

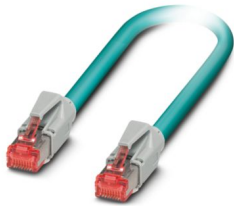
# NBC-R4AC/20,0-94B/R4AC US - Network cable



1419782

<https://www.phoenixcontact.com/us/products/1419782>

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Assembled Ethernet cable, shielded, 4-pair, AWG 26 stranded (7-wire), RAL 5021 (water blue), RJ45 plug/IP20 to RJ45 plug/IP20, line, length: 1 m

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1419782                        |
| Packing unit                         | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF15                           |
| Product key                          | BF1IHB                         |
| GTIN                                 | 4055626218694                  |
| Weight per piece (including packing) | 22.22 g                        |
| Weight per piece (excluding packing) | 22.22 g                        |
| Customs tariff number                | 85444290                       |
| Country of origin                    | US                             |

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## Technical data

### Product properties

|                      |                         |
|----------------------|-------------------------|
| Product type         | Data cable preassembled |
| Sensor type          | Ethernet                |
| Number of positions  | 8                       |
| No. of cable outlets | 1                       |
| Shielded             | yes                     |

### Insulation characteristics

|                     |   |
|---------------------|---|
| Degree of pollution | 2 |
|---------------------|---|

### Interfaces

|                      |  |
|----------------------|--|
| Bus system           | Ethernet                               |
| Signal type/category | Ethernet CAT5 (IEC 11801:2002), 1 Gbps |

### Signaling

|                        |    |
|------------------------|----|
| Status display         | No |
| Status display present | No |

### Electrical properties

|   |                       |
|---|-----------------------|
| Nominal voltage $U_N$                   | 48 V AC               |
|   | 60 V DC               |
| Nominal current $I_N$                   | 1 A                   |
| Transmission medium                     | Copper                |
| Transmission characteristics (category) | CAT5 (IEC 11801:2002) |

### Material specifications

|  |    |
|--|----|
| Flammability rating according to UL 94 | V2 |
|--|----|

### Connector

#### Connection 1

|      |                    |
|------|--------------------|
| Type | Plug straight RJ45 |
|------|--------------------|

#### Connection 2

|      |                    |
|------|--------------------|
| Type | Plug straight RJ45 |
|------|--------------------|

### Cable/line

|              |      |
|--------------|------|
| Cable length | 20 m |
|--------------|------|


Ethernet flexible CAT5, 4-pair [94B]

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|   |  |
|---|--|
| Dimensional drawing                           |  |
| Cable weight                                  | 47 kg/km   |
| UL AWM Style                                  | 20963 (80°C/30 V)  |
| Number of positions                           | 8  |
| Shielded                                      | yes  |
| Cable type                                    | Ethernet flexible CAT5, 4-pair [94B]   |
| Conductor structure                           | 4x2xAWG26/7, SF/UTP  |
| Signal runtime                                | 5.3 ns/m   |
| Conductor structure signal line               | 7x 0.16 mm   |
| AWG signal line                               | 26   |
| Conductor cross section                       | 4x 2x 0.14 mm <sup>2</sup>   |
| Wire diameter incl. insulation                | 0.96 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/blue-blue, white/orange-orange, white/green-green, white/brown-brown         |
| Thickness, outer sheath                       | 1.05 mm  |
| Twisted pairs                                 | 2 cores to the pair  |
| Overall twist                                 | 4 pairs for core   |
| Optical shield covering                       | 70 %   |
| Insulation resistance                         | ≥ 5 GΩ*km  |
| Coupling resistance                           | ≤ 100.00 mΩ/m (at 10 MHz)  |
| Loop resistance                               | ≤ 290.00 Ω/km  |
| Wave impedance                                | 100 Ω ±5 Ω (at 100 MHz)  |
| Cable capacity                                | 48 nF/km (at 1 kHz)  |
| Nominal voltage, cable                        | ≤ 100 V  |
| Test voltage Core/Core                        | 700 V (50 Hz, 1 min.)  |
| Test voltage Core/Shield                      | 700.00 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 | 52 mm  |
| Tensile strength                              | ≤ 100 N  |
|   | 71.3 dB (with 1 MHz)   |

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|  |   |
|--|---|
| Near end crosstalk attenuation (NEXT)                  | 62.3 dB (at 4 MHz)                              |
|  | 56.3 dB (at 10 MHz)                             |
|  | 53.2 dB (at 16 MHz)                             |
|  | 51.8 dB (at 20 MHz)                             |
|  | 48.9 dB (at 31.25 MHz)                          |
|  | 44.4 dB (at 62.5 MHz)                           |
|  | 41.3 dB (at 100 MHz)                            |
| Power-summated near end crosstalk attenuation (PSNEXT) | 62.3 dB (with 1 MHz)                            |
|  | 53.3 dB (at 4 MHz)                              |
|  | 47.3 dB (at 10 MHz)                             |
|  | 44.2 dB (at 16 MHz)                             |
|  | 42.8 dB (at 20 MHz)                             |
|  | 39.9 dB (at 31.25 MHz)                          |
|  | 35.4 dB (at 62.5 MHz)                           |
| Return attenuation (RL)                                | 32.3 dB (at 100 MHz)                            |
|  | 23 dB (at 4 MHz)                                |
|  | 24.1 dB (at 8 MHz)                              |
|  | 25 dB (at 10 MHz)                               |
|  | 25 dB (at 16 MHz)                               |
|  | 25 dB (at 20 MHz)                               |
|  | 23.6 dB (at 31.25 MHz)                          |
| Shield attenuation                                     | 21.5 dB (at 62.5 MHz)                           |
|  | 20.1 dB (at 100 MHz)                            |
|  | 3.2 dB (with 1 MHz)                             |
|  | 6 dB (at 4 MHz)                                 |
|  | 9.5 dB (at 10 MHz)                              |
|  | 12.1 dB (at 16 MHz)                             |
|  | 13.6 dB (at 20 MHz)                             |
| Halogen-free   | 17.1 dB (at 31.25 MHz)                          |
|  | 24.8 dB (at 62.5 MHz)                           |
| Flame resistance                                       | 32 dB (at 100 MHz)                              |
| Resistance to oil                                      | according to IEC 60754-1                        |
| Ambient temperature (operation)                        | according to IEC 60332-1-2                      |
| Ambient temperature (installation)                     | in accordance with EN 60811-2-1                 |
|  | -40 °C ... 80 °C (cable, fixed installation)    |
|  | -20 °C ... 80 °C (Cable, flexible installation) |
|  | -20 °C ... 80 °C                                |

## Environmental and real-life conditions

### Ambient conditions

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Degree of protection            | IP20 (RJ45 connector)             |
| Ambient temperature (operation) | -20 °C ... 70 °C (RJ45 connector) |

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## Drawings

### Schematic diagram



Connector pin assignment plug RJ45

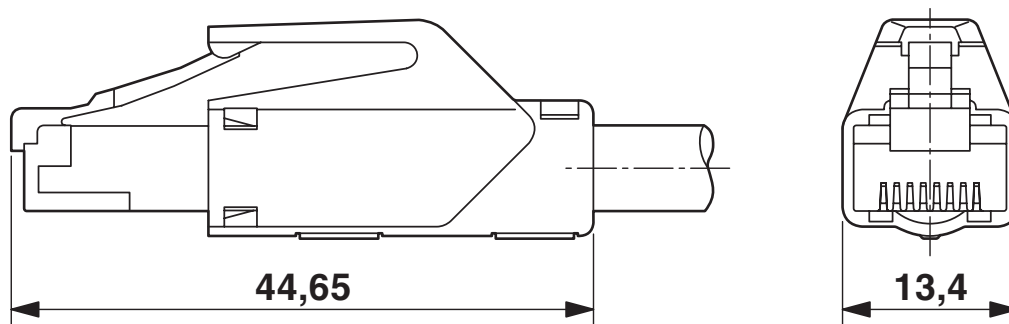
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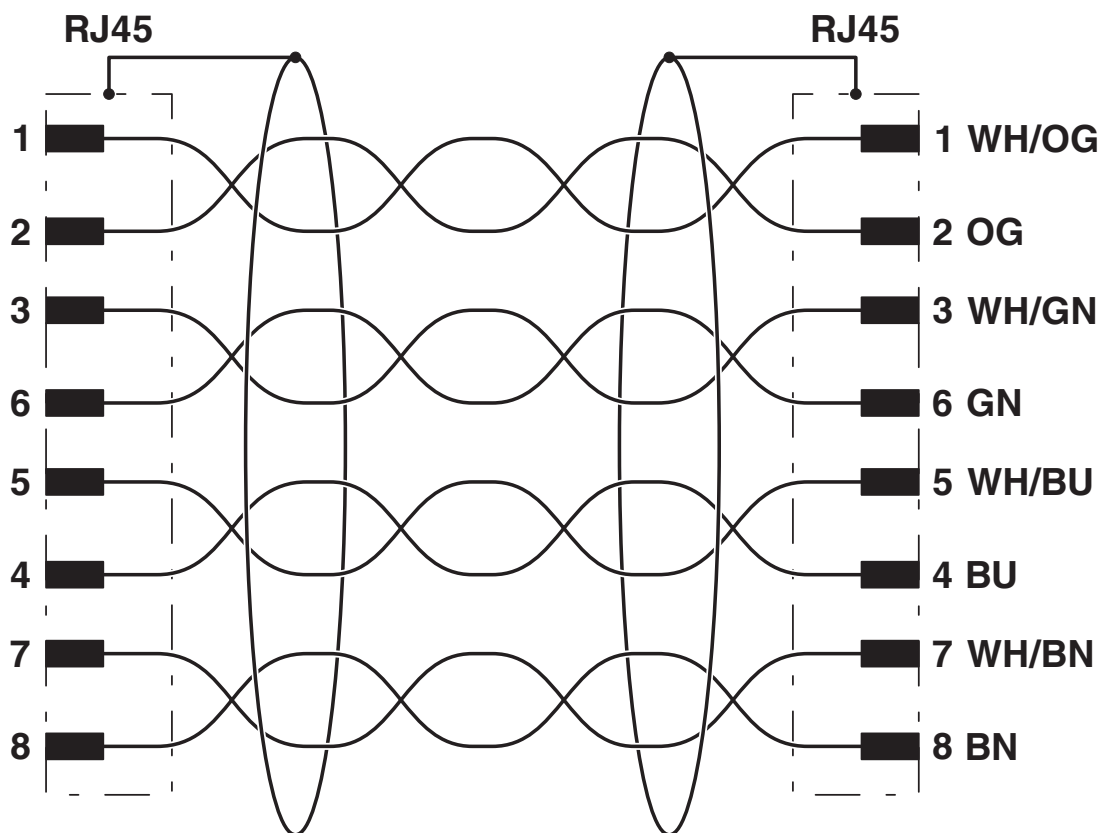
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Dimensional drawing



RJ45 connector, IP20

Circuit diagram



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27061801 |
| ECLASS-12.0 | 27061801 |
| ECLASS-13.0 | 27061801 |

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## Environmental product compliance

### China RoHS

|  |   |
|--|---|
| Environment friendly use period (EFUP) | EFUP-50   |
|  | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

### EU REACH SVHC

|                                     |                            |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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