

## Network cable - NBC-MS/ 0,5-94B/R4AC SCO US - 1408749

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Network cable, Ethernet, 8-position, PUR halogen-free, water blue RAL 5021, shielded, Plug Straight M12 SPEEDCON / IP67, Coding: A, on Plug Straight RJ45 / IP20, Cable length: 0.5 m



### Key commercial data

|                      |                                                                                                         |
|----------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit         | 1 PCE                                                                                                   |
| GTIN                 | <br>4 046356 828574 |
| Custom tariff number | 85444210                                                                                                |
| Country of origin    | GERMANY                                                                                                 |

### Technical data

#### Dimensions

|                 |       |
|-----------------|-------|
| Length of cable | 0.5 m |
|-----------------|-------|

#### 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)        |
| Signal type/category  | Ethernet CAT5e (TIA 568B:2001)        |
| Standards/regulations | M12 plug-in connector IEC 61076-2-101 |
| Degree of protection  | IP65 (M12 plug-in connector)          |
| Degree of protection  | IP67 (M12 plug-in connector)          |
| Degree of protection  | IP20 (RJ45 plug-in connector)         |

#### Characteristics head 1

|             |                                   |
|-------------|-----------------------------------|
| Head design | Plug Straight M12 SPEEDCON / IP67 |
|-------------|-----------------------------------|

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## Technical data

### Characteristics head 1

|        |              |
|--------|--------------|
| Coding | A (Standard) |
|--------|--------------|

### Characteristics head 2

|             |                           |
|-------------|---------------------------|
| Head design | Plug Straight RJ45 / IP20 |
|-------------|---------------------------|

### Line characteristics

|                                               |                                                                            |
|-----------------------------------------------|----------------------------------------------------------------------------|
| Cable type                                    | Ethernet                                                                   |
| Cable type (abbreviation)                     | 94B                                                                        |
| UL AWM style                                  | 20963 (80 °C / 60 V)                                                       |
| Signal type/category                          | Ethernet CAT5 (IEC 11801:2002)                                             |
| Signal type/category                          | Ethernet CAT5e (TIA 568B:2001)                                             |
| 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 (signal line)                                                      |
| Thickness, insulation                         | 1 mm (Outer cable sheath)                                                  |
| Wire colors                                   | white/blue-blue, white/orange-orange, white/green-green, white/brown-brown |
| Twisted pairs                                 | 2 cores to the pair                                                        |
| Overall twist                                 | 4 pairs                                                                    |
| Shielding                                     | Aluminum-coated foil, tinned copper braided shield                         |
| Optical shield covering                       | 70 %                                                                       |
| External sheath, color                        | water blue RAL 5021                                                        |
| 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 (at 20 °C)                                                     |
| Conductor resistance                          | ≤ 290 Ω/km (at 20 °C)                                                      |
| 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)                                                  |

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### Technical data

#### Line characteristics

|                                         |                                                 |
|-----------------------------------------|-------------------------------------------------|
| Nominal voltage, cable                  | ≤ 100 V (at 20 °C)                              |
| Nominal voltage, cable                  | 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)    |
| Ambient temperature (operation)         | -20 °C ... 80 °C (cable, flexible installation) |
| Ambient temperature (installation)      | -20 °C ... 80 °C                                |
| Ambient temperature (storage/transport) | -20 °C ... 80 °C                                |

### Classifications

#### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001855 |
| ETIM 4.0 | EC002599 |
| ETIM 5.0 | EC002599 |

#### UNSPSC

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

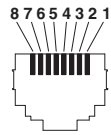
#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27060306 |
| eCl@ss 4.1 | 27060306 |
| eCl@ss 5.0 | 27061801 |
| eCl@ss 5.1 | 27061801 |
| eCl@ss 6.0 | 27061801 |
| eCl@ss 7.0 | 27060308 |

### Drawings

# Network cable - NBC-MS/ 0,5-94B/R4AC SCO US - 1408749

Schematic diagram



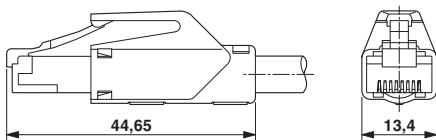
Connector pin assignment plug RJ45

Cable cross section



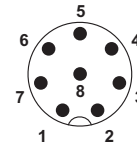
Ethernet [94B]

Dimensioned drawing



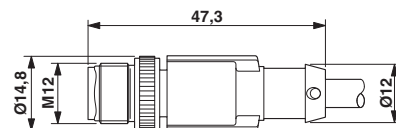
RJ45 plug-in connector, IP20

Schematic diagram



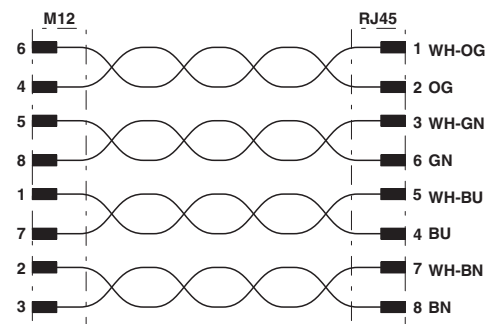
Pin assignment M12 plug, 8-pos., A-coded, view plug side

Dimensioned drawing



Plug, M12 x 1, straight, shielded

Circuit diagram



Contact assignment of the M12 and RJ45 plug