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

1698021

https://www.phoenixcontact.com/us/products/1698021

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

## 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 | 1698021 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | AB11 |
| Product key | ABNABH |
| GTIN | 4067923262416 |
| Weight per piece (including packing) | 267.6 g |
| Weight per piece (excluding packing) | 281 g |
| Customs tariff number | 85444210 |
| Country of origin | CN |

## 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
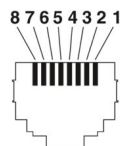
| | |
|---|---|
| Rated voltage (III/2) | 72 V |
| Transmission medium | Copper |
| Transmission speed | 10 Gbps |
| Transmission speed | 10 Gbps |

### Dimensions

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

### Connector

Connection 1

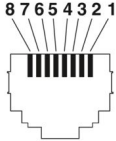| Dimensional drawing | |
|---|---|
| | 8 7 6 5 4 3 2 1 <br><br> Connector pin assignment plug RJ45 |
| Type | RJ45 Plug, straight, 8-position |
| Number of positions | 8 |
| Shielded | yes |
| Signal type/category | Ethernet $CAT6_A$ (IEC 11801:2002), 10 Gbps |
| Insertion/withdrawal cycles | ≥ 750 |
| 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) | orange |
| Flammability rating according to UL 94 | V0 |
| Degree of protection | IP20 |
| Ambient temperature (operation) | -20 °C ... 80 °C |

Connection 2

| | |
|---|---|
| Dimensional drawing | |

Connector pin assignment plug RJ45

| | |
|---|---|
| Type | RJ45 Plug, straight, 8-position |
| Number of positions | 8 |
| Shielded | yes |
| Signal type/category | Ethernet CAT6$_A$ (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) | orange |
| 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 |
| Outer sheath, material | LSZH |

| | |
|---|---|
| External sheath, color | orange |
| 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 | ≥ 5000 MΩ*km |
| Loop resistance | ≤ 148.00 Ω/km |
| Wave impedance | 100 Ω |
| 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) |
| | 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 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) |
|  | 60.1 dB (at 400 MHz) |
|  | 67.9 dB (at 500 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 |

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1698021

**UL Listed**
Approval ID: E335024_20210804

**cUL Listed**
Approval ID: E335024_20210804

## Classifications

### ECLASS

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

### ETIM

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

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

## 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% |