

## Network cable - NBC-FS/ 2,0-94B/R4RC SCO - 1407456

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Network cable, Ethernet CAT5 (0.1 Gbps), Ethernet CAT5e (0.1 Gbps), 8-position, PUR, water blue RAL 5021, shielded, Plug Straight RJ45 Push Pull / IP67, on Socket Straight M12 SPEEDCON / IP67, Coding: A, Cable length: 2 m



### Key commercial data

|                      |          |
|----------------------|----------|
| Packing unit         | 1 pc     |
| Custom tariff number | 85444210 |
| Country of origin    | Poland   |

### Technical data

#### Dimensions

|                 |     |
|-----------------|-----|
| Length of cable | 2 m |
|-----------------|-----|

#### Ambient conditions

|                      |                       |
|----------------------|-----------------------|
| Degree of protection | IP65 (M12 connector)  |
|                      | IP67 (M12 connector)  |
|                      | IP67 (RJ45 connector) |

#### General data

|                       |  |
|-----------------------|--|
| Rated current at 40°C | 1 A                                      |
| Rated voltage         | 30 V                                     |
| Number of positions   | 8  |
| Signal type/category  | Ethernet CAT5 (IEC 11801:2002), 0.1 Gbps |
|                       | Ethernet CAT5e (TIA 568B:2001), 0.1 Gbps |
| Standards/regulations | M12 connector IEC 61076-2-101            |

#### Characteristics head 1

|  |                                     |
|--|-------------------------------------|
| Head type                                | Plug Straight RJ45 Push Pull / IP67 |
| No. of positions (pin connector pattern) | 8 (8)                               |

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### Technical data

#### Characteristics head 1

|                                 |  |
|---------------------------------|--|
| Color                           | silver                                 |
| Material (component)            | CuSn (Contact)                         |
|                                 | Ni/Au (Contact surface)                |
|                                 | PC (Contact carriers)                  |
|                                 | Zinc die-cast, nickel-plated (Housing) |
| Insertion/withdrawal cycles     | ≥ 750                                  |
| Ambient temperature (operation) | -40 °C ... 70 °C                       |

#### Characteristics head 2

|  |  |
|--|--|
| Head type                                | Socket Straight M12 SPEEDCON / IP67                |
| No. of positions (pin connector pattern) | 8  |
| Coding                                   | A (Standard)                                       |
| Color                                    | black  |
| Material (component)                     | CuZn (Contact)                                     |
|  | Ni/Au (Contact surface)                            |
|  | TPU GF (Contact carriers)                          |
|  | TPU, hardly inflammable, self-extinguishing (Grip) |
|  | Zinc die-cast, nickel-plated (Screw connection)    |
| Contact resistance                       | ≤ 5 mΩ   |
| Insulation resistance                    | ≥ 100 MΩ   |
| Insertion/withdrawal cycles              | ≥ 100  |
| Torque                                   | 0.4 Nm   |
| Ambient temperature (operation)          | -25 °C ... 90 °C                                   |

#### Cable

|                                    |  |
|------------------------------------|--|
| Cable type                         | Ethernet, flexible, CAT5e  |
| Cable type (abbreviation)          | 94B  |
| UL AWM style                       | 20963 (80°C/30 V)  |
| Signal type/category               | Ethernet CAT5 (IEC 11801:2002), 0.1 Gbps                                   |
|                                    | Ethernet CAT5e (TIA 568B:2001), 0.1 Gbps                                   |
| Cable structure                    | 4x2xAWG26/7; SF/UTP  |
| Conductor cross section            | 4x 2x 0.14 mm <sup>2</sup>   |
| AWG signal line                    | 26   |
| Conductor structure signal line    | 7x 0.16 mm   |
| Core diameter including insulation | 0.98 mm  |
| Thickness, insulation              | 0.25 mm  |
| Wire colors                        | white/blue-blue, white/orange-orange, white/green-green, white/brown-brown |
| Twisted pairs                      | 2 cores to the pair  |

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### Technical data

#### Cable

|   |  |
|---|--|
| Overall twist                                 | 4 pairs  |
| Shielding                                     | Aluminum-coated foil, tinned copper braided shield |
| Optical shield covering                       | 70 %   |
| External sheath, color                        | water blue RAL 5021                                |
| Outer sheath thickness                        | 1 mm   |
| External cable diameter D                     | 6.4 mm ±0.2 mm                                     |
| Smallest bending radius, fixed installation   | 25.6 mm  |
| Smallest bending radius, movable installation | 51.2 mm  |
| Tensile strength short-term/long-term         | ≤ 100 N  |
| Cable weight                                  | 47 kg/km   |
| Outer sheath, material                        | PUR  |
| Material conductor insulation                 | PE   |
| Conductor material                            | Bare Cu litz wires                                 |
| Insulation resistance                         | ≥ 500 MΩ*km  |
| Loop resistance                               | ≤ 290 Ω (per kilometer)                            |
| Working capacitance                           | 48 nF (At 1 kHz)                                   |
| Wave impedance                                | 100 Ω ±5 Ω (at 100 MHz)                            |
| Signal runtime                                | 5.3 ns/m   |
| Coupling resistance                           | ≤ 100.00 mΩ/m (At 10 MHz)                          |
| Nominal voltage, cable                        | ≤ 100 V  |
|   | 300 V (Outer cable sheath)                         |
| Test voltage Core/Core                        | 700 V (50 Hz, 1 min.)                              |
| Test voltage Core/Shield                      | 700 V (50 Hz, 1 min.)                              |
| Flame resistance                              | IEC 60332-1-2                                      |
| Halogen-free                                  | According to IEC 60754-1                           |
| Resistance to oil                             | in accordance with DIN EN 60811-2-1                |
| Ambient temperature (operation)               | -40 °C ... 80 °C (cable, fixed installation)       |
|   | -20 °C ... 80 °C (cable, flexible installation)    |
| Ambient temperature (installation)            | -20 °C ... 80 °C                                   |
| Ambient temperature (storage/transport)       | -20 °C ... 80 °C                                   |

### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27060306 |
| eCl@ss 4.1 | 27060306 |
| eCl@ss 5.0 | 27061801 |

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## Classifications

### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 5.1 | 27061801 |
| eCl@ss 6.0 | 27061801 |
| eCl@ss 7.0 | 27061801 |
| eCl@ss 8.0 | 27061801 |

### ETIM

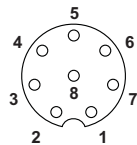
|          |          |
|----------|----------|
| ETIM 3.0 | EC001855 |
| ETIM 4.0 | EC001855 |
| ETIM 5.0 | EC001855 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 31251501 |
| UNSPSC 7.0901 | 31251501 |
| UNSPSC 11     | 31251501 |
| UNSPSC 12.01  | 31251501 |
| UNSPSC 13.2   | 31251501 |

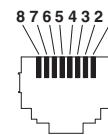
## Drawings

Schematic diagram



Pin assignment M12 socket, 8-pos., A-coded, view female side

Schematic diagram



Connector pin assignment plug RJ45

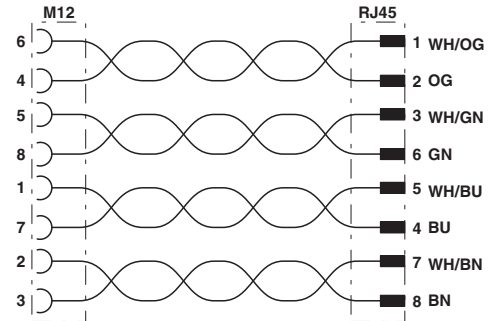
# Network cable - NBC-FS/ 2,0-94B/R4RC SCO - 1407456

Cable cross section



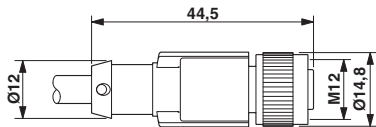
Ethernet, flexible, CAT5e [94B]

Circuit diagram



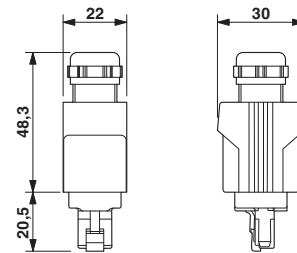
Contact assignment of the M12 socket and the RJ45 plug

Dimensioned drawing



M12 x 1 socket, straight, shielded

Dimensioned drawing



RJ45 Push-Pull connector, IP67