

## Network cable - NBC-MS/ 5,0-94B/R4MC SCO - 1407424

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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 M12 SPEEDCON / IP67, Coding: A, on Plug Straight RJ45 Clip locking / IP67, Cable length: 5 m



### Key commercial data

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

### Technical data

#### Dimensions

|                 |     |
|-----------------|-----|
| Length of cable | 5 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 M12 SPEEDCON / IP67 |
| No. of positions (pin connector pattern) | 8                                 |

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### Technical data

#### Characteristics head 1

|                                 |                                                    |
|---------------------------------|----------------------------------------------------|
| 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              | $\leq 5 \text{ m}\Omega$                           |
| Insulation resistance           | $\geq 100 \text{ M}\Omega$                         |
| Insertion/withdrawal cycles     | $\geq 100$                                         |
| Torque                          | 0.4 Nm                                             |
| Ambient temperature (operation) | -25 °C ... 90 °C                                   |

#### Characteristics head 2

|                                          |                                        |
|------------------------------------------|----------------------------------------|
| Head type                                | Plug Straight RJ45 Clip locking / IP67 |
| No. of positions (pin connector pattern) | 8 (8)                                  |
| Color                                    | Gray                                   |
| Material (component)                     | CuSn (Contact)                         |
|                                          | Ni/Au (Contact surface)                |
|                                          | PC (Contact carriers)                  |
|                                          | PA (Housing)                           |
| Insertion/withdrawal cycles              | $\geq 750$                             |
| Ambient temperature (operation)          | -20 °C ... 70 °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 $\pm$ 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         | $\leq$ 100 N                                       |
| Cable weight                                  | 47 kg/km                                           |
| Outer sheath, material                        | PUR                                                |
| Material conductor insulation                 | PE                                                 |
| Conductor material                            | Bare Cu litz wires                                 |
| Insulation resistance                         | $\geq$ 500 M $\Omega$ *km                          |
| Loop resistance                               | $\leq$ 290 $\Omega$ (per kilometer)                |
| Working capacitance                           | 48 nF (At 1 kHz)                                   |
| Wave impedance                                | 100 $\Omega$ $\pm$ 5 $\Omega$ (at 100 MHz)         |
| Signal runtime                                | 5.3 ns/m                                           |
| Coupling resistance                           | $\leq$ 100.00 m $\Omega$ /m (At 10 MHz)            |
| Nominal voltage, cable                        | $\leq$ 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

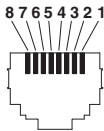
|          |          |
|----------|----------|
| ETIM 3.0 | EC001855 |
| ETIM 4.0 | EC001855 |
| ETIM 5.0 | EC001855 |

UNSPSC

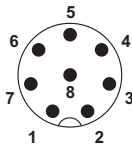
|               |          |
|---------------|----------|
| UNSPSC 6.01   | 31251501 |
| UNSPSC 7.0901 | 31251501 |
| UNSPSC 11     | 31251501 |
| UNSPSC 12.01  | 31251501 |
| UNSPSC 13.2   | 31251501 |

Drawings

Schematic diagram



Schematic diagram



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

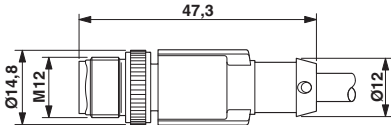
Connector pin assignment plug RJ45

Cable cross section



Ethernet, flexible, CAT5e [94B]

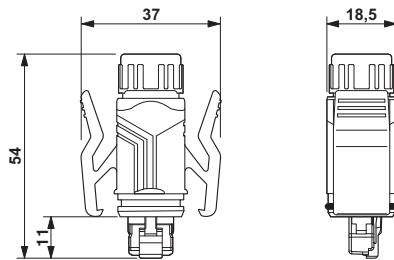
Dimensioned drawing



Plug, M12 x 1, straight, shielded

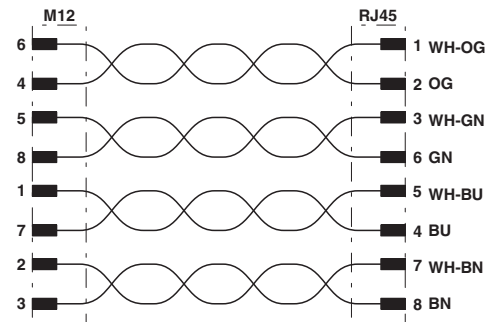
## Network cable - NBC-MS/ 5,0-94B/R4MC SCO - 1407424

Dimensioned drawing



RJ45-connector, IP67

Circuit diagram



Contact assignment of the M12 and RJ45 plug



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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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