

# VS-OE-M12FSBP-93B-LI/2,0 - Device connector rear mounting



1416155

<https://www.phoenixcontact.com/us/products/1416155>

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Device connector rear mounting, PROFINET CAT5, 4-position, Socket, straight, M12, D-coding, on free cable end, Cable connection, cable length: 2 m

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1416155       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Product key                          | ABQDGI        |
| GTIN                                 | 4046356474221 |
| Weight per piece (including packing) | 164.6 g       |
| Weight per piece (excluding packing) | 147.563 g     |
| Country of origin                    | DE            |

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## Technical data

### Product properties

|                      |                         |
|----------------------|-------------------------|
| Product type         | Data cable preassembled |
| Application          | Data                    |
| Number of positions  | 4                       |
| No. of cable outlets | 1                       |
| Coding               | D                       |
| Thread type          | M12                     |

### Insulation characteristics

|                      |    |
|----------------------|----|
| Overvoltage category | II |
| Degree of pollution  | 3  |

### Interfaces

|                      |                                |
|----------------------|--------------------------------|
| Signal type/category | PROFINET CAT5 (IEC 11801:2002) |
|----------------------|--------------------------------|

### Electrical properties

|   |                       |
|---|-----------------------|
| Rated surge voltage                     | 2.5 kV                |
| Contact resistance                      | ≤                     |
| Nominal voltage $U_N$                   | 250 V                 |
| Nominal current $I_N$                   | 4 A                   |
| Transmission medium                     | Copper                |
| Transmission characteristics (category) | CAT5 (IEC 11801:2002) |

### Mechanical properties

#### Mechanical data

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

### Material specifications

|  |                      |
|--|----------------------|
| Flammability rating according to UL 94 | V0                   |
| Contact material                       | CuZn                 |
| Contact surface material               | Ni/Au                |
| Contact carrier material               | PA 6.6               |
| Material for screw connection          | Brass, nickel-plated |

### Connection data

#### Connection technology

|                   |                  |
|-------------------|------------------|
| Connection method | Cable connection |
|-------------------|------------------|

#### Conductor connection

|                         |        |
|-------------------------|--------|
| Contact connection type | Socket |
|-------------------------|--------|

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|                   |                                   |
|-------------------|-----------------------------------|
| Connection method | Cable connection                  |
| Tightening torque | 2 Nm ... 3 Nm (Installation-side) |

## Connector

### Connection 1

|                   |          |
|-------------------|----------|
| Head design       | Socket   |
| Head cable outlet | straight |
| Head thread type  | M12      |
| Coding            | D        |

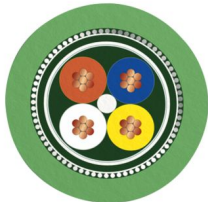
### Connection 2

|             |                |
|-------------|----------------|
| Head design | free cable end |
|-------------|----------------|

## Cable/line

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

### PROFINET PVC stranded CAT5 [93B]

|                                |  |
|--------------------------------|--|
| Dimensional drawing            |  |
| UL AWM Style                   | 21695 (80 °C / 600 V)  |
| Number of positions            | 4  |
| Shielded                       | yes  |
| Cable type                     | PROFINET PVC stranded CAT5 [93B]   |
| Conductor structure            | 1x4xAWG22/7, SF/TQ   |
| AWG signal line                | 22   |
| Conductor cross-section        | 4x 0.34 mm <sup>2</sup>  |
| Wire diameter incl. insulation | 1.5 mm ±0.1 mm   |
| External cable diameter        | 6.50 mm ±0.2 mm  |
| Outer sheath, material         | PVC  |
| External sheath, color         | green RAL 6018   |
| Conductor material             | Tin-plated Cu litz wires   |
| Material wire insulation       | PE   |
| Single wire, color             | white, yellow, blue, orange  |
| Overall twist                  | Star quad  |
| Optical shield covering        | 85 %   |
| Insulation resistance          | ≥ 5 GΩ*km  |
| Loop resistance                | ≤ 120.00 Ω/km  |

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|   |  |
|---|--|
| Wave impedance                                | 100 Ω ±5 Ω (at 100 MHz)                                  |
| Nominal voltage, cable                        | ≤ 600 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    | 4 x D  |
| Minimum bending radius, flexible installation | 8 x D  |
| Flame resistance                              | UL 1581, Section 1060 and UL 2556, Section 9.3 (FT1)     |
|   | UL 1685 (CSA FT 4)                                       |
|   | UL 1581, Section 1100 and UL 2556, Section 9.1 (HFT/FT2) |
| Resistance to oil                             | OIL RES I according to UL 2256                           |
| Other resistance                              | UV resistant (according to UL 1581, Section 1200)        |
| Ambient temperature (operation)               | -40 °C ... 80 °C (cable, fixed installation)             |
|   | -10 °C ... 70 °C (Cable, flexible installation)          |

## Environmental and real-life conditions

### Ambient conditions

|   |   |
|---|---|
| Degree of protection  | IP65 (When plugged in)                          |
|   | IP67 (When plugged in)                          |
| Ambient temperature (operation) (male connector/female connector) | -25 °C ... 85 °C (Plug / socket)                |
|   | -40 °C ... 85 °C (without mechanical actuation) |
| UL Type Rating  | Type 4 (indoor use only)                        |

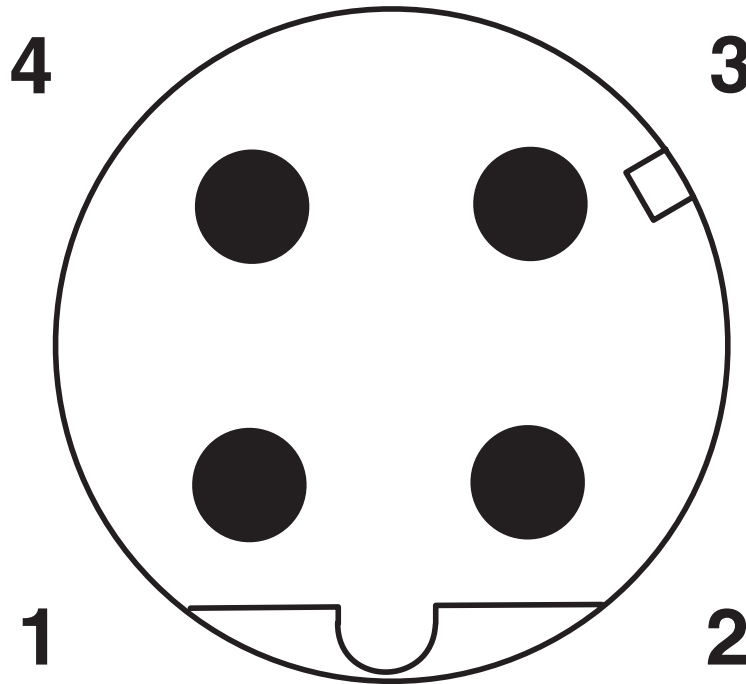
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## Drawings

Schematic diagram



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

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27440103 |
| ECLASS-15.0 | 27440103 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC003570 |
|----------|----------|

### UNSPSC

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

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## Environmental product compliance

### EU RoHS

|   |      |
|---|------|
| Fulfills EU RoHS substance requirements | Yes  |
| Exemption                               | 6(c) |

### China RoHS

|  |   |
|--|---|
| Environment friendly use period (EFUP) | EFUP-50   |
|  | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

### EU REACH SVHC

|                                     |                                      |
|-------------------------------------|--------------------------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1)                 |
| SCIP                                | d56de589-5fbd-40cc-8222-ff39e642c378 |

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