

# NBC-R4OC/5,0-BC6A/R4OC-RD - Patch cable



1697678

<https://www.phoenixcontact.com/us/products/1697678>

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.



Patch cable, RJ45/IP20 straight on RJ45/IP20 straight, cable length: 5 m, number of positions: 8, 10 Gbps, CAT6<sub>A</sub>, connection cross section: AWG 26- 26, Ethernet, 4x2xAWG26/7; S/FTP, red

## Your advantages

- Perfect for office, building, and protected industrial applications (e.g., in control cabinets)
- 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++
- Future-proof high-speed data transmission with up to 10 Gbps (CAT6<sub>A</sub>)

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1697678       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | AB11          |
| Product key                          | ABNABH        |
| GTIN                                 | 4067923262041 |
| Weight per piece (including packing) | 275.3 g       |
| Weight per piece (excluding packing) | 281 g         |
| Customs tariff number                | 85444210      |
| Country of origin                    | CN            |

# NBC-R4OC/5,0-BC6A/R4OC-RD - Patch cable



1697678

<https://www.phoenixcontact.com/us/products/1697678>

## Technical data

### Product properties

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

### Electrical properties

|                       |         |
|-----------------------|---------|
| Rated voltage (III/2) | 72 V    |
| Transmission medium   | Copper  |
| Transmission speed    | 10 Gbps |
| Transmission speed    | 10 Gbps |
| Power transmission    | PoE++   |

### Dimensions

|        |         |
|--------|---------|
| Width  | 11.6 mm |
| Height | 14.8 mm |
| Length | 40 mm   |

### Connector

#### Connection 1

|                             |                                                                                                                               |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Dimensional drawing         |  <p>Connector pin assignment plug RJ45</p> |
| Type                        | RJ45 Plug, straight, 8-position                                                                                               |
| Number of positions         | 8                                                                                                                             |
| Shielded                    | yes                                                                                                                           |
| Signal type/category        | Ethernet CAT6 <sub>A</sub> (IEC 11801:2002), 10 Gbps                                                                          |
| Insertion/withdrawal cycles | ≥ 750                                                                                                                         |
| Insertion force             | 30 N (per signal contact)                                                                                                     |
| Withdrawal force            | 50 N (per signal contact)                                                                                                     |
| Overvoltage category        | I                                                                                                                             |
| Degree of pollution         | 2                                                                                                                             |
| Material Contact            | Brass                                                                                                                         |
| Material Contact surface    | Au                                                                                                                            |

# NBC-R4OC/5,0-BC6A/R4OC-RD - Patch cable



1697678

<https://www.phoenixcontact.com/us/products/1697678>

|                                        |                  |
|----------------------------------------|------------------|
| Material Contact carrier               | PC               |
| Color (Housing)                        | red              |
| Flammability rating according to UL 94 | V0               |
| Degree of protection                   | IP20             |
| Ambient temperature (operation)        | -20 °C ... 80 °C |

## Connection 2

|                                        |                                                                                                                             |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Dimensional drawing                    |  <p>Connector pin assignment plug RJ45</p> |
| Type                                   | RJ45 Plug, straight, 8-position                                                                                             |
| Number of positions                    | 8                                                                                                                           |
| Shielded                               | yes                                                                                                                         |
| Signal type/category                   | Ethernet CAT6 <sub>A</sub> (IEC 11801:2002), 10 Gbps                                                                        |
| Insertion/withdrawal cycles            | ≥ 750                                                                                                                       |
| Insertion force                        | 30 N (per signal contact)                                                                                                   |
| Withdrawal force                       | 50 N (per signal contact)                                                                                                   |
| Overvoltage category                   | I                                                                                                                           |
| Degree of pollution                    | 2                                                                                                                           |
| Material Contact                       | Brass                                                                                                                       |
| Material Contact surface               | Au                                                                                                                          |
| Material Contact carrier               | PC                                                                                                                          |
| Color (Housing)                        | red                                                                                                                         |
| Flammability rating according to UL 94 | V0                                                                                                                          |
| Degree of protection                   | IP20                                                                                                                        |
| Ambient temperature (operation)        | -20 °C ... 80 °C                                                                                                            |

## Cable/line

|              |        |
|--------------|--------|
| Cable length | 5.00 m |
|--------------|--------|

### Ethernet, Type B, 8-pos., CAT6A, LSZH [BC6A]

|                                 |                                              |
|---------------------------------|----------------------------------------------|
| Number of positions             | 8                                            |
| Shielded                        | yes                                          |
| Cable type                      | Ethernet, Type B, 8-pos., CAT6A, LSZH [BC6A] |
| Conductor structure             | 4x2xAWG26/7; S/FTP                           |
| Conductor structure signal line | 7x 0.16 mm                                   |
| AWG signal line                 | 26                                           |
| Wire diameter incl. insulation  | 1 mm                                         |
| External cable diameter         | 6.50 mm ±0.3 mm                              |

# NBC-R4OC/5,0-BC6A/R4OC-RD - Patch cable



1697678

<https://www.phoenixcontact.com/us/products/1697678>

|                                                        |                                             |
|--------------------------------------------------------|---------------------------------------------|
| Outer sheath, material                                 | LSZH                                        |
| External sheath, color                                 | red                                         |
| Conductor material                                     | Bare Cu litz wires                          |
| Material wire insulation                               | PE                                          |
| Single wires, quantity                                 | 8                                           |
| Single wire, cross section [AWG]                       | 26                                          |
| Thickness, outer sheath                                | approx. 0.70 mm                             |
| Optical shield covering                                | 70 %                                        |
| Insulation resistance                                  | $\geq 5000 \text{ M}\Omega \cdot \text{km}$ |
| Loop resistance                                        | $\leq 148.00 \text{ }\Omega/\text{km}$      |
| Wave impedance                                         | 100 $\Omega$                                |
| Minimum bending radius, fixed installation             | 8 x D                                       |
| Smallest bending radius, fixed installation            | 52 mm                                       |
| Near end crosstalk attenuation (NEXT)                  | 75 dB (with 1 MHz)                          |
|                                                        | 66.3 dB (at 4 MHz)                          |
|                                                        | 60.3 dB (at 10 MHz)                         |
|                                                        | 57.2 dB (at 16 MHz)                         |
|                                                        | 55.8 dB (at 20 MHz)                         |
|                                                        | 52.9 dB (at 31.25 MHz)                      |
|                                                        | 48.4 dB (at 62.5 MHz)                       |
|                                                        | 45.3 dB (at 100 MHz)                        |
|                                                        | 40.8 dB (at 200 MHz)                        |
|                                                        | 38.1 dB (at 300 MHz)                        |
|                                                        | 36.3 dB (at 400 MHz)                        |
|                                                        | 34.8 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)                        |
|                                                        | 35.1 dB (at 300 MHz)                        |
| Return attenuation (RL)                                | 33.3 dB (at 400 MHz)                        |
|                                                        | 31.8 dB (at 500 MHz)                        |
|                                                        | 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)                           |

# NBC-R4OC/5,0-BC6A/R4OC-RD - Patch cable



1697678

<https://www.phoenixcontact.com/us/products/1697678>

|                                    |                                                 |
|------------------------------------|-------------------------------------------------|
|                                    | 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 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)                               |
|                                    | 8.9 dB (at 10 MHz)                              |
|                                    | 11.2 dB (at 16 MHz)                             |
|                                    | 12.6 dB (at 20 MHz)                             |
|                                    | 15.8 dB (at 31.25 MHz)                          |
|                                    | 22.5 dB (at 62.5 MHz)                           |
|                                    | 28.7 dB (at 100 MHz)                            |
|                                    | 41.4 dB (at 200 MHz)                            |
|                                    | 51.4 dB (at 300 MHz)                            |
| Halogen-free                       | complying with IEC 60754-1/2                    |
|                                    |                                                 |
| Flame resistance                   | IEC 60332-1-2/IEC 60332-3-24/CM                 |
| Ambient temperature (operation)    | -20 °C ... 80 °C (cable, fixed installation)    |
|                                    | -20 °C ... 80 °C (Cable, flexible installation) |
| Ambient temperature (installation) | 0 °C ... 60 °C                                  |

## Environmental and real-life conditions

### Ambient conditions

|                                         |                  |
|-----------------------------------------|------------------|
| Ambient temperature (operation)         | -20 °C ... 80 °C |
| Ambient temperature (storage/transport) | 0 °C ... 40 °C   |

## Standards and regulations

|                  |               |
|------------------|---------------|
| Flame resistance | IEC 60332-1-2 |
|------------------|---------------|

# NBC-R4OC/5,0-BC6A/R4OC-RD - Patch cable



1697678

<https://www.phoenixcontact.com/us/products/1697678>

## Approvals

 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1697678>



**UL Listed**

Approval ID: E335024\_20210804



**cUL Listed**

Approval ID: E335024\_20210804

# NBC-R4OC/5,0-BC6A/R4OC-RD - Patch cable



1697678

<https://www.phoenixcontact.com/us/products/1697678>

## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27060307 |
| ECLASS-15.0 | 27060307 |

### ETIM

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

# NBC-R4OC/5,0-BC6A/R4OC-RD - Patch cable



1697678

<https://www.phoenixcontact.com/us/products/1697678>

## 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%               |

Phoenix Contact 2025 © - 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)