

# Printed-circuit board connector - PC 4/ 9-STF-7,62 - 1828317

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PCB connector, nominal current: 20 A, rated voltage (III/2): 630 V, nominal cross section: 4 mm<sup>2</sup>, number of positions: 9, pitch: 7.62 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin



The figure shows a 5-pos. version of the product

## Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Allows connection of two conductors
- Integrated double steel spring provides additional safety in the event of temperature and power fluctuations
- Screwable flange for superior mechanical stability



## Key Commercial Data

|              |               |
|--------------|---------------|
| Packing unit | 50 pc         |
| GTIN         |               |
| GTIN         | 4017918050542 |

## Technical data

### Item properties

|                           |                                      |
|---------------------------|--------------------------------------|
| Brief article description | Printed-circuit board connector      |
| Plug-in system            | POWER COMBICON 4                     |
| Type of contact           | Female connector                     |
| Range of articles         | PC 4/...STF                          |
| Pitch                     | 7.62 mm                              |
| Number of positions       | 9                                    |
| Connection method         | Screw connection with tension sleeve |
| Drive form screw head     | Slotted (L)                          |
| Screw thread              | M3                                   |
| Locking                   | Screw flange                         |

# Printed-circuit board connector - PC 4/ 9-STF-7,62 - 1828317

## Technical data

### Item properties

|                       |   |
|-----------------------|---|
| Number of levels      | 1 |
| Number of connections | 9 |
| Number of potentials  | 9 |

### Electrical parameters

|                             |        |
|-----------------------------|--------|
| Nominal current             | 20 A   |
| Nom. voltage                | 630 V  |
| Rated voltage               | 400 V  |
| Rated voltage (III/2)       | 630 V  |
| Rated voltage (II/2)        | 1000 V |
| Rated surge voltage (III/3) | 6 kV   |
| Rated surge voltage (III/2) | 6 kV   |
| Rated surge voltage (II/2)  | 6 kV   |

### Connection capacity

|   |  |
|---|--|
| Connection method   | Screw connection with tension sleeve         |
| pluggable   | Yes  |
| Conductor cross section solid   | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>    |
| Conductor cross section flexible  | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>    |
| Conductor cross section AWG / kcmil   | 24 ... 10                                    |
| Conductor cross section flexible, with ferrule without plastic sleeve                     | 0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| Conductor cross section, flexible, with ferrule, with plastic sleeve                      | 0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| 2 conductors with same cross section, solid   | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>  |
| 2 conductors with same cross section, flexible  | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>  |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve       | 0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>  |
| Stripping length  | 7 mm   |
| Torque  | 0.5 Nm ... 0.6 Nm                            |

### Flange specifications

|                 |                   |
|-----------------|-------------------|
| Type of locking | Screw locking     |
| Mounting flange | Screw flange      |
| Torque          | 0.3 Nm ... 0.7 Nm |

### Material data - contact

|  |   |
|--|---|
| Note                                     | WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/ JEDEC JESD 201 |
| Contact material                         | Cu alloy  |
| Surface characteristics                  | hot-dip tin-plated  |
| Metal surface terminal point (top layer) | Tin (4 - 8 µm Sn)   |
| Metal surface contact area (top layer)   | Tin (4 - 8 µm Sn)   |

### Material data - housing

# Printed-circuit board connector - PC 4/ 9-STF-7,62 - 1828317

## Technical data

### Material data - housing

|   |              |
|---|--------------|
| Housing color   | green (6021) |
| Insulating material   | PA           |
| Insulating material group   | I            |
| CTI according to IEC 60112  | 600          |
| Flammability rating according to UL 94                            | V0           |
| Glow wire flammability index GWFI according to EN 60695-2-12      | 850          |
| Glow wire ignition temperature GWIT according to EN 60695-2-13    | 775          |
| Temperature for the ball pressure test according to EN 60695-10-2 | 125 °C       |

### Dimensions for the product

|                             |         |
|-----------------------------|---------|
| Length [ l ]                | 30.7 mm |
| Width [ w ]                 | 83.8 mm |
| Height [ h ]                | 18.1 mm |
| Pitch                       | 7.62 mm |
| Height (without solder pin) | 18.1 mm |

### Packaging information

|                            |                     |
|----------------------------|---------------------|
| Type of packaging          | packed in cardboard |
| Pieces per package         | 50                  |
| Denomination packing units | Pcs.                |

### General product information

|      |  |
|------|--|
| Note | In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load. |
|------|--|

### Ambient conditions

|   |   |
|---|---|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C                                    |
| Ambient temperature (assembly)          | -5 °C ... 100 °C                                    |
| Ambient temperature (operation)         | -40 °C ... 100 °C (dependent on the derating curve) |

### Termination and connection method

|  |                     |
|--|---------------------|
| Test for conductor damage and slackening | IEC 60999-1:1999-11 |
|  | Test passed         |

### Pull-out test

|  |   |
|--|---|
| Pull-out test  | IEC 60999-1:1999-11                     |
|  | Test passed                             |
| Conductor cross section / conductor type / tensile force | 0.2 mm <sup>2</sup> / solid / > 10 N    |
|  | 0.2 mm <sup>2</sup> / flexible / > 10 N |
|  | 4 mm <sup>2</sup> / solid / > 60 N      |
|  | 4 mm <sup>2</sup> / flexible / > 60 N   |

### Mechanical tests according to standard

|                    |           |
|--------------------|-----------|
| Test specification | IEC 61984 |
|--------------------|-----------|

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## Technical data

### Mechanical tests according to standard

|                                     |                        |
|-------------------------------------|------------------------|
| Visual inspection                   | IEC 60512-1-1:2002-02  |
| Dimension check                     | IEC 60512-1-2:2002-02  |
| Resistance of inscriptions          | IEC 60068-2-70:1995-12 |
| Insertion and withdrawal force      | IEC 60512-13-2:2006-02 |
| No. of cycles                       | 50                     |
| Insertion strength per pos. approx. | 8 N                    |
| Withdraw strength per pos. approx.  | 5 N                    |
| Polarization and coding             | IEC 60512-13-5:2006-02 |
| Contact holder in insert            | IEC 60512-15-1:2008-05 |
| Test force per pos.                 | 42 N                   |

### Air clearances and creepage distances

|   |                     |
|---|---------------------|
| Clearances and creepage distances               | IEC 60664-1:2007-04 |
| Specification                                   | IEC 60664-1:2007-04 |
| Minimum clearance - inhomogeneous field (III/3) | 5.5 mm              |
| Minimum clearance - inhomogeneous field (III/2) | 5.5 mm              |
| Minimum clearance - inhomogeneous field (II/2)  | 5.5 mm              |
| Minimum creepage distance value (III/3)         | 5 mm                |
| Minimum creepage distance value (III/2)         | 3.2 mm              |
| Minimum creepage distance value (II/2)          | 5 mm                |

### Current carrying capacity / derating curves

|                  |  |
|------------------|--|
| Caption          | Type: PC 4/...-STF-7,62 with PC 4/...-G-7,62 and BF-PC 4 |
| Specification    | IEC 61984:2008-10  |
| Reduction factor | 0.8  |
| Note             | Representation based on IEC 60512-5-2:2002-02            |
|                  | For number of positions, see diagram                     |

### Mechanical tests (A)

|  |             |
|--|-------------|
| Test specification                           | IEC 61984   |
| Insertion strength per pos. approx.          | 8 N         |
| Withdraw strength per pos. approx.           | 5 N         |
| Polarization when inserted requirement >20 N | Test passed |
| Contact holder in insert requirements >20 N  | Test passed |

### Durability tests (B)

|  |                       |
|--|-----------------------|
| Specification                                | IEC 60512-9-1:2010-03 |
| Contact resistance R <sub>1</sub>            | 0.5 mΩ                |
| Insertion/withdrawal cycles                  | 50                    |
| Contact resistance R <sub>2</sub>            | 0.6 mΩ                |
| Impulse withstand voltage at sea level       | 7.3 kV                |
| Power-frequency withstand voltage            | 3.31 kV               |
| Insulation resistance, neighboring positions | 12 TΩ                 |

## Printed-circuit board connector - PC 4/ 9-STF-7,62 - 1828317

### Technical data

#### Thermal tests (C)

|   |                       |
|---|-----------------------|
| Specification                                   | IEC 60512-5-1:2002-02 |
| Number of positions                             | 12                    |
| Conductor cross section                         | 4 mm <sup>2</sup>     |
| Test current                                    | 20 A                  |
| Upper limiting temperature requirements <100 °C | Test passed           |

#### Climatic tests (D)

|  |   |
|--|---|
| Specification                          | ISO 6988:1985-02  |
| Cold stress                            | -40 °C/2 h  |
| Thermal stress                         | 100 °C/168 h  |
| Corrosive stress                       | 0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle |
| Impulse withstand voltage at sea level | 7.3 kV  |
| Power-frequency withstand voltage      | 3.31 kV   |

#### Environmental and durability tests (E)

|                                       |  |
|---------------------------------------|--|
| Specification                         | IEC 61984:2008-10                          |
| Result, degree of protection, IP code | Back of hand safety with IP10 access probe |

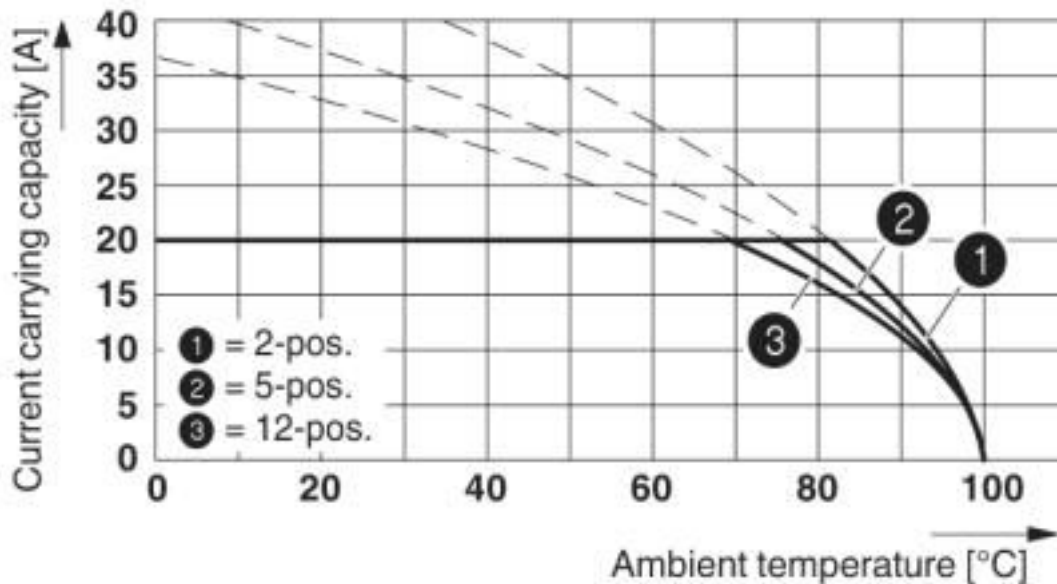
#### Environmental Product Compliance

|            |   |
|------------|---|
| REACH SVHC | Lead 7439-92-1  |
| China RoHS | Environmentally Friendly Use Period = 50 years  |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

### Drawings

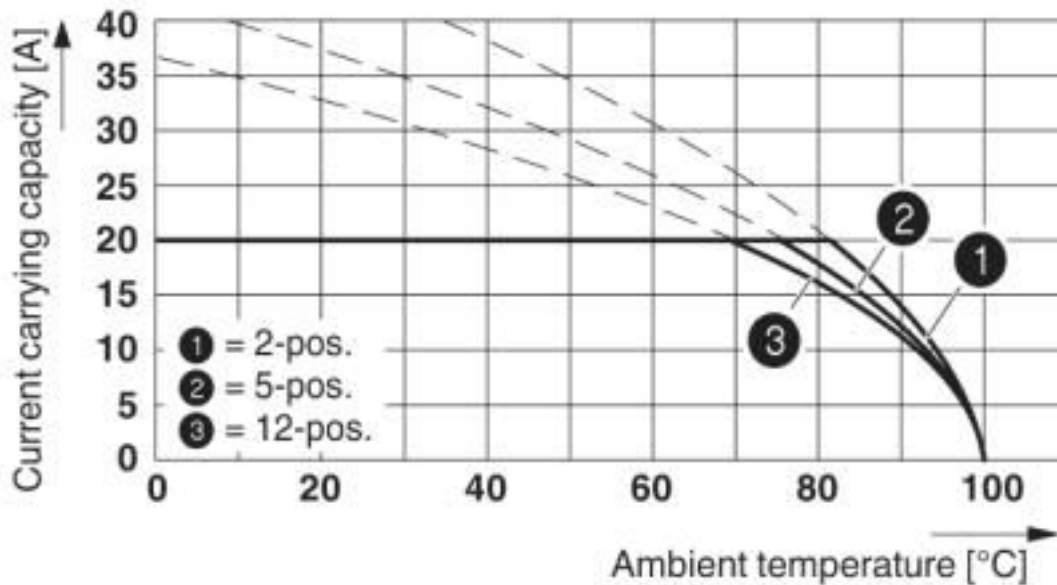
# Printed-circuit board connector - PC 4/ 9-STF-7,62 - 1828317

Diagram



Derating curve for: PC 4/...-ST-7,62 with PC 4/...-G-7,62

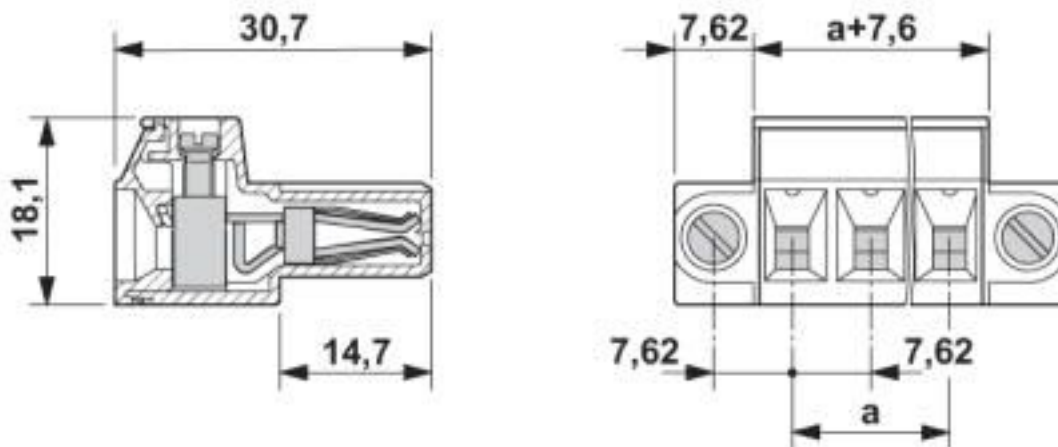
Diagram



Derating curve for: PC 4/...-ST-7,62 with PCV 4/...-G-7,62

# Printed-circuit board connector - PC 4/ 9-STF-7,62 - 1828317

Dimensional drawing



## Classifications

### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440309 |
| eCl@ss 4.0    | 27260700 |
| eCl@ss 4.1    | 27260700 |
| eCl@ss 5.0    | 27260700 |
| eCl@ss 5.1    | 27260700 |
| eCl@ss 6.0    | 27260700 |
| eCl@ss 7.0    | 27440309 |
| eCl@ss 8.0    | 27440309 |
| eCl@ss 9.0    | 27440309 |

### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002638 |
| ETIM 5.0 | EC002638 |
| ETIM 6.0 | EC002638 |
| ETIM 7.0 | EC002638 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211810 |
| UNSPSC 7.0901 | 39121409 |
| UNSPSC 11     | 39121409 |
| UNSPSC 12.01  | 39121409 |
| UNSPSC 13.2   | 39121409 |
| UNSPSC 18.0   | 39121409 |
| UNSPSC 19.0   | 39121409 |
| UNSPSC 20.0   | 39121409 |
| UNSPSC 21.0   | 39121409 |

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## Approvals

### Approvals


#### Approvals

DNV GL / CSA / BV / LR / EAC / cULus Recognized


#### Ex Approvals


### Approval details


|        |   |   |            |
|--------|---|---|------------|
| DNV GL |  | <a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a> | TAE00001EZ |
|--------|---|---|------------|

|                            |  |   |       |
|----------------------------|--|---|-------|
| CSA                        |  | <a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a> | 13631 |
|                            | B  | C   |       |
| Nominal voltage UN         | 300 V  | 300 V   |       |
| Nominal current IN         | 20 A   | 20 A  |       |
| mm <sup>2</sup> /AWG/kcmil | 28-10  | 28-10   |       |

|    |   |   |             |
|----|---|---|-------------|
| BV |  | <a href="http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials">http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials</a> | 35433/B0 BV |
|----|---|---|-------------|

|    |   |   |          |
|----|---|---|----------|
| LR |  | <a href="http://www.lr.org/en">http://www.lr.org/en</a> | 96/20012 |
|----|---|---|----------|

|     |   |  |         |
|-----|---|--|---------|
| EAC |  |  | B.01687 |
|-----|---|--|---------|

|                            |   |   |                 |
|----------------------------|---|---|-----------------|
| cULus Recognized           |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | E60425-19920722 |
|                            | B   | C   | D               |
| Nominal voltage UN         | 300 V   | 300 V   | 600 V           |
| Nominal current IN         | 30 A  | 30 A  | 5 A             |
| mm <sup>2</sup> /AWG/kcmil | 30-10   | 30-10   | 30-10           |



## Printed-circuit board connector - PC 4/ 9-STF-7,62 - 1828317

### Accessories

#### Accessories

#### Coding element

Coding profile - CP-PC RD - 1701967

Coding profile, for plugging into the coding ribs of the plug at a later date, insulating material, color: Red



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### Insertion bridge

Insertion bridge - EB 2-CC 7,5 - 1948048

Insertion bridge, pitch: 7.5 mm, length: 16.5 mm, width: 11.7 mm, number of positions: 2, color: gray



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### Labeled terminal marker

Marker card - SK 7,62/3,8:FORTL.ZAHLEN - 0804549

Marker card, Card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: adhesive, for terminal block width: 7.62 mm, lettering field size: 7.62 x 3.8 mm



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### Screwdriver tools

Screwdriver - SZS 0,6X3,5 - 1205053



Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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### Additional products

## Printed-circuit board connector - PC 4/ 9-STF-7,62 - 1828317

### Accessories

#### Plug - PCVK 4-7,62-PE - 1876246



DIN rail connector, nominal current: 20 A, rated voltage (III/2): 630 V, nominal cross section: 4 mm<sup>2</sup>, number of positions: 1, pitch: 7.62 mm, connection method: Screw connection with tension sleeve, color: green-yellow, mounting: DIN rail

#### Plug-in block - PCVK 4-7,62 - 1849998



DIN rail connector, nominal current: 20 A, rated voltage (III/2): 630 V, nominal cross section: 4 mm<sup>2</sup>, number of positions: 1, pitch: 7.62 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin, mounting: DIN rail

#### Feed-through terminal block - UPCV3K 4-G-7,62 - 1838381



Feed-through terminal block, nom. voltage: 800 V, nominal current: 20 A, connection method: Screw/plug-in connection, number of connections: 4, number of positions: 1, cross section: 0.2 mm<sup>2</sup> - 4 mm<sup>2</sup>, AWG: 24 - 12, width: 7.6 mm, color: gray, mounting type: NS 35/7,5, NS 35/15, NS 32

#### Feed-through header - DFK-PC 4/ 9-GF-7,62 - 1840625



Feed-through connector, nominal current: 20 A, rated voltage (III/2): 630 V, nominal cross section: 4 mm<sup>2</sup>, number of positions: 9, pitch: 7.62 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin, mounting: Direct mounting

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