

# VS-PPC/ME-IP20-93K-LI/5,0 - Network cable



1419176

<https://www.phoenixcontact.com/gb/products/1419176>

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Sercos III cable, shielded, star quad, AWG 22 stranded (7-wire), RAL 3020 (traffic red), RJ45 connector/IP67 push-pull, metal on RJ45 connector/IP20, length: 5 m

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1419176                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | ABNABA                         |
| Product key                          | ABNABA                         |
| GTIN                                 | 4046356541213                  |
| Weight per piece (including packing) | 420.891 g                      |
| Weight per piece (excluding packing) | 420.891 g                      |
| Customs tariff number                | 85444210                       |
| Country of origin                    | PL                             |

## Technical data

### Product properties

|                     |                          |
|---------------------|--------------------------|
| Product type        | Data cable preassembled  |
| Product family      | RJ45 INDUSTRIAL PN4 CAT5 |
| Sensor type         | Sercos                   |
| Number of positions | 4                        |
| Shielded            | yes                      |

### Electrical properties

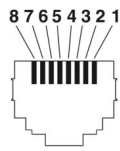
|                                         |          |
|-----------------------------------------|----------|
| Transmission medium                     | Copper   |
| Transmission speed                      | 100 Mbps |
| Transmission characteristics (category) | CAT5     |
| Transmission speed                      | 100 Mbps |

### Material specifications

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

### Connector

#### Connection 1

|                                        |                                                                                                                           |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Dimensional drawing                    | <br>Connector pin assignment plug RJ45 |
| Type                                   | RJ45 Plug, straight                                                                                                       |
| Signal type/category                   | PROFINET CAT5 (IEC 11801), 100 Mbps<br>EtherCAT® CAT5 (IEC 11801)                                                         |
| Insertion/withdrawal cycles            | ≥ 750                                                                                                                     |
| Insulation resistance                  | ≥ 100 MΩ                                                                                                                  |
| Overvoltage category                   | I                                                                                                                         |
| Degree of pollution                    | 2                                                                                                                         |
| Material Contact                       | CuSn                                                                                                                      |
| Material Contact surface               | Ni/Au                                                                                                                     |
| Material Contact carrier               | PC                                                                                                                        |
| Material Housing                       | PA-GF                                                                                                                     |
| Color (Housing)                        | gray                                                                                                                      |
| Flammability rating according to UL 94 | V2                                                                                                                        |

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|                                 |                  |
|---------------------------------|------------------|
| Degree of protection            | IP20             |
| Ambient temperature (operation) | -40 °C ... 70 °C |

## Connection 2

|                                        |                                            |
|----------------------------------------|--------------------------------------------|
| Type                                   | RJ45 Socket, straight, 4-position, Freenet |
| Number of positions                    | 4                                          |
| Signal type/category                   | Ethernet CAT5 (IEC 11801:2002), 100 Mbps   |
| Insertion/withdrawal cycles            | ≥ 750                                      |
| Insulation resistance                  | > 500 MΩ                                   |
| Overvoltage category                   | I                                          |
| Degree of pollution                    | 1                                          |
| Material Contact                       | Copper alloy                               |
| Material Contact surface               | Au                                         |
| Material Contact carrier               | PC                                         |
| Color (Housing)                        | silver-colored                             |
| Flammability rating according to UL 94 | V0                                         |
| Degree of protection                   | IP20                                       |
| Ambient temperature (operation)        | -20 °C ... 70 °C                           |

## Cable/line

|              |        |
|--------------|--------|
| Cable length | 5.00 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                                                                                  |
| 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 mm²                                                                          |
| 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                                                                  |

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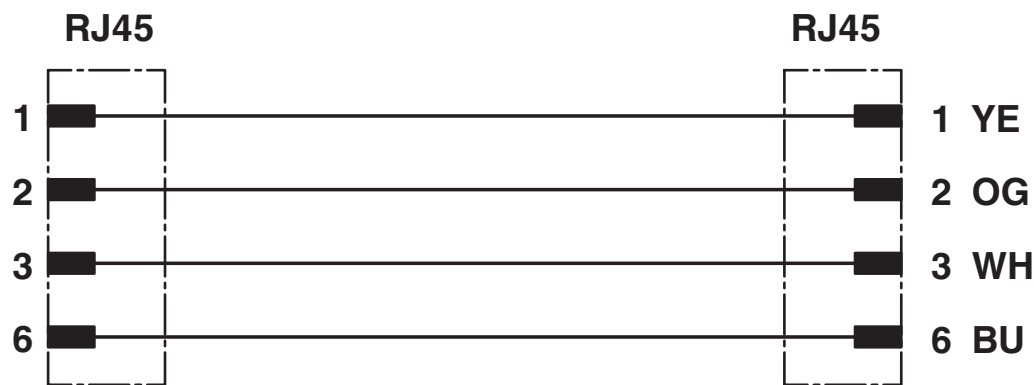
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|                                               |                                                   |
|-----------------------------------------------|---------------------------------------------------|
| Conductor material                            | 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                     | $\leq 120 \Omega/\text{km}$                       |
| Insulation resistance                         | $\geq 0.5 \text{ G}\Omega \cdot \text{km}$        |
| Coupling resistance                           | $\leq 20.00 \text{ m}\Omega/\text{m}$ (at 10 Hz)  |
| Wave impedance                                | $100 \Omega \pm 15 \Omega$ (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                                  |

Drawings

Circuit diagram



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## Approvals

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**EAC**

Approval ID: 19060508

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## Classifications

### ECLASS

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

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC001855 |
|-----------|----------|

### 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.) | 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol(CAS: 119-47-1)<br>2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329)(CAS: 3147-75-9) |
| SCIP                                | 080c6546-74b4-474b-955d-9b248fb0a7b7                                                                                                                |

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PHOENIX CONTACT Ltd  
Halesfield 13, Telford  
Shropshire, TF7 4PG  
01952 681700  
[info@phoenixcontact.co.uk](mailto:info@phoenixcontact.co.uk)