# Network cable - VS-IP20-IP20-93B-LI/2,0 - 1416131

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Assembled PROFINET cable, CAT5e, shielded, star quad, AWG 22 stranded (7-wire), RAL 6018 (yellow-green), RJ45 plug/IP20 on RJ45 plug/IP20, line, length: 2 m

## Key Commercial Data

| | |
|---|---|
| Packing unit | 1 pc |
| GTIN | 4 046356 474047 |
| GTIN | 4046356474047 |

## Technical data

### Dimensions

| | |
|---|---|
| Length of cable | 2.00 m |

### Ambient conditions

| | |
|---|---|
| Degree of protection | IP20 |

### General data

| | |
|---|---|
| Number of positions | 4 |
| Degree of pollution | 1 |
| Alternative short product description | PROFINET cable |
| Rated voltage (III/3) | 50 V |
| Connection method | IDC fast connection |
| Degree of protection | IP20 |
| Rated current | 1.75 A |
| Transmission characteristics (category) | CAT5 |

### Characteristics head 1

| | |
|---|---|
| Shielded | yes |
| Outer sheath, material | PVC |
| External sheath, color | green RAL 6018 |

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## Technical data

### Standards and Regulations

| | |
|---|---|
| Flammability rating according to UL 94 | V0 |

### Cable

| | |
|---|---|
| Cable type | PROFINET PVC stranded CAT5 |
| Cable type (abbreviation) | 93B |
| UL AWM style | 21694 |
| Signal type/category | PROFINET CAT5 (IEC 11801), 100 Mbps |
| | EtherCAT® CAT5 (IEC 11801), 100 Mbps |
| Cable structure | 1x4xAWG22/7; SF/TQ |
| Conductor cross section | 4x 0.34 mm² |
| AWG signal line | 22 |
| Conductor structure signal line | 7x 0.25 mm |
| Core diameter including insulation | 1.55 mm |
| Wire colors | White, yellow, blue, orange |
| Overall twist | Star quad |
| Shielding | Aluminum-coated foil, tinned copper braided shield |
| Optical shield covering | 85 % |
| External sheath, color | green RAL 6018 |
| Outer sheath thickness | approx. 0.9 mm |
| External cable diameter D | 6.5 mm ±0.2 mm |
| Minimum bending radius, fixed installation | 3 x D |
| Minimum bending radius, flexible installation | 7 x D |
| Cable weight | 67 kg/km |
| Outer sheath, material | PVC |
| Material, inner sheath | PVC |
| Material conductor insulation | PE |
| Conductor material | Tin-plated Cu litz wires |
| Insulation resistance | ≥ 500 MΩ*km |
| Loop resistance | ≤ 120.00 Ω/km |
| Wave impedance | 100 Ω ±15 Ω (at 100 MHz) |
| Near end crosstalk attenuation (NEXT) | 80 dB (with 1 MHz) |
| | 76 dB (at 4 MHz) |
| | 70 dB (at 10 MHz) |
| | 65 dB (at 16 MHz) |
| | 63 dB (at 20 MHz) |
| | 60 dB (at 31.25 MHz) |
| | 55 dB (at 62.5 MHz) |
| | 50 dB (at 100 MHz) |
| Attenuation | 2.1 dB (with 1 MHz) |
| | 4 dB (at 4 MHz) |
| | 6.3 dB (at 10 MHz) |

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## Technical data

### Cable

| | |
|---|---|
| | 8 dB (at 16 MHz) |
| | 9 dB (at 20 MHz) |
| | 11.4 dB (at 31.25 MHz) |
| | 16.5 dB (at 62.5 MHz) |
| | 21.3 dB (at 100 MHz) |
| Signal speed | 0.66 c |
| Signal runtime | 5.3 ns/m |
| Coupling resistance | ≤ 20.00 mΩ/m (at 10 MHz) |
| Nominal voltage, cable | 600 V |
| Test voltage Core/Core | 2000 V (50 Hz, 1 min.) |
| Test voltage Core/Shield | 2000 V (50 Hz, 1 min.) |
| Flame resistance | according to UL 1685 (CSA FT 4) |
| Resistance to oil | Resistant to oil to a limited extent |
| Other resistance | UV resistant According to UL 1581, Section 1200 |
| Ambient temperature (operation) | -40 °C ... 70 °C (cable, fixed installation) |
| | -40 °C ... 70 °C (cable, flexible installation) |
| Ambient temperature (installation) | -20 °C ... 60 °C |
| Ambient temperature (storage/transport) | -50 °C ... 70 °C |

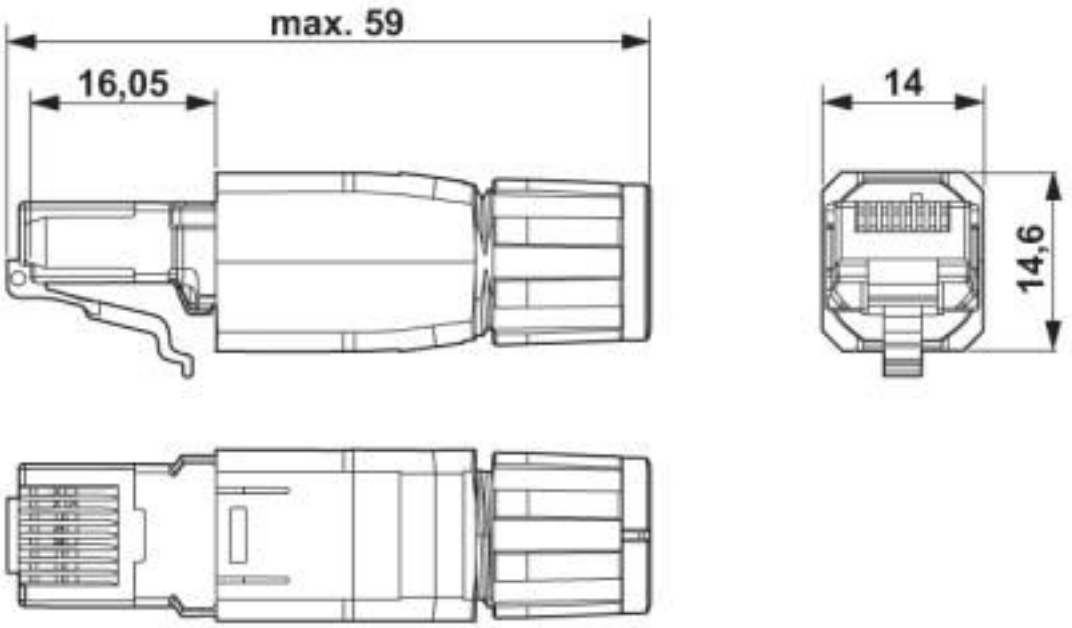
### Environmental Product Compliance

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

## Drawings

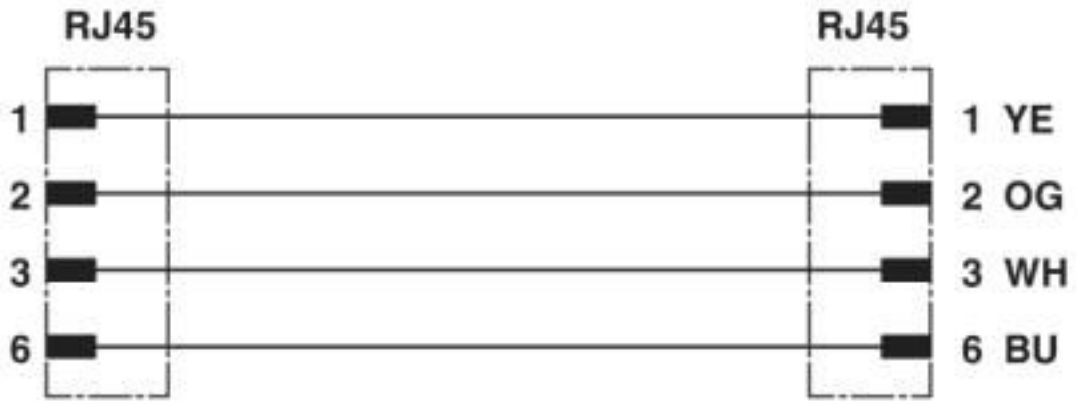
# Network cable - VS-IP20-IP20-93B-LI/2,0 - 1416131

Dimensional drawing



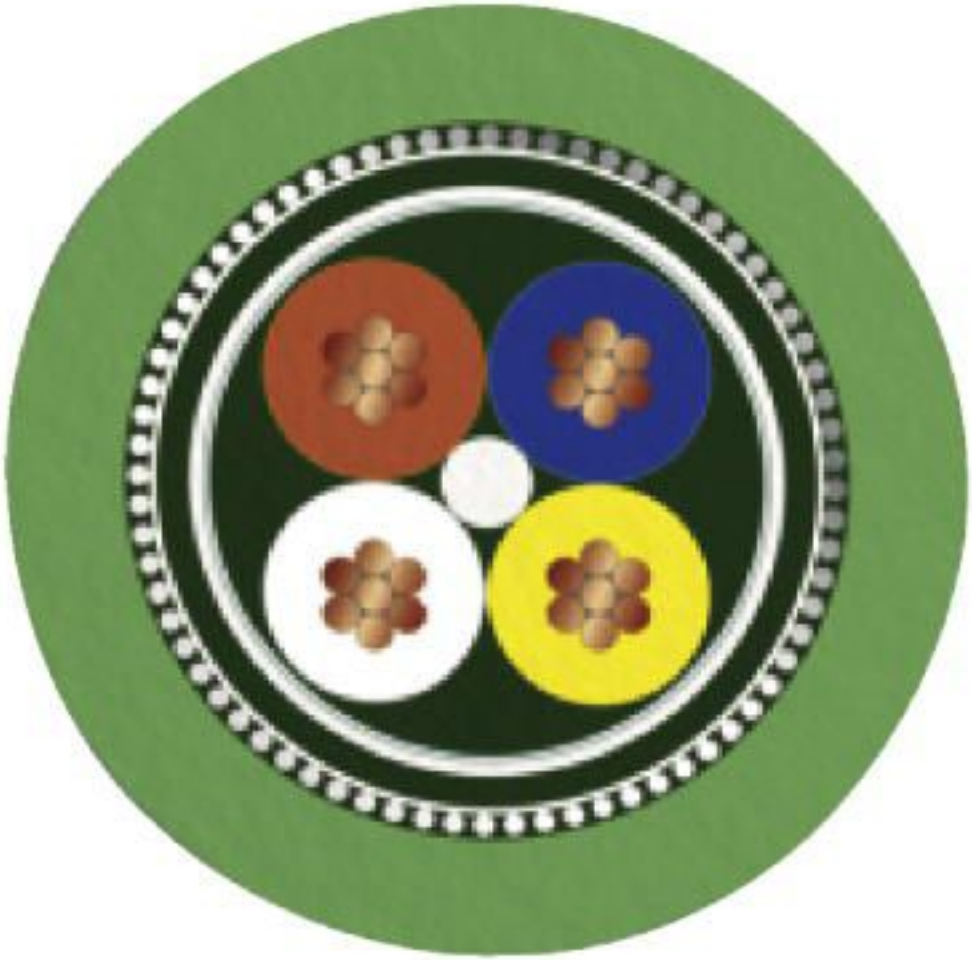

RJ45 connector, IP20

Circuit diagram



# Network cable - VS-IP20-IP20-93B-LI/2,0 - 1416131

Cable cross section



PROFINET PVC stranded CAT5 [93B]

## 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 | EAC | 19060508 |

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