

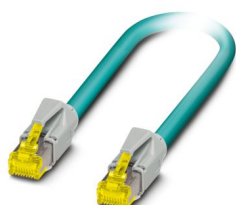
# NBC-R4AC/10G-R4AC/10G-94F/2,0 - Patch cable



1408360

<https://www.phoenixcontact.com/au/products/1408360>

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Patch cable, CAT6<sub>A</sub>, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 2.0 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                          | 1408360             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | ABNABF              |
| Product key                          | ABNABF              |
| Catalog page                         | Page 402 (C-2-2019) |
| GTIN                                 | 4046356805056       |
| Weight per piece (including packing) | 117.4 g             |
| Weight per piece (excluding packing) | 102.556 g           |
| Customs tariff number                | 85444290            |
| Country of origin                    | PL                  |

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## Technical data

### Product properties

|                     |                           |
|---------------------|---------------------------|
| Product type        | Data cable preassembled   |
| Product family      | RJ45 INDUSTRIAL IE8 CAT6A |
| Sensor type         | Ethernet                  |
| Number of positions | 8                         |
| Shielded            | yes                       |

### Electrical properties

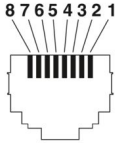
|   |                   |
|---|-------------------|
| Rated voltage (III/3)                   | 72 V (DC)         |
| Nominal voltage $U_N$                   | 48 V              |
| Nominal current $I_N$                   | 0.5 A             |
| Transmission characteristics (category) | CAT6 <sub>A</sub> |
| Transmission speed                      | 10 Gbps           |

### Material specifications

|                        |     |
|------------------------|-----|
| Outer sheath, material | PUR |
|------------------------|-----|

### Connector

#### Connection 1

|                             |   |
|-----------------------------|---|
| Dimensional drawing         |  <p>Connector pin assignment plug RJ45</p> |
| Type                        | RJ45 Plug, straight, 8-position   |
| Number of positions         | 8   |
| Signal type/category        | Ethernet CAT6 <sub>A</sub> , 10 Gbps<br>CC-Link IE CAT6 <sub>A</sub> , 10 Gbps  |
| Insertion/withdrawal cycles | ≥ 750   |
| Insulation resistance       | ≥ 100 Ω   |
| Overvoltage category        | I   |
| Degree of pollution         | 2   |
| Material Contact            | CuSn  |
| Material Contact surface    | Ni/Au   |
| Material Contact carrier    | PC  |
| Material Housing            | PA  |
| Color (Housing)             | gray  |

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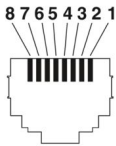
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|  |                       |
|--|-----------------------|
| Flammability rating according to UL 94 | V2                    |
| Degree of protection                   | IP20 (RJ45 connector) |
| Ambient temperature (operation)        | -25 °C ... 60 °C      |


## Connection 2

|  |   |
|--|---|
| Dimensional drawing                    |  <p>Connector pin assignment plug RJ45</p> |
| Type                                   | RJ45 Plug, straight, 8-position   |
| Number of positions                    | 8   |
| Signal type/category                   | Ethernet CAT6 <sub>A</sub> , 10 Gbps<br>CC-Link IE CAT6 <sub>A</sub> , 10 Gbps  |
| Insertion/withdrawal cycles            | ≥ 750   |
| Insulation resistance                  | ≥ 100 Ω   |
| Overvoltage category                   | I   |
| Degree of pollution                    | 2   |
| Material Contact                       | CuSn  |
| Material Contact surface               | Ni/Au   |
| Material Contact carrier               | PC  |
| Material Housing                       | PA  |
| Color (Housing)                        | gray  |
| Flammability rating according to UL 94 | V2  |
| Degree of protection                   | IP20 (RJ45 connector)   |
| Ambient temperature (operation)        | -25 °C ... 60 °C  |

## Cable/line

|              |        |
|--------------|--------|
| Cable length | 2.00 m |
|--------------|--------|

## Ethernet 10 Gbit [94F]

|                     |  |
|---------------------|--|
| Dimensional drawing |  |
| Cable weight        | 42 kg/km   |
| UL AWM Style        | 20963 (80°C/30 V)  |

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|   |  |
|---|--|
| Number of positions                           | 8  |
| Shielded                                      | yes  |
| Cable type                                    | Ethernet 10 Gbit [94F]   |
| Conductor structure                           | 4x2xAWG26/7; S/FTP   |
| Signal runtime                                | 5.13 ns/m  |
| Conductor structure signal line               | 7x 0.16 mm   |
| AWG signal line                               | 26   |
| Conductor cross section                       | 4x 2x 0.14 mm <sup>2</sup>   |
| Wire diameter incl. insulation                | 1.04 mm  |
| External cable diameter                       | 6.40 mm ±0.2 mm  |
| Outer sheath, material                        | PUR  |
| External sheath, color                        | water blue RAL 5021  |
| Conductor material                            | Bare Cu litz wires   |
| Material wire insulation                      | Foamed PE  |
| Single wire, color                            | white/blue-blue, white/orange-orange, white/green-green, white/brown-brown |
| Thickness, outer sheath                       | 0.65 mm  |
| Twisted pairs                                 | 2 cores to the pair  |
| Type of pair shielding                        | Aluminum-lined foil  |
| Overall twist                                 | 4 pairs for core   |
| Optical shield covering                       | 70 %   |
| Insulation resistance                         | ≥ 500 MΩ*km  |
| Loop resistance                               | ≤ 290.00 Ω/km  |
| Wave impedance                                | 100 Ω ±5 Ω (at 100 MHz)  |
| Cable capacity                                | 47 nF/km   |
| Nominal voltage, cable                        | ≤ 100 V  |
| Test voltage Core/Core                        | 700 V (50 Hz, 1 min.)  |
| Test voltage Core/Shield                      | 700.00 V (50 Hz, 1 min.)   |
| Minimum bending radius, fixed installation    | 4 x D  |
| Minimum bending radius, flexible installation | 8 x D  |
| Smallest bending radius, fixed installation   | 26 mm  |
| Smallest bending radius, movable installation | 52 mm  |
| Tensile strength                              | ≤ 100 N  |
| Near end crosstalk attenuation (NEXT)         | 75.3 dB (with 1 MHz)   |
|   | 66.3 dB (at 4 MHz)   |
|   | 61.8 dB (at 8 MHz)   |
|   | 60.3 dB (at 10 MHz)  |
|   | 57.2 dB (at 16 MHz)  |
|   | 55.8 dB (at 20 MHz)  |
|   | 54.3 dB (at 25 MHz)  |
|   | 52.8 dB (at 31.25 MHz)   |
|   | 48.4 dB (at 62.5 MHz)  |
|   | 45.3 dB (at 100 MHz)   |
|   | 40.8 dB (at 200 MHz)   |

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|  |                        |
|--|------------------------|
|  | 39.3 dB (at 250 MHz)   |
|  | 38.1 dB (at 300 MHz)   |
|  | 38.1 dB (at 400 MHz)   |
|  | 38.1 dB (at 500 MHz)   |
| Power-summated near end crosstalk attenuation (PSNEXT) | 72.3 dB (with 1 MHz)   |
|  | 63.3 dB (at 4 MHz)     |
|  | 58.8 dB (at 8 MHz)     |
|  | 57.3 dB (at 10 MHz)    |
|  | 54.2 dB (at 16 MHz)    |
|  | 52.8 dB (at 20 MHz)    |
|  | 51.3 dB (at 25 MHz)    |
|  | 49.9 dB (at 31.25 MHz) |
|  | 45.4 dB (at 62.5 MHz)  |
|  | 42.3 dB (at 100 MHz)   |
|  | 37.8 dB (at 200 MHz)   |
|  | 36.3 dB (at 250 MHz)   |
|  | 35.1 dB (at 300 MHz)   |
|  | 33.3 dB (at 400 MHz)   |
|  | 31.8 dB (at 500 MHz)   |
| Return attenuation (RL)                                | 20 dB (with 1 MHz)     |
|  | 23 dB (at 4 MHz)       |
|  | 24.5 dB (at 8 MHz)     |
|  | 25 dB (at 10 MHz)      |
|  | 25 dB (at 16 MHz)      |
|  | 25 dB (at 20 MHz)      |
|  | 24.2 dB (at 25 MHz)    |
|  | 23.3 dB (at 31.25 MHz) |
|  | 20.7 dB (at 62.5 MHz)  |
|  | 19 dB (at 100 MHz)     |
|  | 16.4 dB (at 200 MHz)   |
|  | 15.6 dB (at 250 MHz)   |
|  | 15.6 dB (at 300 MHz)   |
|  | 15.6 dB (at 400 MHz)   |
|  | 15.6 dB (at 500 MHz)   |
| Shield attenuation                                     | 3.1 dB (with 1 MHz)    |
|  | 5.7 dB (at 4 MHz)      |
|  | 8 dB (at 8 MHz)        |
|  | 8.9 dB (at 10 MHz)     |
|  | 11.2 dB (at 16 MHz)    |
|  | 12.6 dB (at 20 MHz)    |
|  | 14.1 dB (at 25 MHz)    |
|  | 15.8 dB (at 31.25 MHz) |
|  | 22.5 dB (at 62.5 MHz)  |
|  | 28.7 dB (at 100 MHz)   |

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|                                    |   |
|------------------------------------|---|
|                                    | 41.4 dB (at 200 MHz)                            |
|                                    | 46.6 dB (at 250 MHz)                            |
|                                    | 51.4 dB (at 300 MHz)                            |
|                                    | 60.1 dB (at 400 MHz)                            |
|                                    | 67.9 dB (at 500 MHz)                            |
|                                    | ≥ 80.00 dB (at 30 ... 100 MHz)                  |
| Halogen-free                       | according to IEC 60754-1                        |
| Flame resistance                   | according to IEC 60332-1-2                      |
|                                    | in accordance with UN ECE-R 118.03              |
| Resistance to oil                  | in accordance with DIN EN 60811-2-1             |
| Ambient temperature (operation)    | -40 °C ... 80 °C (cable, fixed installation)    |
|                                    | -20 °C ... 80 °C (Cable, flexible installation) |
| Ambient temperature (installation) | -20 °C ... 80 °C                                |

## Environmental and real-life conditions

### Ambient conditions

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

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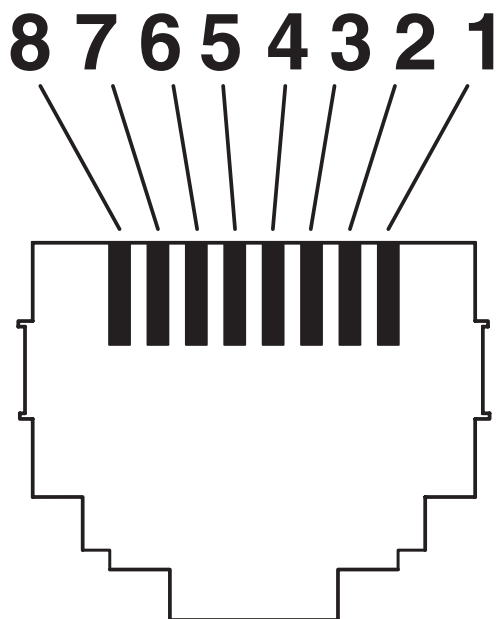
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## Drawings

### Schematic diagram



Connector pin assignment plug RJ45

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## Approvals

🔗 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/au/products/1408360>



**EAC**

Approval ID: 19060508



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27060307 |
|-------------|----------|

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001855 |
|----------|----------|

### UNSPSC

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

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## 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% |
|-------------------------------------|----------------------------|

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