

# NBC-R4ACS-R4ACB-PN4/.../... - Patch cable



1247629

<https://www.phoenixcontact.com/us/products/1247629>

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, degree of protection: IP20, number of positions: 4, 100 Mbps, CAT5, material: PP, connection method: Pierce connection, connection cross section: AWG 23- 22, cable outlet: bottom, PROFINET

## Your advantages

- Compact angle
- Perfect for industrial applications
- 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 100 Mbps (CAT5)

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1247629                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | AB50                           |
| Product key                          | ABNABA                         |
| Weight per piece (including packing) | 22.22 g                        |
| Weight per piece (excluding packing) | 22.22 g                        |
| Customs tariff number                | 85444210                       |
| Country of origin                    | PL                             |

## Technical data

### Product properties

|                     |                          |
|---------------------|--------------------------|
| Product type        | Data cable preassembled  |
| Product family      | RJ45 INDUSTRIAL PN4 CAT5 |
| Sensor type         | PROFINET                 |
| Number of positions | 4                        |
| Shielded            | yes                      |
| Cable outlet        | bottom                   |

### Insulation characteristics

|                      |   |
|----------------------|---|
| Overvoltage category | I |
| Degree of pollution  | 2 |

### Electrical properties

|   |          |
|---|----------|
| Rated voltage (III/2)                   | 72 V     |
| Rated current                           | 1.75 A   |
| Insulation resistance                   | > 1 TΩ   |
| Contact resistance                      | < 20 mΩ  |
| Transmission speed                      | 100 Mbps |
| Transmission characteristics (category) | CAT5     |
| Transmission speed                      | 100 Mbps |

### Mechanical properties

#### Mechanical data

|                                     |         |
|-------------------------------------|---------|
| Insertion force per signal contact  | 50.00 N |
| Extraction force per signal contact | 30 N    |

### Material specifications

|  |       |
|--|-------|
| Flammability rating according to UL 94 | V0    |
| Housing material                       | PP    |
| Contact material                       | CuSn6 |
| Contact surface material               | Ni/Au |
| Contact carrier material               | PC    |

### Dimensions

|        |         |
|--------|---------|
| Width  | 13.8 mm |
| Height | 33.9 mm |
| Length | 34 mm   |

### Connection data

#### Connection technology

|                   |                   |
|-------------------|-------------------|
| Connection method | Pierce connection |
|-------------------|-------------------|

# NBC-R4ACS-R4ACB-PN4/.../... - Patch cable



1247629

<https://www.phoenixcontact.com/us/products/1247629>

## Conductor connection

|                   |                   |
|-------------------|-------------------|
| Connection method | Pierce connection |
|-------------------|-------------------|

## Connector

### Connection 1

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

### Connection 2

|                             |                  |
|-----------------------------|------------------|
| Type                        | Plug bottom RJ45 |
| Shielded                    | yes              |
| Insertion/withdrawal cycles | ≥ 750            |
| Degree of protection        | IP20             |

## Cable/line

### PROFINET PVC stranded CAT5 [93B]

|                                 |  |
|---------------------------------|--|
| Cable weight                    | 67 kg/km   |
| UL AWM Style                    | 21694  |
| Number of positions             | 4  |
| Shielded                        | yes  |
| Cable type                      | PROFINET PVC stranded CAT5 [93B]<br>PROFINET PVC stranded CAT5 93B |
| Conductor structure             | 1x4xAWG22/7, SF/TQ   |
| Signal runtime                  | 5.3 ns/m   |
| Signal speed                    | 0.66 c   |
| Conductor structure signal line | 7x 0.25 mm   |
| AWG signal line                 | 22   |
| Conductor cross-section         | 4x 0.34 mm <sup>2</sup>  |
| Wire diameter incl. insulation  | 1.55 mm  |
| External cable diameter         | 6.50 mm ±0.2 mm  |
| Outer sheath, material          | PVC  |
| External sheath, color          | green RAL 6018   |
| Conductor material              | Tin-plated Cu litz wires   |
| Material wire insulation        | PE   |
| Single wire, color              | white, yellow, blue, orange  |
| Thickness, outer sheath         | approx. 0.90 mm  |
| Overall twist                   | Star quad  |
| Shielding                       | Aluminum-coated foil, tinned copper braided shield                 |
| Optical shield covering         | 85 %   |
| Insulation resistance           | ≥ 500 MΩ*km  |
| Coupling resistance             | ≤ 20.00 mΩ/m (at 10 MHz)   |

# NBC-R4ACS-R4ACB-PN4/.../... - Patch cable



1247629

<https://www.phoenixcontact.com/us/products/1247629>

|   |   |
|---|---|
| Loop resistance                               | ≤ 120.00 Ω/km                                     |
| Wave impedance                                | 100 Ω ±15 Ω (at 100 MHz)                          |
| Nominal voltage, cable                        | 600 V   |
| Test voltage Core/Core                        | 2000 V (50 Hz, 1 min.)                            |
| Test voltage Core/Shield                      | 2000.00 V (50 Hz, 1 min.)                         |
| Minimum bending radius, fixed installation    | 3 x D   |
| Minimum bending radius, flexible installation | 7 x D   |
| Smallest bending radius, fixed installation   | 20 mm   |
| Smallest bending radius, movable installation | 46 mm   |
| Near end crosstalk attenuation (NEXT)         | 80 dB (with 1 MHz)                                |
|   | 76 dB (at 4 MHz)                                  |
|   | 70 dB (at 10 MHz)                                 |
|   | 65 dB (at 16 MHz)                                 |
|   | 63 dB (at 20 MHz)                                 |
|   | 60 dB (at 31.25 MHz)                              |
|   | 55 dB (at 62.5 MHz)                               |
|   | 50 dB (at 100 MHz)                                |
| Wave attenuation                              | 2.1 dB (with 1 MHz)                               |
|   | 4 dB (at 4 MHz)                                   |
|   | 6.3 dB (at 10 MHz)                                |
|   | 8 dB (at 16 MHz)                                  |
|   | 9 dB (at 20 MHz)                                  |
|   | 11.4 dB (at 31.25 MHz)                            |
|   | 16.5 dB (at 62.5 MHz)                             |
|   | 21.3 dB (at 100 MHz)                              |
| Flame resistance                              | according to UL 1685 (CSA FT 4)                   |
| Resistance to oil                             | Resistant to oil to a limited extent              |
| Other resistance                              | UV resistant (according to UL 1581, Section 1200) |
| Ambient temperature (operation)               | -40 °C ... 70 °C (cable, fixed installation)      |
|   | -40 °C ... 70 °C (Cable, flexible installation)   |

## PROFINET drag chain CAT5 [93C]

|                                 |                                |
|---------------------------------|--------------------------------|
| Cable weight                    | 61 kg/km                       |
| Shielded                        | yes                            |
| Cable type                      | PROFINET drag chain CAT5 [93C] |
|                                 | PROFINET drag chain CAT5 93C   |
| Conductor structure             | 1x4xAWG22/7, SF/TQ             |
| Signal runtime                  | 5.3 ns/m                       |
| Signal speed                    | 0.66 c                         |
| Conductor structure signal line | 7x 0.25 mm                     |
| AWG signal line                 | 22                             |
| Conductor cross-section         | 4x 0.34 mm <sup>2</sup>        |
| Wire diameter incl. insulation  | 1.5 mm                         |
| External cable diameter         | 6.50 mm ±0.2 mm                |

# NBC-R4ACS-R4ACB-PN4/.../... - Patch cable



1247629

<https://www.phoenixcontact.com/us/products/1247629>

|   |   |
|---|---|
| Outer sheath, material                        | PUR   |
| External sheath, color                        | green RAL 6018  |
| Conductor material                            | Tin-plated Cu litz wires  |
| Material wire insulation                      | PE  |
| Single wire, color                            | white, yellow, blue, orange   |
| Thickness, outer sheath                       | approx. 0.90 mm   |
| Overall twist                                 | Star quad   |
| Shielding                                     | Aluminum-coated foil, tinned copper braided shield  |
| Optical shield covering                       | 85 %  |
| Insulation resistance                         | ≥ 500 MΩ*km   |
| Coupling resistance                           | ≤ 20.00 mΩ/m (at 10 MHz)  |
| Loop resistance                               | ≤ 120.00 Ω/km   |
| Wave impedance                                | 100 Ω ±15 Ω (at 1 ... 100 MHz)  |
| Nominal voltage, cable                        | 600 V (UL rating)   |
| Test voltage Core/Core                        | 2000 V (50 Hz, 1 min.)  |
| Test voltage Core/Shield                      | 2000.00 V (50 Hz, 1 min.)   |
| Minimum bending radius, fixed installation    | 5 x D   |
| Minimum bending radius, flexible installation | 7.5 x D   |
| Smallest bending radius, fixed installation   | 33 mm   |
| Smallest bending radius, movable installation | 49 mm   |
| Dynamic load capacity (bending)               | Max. bending cycles: 3000000, Bending radius: 100 mm, Traversing path: 10 m, Traversing rate: 4 m/s, Acceleration: 4 m/s <sup>2</sup> |
| Tensile strength                              | ≤ 150 N   |
| Dynamic load capacity (torsion)               | Torsion: ±30 °/m  |
| Near end crosstalk attenuation (NEXT)         | 80 dB (with 1 MHz)  |
|   | 76 dB (at 4 MHz)  |
|   | 70 dB (at 10 MHz)   |
|   | 65 dB (at 16 MHz)   |
|   | 63 dB (at 20 MHz)   |
|   | 60 dB (at 31.25 MHz)  |
|   | 55 dB (at 62.5 MHz)   |
|   | 50 dB (at 100 MHz)  |
| Wave attenuation                              | 2.1 dB (with 1 MHz)   |
|   | 4 dB (at 4 MHz)   |
|   | 6.3 dB (at 10 MHz)  |
|   | 8 dB (at 16 MHz)  |
|   | 9 dB (at 20 MHz)  |
|   | 11.4 dB (at 31.25 MHz)  |
|   | 16.5 dB (at 62.5 MHz)   |
|   | 21.3 dB (at 100 MHz)  |
| Halogen-free                                  | yes   |
| Flame resistance                              | according to IEC 60332-1-2  |
|   | in accordance with UN ECE-R 118.03  |

# NBC-R4ACS-R4ACB-PN4/.../... - Patch cable



1247629

<https://www.phoenixcontact.com/us/products/1247629>

|                                 |   |
|---------------------------------|---|
| Resistance to oil               | in accordance with DIN EN 60811-2-1                   |
| Other resistance                | UV resistant  |
| Special properties              | Electrical properties in accordance with EN 50288-2-2 |
| Ambient temperature (operation) | -40 °C ... 70 °C (cable, fixed installation)          |
|                                 | -40 °C ... 70 °C (Cable, flexible installation)       |

## PROFINET stranded CAT5 [93M]

|   |  |
|---|--|
| UL AWM Style                                  | 21238 (80 °C / 600 V)                              |
| Number of positions                           | 4  |
| Shielded                                      | yes  |
| Cable type                                    | PROFINET stranded CAT5 [93M]                       |
|   | PROFINET stranded CAT5 93M                         |
| Conductor structure                           | 1x4xAWG22/7, SF/TQ                                 |
| AWG signal line                               | 22   |
| Conductor cross-section                       | 4x 0.34 mm <sup>2</sup>                            |
| Wire diameter incl. insulation                | 1.56 mm ±0.05 mm                                   |
| External cable diameter                       | 6.50 mm ±0.2 mm                                    |
| Outer sheath, material                        | PUR  |
| External sheath, color                        | green RAL 6018                                     |
| Conductor material                            | Tin-plated Cu litz wires                           |
| Material wire insulation                      | PE   |
| Single wire, color                            | white, yellow, blue, orange                        |
| Overall twist                                 | Star quad  |
| Shielding                                     | Aluminum-coated foil, tinned copper braided shield |
| Optical shield covering                       | 85 %   |
| Insulation resistance                         | ≥ 500 MΩ*km  |
| Loop resistance                               | ≤ 120.00 Ω/km                                      |
| Wave impedance                                | 100 Ω ±15 Ω (at 100 MHz)                           |
| Nominal voltage, cable                        | ≤ 100 V  |
| Test voltage Core/Core                        | 2000 V (50 Hz, 1 min.)                             |
| Test voltage Core/Shield                      | 2000.00 V (50 Hz, 1 min.)                          |
| Minimum bending radius, fixed installation    | 5 x D  |
| Minimum bending radius, flexible installation | 10 x D   |
| Halogen-free                                  | according to IEC 60754-1                           |
| Flame resistance                              | according to CSA C 22.2 No. 210-FT1                |
| Ambient temperature (operation)               | -40 °C ... 80 °C                                   |
|   | -40 °C ... 80 °C (Cable, flexible installation)    |

## Sercos III [93K]

|                     |                       |
|---------------------|-----------------------|
| Cable weight        | 68 kg/km              |
| UL AWM Style        | 21694 (60 °C / 600 V) |
| Number of positions | 4                     |
| Shielded            | yes                   |
| Cable type          | Sercos III [93K]      |
|                     | Sercos III 93K        |

# NBC-R4ACS-R4ACB-PN4/.../... - Patch cable



1247629

<https://www.phoenixcontact.com/us/products/1247629>

|   |   |
|---|---|
| Conductor structure                           | 1x4xAWG22/7, SF/TQ  |
| Signal runtime                                | 5.3 ns/m  |
| Conductor structure signal line               | 7x 0.25 mm  |
| AWG signal line                               | 22  |
| Conductor cross-section                       | 4x 0.34 mm <sup>2</sup>   |
| Wire diameter incl. insulation                | approx. 1.55 mm   |
| External cable diameter                       | 6.50 mm ±0.2 mm   |
| Outer sheath, material                        | PVC   |
| External sheath, color                        | signal red RAL 3020   |
| Conductor material                            | Tin-plated Cu litz wires  |
| Material wire insulation                      | PE  |
| Single wire, color                            | white, yellow, blue, orange   |
| Thickness, outer sheath                       | approx. 0.90 mm   |
| Type of pair shielding                        | Aluminum-lined polyester foil   |
| Overall twist                                 | Star quad   |
| Shielding                                     | Tinned copper braided shield  |
| Max. conductor resistance                     | ≤ 120 Ω/km  |
| Insulation resistance                         | ≥ 0.5 GΩ*km   |
| Coupling resistance                           | ≤ 20.00 mΩ/m (at 10 Hz)   |
| Wave impedance                                | 100 Ω ±15 Ω (at 100 MHz)  |
| Nominal voltage, cable                        | 600 V   |
| Test voltage Core/Core                        | 2000 V (50 Hz, 1 min.)  |
| Test voltage Core/Shield                      | 2000.00 V (50 Hz, 1 min.)   |
| Minimum bending radius, fixed installation    | 3 x D   |
| Minimum bending radius, flexible installation | 7 x D   |
| Smallest bending radius, fixed installation   | 20 mm   |
| Smallest bending radius, movable installation | 46 mm   |
| Flame resistance                              | according to UL 1685 (CSA FT 4)   |
| Resistance to oil                             | Resistant to oil to a limited extent  |
| Other resistance                              | UV resistant (according to UL 1581, Section 1200)   |
| Ambient temperature (operation)               | -40 °C ... 70 °C (cable, fixed installation)<br>-40 °C ... 70 °C (Cable, flexible installation) |

1247629

<https://www.phoenixcontact.com/us/products/1247629>

## Classifications

### ECLASS

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

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC001855 |
|-----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

# NBC-R4ACS-R4ACB-PN4/.../... - Patch cable



1247629

<https://www.phoenixcontact.com/us/products/1247629>

## 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 2026 © - 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)