

# NBC-R4RC/2,0-93B/R4RC - Network cable



1408975

<https://www.phoenixcontact.com/us/products/1408975>

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 documentation. Our general terms of use for downloads are valid.



Assembled PROFINET cable, CAT5e, shielded, star quad, 22 AWG stranded (7-wire), RAL 6018 (yellow-green), RJ45 plug/IP67 push/pull metal housing to RJ45 plug/IP67 push/pull metal housing, line, length: 2 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	1408975
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	AB11
Product key	ABNABA
Catalog page	Page 396 (C-2-2019)
GTIN	4046356857031
Weight per piece (including packing)	275.2 g
Weight per piece (excluding packing)	152.778 g
Customs tariff number	85444210
Country of origin	PL

1408975

<https://www.phoenixcontact.com/us/products/1408975>

## Technical data

### Product properties

Product type	Data cable preassembled
Sensor type	PROFINET
Number of positions	4
Connection profile	RJ45 8(4)
No. of cable outlets	1
Number of slots	1
Shielded	yes
Cable outlet	straight

### Insulation characteristics

Overvoltage category	I
Degree of pollution	2

### 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	100 Mbps
Wave impedance	100 $\Omega$

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	$\geq 250$
-----------------------------	------------

### Material specifications

Flammability rating according to UL 94	V0
Outer sheath, material	PVC
Conductor material	Tin-plated Cu litz wires

### Connector

#### Connection 1

Type	Plug straight RJ45
Locking type	Push Pull
Handle color	silver

# NBC-R4RC/2,0-93B/R4RC - Network cable



1408975

<https://www.phoenixcontact.com/us/products/1408975>

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


## 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	2.00 m
--------------	--------

## PROFINET PVC stranded CAT5 [93B]

Dimensional drawing	
Shielded	yes
UL AWM Style	21694
Cable weight	67 kg/km
Cable type	PROFINET PVC stranded CAT5
Short symbol	2YY(ST)CY
Cable type (abbreviation)	93B
Signal type/category	PROFINET CAT5 (IEC 11801), 100 Mbps
	EtherCAT <sup>®</sup> CAT5 (IEC 11801), 100 Mbps
Cable structure	1x4xAWG22/7, SF/TQ
External cable diameter	6.5 mm ±0.2 mm
Outer sheath, material	PVC
External sheath, color	green RAL 6018
Thickness, outer sheath	approx. 0.9 mm

# NBC-R4RC/2,0-93B/R4RC - Network cable



1408975

<https://www.phoenixcontact.com/us/products/1408975>

Material, inner sheath	PVC
Conductor material	Tin-plated Cu litz wires
Conductor structure signal line	7x 0.25 mm
AWG signal line	22
Conductor cross section	4x 0.34 mm <sup>2</sup>
Material wire insulation	PE
Wire diameter incl. insulation	1.55 mm
Single wire, color	white, yellow, blue, orange
Overall twist	Star quad
Shielding	Aluminum-coated foil, tinned copper braided shield
Optical shield covering	85 %
Nominal voltage, cable	600 V
Test voltage Core/Core	2000 V (50 Hz, 1 min.)
Test voltage Core/Shield	2000 V (50 Hz, 1 min.)
Cable insulation resistance	≥ 500 MΩ*km
Coupling resistance	≤ 20.00 mΩ/m (at 10 MHz)
Wave impedance	100 Ω ±15 Ω (at 100 MHz)
Loop resistance	≤ 120.00 Ω/km
Signal runtime	5.3 ns/m
Signal speed	0.66 c
Minimum bending radius, fixed installation	3 x D
Minimum bending radius, flexible installation	7 x D
Damping	2.1 dB (with 1 MHz)
	4 dB (at 4 MHz)
	6.3 dB (at 10 MHz)
	8 dB (at 16 MHz)
	9 dB (at 20 MHz)
	11.4 dB (at 31.25 MHz)
	16.5 dB (at 62.5 MHz)
	21.3 dB (at 100 MHz)
Near end crosstalk attenuation (NEXT)	80 dB (with 1 MHz)
	76 dB (at 4 MHz)
	70 dB (at 10 MHz)
	65 dB (at 16 MHz)
	63 dB (at 20 MHz)
	60 dB (at 31.25 MHz)
	55 dB (at 62.5 MHz)
	50 dB (at 100 MHz)
Resistance to oil	Resistant to oil to a limited extent
Flame resistance	according to UL 1685 (CSA FT 4)
Other resistance	UV resistant (According to UL 1581, Section 1200)
Ambient temperature (operation)	-40 °C ... 70 °C (Cable, flexible installation)
	-40 °C ... 70 °C (cable, fixed installation)

# NBC-R4RC/2,0-93B/R4RC - Network cable



1408975

<https://www.phoenixcontact.com/us/products/1408975>

## 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
--------------------------	---------------------

# NBC-R4RC/2,0-93B/R4RC - Network cable

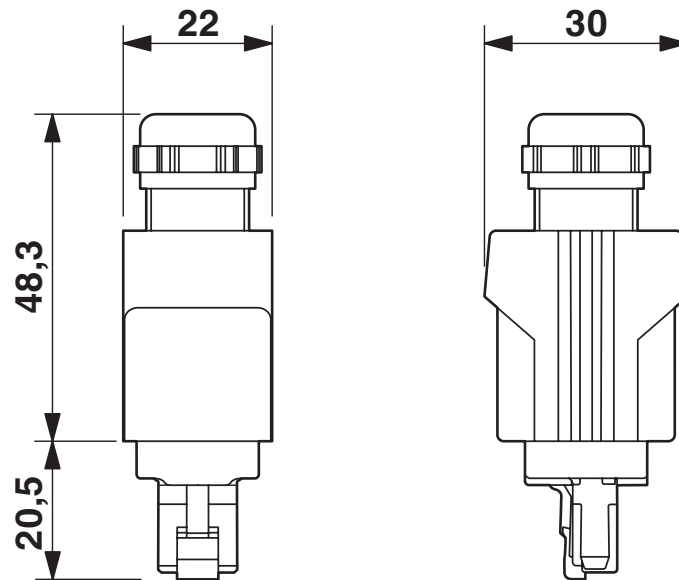
1408975

<https://www.phoenixcontact.com/us/products/1408975>



## Drawings

Dimensional drawing



RJ45 Push-Pull connector, IP67

# NBC-R4RC/2,0-93B/R4RC - Network cable



1408975

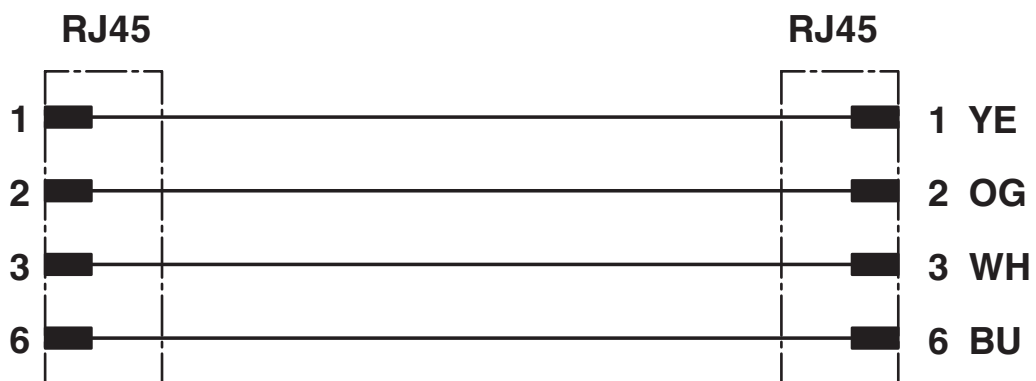
<https://www.phoenixcontact.com/us/products/1408975>

Schematic diagram



Connector pin assignment plug RJ45

Circuit diagram



# NBC-R4RC/2,0-93B/R4RC - Network cable



1408975

<https://www.phoenixcontact.com/us/products/1408975>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1408975>



**EAC**

Approval ID: 19060508

# NBC-R4RC/2,0-93B/R4RC - Network cable



1408975

<https://www.phoenixcontact.com/us/products/1408975>

## Classifications

### ECLASS

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

### ETIM

ETIM 9.0	EC002599
----------	----------

### UNSPSC

UNSPSC 21.0	26121600
-------------	----------

# NBC-R4RC/2,0-93B/R4RC - Network cable



1408975

<https://www.phoenixcontact.com/us/products/1408975>

## Environmental product compliance

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

Phoenix Contact 2024 © - all rights reserved  
<https://www.phoenixcontact.com>

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