

# VS-M12MSS-M12MSS-94B-LI/3,0 - Network cable



1403440

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Assembled Ethernet cable, shielded, 4-pair, 26 AWG stranded (7-wire), RAL 5021 (water blue), M12 plug to M12 plug, SPEEDCON, length 3.0 m

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1403440       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 25 pc         |
| Product key                          | AF1CMI        |
| GTIN                                 | 4046356653046 |
| Weight per piece (including packing) | 22.22 g       |
| Weight per piece (excluding packing) | 22.22 g       |
| Country of origin                    | PL            |

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## Technical data

### Product properties

|                     |                         |
|---------------------|-------------------------|
| Product type        | Data cable preassembled |
| Number of positions | 8                       |
| Number of slots     | 1                       |
| Shielded            | yes                     |

### Insulation characteristics

|                      |   |
|----------------------|---|
| Overvoltage category | I |
| Degree of pollution  | 3 |

### Electrical properties

|                       |         |
|-----------------------|---------|
| Nominal voltage $U_N$ | 30 V AC |
| Nominal current $I_N$ | 0.5 A   |

### Material specifications

|                                        |    |
|----------------------------------------|----|
| Flammability rating according to UL 94 | HB |
|----------------------------------------|----|

### Cable/line

|              |     |
|--------------|-----|
| Cable length | 3 m |
|--------------|-----|

### Ethernet flexible CAT5, 4-pair [94B]

|                                 |                                                                                      |
|---------------------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing             |  |
| Cable weight                    | 47 kg/km                                                                             |
| UL AWM Style                    | 20963 (80°C/30 V)                                                                    |
| Number of positions             | 8                                                                                    |
| Shielded                        | yes                                                                                  |
| Cable type                      | Ethernet flexible CAT5, 4-pair [94B]                                                 |
| Conductor structure             | 4x2xAWG26/7, SF/UTP                                                                  |
| Signal runtime                  | 5.3 ns/m                                                                             |
| Conductor structure signal line | 7x 0.16 mm                                                                           |
| AWG signal line                 | 26                                                                                   |
| Conductor cross section         | 4x 2x 0.14 mm <sup>2</sup>                                                           |
| Wire diameter incl. insulation  | 0.96 mm                                                                              |
| External cable diameter         | 6.40 mm ±0.2 mm                                                                      |
| Outer sheath, material          | PUR                                                                                  |

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|                                                        |                                                                            |
|--------------------------------------------------------|----------------------------------------------------------------------------|
| External sheath, color                                 | water blue RAL 5021                                                        |
| Conductor material                                     | Bare Cu litz wires                                                         |
| Material wire insulation                               | Foamed PE                                                                  |
| Single wire, color                                     | white/blue-blue, white/orange-orange, white/green-green, white/brown-brown |
| Thickness, outer sheath                                | 1.05 mm                                                                    |
| Twisted pairs                                          | 2 cores to the pair                                                        |
| Overall twist                                          | 4 pairs for core                                                           |
| Optical shield covering                                | 70 %                                                                       |
| Insulation resistance                                  | $\geq 5 \text{ G}\Omega \cdot \text{km}$                                   |
| Coupling resistance                                    | $\leq 100.00 \text{ m}\Omega/\text{m}$ (at 10 MHz)                         |
| Loop resistance                                        | $\leq 290.00 \text{ }\Omega/\text{km}$                                     |
| Wave impedance                                         | $100 \text{ }\Omega \pm 5 \text{ }\Omega$ (at 100 MHz)                     |
| Cable capacity                                         | 48 nF/km (at 1 kHz)                                                        |
| Nominal voltage, cable                                 | $\leq 100 \text{ V}$                                                       |
| Test voltage Core/Core                                 | 700 V (50 Hz, 1 min.)                                                      |
| Test voltage Core/Shield                               | 700.00 V (50 Hz, 1 min.)                                                   |
| Minimum bending radius, fixed installation             | 4 x D                                                                      |
| Minimum bending radius, flexible installation          | 8 x D                                                                      |
| Smallest bending radius, fixed installation            | 26 mm                                                                      |
| Smallest bending radius, movable installation          | 52 mm                                                                      |
| Tensile strength                                       | $\leq 100 \text{ N}$                                                       |
| Near end crosstalk attenuation (NEXT)                  | 71.3 dB (with 1 MHz)                                                       |
|                                                        | 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)                                                       |
| Return attenuation (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)                                                     |

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|                                    |                                                 |
|------------------------------------|-------------------------------------------------|
| Shield attenuation                 | 21.5 dB (at 62.5 MHz)                           |
|                                    | 20.1 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)                             |
|                                    | 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)                              |
| Halogen-free                       | according to IEC 60754-1                        |
| Flame resistance                   | according to IEC 60332-1-2                      |
| Resistance to oil                  | in accordance with 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                                |

## Environmental and real-life conditions

### Ambient conditions

|                                 |                                                |
|---------------------------------|------------------------------------------------|
| Ambient temperature (operation) | -25 °C ... 60 °C (cable, fixed installation)   |
|                                 | -5 °C ... 60 °C (Cable, flexible installation) |

## Drawings

Dimensional drawing



M12 connector dimensional drawing

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27060307 |
|-------------|----------|

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## Environmental product compliance

### EU RoHS

|                                         |                    |
|-----------------------------------------|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|-----------------------------------------|--------------------|

### China RoHS

|                                        |                                          |
|----------------------------------------|------------------------------------------|
| Environment friendly use period (EFUP) | EFUP-E                                   |
|                                        | No hazardous substances above the limits |

### EU REACH SVHC

|                                     |                            |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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