

# NBC-R4AC/12,0-93E/R4AC - Network cable



1412088

<https://www.phoenixcontact.com/us/products/1412088>

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Assembled Ethernet cable, CAT5e, shielded, 2-pair, 26\* AWG stranded (7-wire), RAL 5021 (water blue), RJ45 plug/IP20 to RJ45 plug/IP20, line, length: 12 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                          | 1412088                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to order (non-returnable) |
| Product key                          | ABNABD                         |
| GTIN                                 | 4046356948906                  |
| Weight per piece (including packing) | 518.08 g                       |
| Weight per piece (excluding packing) | 518.08 g                       |
| Country of origin                    | PL                             |

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## Technical data

### Product properties

|                     |                          |
|---------------------|--------------------------|
| Product type        | Data cable preassembled  |
| Product family      | RJ45 INDUSTRIAL IE4 CAT5 |
| Number of positions | 4                        |
| Shielded            | yes                      |

### Interfaces

|                      |  |
|----------------------|--|
| Signal type/category | Ethernet CAT5 (IEC 11801:2002), 100 Mbps |
|                      | Ethernet CAT5 (TIA 568B:2001), 100 Mbps  |

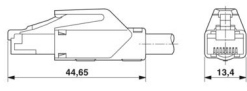
### Electrical properties

|   |                       |
|---|-----------------------|
| Rated voltage (III/3)                   | 72 V (DC)             |
| Nominal voltage $U_N$                   | 48 V                  |
| Nominal current $I_N$                   | 1 A                   |
| Transmission medium                     | Copper                |
| Transmission speed                      | 100 Mbps              |
| Transmission characteristics (category) | CAT5 (IEC 11801:2002) |
| Transmission speed                      | 100 Mbps              |

### Material specifications

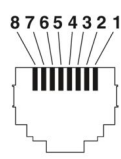
|                        |     |
|------------------------|-----|
| Outer sheath, material | PUR |
|------------------------|-----|

### Dimensions

|                     |  |
|---------------------|--|
| Dimensional drawing |  |
| Width               | 13.4 mm  |
| Height              | 12.9 mm  |
| Length              | 44.7 mm  |

### Connector

#### Connection 1

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

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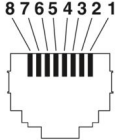


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|  |  |
|--|--|
|  | Connector pin assignment plug RJ45       |
| Type                                   | RJ45 Plug, straight, 4-position          |
| Number of positions                    | 4  |
| Signal type/category                   | Ethernet CAT5 (IEC 11801:2002), 100 Mbps |
| Insertion/withdrawal cycles            | ≥ 750                                    |
| Insertion force                        | 30 N (per signal contact)                |
| Withdrawal force                       | 50 N (per signal contact)                |
| Degree of pollution                    | 2  |
| Material Contact                       | CuSn                                     |
| Material Contact surface               | Ni/Au                                    |
| Material Contact carrier               | PC                                       |
| Material Housing                       | PA                                       |
| Color (Housing)                        | gray                                     |
| Flammability rating according to UL 94 | V2                                       |
| Degree of protection                   | IP20                                     |
| Ambient temperature (operation)        | -40 °C ... 60 °C                         |

## Connection 2

|  |  |
|--|--|
| Dimensional drawing                    |  <p>8 7 6 5 4 3 2 1</p> |
|  | Connector pin assignment plug RJ45   |
| Type                                   | RJ45 Plug, straight, 4-position  |
| Number of positions                    | 4  |
| Signal type/category                   | Ethernet CAT5 (IEC 11801:2002), 100 Mbps   |
| Insertion/withdrawal cycles            | ≥ 750  |
| Insertion force                        | 30 N (per signal contact)  |
| Withdrawal force                       | 50 N (per signal contact)  |
| Degree of pollution                    | 2  |
| Material Contact                       | CuSn   |
| Material Contact surface               | Ni/Au  |
| Material Contact carrier               | PC   |
| Material Housing                       | PA   |
| Color (Housing)                        | gray   |
| Flammability rating according to UL 94 | V2   |
| Degree of protection                   | IP20   |
| Ambient temperature (operation)        | -40 °C ... 60 °C   |


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## Cable/line

|   |  |
|---|--|
| Cable length                                  | 12.00 m  |
| Ethernet flexible CAT5, 2-pair [93E]          |  |
| Dimensional drawing                           |                                        |
| UL AWM Style                                  | 21238 (80 °C / 600 V)  |
| Number of positions                           | 4  |
| Shielded                                      | yes  |
| Cable type                                    | Ethernet flexible CAT5, 2-pair [93E]   |
| Conductor structure                           | 2x2xAWG26/7, SF/UTP  |
| AWG signal line                               | 26   |
| Conductor cross-section                       | 2x 2x 0.14 mm <sup>2</sup>   |
| Wire diameter incl. insulation                | 0.95 mm ±0.05 mm   |
| External cable diameter                       | 6.40 mm ±0.2 mm  |
| Outer sheath, material                        | PUR  |
| External sheath, color                        | water blue RAL 5021  |
| Conductor material                            | Bare Cu litz wires   |
| Material wire insulation                      | Foamed PE  |
| Single wire, color                            | white/orange-orange, white/green-green   |
| Twisted pairs                                 | 2 cores to the pair  |
| Overall twist                                 | Two pairs with two fillers to the core   |
| Optical shield covering                       | 70 %   |
| Insulation resistance                         | ≥ 5 GΩ*km  |
| Loop resistance                               | ≤ 280.00 Ω/km  |
| Wave impedance                                | 100 Ω ±5 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    | 4 x D  |
| Minimum bending radius, flexible installation | 8 x D  |
| Smallest bending radius, fixed installation   | 26 mm  |
| Smallest bending radius, movable installation | 51 mm  |
| Halogen-free                                  | according to IEC 60754-1   |
| Flame resistance                              | according to IEC 60332-1-2<br>in accordance with UN ECE-R 118.03<br>UL 1581, Section 1060 and UL 2556, Section 9.3 (FT1) |

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|                                 |  |
|---------------------------------|--|
|                                 | UL 1581, Section 1100 and UL 2556, Section 9.1 (HFT/FT2) |
| Resistance to oil               | in accordance with IEC 60811-404                         |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation)             |
|                                 | -30 °C ... 70 °C (Cable, flexible installation)          |

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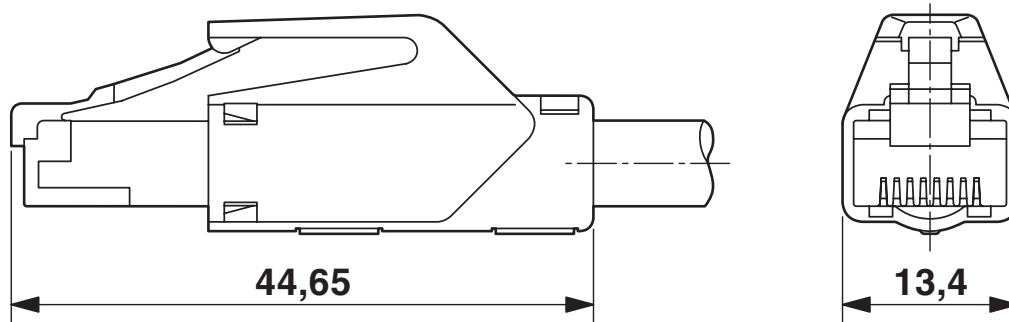


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## Drawings

Dimensional drawing



RJ45 connector, IP20

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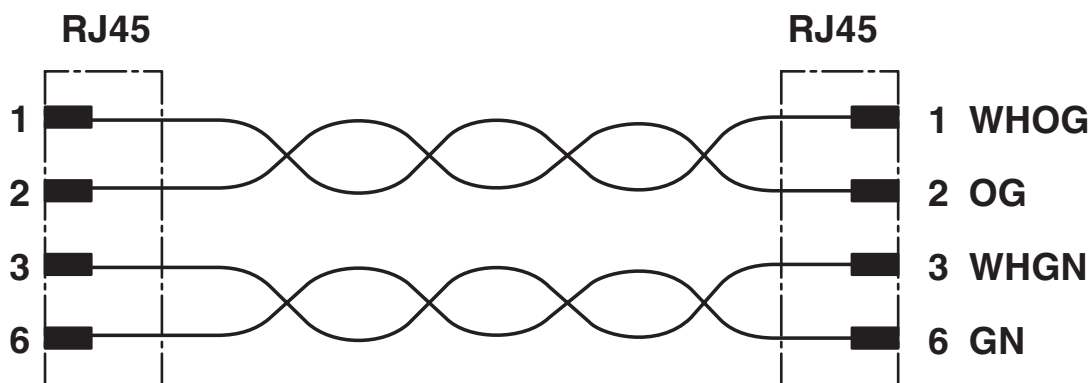
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Schematic diagram



Connector pin assignment plug RJ45

Circuit diagram



Contact assignment of RJ45 plugs

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1412088>



**EAC**

Approval ID: 19060508

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## Classifications

### ECLASS

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

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 26121600 |
|-------------|----------|

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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% |
|-------------------------------------|----------------------------|

### EF3.1 Climate Change

|         |                |
|---------|----------------|
| CO2e kg | 19.139 kg CO2e |
|---------|----------------|

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