

## Network cable - NBC-MRD/ 5,0-93E/MRD SCO - 1409200

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Assembled Ethernet cable, CAT5e, shielded, 2-pair, 26 AWG stranded (7-wire), RAL 5021 (water blue), angled M12 SPEEDCON plug to angled M12 SPEEDCON plug, line, length: 5 m

RoHS

### Key Commercial Data

|                        |                                                                                                       |
|------------------------|-------------------------------------------------------------------------------------------------------|
| Packing unit           | 1 pc                                                                                                  |
| Minimum order quantity | 50 pc                                                                                                 |
| GTIN                   | <br>4 046356 863995 |
| GTIN                   | 4046356863995                                                                                         |

### Technical data

#### General data

|               |         |
|---------------|---------|
| Rated voltage | 48 V AC |
|               | 60 V DC |

#### Cable

|                                            |                                                    |
|--------------------------------------------|----------------------------------------------------|
| Cable type                                 | PUR ETHERNET 2x2 FLEX                              |
| Cable type (abbreviation)                  | 93E                                                |
| UL AWM style                               | 20963 (80°C/30 V)                                  |
| Signal type/category                       | Ethernet CAT5 (IEC 11801), 100 Mbps                |
| Cable structure                            | 2x2xAWG26/7; SF/UTP                                |
| Conductor cross section                    | 2x 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                                            |
| Wire colors                                | white/orange-orange, white/green-green             |
| Twisted pairs                              | 2 cores to the pair                                |
| Overall twist                              | Two pairs with two fillers to the core             |
| Shielding                                  | Aluminum-coated foil, tinned copper braided shield |
| Optical shield covering                    | 70 %                                               |
| External sheath, color                     | water blue RAL 5021                                |
| Outer sheath thickness                     | 1.2 mm                                             |
| External cable diameter D                  | 6.4 mm ±0.2 mm                                     |
| Minimum bending radius, fixed installation | 4 x D                                              |

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|                                                        |                                      |
|--------------------------------------------------------|--------------------------------------|
| Minimum bending radius, flexible installation          | 8 x D                                |
| Tensile strength GRP                                   | ≤ 80 N                               |
| Cable weight                                           | 42 kg/km                             |
| Outer sheath, material                                 | PUR                                  |
| Material conductor insulation                          | Foamed PE                            |
| Conductor material                                     | Bare Cu litz wires                   |
| Standards/specifications                               | Electrical requirements EN 50288-2-2 |
| Insulation resistance                                  | ≥ 500 MΩ*km                          |
| Loop resistance                                        | ≤ 290.00 Ω/km                        |
| Cable capacity                                         | approx. 45 nF/km (at 1 kHz)          |
| Wave impedance                                         | 100 Ω ±5 Ω (at 100 MHz)              |
| Near end crosstalk attenuation (NEXT)                  | 65.3 dB (with 1 MHz)                 |
|                                                        | 56.3 dB (at 4 MHz)                   |
|                                                        | 50.3 dB (at 10 MHz)                  |
|                                                        | 47.2 dB (at 16 MHz)                  |
|                                                        | 45.8 dB (at 20 MHz)                  |
|                                                        | 42.9 dB (at 31.25 MHz)               |
|                                                        | 38.4 dB (at 62.5 MHz)                |
|                                                        | 35.3 dB (at 100 MHz)                 |
|                                                        | 62.3 dB (with 1 MHz)                 |
|                                                        | 53.3 dB (at 4 MHz)                   |
| Power-summated near end crosstalk attenuation (PSNEXT) | 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)                 |
|                                                        | 3.2 dB (with 1 MHz)                  |
|                                                        | 6 dB (at 4 MHz)                      |
|                                                        | 9.5 dB (at 10 MHz)                   |
|                                                        | 12.1 dB (at 16 MHz)                  |
| Attenuation                                            | 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)                   |
|                                                        | 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)                    |
|                                                        | 25 dB (at 20 MHz)                    |

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#### Cable

|                                         |                                                       |
|-----------------------------------------|-------------------------------------------------------|
|                                         | 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 (Peak value, not for high-power applications) |
| Test voltage Core/Core                  | 700 V (50 Hz, 1 min.)                                 |
| Test voltage Core/Shield                | 700 V (50 Hz, 1 min.)                                 |
| Current carrying capacity of cable      | 2 A (according to DIN VDE 0891-1)                     |
| Flame resistance                        | according to IEC 60332-1-2                            |
|                                         | in acc. to UL VW1                                     |
| 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)          |
|                                         | -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                                                            |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

### Drawings

Cable cross section



PUR ETHERNET 2x2 FLEX [93E]

### Approvals

#### Approvals

Approvals

UL Listed

## Network cable - NBC-MRD/ 5,0-93E/MRD SCO - 1409200

### Approvals

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Ex Approvals

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### Approval details

|                                                                                                                                                                                                                                                                 |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| UL Listed  <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> FILE E 335024 |      |
|                                                                                                                                                                                                                                                                 |      |
| Nominal voltage UN                                                                                                                                                                                                                                              | 30 V |
| Nominal current IN                                                                                                                                                                                                                                              | 4 A  |

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