

NBC-R4RC/1,0-94B/R4RC - Network cable



1408961

<https://www.phoenixcontact.com/us/products/1408961>

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Assembled Ethernet cable, shielded, 4-pair, 26 AWG stranded (7-wire), RAL 5021 (water blue), RJ45 plug/IP67 push/pull metal housing to RJ45 plug/IP67 push/pull metal housing, line, length: 1 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 | 1408961 |
| 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 | 4046356856898 |
| Weight per piece (including packing) | 181.7 g |
| Weight per piece (excluding packing) | 181.7 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 |
| Connection profile | RJ45 |
| No. of cable outlets | 1 |
| Number of slots | 1 |
| Shielded | yes |
| Cable outlet | straight |

Insulation characteristics

| | |
|---------------------|---|
| 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 | 1 Gbps |
| Wave impedance | 100 Ω |

Mechanical properties

Mechanical data

| | |
|-----------------------------|------------|
| Insertion/withdrawal cycles | ≥ 200 |
|-----------------------------|------------|

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) |

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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 | 1.00 m |
|--------------|--------|

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 ² |
| 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-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) |

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| | |
|---------------------------------|---|
| Return attenuation (RL) | 35.4 dB (at 62.5 MHz) |
| | 32.3 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) |
| | 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 | 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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Drawings

Schematic diagram



Connector pin assignment plug RJ45

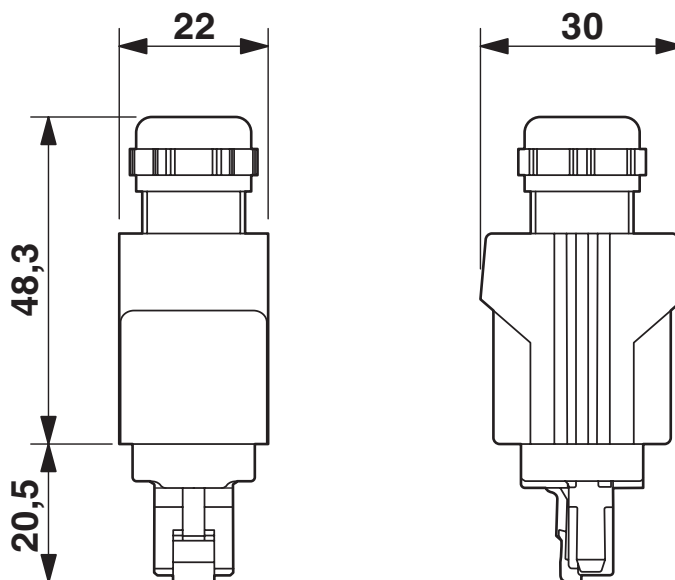
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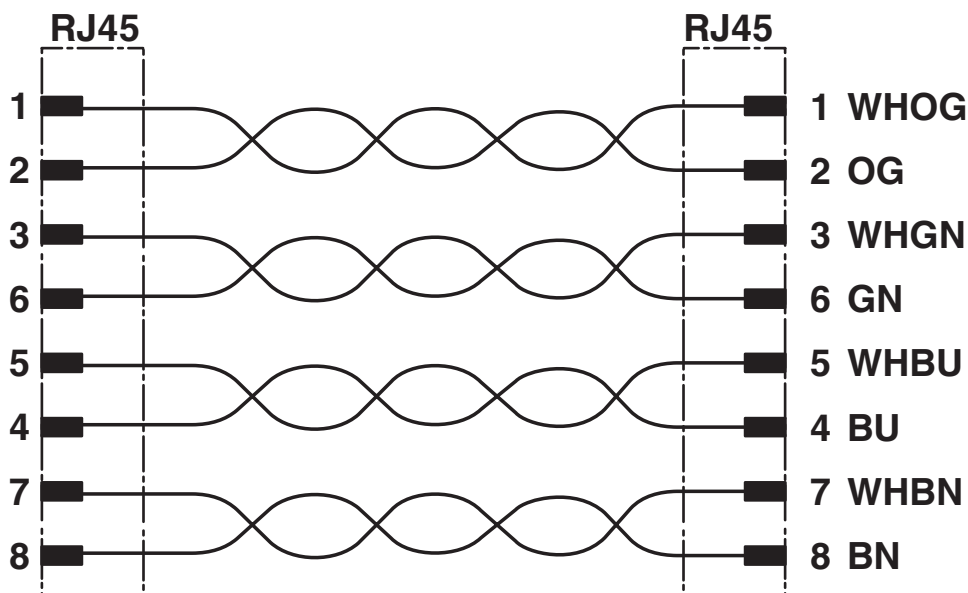
<https://www.phoenixcontact.com/us/products/1408961>

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 |
|----------|----------|

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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