

## Network cable - NBC-MR/ 5,0-94B SCO US - 1408751


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Network cable, Ethernet CAT5 (1 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded, Plug angled M12 SPEEDCON / IP67, coding: A, on free cable end, cable length: 5 m



### Key Commercial Data

|                        |   |
|------------------------|---|
| Packing unit           | 1 pc  |
| Minimum order quantity | 50 pc   |
| GTIN                   | <br>4 046356 827669 |
| GTIN                   | 4046356827669   |

### Technical data

#### Dimensions

|                 |     |
|-----------------|-----|
| Length of cable | 5 m |
|-----------------|-----|

#### Ambient conditions

|                                 |                                  |
|---------------------------------|----------------------------------|
| Degree of protection            | IP65                             |
|                                 | IP67                             |
| Ambient temperature (operation) | -25 °C ... 85 °C (M12 connector) |

#### General data

|                          |                               |
|--------------------------|-------------------------------|
| Rated current at 40°C    | 2 A                           |
| Rated voltage            | 48 V AC                       |
|                          | 60 V DC                       |
| Number of positions      | 8                             |
| Standards/regulations    | M12 connector IEC 61076-2-101 |
| Contact material         | CuSn                          |
| Contact carrier material | TPU GF                        |
| Contact surface material | Ni/Au                         |
| Degree of protection     | IP65/IP67                     |

#### Characteristics head 1

# Network cable - NBC-MR/ 5,0-94B SCO US - 1408751

## Technical data

### Characteristics head 1

|                        |                     |
|------------------------|---------------------|
| Coding                 | A (Standard)        |
| Shielded               | yes                 |
| Outer sheath, material | PUR                 |
| External sheath, color | water blue RAL 5021 |
| Type type, plug side   | Plug angled         |
| Type type, socket side | free cable end      |

### Characteristics head 2

|       |       |
|-------|-------|
| Color | black |
|-------|-------|

### Standards and Regulations

|                          |                               |
|--------------------------|-------------------------------|
| Standards/specifications | M12 connector IEC 61076-2-101 |
|--------------------------|-------------------------------|

### Cable

|   |  |
|---|--|
| Cable type                                    | Ethernet flexible CAT5, 4-pair   |
| Cable type (abbreviation)                     | 94B  |
| UL AWM style                                  | 20963 (80°C/30 V)  |
| 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            | 0.96 mm  |
| 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 for core   |
| Shielding                                     | Aluminum-coated foil, tinned copper braided shield                         |
| Optical shield covering                       | 70 %   |
| External sheath, color                        | water blue RAL 5021  |
| Outer sheath thickness                        | 1.05 mm  |
| External cable diameter D                     | 6.4 mm ±0.2 mm   |
| Minimum bending radius, fixed installation    | 4 x D  |
| Minimum bending radius, flexible installation | 8 x D  |
| Tensile strength GRP                          | ≤ 100 N  |
| Cable weight                                  | 47 kg/km   |
| Outer sheath, material                        | PUR  |
| Material conductor insulation                 | Foamed PE  |
| Conductor material                            | Bare Cu litz wires   |
| Insulation resistance                         | ≥ 500 MΩ*km  |
| Loop resistance                               | ≤ 290.00 Ω/km  |
| Cable capacity                                | 48 nF/km (at 1 kHz)  |
| Wave impedance                                | 100 Ω ±5 Ω (at 100 MHz)  |
| Near end crosstalk attenuation (NEXT)         | 71.3 dB (with 1 MHz)   |

## Network cable - NBC-MR/ 5,0-94B SCO US - 1408751

### Technical data

#### Cable

|  |  |
|--|--|
|  | 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)                        |
|  | 32.3 dB (at 100 MHz)                         |
| Attenuation  | 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)                          |
|  | 17.1 dB (at 31.25 MHz)                       |
|  | 24.8 dB (at 62.5 MHz)                        |
|  | 32 dB (at 100 MHz)                           |
| Return loss (RL)                                       | 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)                       |
|  | 21.5 dB (at 62.5 MHz)                        |
|  | 20.1 dB (at 100 MHz)                         |
| Signal runtime   | 5.3 ns/m                                     |
| Coupling resistance                                    | ≤ 100.00 mΩ/m (at 10 MHz)                    |
| Nominal voltage, cable                                 | ≤ 100 V                                      |
| Test voltage Core/Core                                 | 700 V (50 Hz, 1 min.)                        |
| Test voltage Core/Shield                               | 700 V (50 Hz, 1 min.)                        |
| Flame resistance                                       | according to IEC 60332-1-2                   |
| Halogen-free   | according to IEC 60754-1                     |
| Resistance to oil                                      | according to EN 60811-2-1                    |
| Ambient temperature (operation)                        | -40 °C ... 80 °C (cable, fixed installation) |

## Network cable - NBC-MR/ 5,0-94B SCO US - 1408751

### Technical data

#### Cable

|   |   |
|---|---|
|   | -20 °C ... 80 °C (cable, flexible installation) |
| Ambient temperature (installation)      | -20 °C ... 80 °C                                |
| Ambient temperature (storage/transport) | -20 °C ... 80 °C                                |

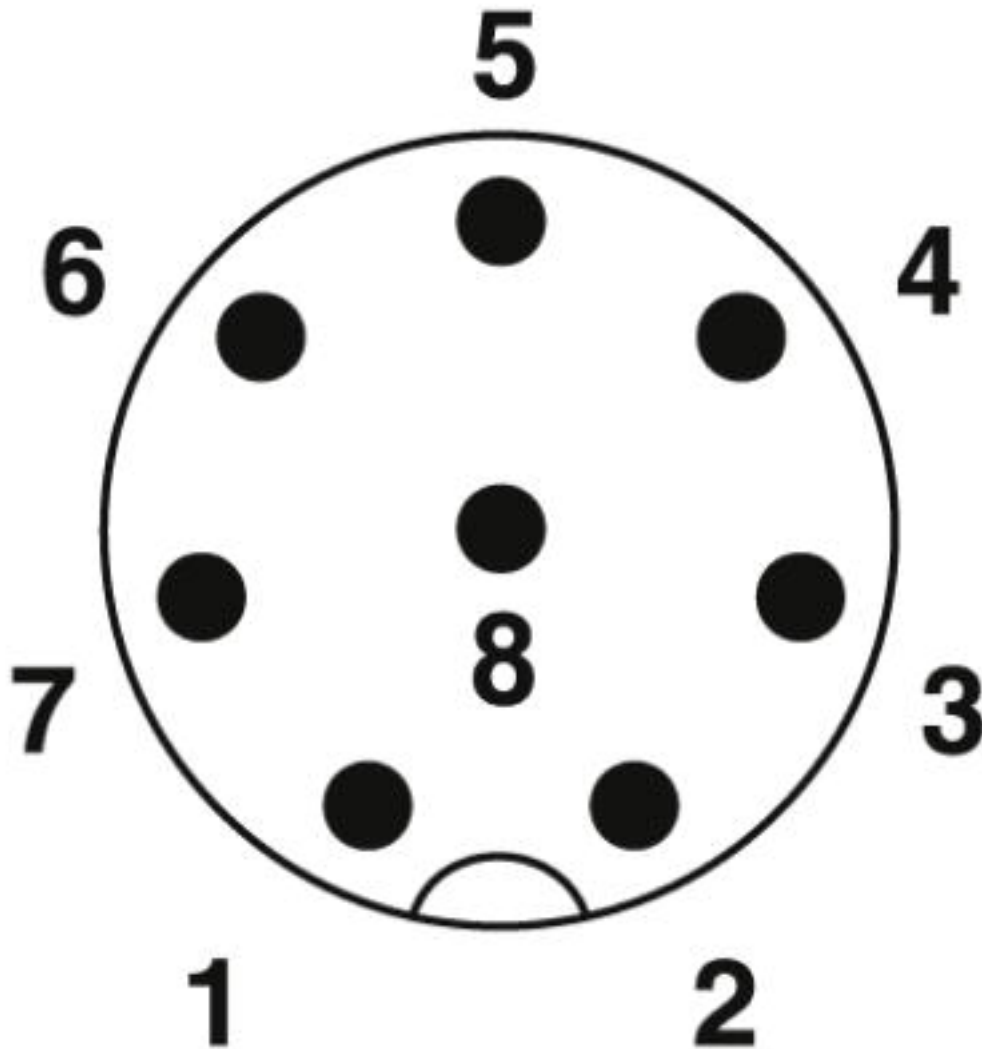
#### Environmental Product Compliance

|            |   |
|------------|---|
| REACH SVHC | Lead 7439-92-1  |
| China RoHS | Environmentally Friendly Use Period = 50 years  |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

### Drawings

# Network cable - NBC-MR/ 5,0-94B SCO US - 1408751

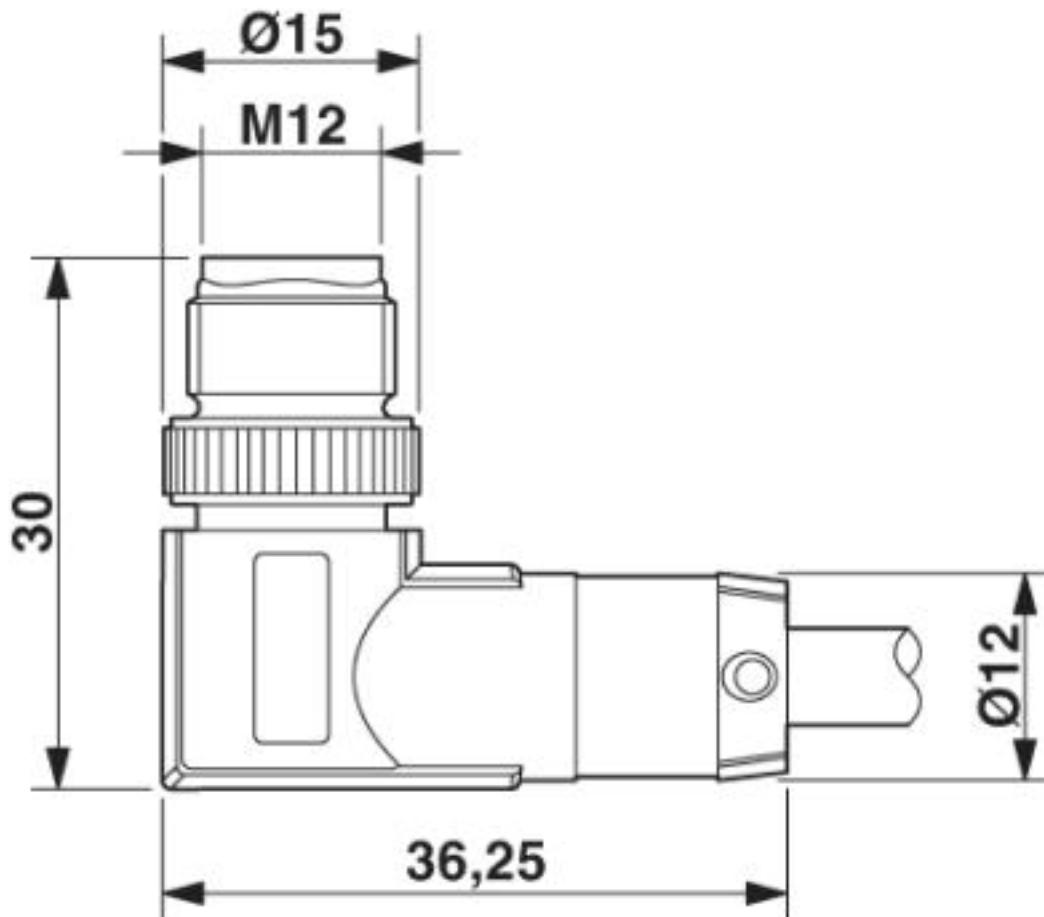
Schematic diagram



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

# Network cable - NBC-MR/ 5,0-94B SCO US - 1408751

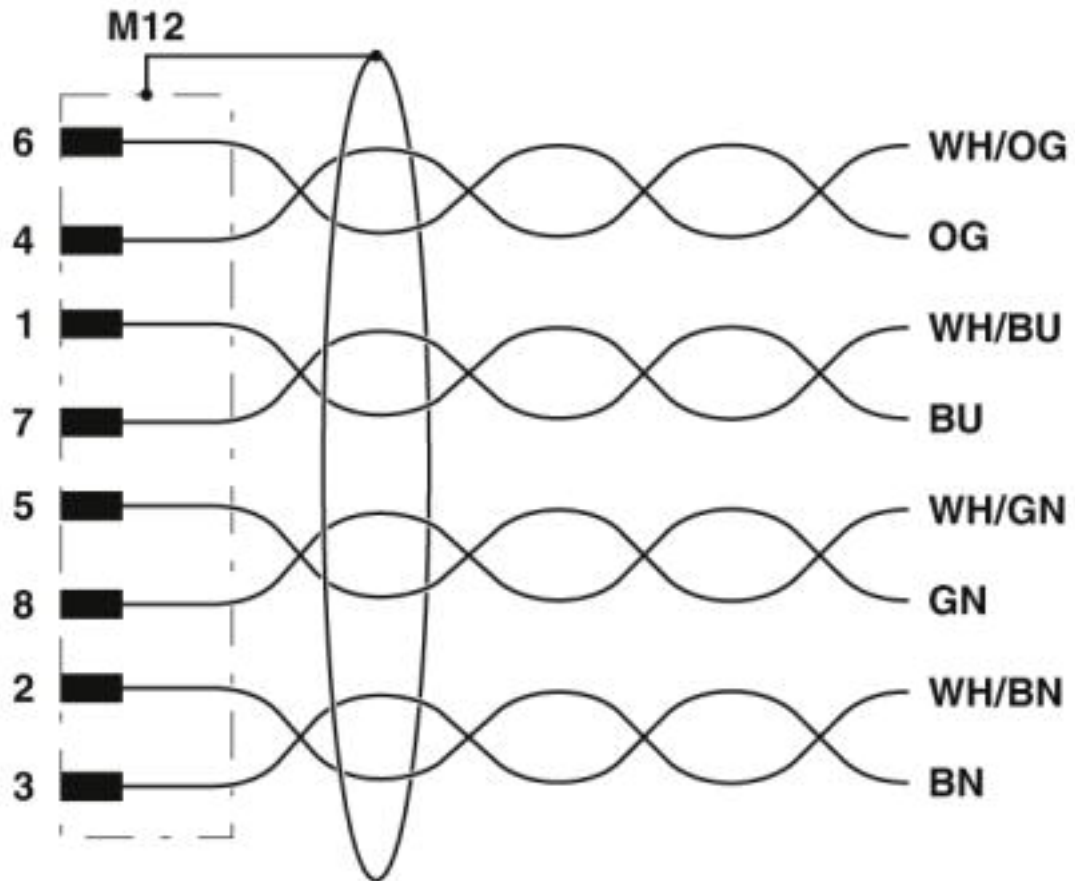
Dimensional drawing



M12 x 1 male plug, angled, shielded

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Circuit diagram



Contact assignment of the M12 plug

# Network cable - NBC-MR/ 5,0-94B SCO US - 1408751

Cable cross section



Ethernet flexible CAT5, 4-pair [94B]

## Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27060308 |
| eCl@ss 4.0    | 24010400 |
| eCl@ss 4.1    | 24010400 |
| eCl@ss 5.0    | 19030300 |
| eCl@ss 5.1    | 19030300 |
| eCl@ss 6.0    | 27061800 |
| eCl@ss 7.0    | 27061801 |
| eCl@ss 8.0    | 27061801 |
| eCl@ss 9.0    | 27060308 |



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## Classifications

### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001855 |
| ETIM 4.0 | EC002599 |
| ETIM 5.0 | EC002599 |
| ETIM 6.0 | EC000830 |
| ETIM 7.0 | EC003249 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 31251501 |
| UNSPSC 7.0901 | 31251501 |
| UNSPSC 11     | 31251501 |
| UNSPSC 12.01  | 31251501 |
| UNSPSC 13.2   | 31251501 |
| UNSPSC 18.0   | 26121604 |
| UNSPSC 19.0   | 26121604 |
| UNSPSC 20.0   | 26121604 |
| UNSPSC 21.0   | 26121604 |

## Approvals

### Approvals

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### Approvals

### EAC

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### Ex Approvals

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### Approval details

|     |   |                          |
|-----|---|--------------------------|
| EAC |  | RU D-<br>DE.HB35.B.00387 |
|-----|---|--------------------------|