

Network cable - VS-M12FSBP-OE-936-2,0 - 1416578


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Assembled PROFINET cable, CAT5e, shielded, star quad, AWG 22 (7-wire), black, M12 flush-type socket, rear/screw mounting with M16 thread on free conductor end, length 2 m



Key Commercial Data

| | |
|--------------|---|
| Packing unit | 1 pc |
| GTIN |  4 0 4 6 3 5 6 4 7 9 3 1 8 |
| GTIN | 4046356479318 |

Technical data

Ambient conditions

| | |
|----------------------|------------------------|
| Degree of protection | IP67 (When plugged in) |
| | IP65 (When plugged in) |

General data

| | |
|---|--------------------------------|
| Rated current at 40°C | 4 A |
| Rated voltage | 250 V |
| Number of positions | 4 |
| Signal type/category | PROFINET CAT5 (IEC 11801:2002) |
| Overvoltage category | II |
| Degree of pollution | 3 |
| Alternative short product description | PROFINET cable |
| Contact material | CuZn |
| Contact carrier material | PA 6.6 |
| Contact surface material | Ni/Au |
| Degree of protection | IP65/IP67 |
| Transmission characteristics (category) | CAT5 |

Characteristics head 1

| | |
|----------|-----|
| Shielded | yes |
|----------|-----|

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Technical data

Characteristics head 1

| | |
|------------------------|----------------|
| Outer sheath, material | PE-X |
| External sheath, color | black RAL 9005 |

Standards and Regulations

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

Cable

| | |
|---|--|
| Cable type | PROFINET RADOX® railway application CAT5 reinforced |
| Cable type (abbreviation) | 936 |
| Signal type/category | PROFINET CAT5 (IEC 11801), 100 Mbps |
| Cable structure | 1x4xAWG22/7; SF/TQ |
| Conductor cross section | 4x 0.34 mm ² |
| AWG signal line | 22 |
| Conductor structure signal line | 7x 0.25 mm |
| Core diameter including insulation | 1.95 mm |
| Wire colors | white-blue, orange-yellow |
| Overall twist | Star quad |
| Shielding | Plastic-coated aluminum foil, tinned copper braided shield |
| Optical shield covering | 100 % |
| External sheath, color | black RAL 9005 |
| Outer sheath thickness | ≥ 0.8 mm |
| External cable diameter D | 7.25 mm ±0.3 mm |
| Minimum bending radius, fixed installation | 6 x D |
| Minimum bending radius, flexible installation | 10 x D |
| Cable weight | 81 g/m |
| Outer sheath, material | PE-X |
| Material conductor insulation | PE-X |
| Conductor material | silver-plated Cu litz wires |
| Conductor resistance | ≤ 54.4 Ω/km |
| Working capacitance | ≤ 65 pF (core-core) |
| | ≤ 100 pF (core-shield) |
| Wave impedance | 100 Ω ±5 Ω (f = 100 MHz) |
| Near end crosstalk attenuation (NEXT) | 80 dB (with 1 MHz) |
| | 76 dB (at 4 MHz) |
| | 67 dB (at 10 MHz) |
| | 60 dB (at 31.5 MHz) |
| | 56 dB (at 62.5 MHz) |
| | 53 dB (at 100 MHz) |
| Remote crosstalk attenuation (FEXT) | 80 dB (with 1 MHz) |
| | 70 dB (at 4 MHz) |
| | 65 dB (at 10 MHz) |
| | 58 dB (at 31.5 MHz) |

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|----------------------------------|--|
| | 59 dB (at 62.5 MHz) |
| | 67 dB (at 100 MHz) |
| Attenuation | 2 dB (with 1 MHz) |
| | 4 dB (at 4 MHz) |
| | 6.5 dB (at 10 MHz) |
| | 10.5 dB (at 31.5 MHz) |
| | 14 dB (at 62.5 MHz) |
| | 18 dB (at 100 MHz) |
| Return loss (RL) | 35 dB (at 4 MHz) |
| | 35 dB (at 10 MHz) |
| | 35 dB (at 31.5 MHz) |
| | 33 dB (at 62.5 MHz) |
| | 33 dB (at 100 MHz) |
| Signal speed | 66 c |
| Shield attenuation | 40 dB (30 MHz ≤ f ≤ 100 MHz) |
| Coupling resistance | 200.00 mΩ/m (f ≤ 30 MHz) |
| Nominal voltage, cable | 300 V AC |
| Test voltage, cable | 2000 V AC (50 Hz, 5 minutes) |
| Fire protection in rail vehicles | BS 6853 (Category Ia, Ib, II) |
| | GM/RT 2130 (Category Ia, Ib, II) |
| | EN 45545 (Risk level HL1 - HL3) |
| | DIN 5510 (Fire protection level 1, 2, 3, 4) |
| | NF F16-101 (Category A1, A2, B) |
| | NF F16-101 (Class C/F0) |
| | NFPA 130 |
| | UNI CEI 11170 (Risk level LR1 - LR4) |
| Flame resistance | EN 60332-1-2 |
| | EN 50266 |
| | EN 60332-3-25 |
| | NF C32-070, 2.1 |
| | NF C32-070, 2.2 |
| | UL 1685, 12 (FT4) |
| | in accordance with ISO 6722-1 5.22 (UN ECE-R 118.01) |
| Halogen-free | According to EN 50267-2-1 |
| Resistance to oil | according to IRM 902, 72 h at 100 °C |
| Other resistance | Resistance to fuels according to IRM 903, 168 h at 70 °C |
| Concentration of fumes | BS 6853 D.8.7 |
| | EN 61034-2 |
| | UL 1685, 12 (FT4) |
| Fume corrosiveness | EN 50267-2-2 |

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|---------------------------------|---|
| Fume toxicity | BS 6853 B.1 |
| | EN 50305, 9.2 |
| Ambient temperature (operation) | -50 °C ... 90 °C (cable, fixed installation) |
| | -40 °C ... 90 °C (cable, flexible installation) |

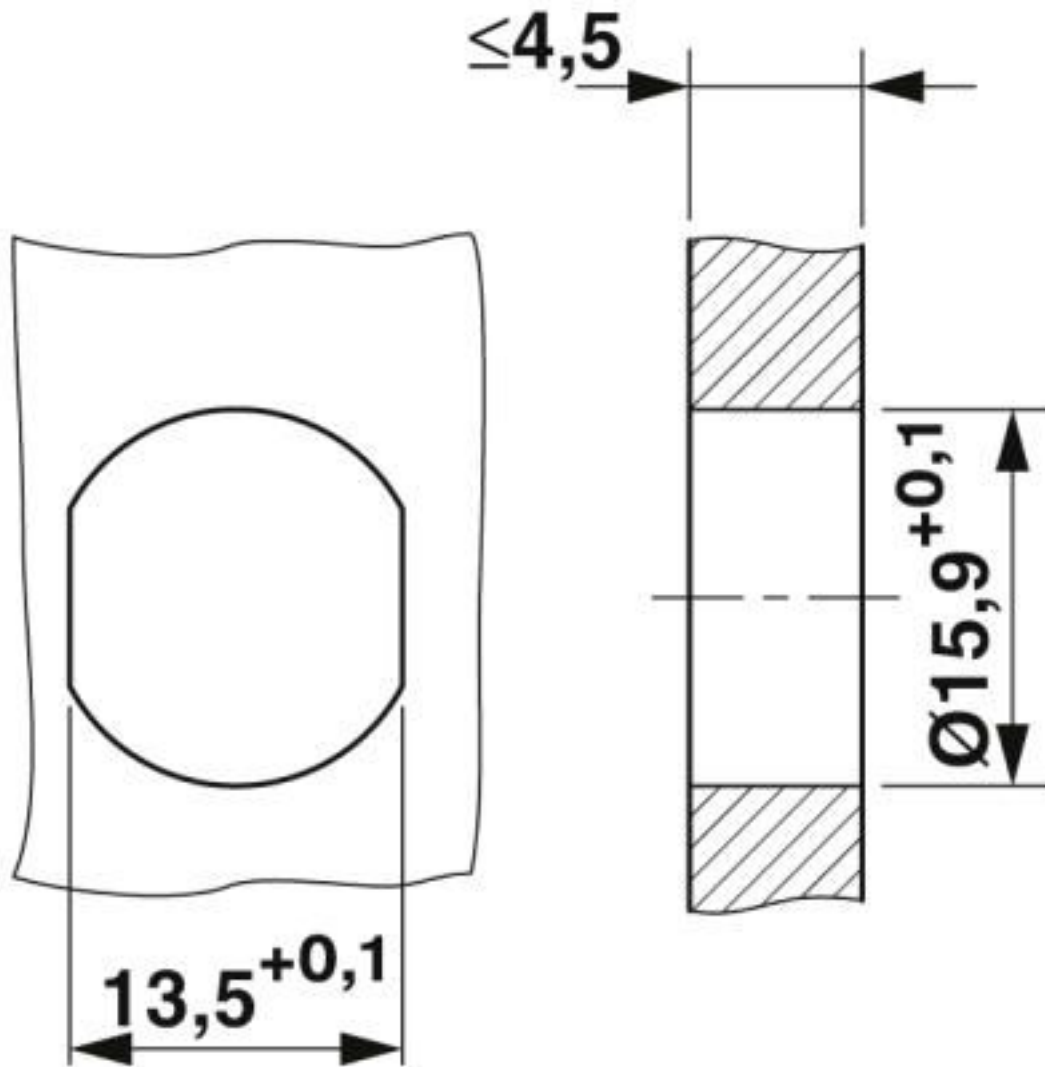
Environmental Product Compliance

| | |
|------------|---|
| 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-OE-936-2,0 - 1416578

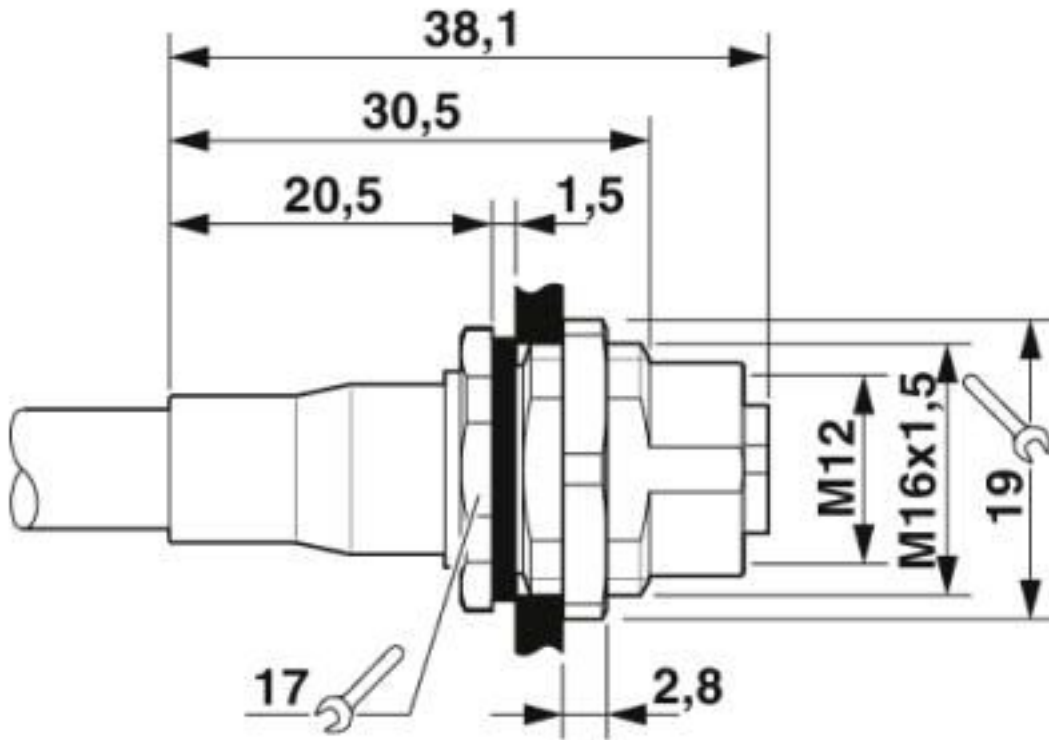
Dimensional drawing



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

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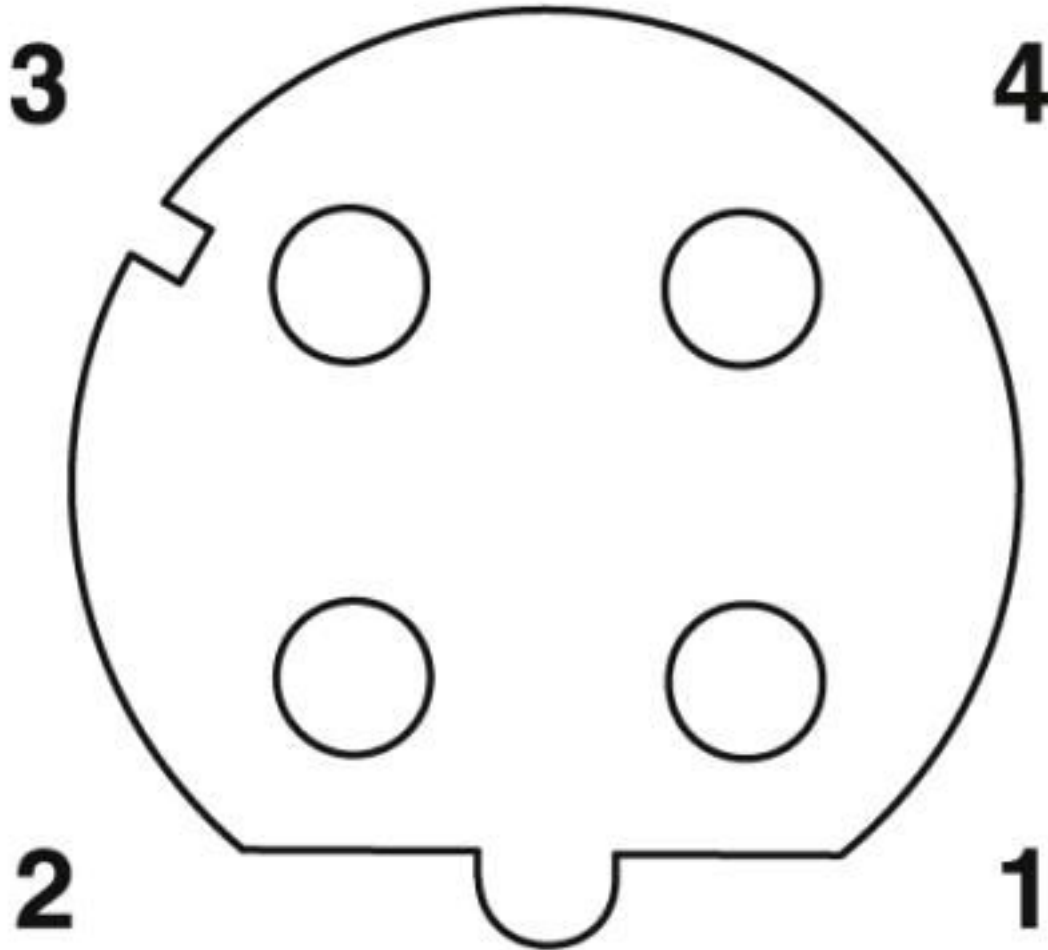
Dimensional drawing



M12 flush-type connector

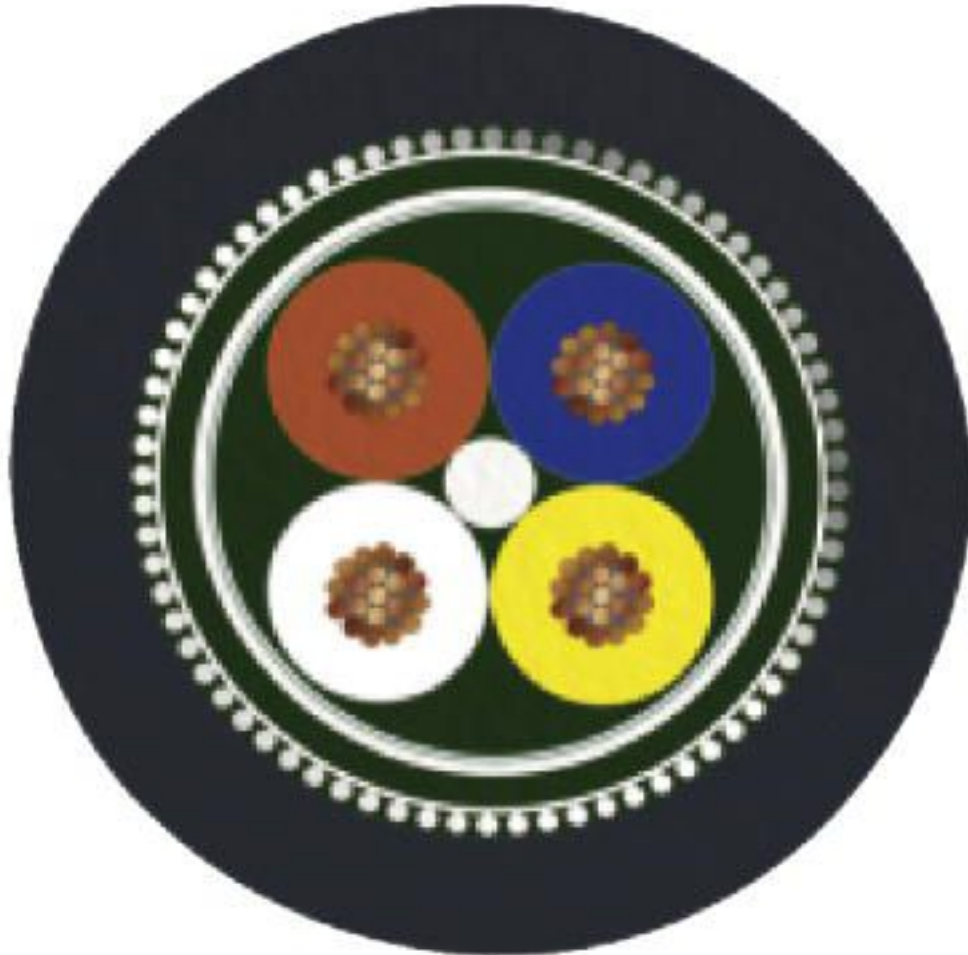
Network cable - VS-M12FSBP-OE-936-2,0 - 1416578

Schematic diagram



Network cable - VS-M12FSBP-OE-936-2,0 - 1416578

Cable cross section



PROFINET RADOX[®] railway application CAT5 reinforced [936]

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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