

# VS-FSDBPS-IP20-93K-LI/2,0 - Bus system cable



1419167

<https://www.phoenixcontact.com/us/products/1419167>

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Assembled Sercos III cable, shielded, star quad, AWG 22 stranded (7-wire), RAL 3020 (traffic red), M12 flush-type socket, rear mounting, SPEEDCON 4-pos. on free RJ45 connector/IP20, length: 2 m

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1419167                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | AB18                           |
| Product key                          | ABNPAA                         |
| GTIN                                 | 4046356541121                  |
| Weight per piece (including packing) | 174.5 g                        |
| Weight per piece (excluding packing) | 173.964 g                      |
| Customs tariff number                | 85444210                       |
| Country of origin                    | PL                             |

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## Technical data

### Product properties

|                      |                                   |
|----------------------|-----------------------------------|
| Product type         | Circular connectors (device side) |
| Sensor type          | Sercos                            |
| Number of positions  | 4                                 |
| No. of cable outlets | 1                                 |
| Shielded             | yes                               |
| Cable outlet         | straight                          |

### Material specifications

|                        |                          |
|------------------------|--------------------------|
| Outer sheath, material | PVC                      |
| Conductor material     | Tin-plated Cu litz wires |

### Electrical properties

|                     |        |
|---------------------|--------|
| Transmission medium | Copper |
|---------------------|--------|

### Connector

#### Connection 1

|                      |                                          |
|----------------------|------------------------------------------|
| Type                 | Flush-type female connector straight M12 |
| Locking type         | SPEEDCON                                 |
| Coding type          | A                                        |
| Degree of protection | IP65/IP67                                |

#### Connection 2

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

### Cable/line

|              |        |
|--------------|--------|
| Cable length | 2.00 m |
|--------------|--------|

#### Sercos III [93K]

|                     |                                                                                      |
|---------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing |  |
| Cable weight        | 68 kg/km                                                                             |
| UL AWM Style        | 21694 (60 °C / 600 V)                                                                |
| Number of positions | 4                                                                                    |
| Shielded            | yes                                                                                  |

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|                                               |                                                   |
|-----------------------------------------------|---------------------------------------------------|
| Cable type                                    | Sercos III [93K]                                  |
| Conductor structure                           | 1x4xAWG22/7, SF/TQ                                |
| Signal runtime                                | 5.3 ns/m                                          |
| Conductor structure signal line               | 7x 0.25 mm                                        |
| AWG signal line                               | 22                                                |
| Conductor cross section                       | 4x 0.34 mm <sup>2</sup>                           |
| Wire diameter incl. insulation                | approx. 1.55 mm                                   |
| External cable diameter                       | 6.50 mm ±0.2 mm                                   |
| Outer sheath, material                        | PVC                                               |
| External sheath, color                        | signal red RAL 3020                               |
| Conductor material                            | Tin-plated Cu litz wires                          |
| Material wire insulation                      | PE                                                |
| Single wire, color                            | white, yellow, blue, orange                       |
| Thickness, outer sheath                       | approx. 0.90 mm                                   |
| Type of pair shielding                        | Aluminum-lined polyester foil                     |
| Overall twist                                 | Star quad                                         |
| Max. conductor resistance                     | ≤ 120 Ω/km                                        |
| Insulation resistance                         | ≥ 0.5 GΩ*km                                       |
| Coupling resistance                           | ≤ 20.00 mΩ/m (at 10 Hz)                           |
| Wave impedance                                | 100 Ω ±15 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    | 3 x D                                             |
| Minimum bending radius, flexible installation | 7 x D                                             |
| Smallest bending radius, fixed installation   | 20 mm                                             |
| Smallest bending radius, movable installation | 46 mm                                             |
| 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                                  |

## Environmental and real-life conditions

### Ambient conditions

|                                 |                                                |
|---------------------------------|------------------------------------------------|
| Degree of protection            | IP20                                           |
|                                 | IP20                                           |
| Ambient temperature (operation) | -10 °C ... 60 °C (cable, fixed installation)   |
|                                 | -5 °C ... 50 °C (Cable, flexible installation) |

# VS-FSDBPS-IP20-93K-LI/2,0 - Bus system cable

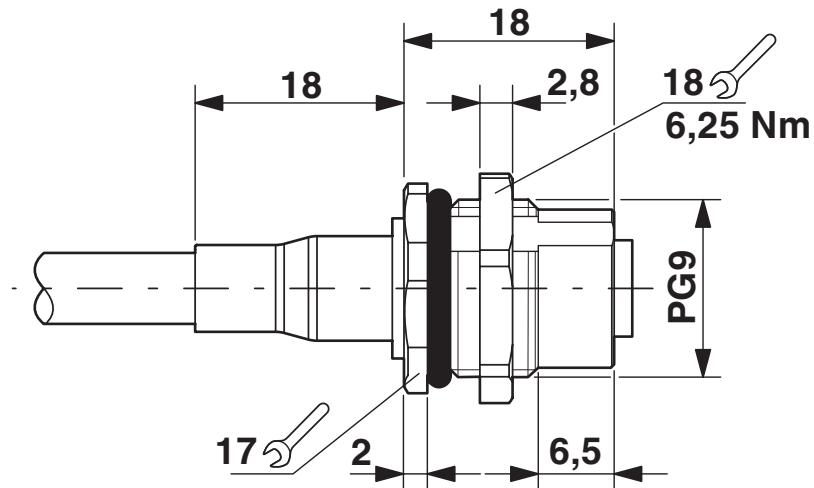


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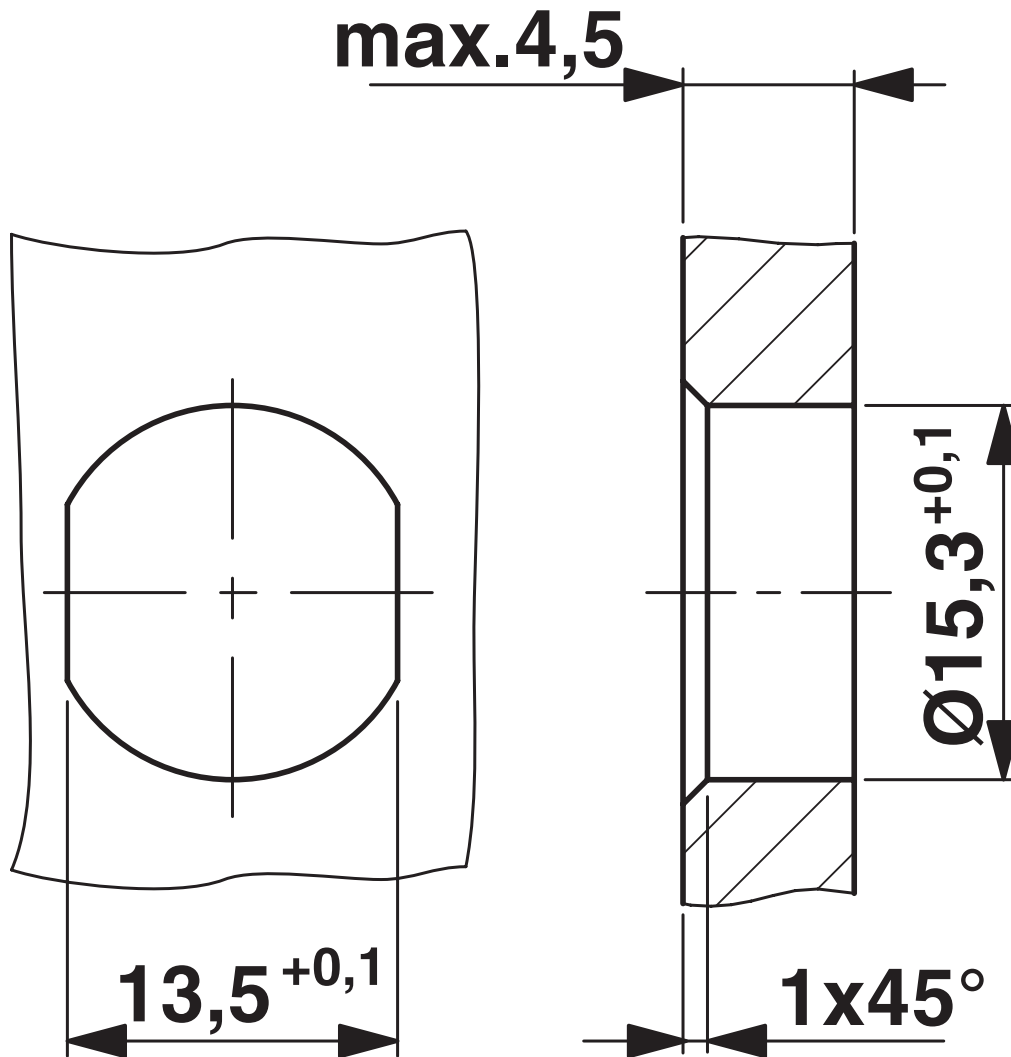
## Drawings

Dimensional drawing



M12 panel feed-through

Dimensional drawing



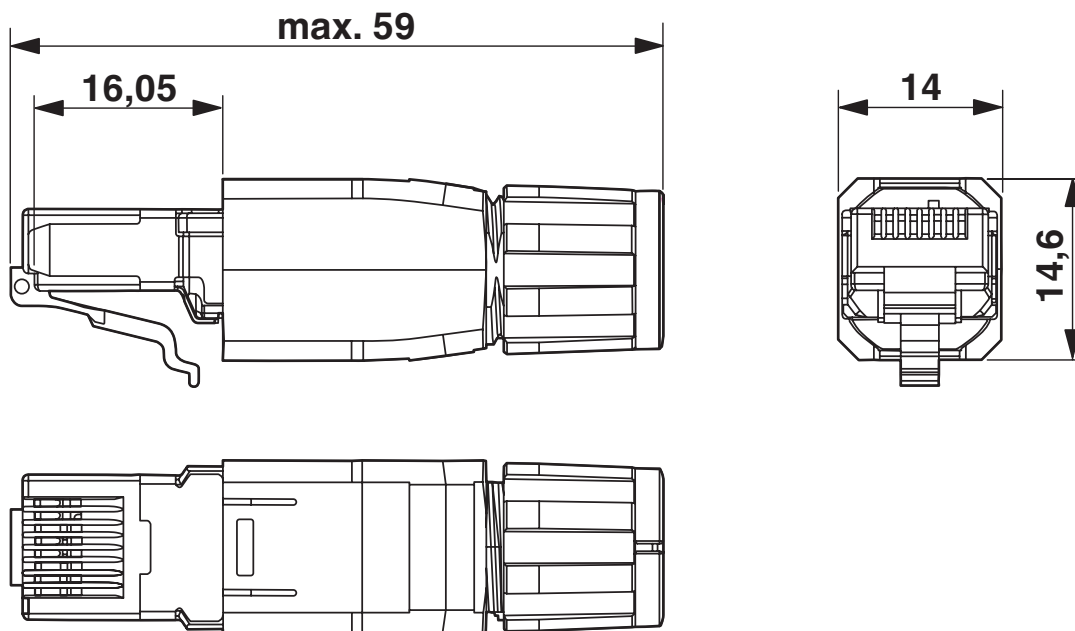
Housing cutout for Pg9 fastening thread, mounting panel with feed-through hole (alternatively with surface as protection against rotation)

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## Dimensional drawing



RJ45 connector, IP20

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## Approvals

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**EAC**

Approval ID: 19060508

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## Classifications

### ECLASS

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

### ETIM

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

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

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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.) | 2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329)(CAS: 3147-75-9) |
| SCIP                                | ccfeab6d-b19f-4c76-9108-71abedff1696                                                 |

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