

VS-M12FSBP-IP20-93E-LI/0,3 - Device connector rear mounting



1403157  
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Assembled Ethernet cable, CAT5e, shielded, 2-pair, 26 AWG stranded (7-wire), RAL 5021 (water blue), M12 flush-type socket, rear/screw mounting with SPEEDCON to RJ45 plug/IP20, line, length: 0.3 m

Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1403157       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | AB25          |
| Product key                          | ABQDGI        |
| GTIN                                 | 4046356644068 |
| Weight per piece (including packing) | 49.2 g        |
| Weight per piece (excluding packing) | 44.5 g        |
| Customs tariff number                | 85444290      |
| Country of origin                    | PL            |

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## Technical data

### Product properties

|                      |                         |
|----------------------|-------------------------|
| Product type         | Data cable preassembled |
| Application          | Data                    |
|                      | On the device side      |
| Type                 | M12                     |
| Sensor type          | Ethernet                |
| Number of positions  | 4                       |
| No. of cable outlets | 1                       |
| Shielded             | yes                     |
| Cable outlet         | straight                |

### Data management status

|                  |    |
|------------------|----|
| Article revision | 05 |
|------------------|----|

### Insulation characteristics

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

### Electrical properties

|                                         |                                                                                              |
|-----------------------------------------|----------------------------------------------------------------------------------------------|
| Nominal voltage $U_N$                   | 48 V                                                                                         |
| Nominal current $I_N$                   | 2 A (Plug/socket in accordance with IEC 61076-2-101, cable technical data is to be observed) |
| Transmission medium                     | Copper                                                                                       |
| Transmission characteristics (category) | CAT5 (IEC 11801:2002)                                                                        |

### Mechanical properties

#### Mechanical data

|                             |            |
|-----------------------------|------------|
| Insertion/withdrawal cycles | $\geq 100$ |
|-----------------------------|------------|

### Material specifications

|                                        |                    |
|----------------------------------------|--------------------|
| Flammability rating according to UL 94 | V0                 |
| Outer sheath, material                 | PUR                |
| Conductor material                     | Bare Cu litz wires |

### Connector

#### Connection 1

|                      |                                          |
|----------------------|------------------------------------------|
| Type                 | Flush-type female connector straight M12 |
| Locking type         | SPEEDCON                                 |
| Degree of protection | IP67                                     |

#### Connection 2

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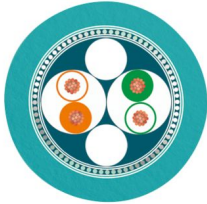
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|                      |                    |
|----------------------|--------------------|
| Type                 | Plug straight RJ45 |
| Degree of protection | IP20               |

## Cable/line

|              |        |
|--------------|--------|
| Cable length | 0.30 m |
|--------------|--------|

### Ethernet flexible CAT5, 2-pair [93E]

|                                 |                                                                                    |
|---------------------------------|------------------------------------------------------------------------------------|
| Dimensional drawing             |  |
| Cable weight                    | 42 kg/km                                                                           |
| UL AWM Style                    | 20963 (80°C/30 V)                                                                  |
| Wiring standards/regulations    | Electrical requirements EN 50288-2-2                                               |
| Number of positions             | 4                                                                                  |
| Shielded                        | yes                                                                                |
| Cable type                      | Ethernet flexible CAT5, 2-pair [93E]                                               |
| Conductor structure             | 2x2xAWG26/7, SF/UTP                                                                |
| Signal runtime                  | 5.3 ns/m                                                                           |
| Conductor structure signal line | 7x 0.16 mm                                                                         |
| AWG signal line                 | 26                                                                                 |
| Conductor cross section         | 2x 2x 0.14 mm²                                                                     |
| Wire diameter incl. insulation  | 0.98 mm                                                                            |
| External cable diameter         | 6.40 mm ±0.2 mm                                                                    |
| Outer sheath, material          | PUR                                                                                |
| External sheath, color          | water blue RAL 5021                                                                |
| Conductor material              | Bare Cu litz wires                                                                 |
| Material wire insulation        | Foamed PE                                                                          |
| Single wire, color              | white/orange-orange, white/green-green                                             |
| Thickness, outer sheath         | 1.20 mm                                                                            |
| Twisted pairs                   | 2 cores to the pair                                                                |
| Overall twist                   | Two pairs with two fillers to the core                                             |
| Optical shield covering         | 70 %                                                                               |
| Insulation resistance           | ≥ 500 MΩ*km                                                                        |
| Coupling resistance             | ≤ 100.00 mΩ/m (at 10 MHz)                                                          |
| Loop resistance                 | ≤ 290.00 Ω/km                                                                      |
| Wave impedance                  | 100 Ω ±5 Ω (at 100 MHz)                                                            |
| Cable capacity                  | approx. 45 nF/km (at 1 kHz)                                                        |
| Nominal voltage, cable          | ≤ 100 V (Peak value, not for high-power applications)                              |

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|                                                        |                                      |
|--------------------------------------------------------|--------------------------------------|
| Test voltage Core/Core                                 | 700 V (50 Hz, 1 min.)                |
| Test voltage Core/Shield                               | 700.00 V (50 Hz, 1 min.)             |
| Current carrying capacity of cable                     | 2.00 A (according to DIN VDE 0891-1) |
| Minimum bending radius, fixed installation             | 4 x D                                |
| Minimum bending radius, flexible installation          | 8 x D                                |
| Smallest bending radius, fixed installation            | 26 mm                                |
| Smallest bending radius, movable installation          | 52 mm                                |
| Tensile strength                                       | ≤ 80 N                               |
| Near end crosstalk attenuation (NEXT)                  | 65.3 dB (with 1 MHz)                 |
|                                                        | 56.3 dB (at 4 MHz)                   |
|                                                        | 50.3 dB (at 10 MHz)                  |
|                                                        | 47.2 dB (at 16 MHz)                  |
|                                                        | 45.8 dB (at 20 MHz)                  |
|                                                        | 42.9 dB (at 31.25 MHz)               |
|                                                        | 38.4 dB (at 62.5 MHz)                |
|                                                        | 35.3 dB (at 100 MHz)                 |
| Power-summated near end crosstalk attenuation (PSNEXT) | 62.3 dB (with 1 MHz)                 |
|                                                        | 53.3 dB (at 4 MHz)                   |
|                                                        | 47.3 dB (at 10 MHz)                  |
|                                                        | 44.2 dB (at 16 MHz)                  |
|                                                        | 42.8 dB (at 20 MHz)                  |
|                                                        | 39.9 dB (at 31.25 MHz)               |
|                                                        | 35.4 dB (at 62.5 MHz)                |
|                                                        | 32.3 dB (at 100 MHz)                 |
| Return attenuation (RL)                                | 23 dB (at 4 MHz)                     |
|                                                        | 24.1 dB (at 8 MHz)                   |
|                                                        | 25 dB (at 10 MHz)                    |
|                                                        | 25 dB (at 16 MHz)                    |
|                                                        | 25 dB (at 20 MHz)                    |
|                                                        | 23.6 dB (at 31.25 MHz)               |
|                                                        | 21.5 dB (at 62.5 MHz)                |
|                                                        | 20.1 dB (at 100 MHz)                 |
| Shield attenuation                                     | 3.2 dB (with 1 MHz)                  |
|                                                        | 6 dB (at 4 MHz)                      |
|                                                        | 9.5 dB (at 10 MHz)                   |
|                                                        | 12.1 dB (at 16 MHz)                  |
|                                                        | 13.6 dB (at 20 MHz)                  |
|                                                        | 17.1 dB (at 31.25 MHz)               |
|                                                        | 24.8 dB (at 62.5 MHz)                |
|                                                        | 32 dB (at 100 MHz)                   |
| Halogen-free                                           | according to IEC 60754-1             |
|                                                        | according to IEC 60332-1-2           |

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|                                    |                                                 |
|------------------------------------|-------------------------------------------------|
| Flame resistance                   | in acc. to UL VW1                               |
|                                    | in accordance with UN ECE-R 118.03              |
| Resistance to oil                  | in accordance with 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                                |

## Environmental and real-life conditions

### Ambient conditions

|                                 |                                                |
|---------------------------------|------------------------------------------------|
| Degree of protection            | IP65/IP67                                      |
| Ambient temperature (operation) | -25 °C ... 60 °C (cable, fixed installation)   |
|                                 | -5 °C ... 60 °C (Cable, flexible installation) |

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## Approvals

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**EAC**

Approval ID: 19060508

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27060308 |
| ECLASS-12.0 | 27060308 |
| ECLASS-13.0 | 27440116 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002599 |
|----------|----------|

### 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                                | 7a2bbbc9-c007-4ff2-86c4-028cb815e03b |

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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)