

# NBC-R4ACS/2,0-93K/R4ACS - Patch cable



1112929

<https://www.phoenixcontact.com/gb/products/1112929>

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Patch cable, degree of protection: IP20, cable length: 2 m, number of positions: 4, 100 Mbps, CAT5, material: PP, connection method: Pierce connection, connection cross section: AWG 23-22, cable outlet: straight, PROFINET

## Your advantages

- Perfect for industrial applications
- PUR cable for moving applications (bend)
- 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                          | 1112929       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | ABNABA        |
| Product key                          | ABNABA        |
| GTIN                                 | 4063151034801 |
| Weight per piece (including packing) | 160 g         |
| Weight per piece (excluding packing) | 153.694 g     |
| Customs tariff number                | 85444210      |
| Country of origin                    | PL            |

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## Technical data

### Product properties

|                     |                         |
|---------------------|-------------------------|
| Product type        | Data cable preassembled |
| Sensor type         | PROFINET                |
| Number of positions | 4                       |
| Shielded            | yes                     |
| Cable outlet        | straight                |

### 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 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 | V2    |
| Housing material                       | PP    |
| Contact material                       | CuSn6 |
| Contact surface material               | Ni/Au |
| Contact carrier material               | PC    |

### Dimensions

|        |         |
|--------|---------|
| Width  | 13.8 mm |
| Height | 14.8 mm |
| Length | 44.2 mm |

### Connection data

#### Connection technology

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

#### Conductor connection

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

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## Connector

### Connection 1

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

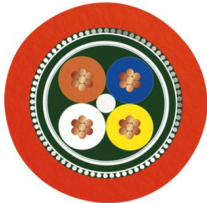
### Connection 2

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

## Cable/line

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

### Sercos III [93K]

|                                 |                                                                                      |
|---------------------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing             |  |
| Shielded                        | yes                                                                                  |
| UL AWM Style                    | 21694 (60 °C / 600 V)                                                                |
| Cable weight                    | 68 kg/km                                                                             |
| Cable type                      | Sercos III                                                                           |
| Cable type (abbreviation)       | 93K                                                                                  |
| Signal type/category            | Sercos CAT5 (IEC 11801), 100 Mbps                                                    |
| Cable structure                 | 1x4xAWG22/7, SF/TQ                                                                   |
| External cable diameter         | 6.50 mm ±0.2 mm                                                                      |
| Outer sheath, material          | PVC                                                                                  |
| External sheath, color          | signal red RAL 3020                                                                  |
| Thickness, outer sheath         | approx. 0.90 mm                                                                      |
| Material, inner sheath          | PVC                                                                                  |
| Conductor material              | Tin-plated Cu litz wires                                                             |
| Conductor structure signal line | 7x 0.25 mm                                                                           |
| AWG signal line                 | 22                                                                                   |
| Conductor cross section         | 4x 0.34 mm²                                                                          |
| Material wire insulation        | PE                                                                                   |

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|                                               |                                                   |
|-----------------------------------------------|---------------------------------------------------|
| Wire diameter incl. insulation                | approx. 1.55 mm                                   |
| Single wire, color                            | white, yellow, blue, orange                       |
| Type of pair shielding                        | Aluminum-lined polyester foil                     |
| Overall twist                                 | Star quad                                         |
| Shielding                                     | Tinned copper braided shield                      |
| 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.)                         |
| Cable resistance                              | $\leq 120 \Omega/\text{km}$                       |
| Cable insulation resistance                   | $\geq 0.5 \text{ G}\Omega \cdot \text{km}$        |
| Coupling resistance                           | $\leq 20.00 \text{ m}\Omega/\text{m}$ (at 10 Hz)  |
| Wave impedance                                | $100 \Omega \pm 15 \Omega$ (at 100 MHz)           |
| Signal runtime                                | 5.3 ns/m                                          |
| Minimum bending radius, fixed installation    | 3 x D                                             |
| Minimum bending radius, flexible installation | 7 x D                                             |
| Resistance to oil                             | Resistant to oil to a limited extent              |
| Flame resistance                              | according to UL 1685 (CSA FT 4)                   |
| Other resistance                              | UV resistant (According to UL 1581, Section 1200) |
| Ambient temperature (operation)               | -40 °C ... 70 °C (Cable, flexible installation)   |
|                                               | -40 °C ... 70 °C (cable, fixed installation)      |

## Environmental and real-life conditions

### Ambient conditions

|                                         |                                   |
|-----------------------------------------|-----------------------------------|
| Degree of protection                    | IP20                              |
| Ambient temperature (operation)         | -40 °C ... 85 °C (RJ45 connector) |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C (RJ45 connector) |

## Standards and regulations

|                          |             |
|--------------------------|-------------|
| Standards/specifications | IEC 60603-7 |
|--------------------------|-------------|

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27060308 |
| ECLASS-12.0 | 27060308 |
| ECLASS-13.0 | 27060307 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002599 |
|----------|----------|

### UNSPSC

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

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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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