# NBC-R4AC/3,0-93E/R4AC - Network cable

1420429

https://www.phoenixcontact.com/us/products/1420429

**PHŒNIX CONTACT**

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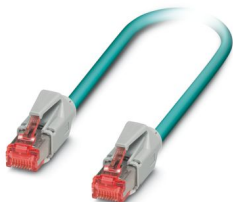
Network cable, degree of protection: IP20, cable length: 3 m, number of positions: 4, 100 Mbps, CAT5, cable outlet: straight, Ethernet

## Your advantages

- Perfect for industrial applications
- Perfect for office, building, and protected industrial applications (e.g., in control cabinets)
- Compact angle

## Commercial data

| | |
|---|---|
| Item number | 1420429 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | AB11 |
| Product key | ABNABD |
| GTIN | 4055626217093 |
| Weight per piece (including packing) | 146.9 g |
| Weight per piece (excluding packing) | 135.605 g |
| Customs tariff number | 85444210 |
| Country of origin | PL |

## Technical data

### Product properties

| | |
|---|---|
| Product type | Data cable preassembled |
| Sensor type | Ethernet |
| Number of positions | 4 |
| No. of cable outlets | 1 |
| Number of slots | 1 |
| Shielded | yes |
| Cable outlet | straight |

### 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 |

### Mechanical properties

Mechanical data

| | |
|---|---|
| Insertion/withdrawal cycles | ≥ 750 |
| Insertion force per signal contact | 50.00 N |
| Extraction force per signal contact | 30 N |

### Material specifications

| | |
|---|---|
| Flammability rating according to UL 94 | V0 |
| Outer sheath, material | PUR |
| Conductor material | Bare Cu litz wires |

### Connector

Connection 1

| | |
|---|---|
| Type | Plug straight RJ45 |
| Shielded | yes |
| 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

# NBC-R4AC/3,0-93E/R4AC - Network cable

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| | |
|---|---|
| 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 | 3.00 m |

Ethernet flexible CAT5, 2-pair [93E]

| | |
|---|---|
| Dimensional drawing |  |
| Shielded | yes |
| UL AWM Style | 20963 (80°C/30 V) |
| Cable weight | 42 kg/km |
| Cable type | Ethernet flexible CAT5, 2-pair |
| Short symbol | 02YS(ST)C11Y |
| Cable type (abbreviation) | 93E |
| Signal type/category | Ethernet CAT5 (IEC 11801), 100 Mbps |
| Cable structure | 2x2xAWG26/7, SF/UTP |
| External cable diameter | 6.40 mm ±0.2 mm |
| Outer sheath, material | PUR |
| External sheath, color | water blue RAL 5021 |
| Thickness, outer sheath | 1.20 mm |
| Conductor material | Bare Cu litz wires |
| Conductor structure signal line | 7x 0.16 mm |
| AWG signal line | 26 |
| Conductor cross section | 2x 2x 0.14 mm² |
| Material wire insulation | Foamed PE |
| Wire diameter incl. insulation | 0.98 mm |
| Single wire, color | 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 % |
| Current carrying capacity of cable | 2.00 A (according to DIN VDE 0891-1) |
| Nominal voltage, cable | ≤ 100 V (Peak value, not for high-power applications) |
| Test voltage Core/Core | 700 V (50 Hz, 1 min.) |
| Test voltage Core/Shield | 700.00 V (50 Hz, 1 min.) |
| Cable insulation resistance | ≥ 500 MΩ*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 | approx. 45 nF/km (at 1 kHz) |
| Signal runtime | 5.3 ns/m |
| Tensile strength | ≤ 80 N |
| Minimum bending radius, fixed installation | 4 x D |
| Minimum bending radius, flexible installation | 8 x D |
| 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) |
| 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 |
| | in acc. to UL VW1 |
| | in accordance with UN ECE-R 118.03 |

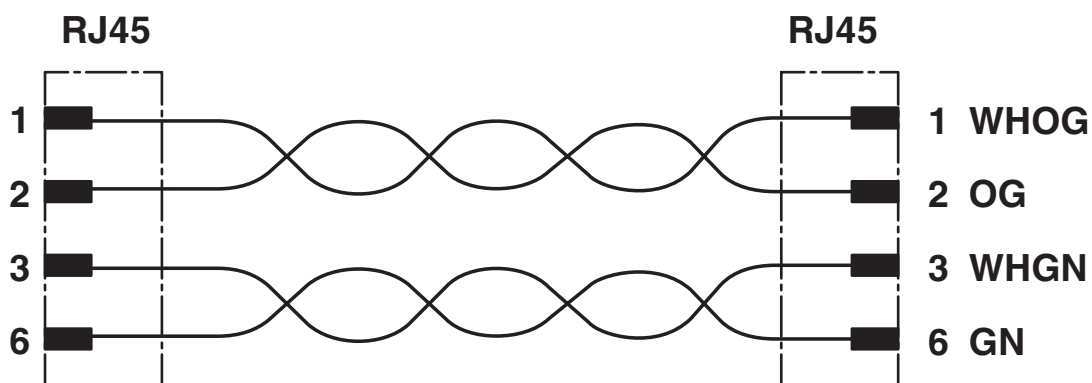| Ambient temperature (operation) | -20 °C ... 80 °C (Cable, flexible installation) |
|---|---|
| | -40 °C ... 80 °C (cable, fixed installation) |

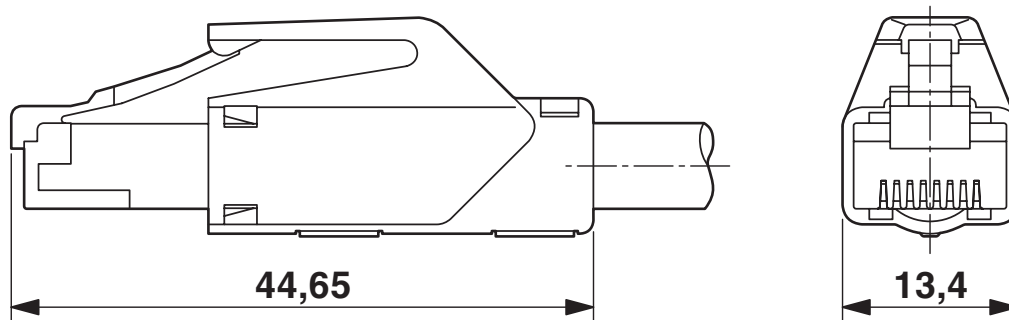## Environmental and real-life conditions

### Ambient conditions

| Degree of protection | IP20 |
|---|---|
| Ambient temperature (operation) | -40 °C ... 60 °C (RJ45 connector) |

## Drawings

### Circuit diagram

**RJ45**                                    **RJ45**

| 1 | | 1 WHOG |
| 2 | | 2 OG |
| 3 | | 3 WHGN |
| 6 | | 6 GN |

### Dimensional drawing

**44,65**

**13,4**

RJ45 connector, IP20

# NBC-R4AC/3,0-93E/R4AC - Network cable

Schematic diagram



Connector pin assignment plug RJ45

## Approvals

🔅 To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1420429

| ЕАС | **EAC**<br>Approval ID: 19060508 |
|---|---|

## Classifications

### ECLASS

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

### ETIM

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

### UNSPSC

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

## Environmental product compliance

### EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |

### China RoHS

| | |
|---|---|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

### EU REACH SVHC

| | |
|---|---|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |