

VS-M12MS-M12MS-93R-LI/2,0 - Network cable



1416254

<https://www.phoenixcontact.com/us/products/1416254>

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Network cable, PROFINET CAT5 (100 Mbps), 4-position, PUR halogen-free, green RAL 6018, Plug straight M12, coding: D / IP67, on Plug straight M12, coding: D / IP67, cable length: 2 m

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1416254 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | BF04 |
| Product key | AF1CJN |
| GTIN | 4046356473422 |
| Weight per piece (including packing) | 150.8 g |
| Weight per piece (excluding packing) | 150.8 g |
| Customs tariff number | 85444210 |
| Country of origin | PL |

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Technical data

Product properties

| | |
|----------------------|-------------------------|
| Product type | Data cable preassembled |
| Application | Standard |
| Sensor type | PROFINET |
| Number of positions | 4 |
| No. of cable outlets | 1 |
| Shielded | yes |

Interfaces

| | |
|----------------------|-------------------------------------|
| Signal type/category | PROFINET CAT5 (IEC 11801), 100 Mbps |
|----------------------|-------------------------------------|

Electrical properties

| | |
|---|-----------------------|
| Nominal voltage U_N | 48 V AC |
| | 60 V DC |
| Transmission medium | Copper |
| Transmission speed | 100 Mbps |
| Transmission characteristics (category) | CAT5 (IEC 11801:2002) |

Mechanical properties

Mechanical data

| | |
|-----------------------------|------------|
| Insertion/withdrawal cycles | ≥ 100 |
|-----------------------------|------------|

Connector

Connection 1

| | |
|----------------------|--------------------------|
| Type | Plug straight M12 / IP67 |
| Number of positions | 4 |
| Coding type | D (Data) |
| Handle color | black |
| Degree of protection | IP67 |

Connection 2

| | |
|----------------------|--------------------------|
| Type | Plug straight M12 / IP67 |
| Number of positions | 4 |
| Coding type | D (Data) |
| Handle color | black |
| Degree of protection | IP67 |

Cable/line

| | |
|--------------|-----|
| Cable length | 2 m |
|--------------|-----|


PROFINET robot CAT5 [93R]

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| | |
|---|---|
| Dimensional drawing |  |
| Cable weight | 55 kg/km |
| UL AWM Style | 20233 (80°C/300 V) |
| Number of positions | 4 |
| Shielded | yes |
| Cable type | PROFINET robot CAT5 [93R] |
| Conductor structure | 1x4xAWG22/19, S/TQ |
| Signal runtime | 4.8 ns/m |
| Conductor structure signal line | 19x 0.15 mm |
| AWG signal line | 22 |
| Conductor cross-section | 4x 0.34 mm ² |
| Wire diameter incl. insulation | 1.5 mm |
| External cable diameter | 6.50 mm ±0.2 mm |
| Outer sheath, material | PUR |
| External sheath, color | green RAL 6018 |
| Conductor material | Tin-plated Cu litz wires |
| Material wire insulation | Foamed PE |
| Single wire, color | white, yellow, blue, orange |
| Thickness, outer sheath | approx. 1.00 mm |
| Overall twist | Star quad |
| Optical shield covering | 85 % |
| Insulation resistance | ≥ 500 MΩ*km |
| Loop resistance | ≤ 120.00 Ω/km |
| Wave impedance | 100 Ω ±5 Ω (at 100 MHz) |
| Nominal voltage, cable | 300 V |
| Test voltage Core/Core | 2000 V (50 Hz, 1 min.) |
| Test voltage Core/Shield | 2000.00 V (50 Hz, 1 min.) |
| Minimum bending radius, fixed installation | 5 x D |
| Smallest bending radius, fixed installation | 33 mm |
| Dynamic load capacity (torsion) | Torsion: ±180 °/m, Torsion cycles: 1000000 |
| Shield attenuation | 2.9 dB (with 1 MHz) 5 dB (at 4 MHz) 8.1 dB (at 10 MHz) 10.4 dB (at 16 MHz) 11.9 dB (at 20 MHz) 15.5 dB (at 31.25 MHz) 26.5 dB (at 62.5 MHz) |

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| | |
|------------------------------------|---|
| | 41 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 DIN EN 60811-2-1 |
| Other resistance | UV resistant (according to UL 1581, Section 1200) |
| Ambient temperature (operation) | -40 °C ... 80 °C |
| | -40 °C ... 80 °C |
| Ambient temperature (installation) | -20 °C ... 60 °C |

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Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Schematic diagram

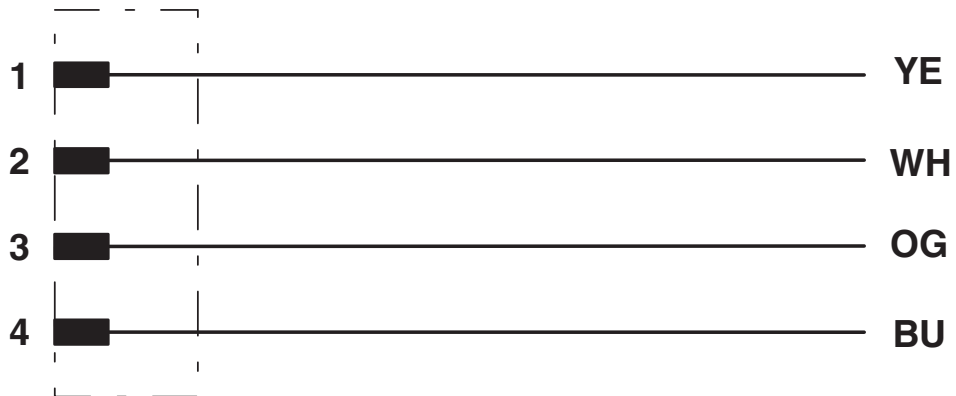


Pin assignment M12 male connector, 4-pos., D-coded, male side

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Circuit diagram



Contact assignment of the M12 connector

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27060307 |
| ECLASS-15.0 | 27060307 |

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 26121600 |
|-------------|----------|

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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% |
|-------------------------------------|----------------------------|

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 2.363 kg CO2e |
|---------|---------------|

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