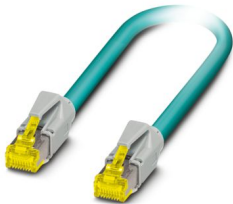


# NBC-R4AC-10G/0,5-94F/R4AC-10G - Patch cable



1422210  
<https://www.phoenixcontact.com/us/products/1422210>

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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: 0.5 m

## 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                          | 1422210       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | AB11          |
| Product key                          | ABNABF        |
| GTIN                                 | 4055626292649 |
| Weight per piece (including packing) | 48 g          |
| Weight per piece (excluding packing) | 35.4 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                       |
| Shielded            | yes                     |

### Data management status

|                  |    |
|------------------|----|
| Article revision | 03 |
|------------------|----|

### Electrical properties

|                                         |                   |
|-----------------------------------------|-------------------|
| Rated voltage (III/3)                   | 72 V (DC)         |
| Nominal voltage $U_N$                   | 48 V              |
| Nominal current $I_N$                   | 0.5 A             |
| Transmission medium                     | Copper            |
| Transmission characteristics (category) | CAT6 <sub>A</sub> |
| Transmission speed                      | 10 Gbps           |
| Wave impedance                          | 100 $\Omega$      |

### Mechanical properties

#### Mechanical data

|                                     |         |
|-------------------------------------|---------|
| Insertion/withdrawal cycles         | 200     |
| Insertion force per signal contact  | 50.00 N |
| Extraction force per signal contact | 30 N    |

### Material specifications

|                        |                    |
|------------------------|--------------------|
| Outer sheath, material | PUR                |
| Conductor material     | Bare Cu litz wires |

### Connector

#### Connection 1

|                             |                    |
|-----------------------------|--------------------|
| Type                        | Plug straight RJ45 |
| Shielded                    | yes                |
| Insertion/withdrawal cycles | $\geq 750$         |
| Degree of protection        | IP20               |

#### Connection 2

|                             |                    |
|-----------------------------|--------------------|
| Type                        | Plug straight RJ45 |
| Shielded                    | yes                |
| Insertion/withdrawal cycles | $\geq 750$         |
| Degree of protection        | IP20               |

### Cable/line

# NBC-R4AC-10G/0,5-94F/R4AC-10G - Patch cable



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|                                 |                                                                                    |
|---------------------------------|------------------------------------------------------------------------------------|
| Cable length                    | 0.50 m                                                                             |
| Ethernet 10 Gbit [94F]          |                                                                                    |
| Dimensional drawing             |  |
| Shielded                        | yes                                                                                |
| UL AWM Style                    | 20963 (80°C/30 V)                                                                  |
| Cable weight                    | 42 kg/km                                                                           |
| Cable type                      | Ethernet 10 Gbit                                                                   |
| Short symbol                    | 02YSC11Y                                                                           |
| Cable type (abbreviation)       | 94F                                                                                |
| Signal type/category            | Ethernet CAT6 <sub>A</sub> , 10 Gbps                                               |
| Cable structure                 | 4x2xAWG26/7; S/FTP                                                                 |
| External cable diameter         | 6.40 mm ±0.2 mm                                                                    |
| Outer sheath, material          | PUR                                                                                |
| External sheath, color          | water blue RAL 5021                                                                |
| Thickness, outer sheath         | 0.65 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  | 1.04 mm                                                                            |
| Single wire, color              | white/blue-blue, white/orange-orange, white/green-green, white/brown-brown         |
| Twisted pairs                   | 2 cores to the pair                                                                |
| Type of pair shielding          | Aluminum-lined foil                                                                |
| Overall twist                   | 4 pairs for core                                                                   |
| Shielding                       | 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        | 700.00 V (50 Hz, 1 min.)                                                           |
| Cable insulation resistance     | ≥ 500 MΩ*km                                                                        |
| Wave impedance                  | 100 Ω ±5 Ω (at 100 MHz)                                                            |
| Loop resistance                 | ≤ 290.00 Ω/km                                                                      |
| Cable capacity                  | 47 nF/km                                                                           |
| Signal runtime                  | 5.13 ns/m                                                                          |

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|                                                        |                        |
|--------------------------------------------------------|------------------------|
| Tensile strength                                       | ≤ 100 N                |
| Minimum bending radius, fixed installation             | 4 x D                  |
| Minimum bending radius, flexible installation          | 8 x D                  |
| 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)   |
|                                                        | 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)   |

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|                                 |                                                 |
|---------------------------------|-------------------------------------------------|
|                                 | 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              | ≥ 80.00 dB (at 30 ... 100 MHz)                  |
| Halogen-free                    | according to IEC 60754-1                        |
| Resistance to oil               | in accordance with DIN EN 60811-2-1             |
| Flame resistance                | according to IEC 60332-1-2                      |
|                                 | 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) | -25 °C ... 60 °C (RJ45 connector) |

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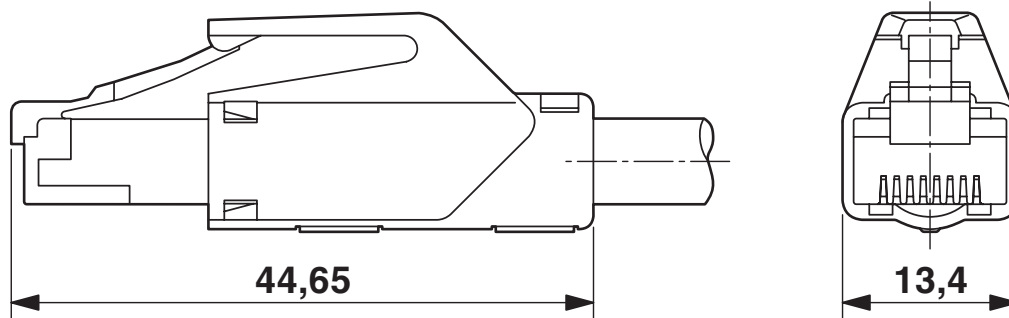
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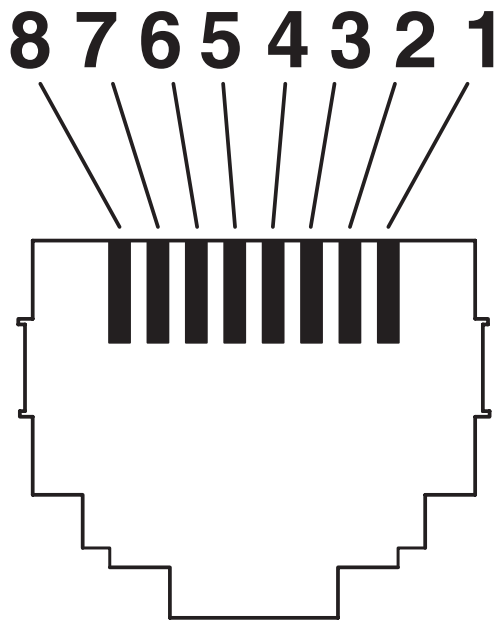
## Drawings

Dimensional drawing



RJ45 connector, IP20

Schematic diagram



Connector pin assignment plug RJ45

# NBC-R4AC-10G/0,5-94F/R4AC-10G - Patch cable



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## Approvals

🔗 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1422210>



**EAC**

Approval ID: 19060508



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27061801 |
| ECLASS-12.0 | 27061801 |
| ECLASS-13.0 | 27060307 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC003249 |
|----------|----------|

### 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%               |

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