

## Network cable - VS-IP67-IP20-94F-LI/5,0 - 1415490

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Assembled Ethernet cable, CAT6, shielded, 4-pair, AWG 26 stranded (7-wire), RAL 5021 (water blue), RJ45 plug/IP67, gray on RJ45 plug/IP20, line, length 5 m

RoHS

### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                                    |
| GTIN         | <br>4 046356 474917 |
| GTIN         | 4046356474917                                                                                           |

### Technical data

#### Dimensions

|                 |        |
|-----------------|--------|
| Length of cable | 5.00 m |
|-----------------|--------|

#### Ambient conditions

|                                 |                                                 |
|---------------------------------|-------------------------------------------------|
| Degree of protection            | IP20                                            |
|                                 | IP67                                            |
| Ambient temperature (operation) | -25 °C ... 60 °C (cable, fixed installation)    |
|                                 | -10 °C ... 50 °C (cable, flexible installation) |

#### General data

|                                         |                |
|-----------------------------------------|----------------|
| Number of positions                     | 8              |
| Degree of pollution                     | 2              |
| Alternative short product description   | Ethernet cable |
| Degree of protection                    | IP67/IP20      |
| Number of slots                         | 1              |
| Transmission characteristics (category) | CAT6           |

#### Characteristics head 1

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

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## Technical data

### Characteristics head 1

|                        |                     |
|------------------------|---------------------|
| External sheath, color | water blue RAL 5021 |
|------------------------|---------------------|

### Standards and Regulations

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

### Cable

|                                               |                                                                            |
|-----------------------------------------------|----------------------------------------------------------------------------|
| Cable type                                    | Ethernet 10 Gbit                                                           |
| Cable type (abbreviation)                     | 94F                                                                        |
| UL AWM style                                  | 20963 (80°C/30 V)                                                          |
| Signal type/category                          | Ethernet CAT6A, 10 Gbps                                                    |
| Cable structure                               | 4x2xAWG26/7; S/FTP                                                         |
| Conductor cross section                       | 4x 2x 0.14 mm²                                                             |
| AWG signal line                               | 26                                                                         |
| Conductor structure signal line               | 7x 0.16 mm                                                                 |
| Core diameter including insulation            | 1.04 mm                                                                    |
| Wire colors                                   | white/blue-blue, white/orange-orange, white/green-green, white/brown-brown |
| Twisted pairs                                 | 2 cores to the pair                                                        |
| Type of pair shielding                        | Aluminum-lined foil                                                        |
| Overall twist                                 | 4 pairs for core                                                           |
| Shielding                                     | Tinned copper braided shield                                               |
| Optical shield covering                       | 70 %                                                                       |
| External sheath, color                        | water blue RAL 5021                                                        |
| Outer sheath thickness                        | 0.65 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                                  | 42 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                                | 47 nF/km                                                                   |
| Wave impedance                                | 100 Ω ±5 Ω (at 100 MHz)                                                    |
| Near end crosstalk attenuation (NEXT)         | 75.3 dB (with 1 MHz)                                                       |
|                                               | 66.3 dB (at 4 MHz)                                                         |
|                                               | 61.8 dB (at 8 MHz)                                                         |
|                                               | 60.3 dB (at 10 MHz)                                                        |
|                                               | 57.2 dB (at 16 MHz)                                                        |
|                                               | 55.8 dB (at 20 MHz)                                                        |

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## Technical data

### Cable

|                                                      |                        |
|------------------------------------------------------|------------------------|
|                                                      | 54.3 dB (at 25 MHz)    |
|                                                      | 52.8 dB (at 31.25 MHz) |
|                                                      | 48.4 dB (at 62.5 MHz)  |
|                                                      | 45.3 dB (at 100 MHz)   |
|                                                      | 40.8 dB (at 200 MHz)   |
|                                                      | 39.3 dB (at 250 MHz)   |
|                                                      | 38.1 dB (at 300 MHz)   |
|                                                      | 36.3 dB (at 400 MHz)   |
|                                                      | 34.8 dB (at 500 MHz)   |
| Power-summed near end crosstalk attenuation (PSNEXT) | 72.3 dB (with 1 MHz)   |
|                                                      | 63.3 dB (at 4 MHz)     |
|                                                      | 58.8 dB (at 8 MHz)     |
|                                                      | 57.3 dB (at 10 MHz)    |
|                                                      | 54.2 dB (at 16 MHz)    |
|                                                      | 52.8 dB (at 20 MHz)    |
|                                                      | 51.3 dB (at 25 MHz)    |
|                                                      | 49.9 dB (at 31.25 MHz) |
|                                                      | 45.4 dB (at 62.5 MHz)  |
|                                                      | 42.3 dB (at 100 MHz)   |
|                                                      | 37.8 dB (at 200 MHz)   |
|                                                      | 36.3 dB (at 250 MHz)   |
|                                                      | 35.1 dB (at 300 MHz)   |
|                                                      | 33.3 dB (at 400 MHz)   |
|                                                      | 31.8 dB (at 500 MHz)   |
| Attenuation                                          | 3.1 dB (with 1 MHz)    |
|                                                      | 5.7 dB (at 4 MHz)      |
|                                                      | 8 dB (at 8 MHz)        |
|                                                      | 8.9 dB (at 10 MHz)     |
|                                                      | 11.2 dB (at 16 MHz)    |
|                                                      | 12.6 dB (at 20 MHz)    |
|                                                      | 14.1 dB (at 25 MHz)    |
|                                                      | 15.8 dB (at 31.25 MHz) |
|                                                      | 22.5 dB (at 62.5 MHz)  |
|                                                      | 28.7 dB (at 100 MHz)   |
|                                                      | 41.4 dB (at 200 MHz)   |
|                                                      | 46.6 dB (at 250 MHz)   |
|                                                      | 51.4 dB (at 300 MHz)   |
|                                                      | 60.1 dB (at 400 MHz)   |
|                                                      | 67.9 dB (at 500 MHz)   |
| Return loss (RL)                                     | 20 dB (with 1 MHz)     |

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### Technical data

#### Cable

|                                         |                                                 |
|-----------------------------------------|-------------------------------------------------|
|                                         | 23 dB (at 4 MHz)                                |
|                                         | 24.5 dB (at 8 MHz)                              |
|                                         | 25 dB (at 10 MHz)                               |
|                                         | 25 dB (at 16 MHz)                               |
|                                         | 25 dB (at 20 MHz)                               |
|                                         | 24.2 dB (at 25 MHz)                             |
|                                         | 23.3 dB (at 31.25 MHz)                          |
|                                         | 20.7 dB (at 62.5 MHz)                           |
|                                         | 19 dB (at 100 MHz)                              |
|                                         | 16.4 dB (at 200 MHz)                            |
|                                         | 15.6 dB (at 250 MHz)                            |
|                                         | 15.6 dB (at 300 MHz)                            |
|                                         | 15.6 dB (at 400 MHz)                            |
|                                         | 15.6 dB (at 500 MHz)                            |
| Signal runtime                          | 5.13 ns/m                                       |
| Shield attenuation                      | ≥ 80 dB (at 30 ... 100 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                       | 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                                |

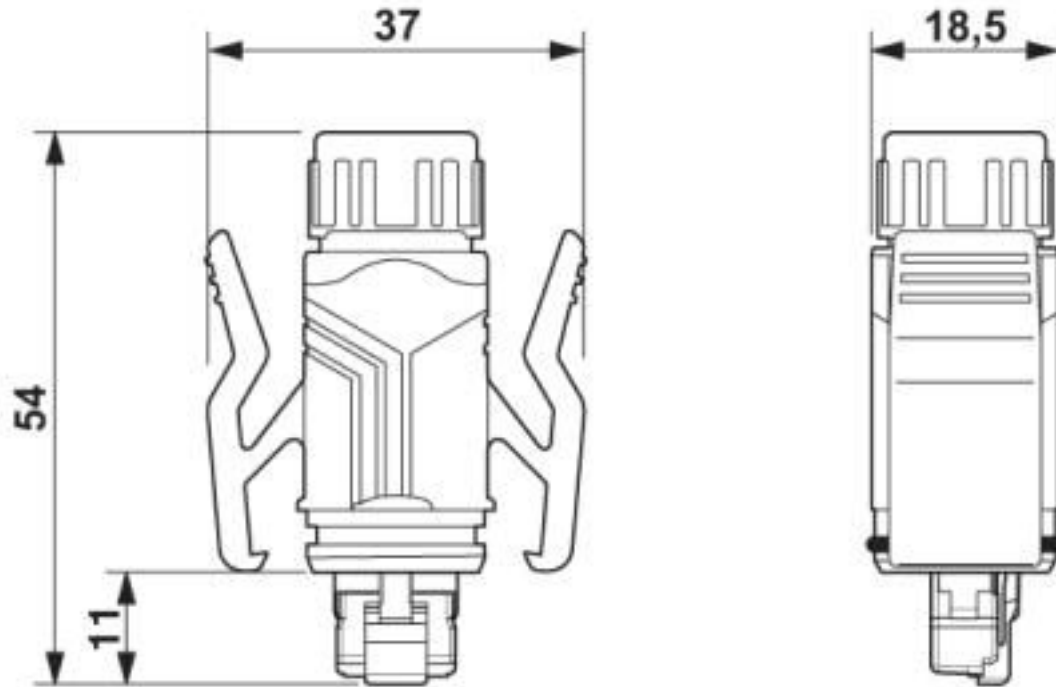
#### Environmental Product Compliance

|            |                                                         |
|------------|---------------------------------------------------------|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

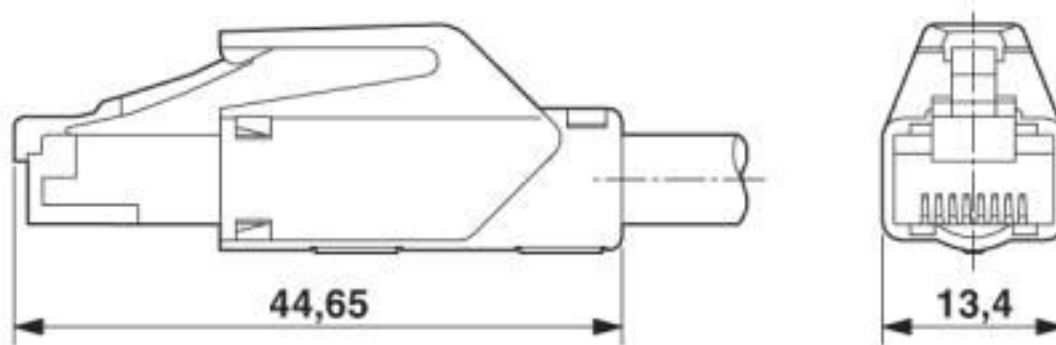
### Drawings

## Network cable - VS-IP67-IP20-94F-LI/5,0 - 1415490

Dimensional drawing

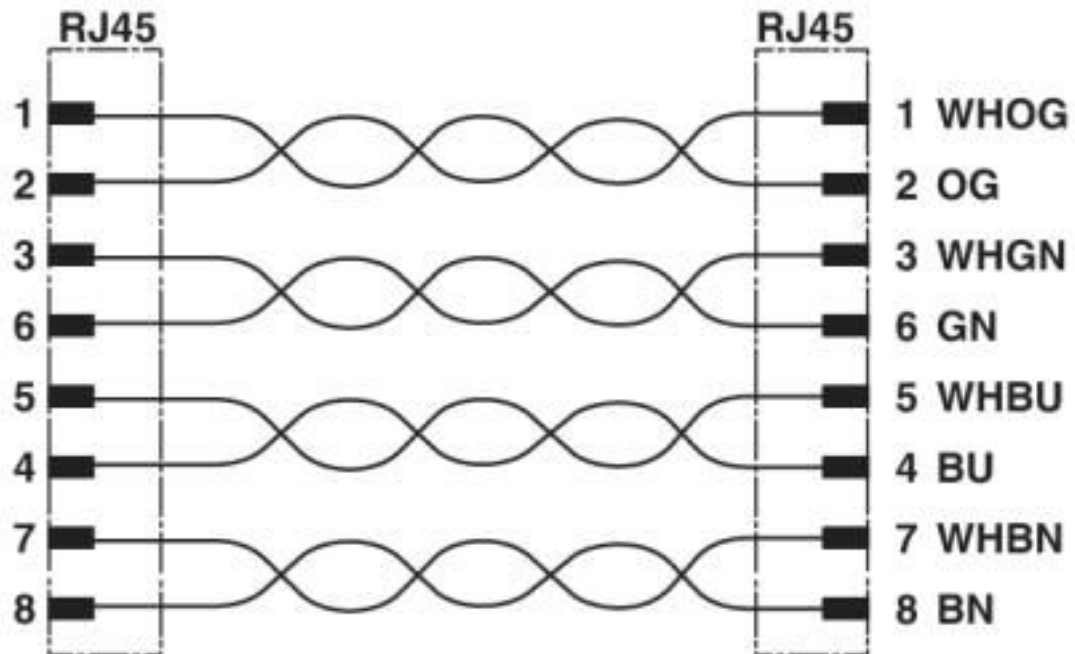


Dimensional drawing



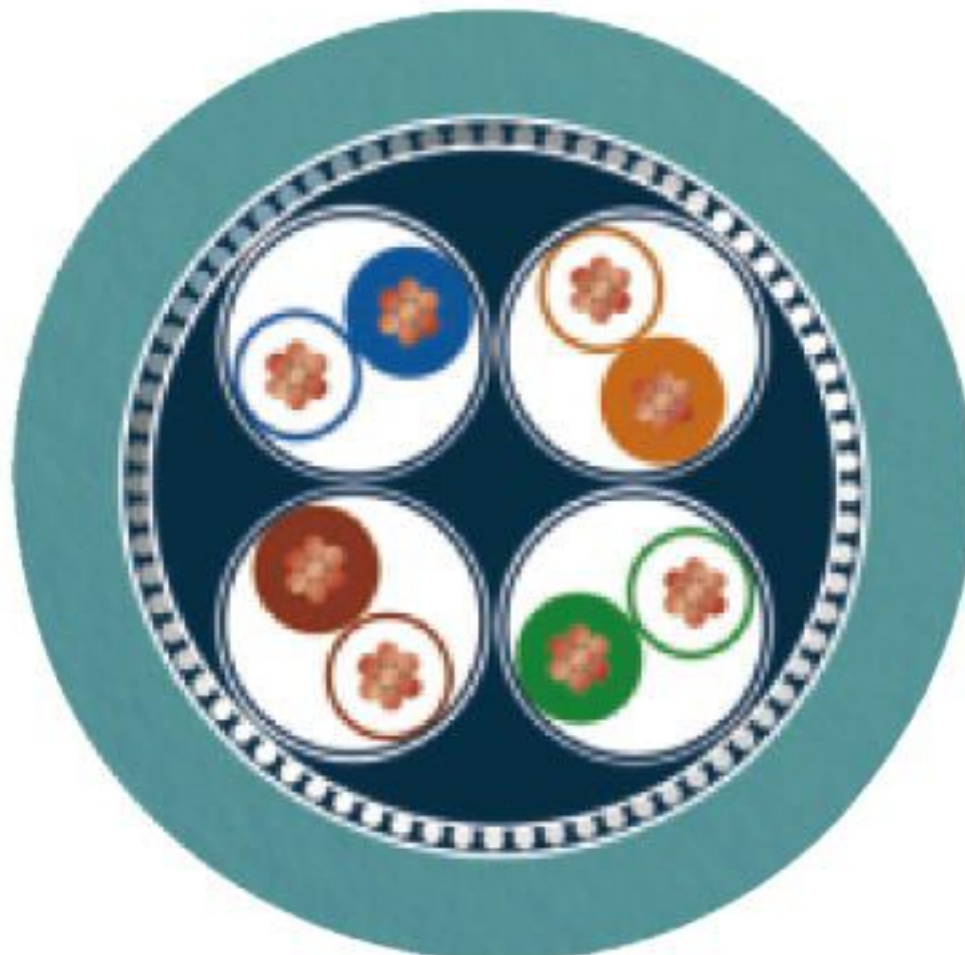
## Network cable - VS-IP67-IP20-94F-LI/5,0 - 1415490

Circuit diagram



## Network cable - VS-IP67-IP20-94F-LI/5,0 - 1415490

Cable cross section



Ethernet 10 Gbit [94F]

### 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    | 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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