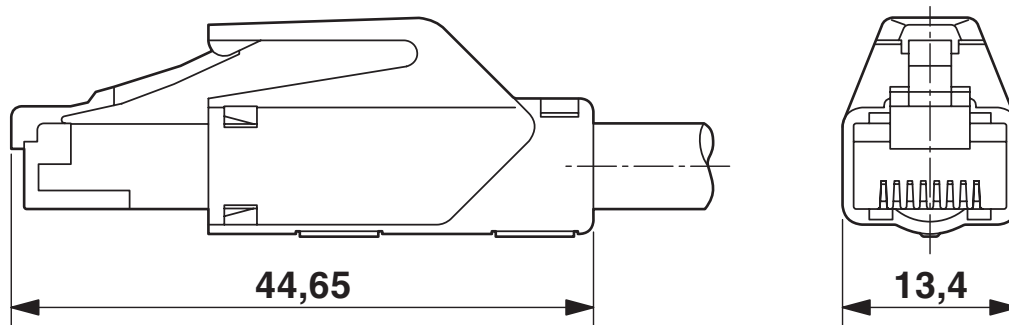
Connector pin assignment plug RJ45

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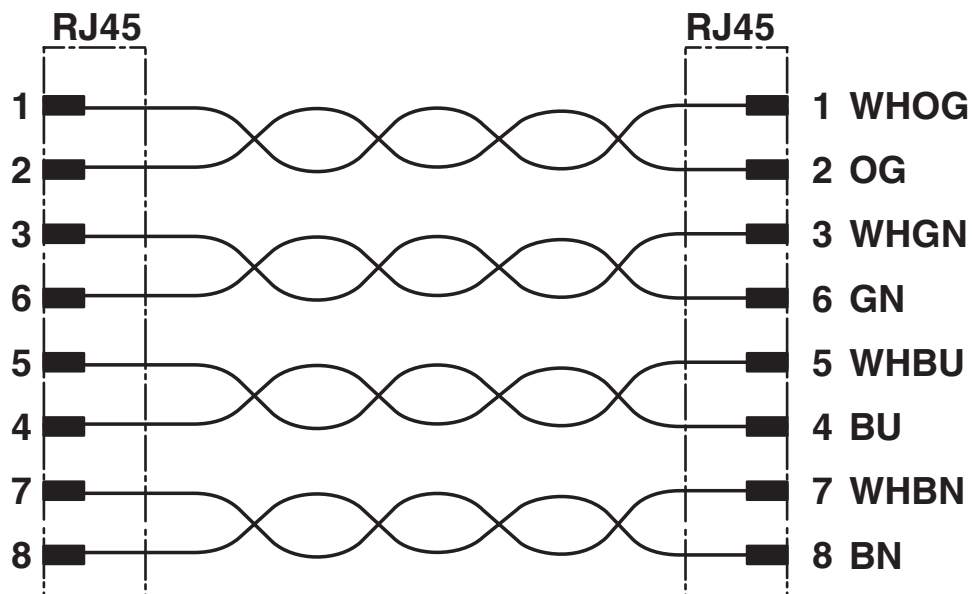
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Dimensional drawing



RJ45 connector, IP20

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1408951>



**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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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)