

## Network cable - VS-M12FSBP-IP67/B-94C-LI/2,0 - 1413476

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Assembled Ethernet cable, shielded, 4-pair, AWG 26 suitable for use with drag chain (19-wire), RAL 5021 (sea blue), M12 flush-type socket, rear wall/screw mounting with M16 thread on RJ45 connector/IP67, black, line, length 2 m



### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                                    |
| GTIN         | <br>4 046356 475815 |
| GTIN         | 4046356475815                                                                                           |

### Technical data

#### Ambient conditions

|                      |      |
|----------------------|------|
| Degree of protection | IP67 |
|----------------------|------|

#### General data

|                                         |                |
|-----------------------------------------|----------------|
| Number of positions                     | 8              |
| Degree of pollution                     | 3              |
| Alternative short product description   | Ethernet cable |
| Degree of protection                    | IP67           |
| Transmission characteristics (category) | CAT5           |

#### Characteristics head 1

|                        |     |
|------------------------|-----|
| Shielded               | yes |
| Outer sheath, material | PUR |

#### Standards and Regulations

|                                        |    |
|----------------------------------------|----|
| Flammability rating according to UL 94 | V2 |
|----------------------------------------|----|

#### Cable

|                           |                                  |
|---------------------------|----------------------------------|
| Cable type                | Ethernet drag chain CAT5, 4-pair |
| Cable type (abbreviation) | 94C                              |
| UL AWM style              | 20963 (80°C/30 V)                |

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## Technical data

### Cable

|                                                      |                                                                            |
|------------------------------------------------------|----------------------------------------------------------------------------|
| Signal type/category                                 | Ethernet CAT5 (IEC 11801), 1 Gbps                                          |
| Cable structure                                      | 4x2xAWG26/19; S/UTP                                                        |
| Conductor cross section                              | 4x 2x 0.14 mm <sup>2</sup>                                                 |
| AWG signal line                                      | 26                                                                         |
| Conductor structure signal line                      | 19x 0.10 mm                                                                |
| Core diameter including insulation                   | 1 mm                                                                       |
| Wire colors                                          | white/blue-blue, white/orange-orange, white/green-green, white/brown-brown |
| Twisted pairs                                        | 2 cores to the pair                                                        |
| Overall twist                                        | Four pairs and four fillers to the core                                    |
| Shielding                                            | Tinned copper braided shield                                               |
| Optical shield covering                              | 90 %                                                                       |
| External sheath, color                               | water blue RAL 5021                                                        |
| Outer sheath thickness                               | 0.85 mm                                                                    |
| External cable diameter D                            | 6.9 mm +0.1 mm ... 0.2 mm                                                  |
| Minimum bending radius, fixed installation           | 4 x D                                                                      |
| Minimum bending radius, flexible installation        | 8 x D                                                                      |
| Number of bending cycles                             | 5000000                                                                    |
| Minimum bending radius, drag chain applications      | 7,5 x D                                                                    |
| Traversing rate                                      | 3 m/s                                                                      |
| Acceleration                                         | 5 m/s <sup>2</sup>                                                         |
| Tensile strength GRP                                 | ≤ 100 N                                                                    |
| Cable weight                                         | 57 kg/km                                                                   |
| Outer sheath, material                               | PUR                                                                        |
| Material conductor insulation                        | PP                                                                         |
| Conductor material                                   | Bare Cu litz wires                                                         |
| Insulation resistance                                | ≥ 500 MΩ*km                                                                |
| Loop resistance                                      | ≤ 290.00 Ω/km                                                              |
| Cable capacity                                       | approx. 50 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)                                                       |
| Power-summed near end crosstalk attenuation (PSNEXT) | 62.3 dB (with 1 MHz)                                                       |
|                                                      | 53.3 dB (at 4 MHz)                                                         |
|                                                      | 47.3 dB (at 10 MHz)                                                        |

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### Technical data

#### Cable

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

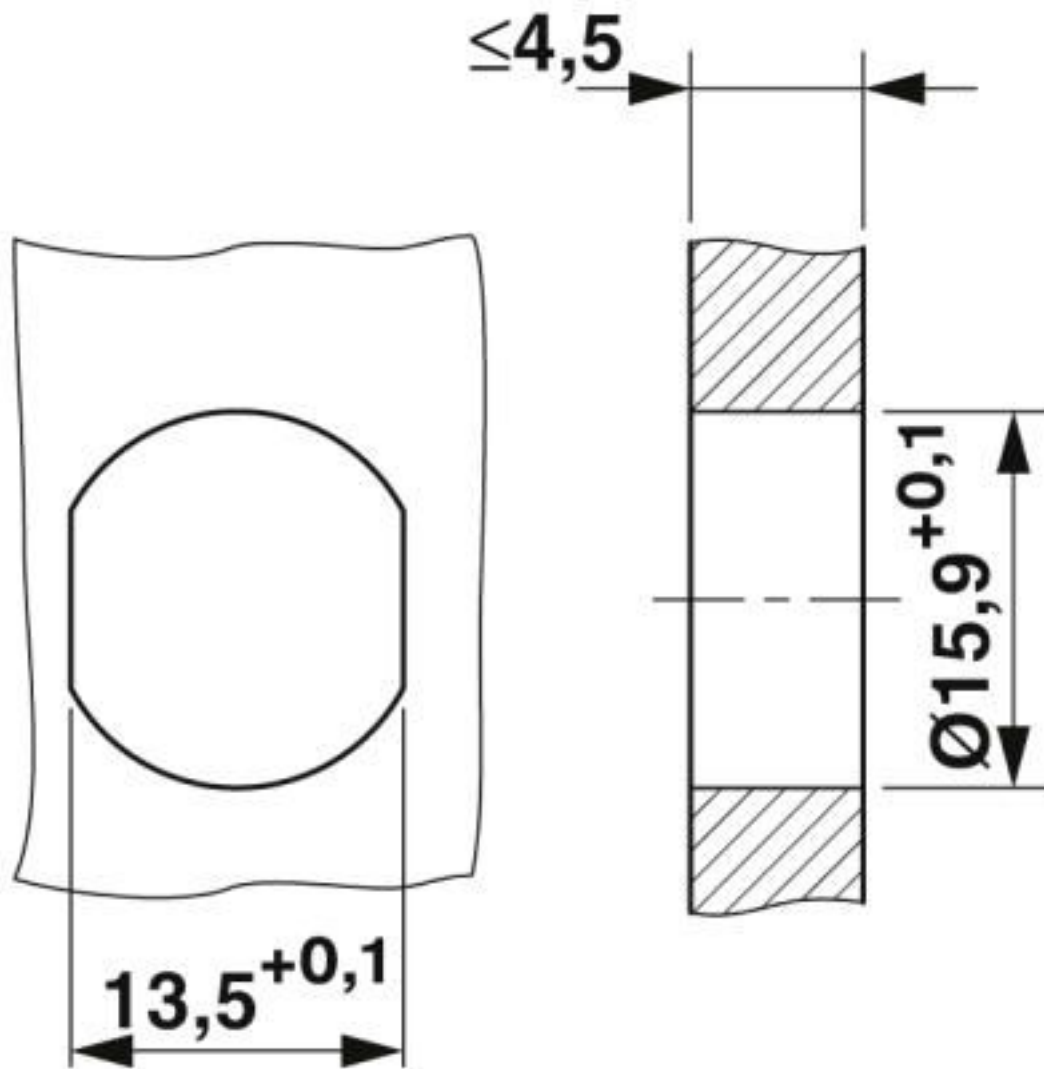
#### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| 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 - VS-M12FSBP-IP67/B-94C-LI/2,0 - 1413476

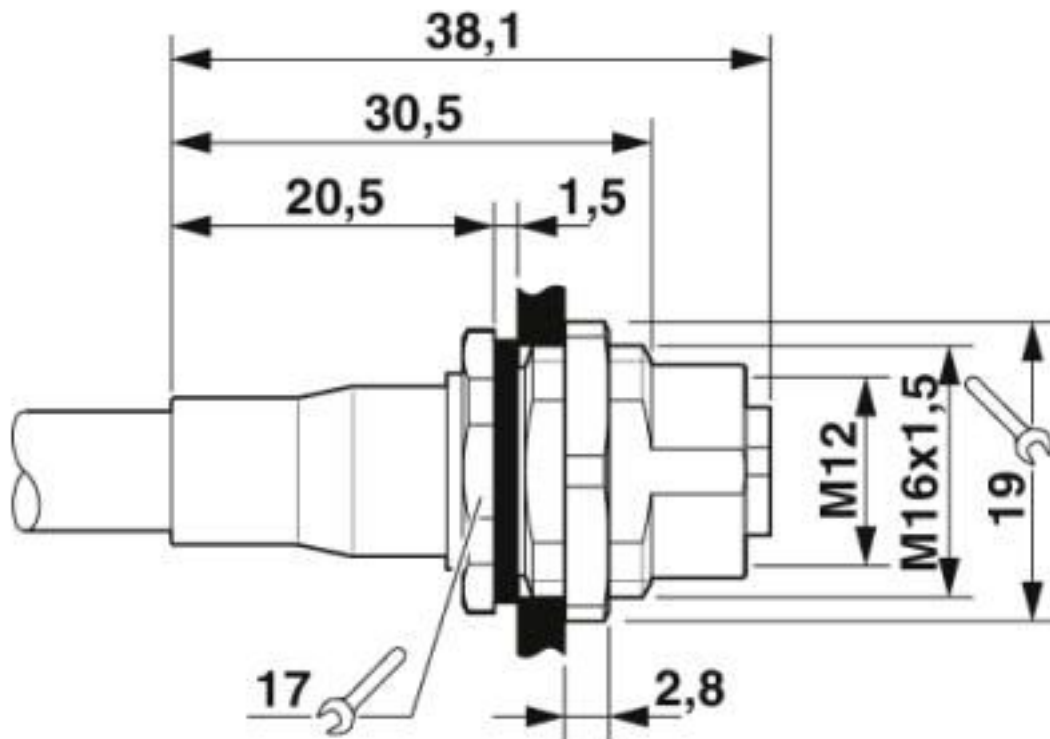
Dimensional drawing



Housing cutout for M16 fastening thread, mounting panel with feed-through hole (alternatively with surface as protection against rotation)

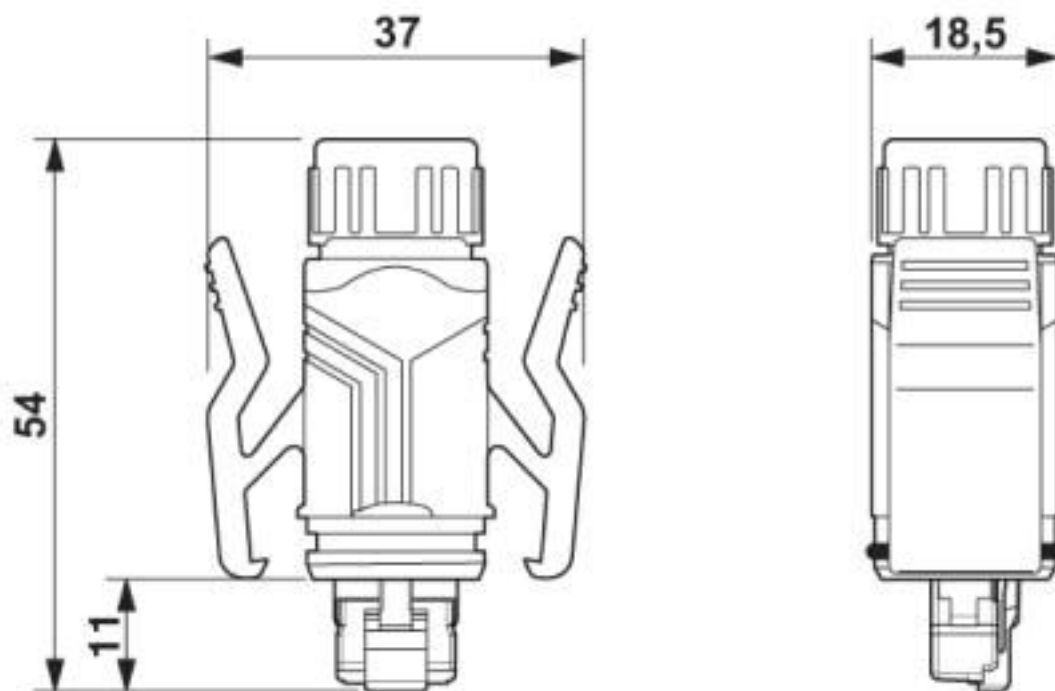
## Network cable - VS-M12FSBP-IP67/B-94C-LI/2,0 - 1413476

Dimensional drawing



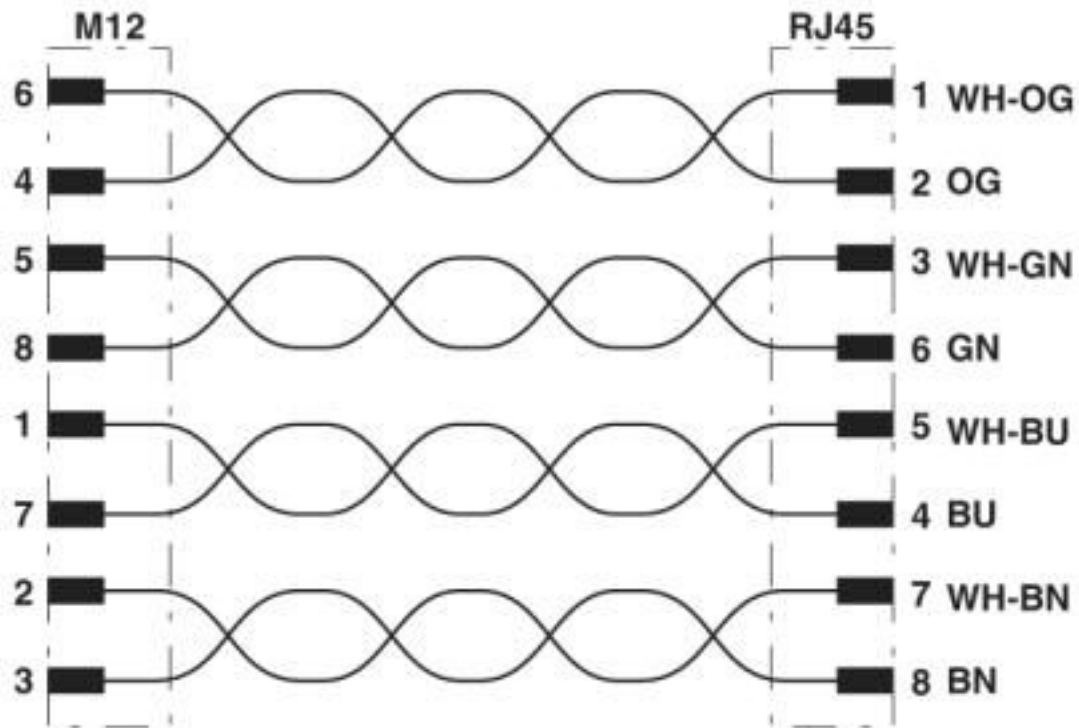
M12 flush-type connector

Dimensional drawing



## Network cable - VS-M12FSBP-IP67/B-94C-LI/2,0 - 1413476

Circuit diagram



## Network cable - VS-M12FSBP-IP67/B-94C-LI/2,0 - 1413476

Cable cross section



Ethernet drag chain CAT5, 4-pair [94C]

### 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    | 27060300 |
| eCl@ss 7.0    | 27060308 |
| eCl@ss 8.0    | 27060308 |
| eCl@ss 9.0    | 27060308 |

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### Classifications

#### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC000830 |
| ETIM 4.0 | EC002599 |
| ETIM 5.0 | EC002599 |
| ETIM 6.0 | EC001262 |
| ETIM 7.0 | EC001262 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 26121616 |
| UNSPSC 7.0901 | 26121616 |
| UNSPSC 11     | 26121604 |
| UNSPSC 12.01  | 31261501 |
| UNSPSC 13.2   | 26121604 |
| UNSPSC 18.0   | 26121604 |
| UNSPSC 19.0   | 26121604 |
| UNSPSC 20.0   | 26121604 |
| UNSPSC 21.0   | 26121604 |

### Approvals

#### Approvals

#### Approvals

#### EAC

#### Ex Approvals

#### Approval details

|     |                                                                                     |          |
|-----|-------------------------------------------------------------------------------------|----------|
| EAC |  | 19060508 |
|-----|-------------------------------------------------------------------------------------|----------|

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