

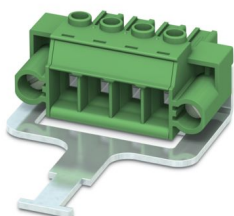
# PC 5/ 7-STF-SH1-7,62 - PCB connector



1778201

<https://www.phoenixcontact.com/us/products/1778201>

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PCB connector, nominal cross section: 6 mm<sup>2</sup>, color: green, nominal current: 32 A, rated voltage (III/2): 1000 V, contact surface: Sn, contact connection type: Socket, number of potentials: 7, number of rows: 1, number of positions: 7, number of connections: 7, product range: PC 5/..-STF1-SH, pitch: 7.62 mm, connection method: Screw connection with tension sleeve, screw head form: H1L Slotted Phillips recess, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON PC 5, Electrical properties: shielded, locking: Screw locking mechanism, mounting method: Screw flange, type of packaging: packed in cardboard

## 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
- 600 V UL approval in the smallest of dimensions
- Shield for adherence to the EMC requirements and an optional strain relief
- Screwable flange for superior mechanical stability

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1778201                        |
| Packing unit                         | 50 pc                          |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | AA04                           |
| Product key                          | AADABD                         |
| GTIN                                 | 4046356523332                  |
| Weight per piece (including packing) | 57.23 g                        |
| Weight per piece (excluding packing) | 55.994 g                       |
| Customs tariff number                | 85366990                       |
| Country of origin                    | DE                             |

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## Technical data

### Product properties

|                           |                       |
|---------------------------|-----------------------|
| Product type              | PCB connector         |
| Product family            | PC 5/...-STF1-SH      |
| Product line              | COMBICON Connectors L |
| Type                      | Standard              |
| Number of positions       | 7                     |
| Pitch                     | 7.62 mm               |
| Number of connections     | 7                     |
| Number of rows            | 1                     |
| Number of potentials      | 7                     |
| Mounting type             | Screw flange          |
| Electrical characteristic | shielded              |

### Electrical properties

#### Properties

|                             |          |
|-----------------------------|----------|
| Nominal current $I_N$       | 32 A     |
| Nominal voltage $U_N$       | 1000 V   |
| Rated voltage (III/3)       | 1000 V   |
| Rated surge voltage (III/3) | 8 kV     |
| Rated voltage (III/2)       | 1000 V   |
| Rated surge voltage (III/2) | 8 kV     |
| Rated voltage (II/2)        | 1000 V   |
| Rated surge voltage (II/2)  | 6 kV     |
| Electrical characteristic   | shielded |

### Connection data

#### Connection technology

|                         |                   |
|-------------------------|-------------------|
| Type                    | Standard          |
| Connector system        | COMBICON PC 5     |
| Nominal cross section   | 6 mm <sup>2</sup> |
| Contact connection type | Socket            |

#### Interlock

|                   |                         |
|-------------------|-------------------------|
| Locking type      | Screw locking mechanism |
| Mounting type     | Screw flange            |
| Tightening torque | 0.3 Nm ... 0.7 Nm       |

#### Conductor connection

|                                    |                                            |
|------------------------------------|--------------------------------------------|
| Connection method                  | Screw connection with tension sleeve       |
| Conductor/PCB connection direction | 0 °                                        |
| Conductor cross-section rigid      | 0.2 mm <sup>2</sup> ... 10 mm <sup>2</sup> |

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|                                                                                           |                                                                                                        |
|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Conductor cross-section flexible                                                          | 0.2 mm² ... 6 mm²                                                                                      |
| Conductor cross-section AWG                                                               | 24 ... 10                                                                                              |
| Conductor cross-section flexible, with ferrule without plastic sleeve                     | 0.25 mm² ... 6 mm²                                                                                     |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve                      | 0.25 mm² ... 4 mm²                                                                                     |
| 2 conductors with same cross section, solid                                               | 0.2 mm² ... 2.5 mm²                                                                                    |
| 2 conductors with same cross section, flexible                                            | 0.2 mm² ... 4 mm²                                                                                      |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve       | 0.25 mm² ... 1.5 mm²                                                                                   |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.25 mm² ... 2.5 mm²                                                                                   |
| Cylindrical gauge a x b / diameter                                                        | 3.6 mm x 3.1 mm / 3.4 mm                                                                               |
| Stripping length                                                                          | 10 mm                                                                                                  |
| Drive form screw head                                                                     | Slotted Phillips recess (H1L)                                                                          |
| Tightening torque                                                                         | 0.5 Nm ... 0.8 Nm ( $\leq 4 \text{ mm}^2$ is 0.5 Nm to 0.6 Nm, $> 4 \text{ mm}^2$ is 0.7 Nm to 0.8 Nm) |

## Material specifications

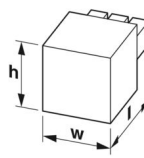
### Material data - contact

|                                          |                                                                                  |
|------------------------------------------|----------------------------------------------------------------------------------|
| 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 $\mu\text{m}$ Sn)                                                     |
| Metal surface contact area (top layer)   | Tin (4 - 8 $\mu\text{m}$ Sn)                                                     |

### Material data - housing

|                                                                   |              |
|-------------------------------------------------------------------|--------------|
| Color (Housing)                                                   | 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

|                     |                                                                                      |
|---------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing |  |
| Pitch               | 7.62 mm                                                                              |

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|            |          |
|------------|----------|
| Width [w]  | 60.94 mm |
| Height [h] | 22.9 mm  |
| Length [l] | 77.75 mm |

## Mounting

### Flange

|                   |                   |
|-------------------|-------------------|
| Tightening torque | 0.3 Nm ... 0.7 Nm |
|-------------------|-------------------|

## Notes

|                    |                                                                                                                                                                                          |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notes on operation | 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. |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Environmental and real-life conditions

### Ambient conditions

|                                         |                                                     |
|-----------------------------------------|-----------------------------------------------------|
| Ambient temperature (operation)         | -40 °C ... 100 °C (dependent on the derating curve) |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C                                    |
| Relative humidity (storage/transport)   | 30 % ... 70 %                                       |
| Ambient temperature (assembly)          | -5 °C ... 100 °C                                    |

## Electrical tests

### Air clearances and creepage distances |

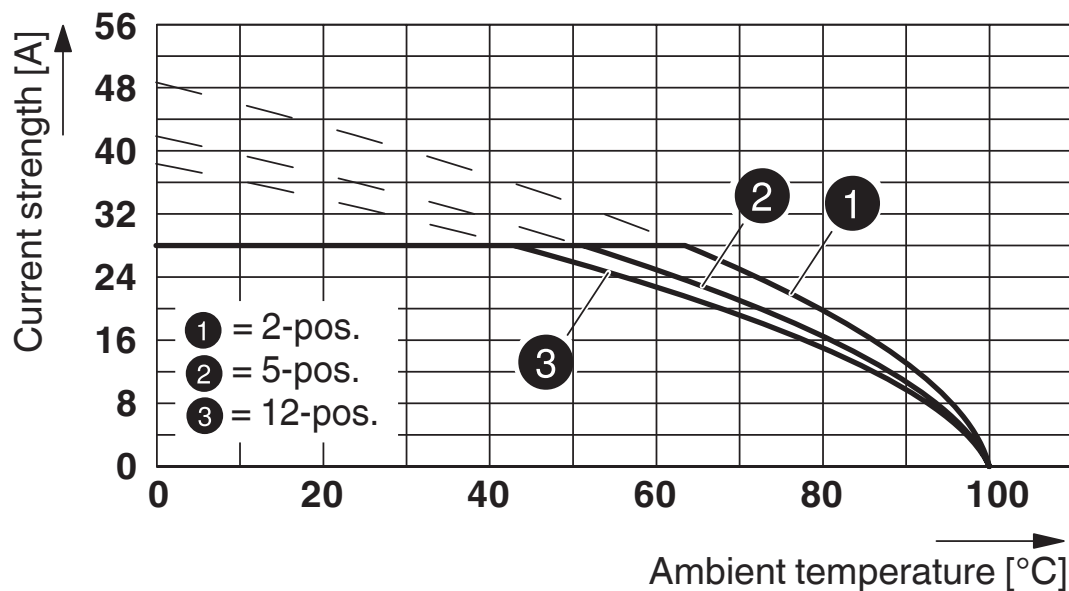
|                                                        |                     |
|--------------------------------------------------------|---------------------|
| Specification                                          | IEC 60664-1:2007-04 |
| Insulating material group                              | I                   |
| Comparative tracking index (IEC 60112)                 | CTI 600             |
| Rated insulation voltage (III/3)                       | 1000 V              |
| Rated surge voltage (III/3)                            | 8 kV                |
| minimum clearance value - non-homogenous field (III/3) | 8 mm                |
| minimum creepage distance (III/3)                      | 12.5 mm             |
| Rated insulation voltage (III/2)                       | 1000 V              |
| Rated surge voltage (III/2)                            | 8 kV                |
| minimum clearance value - non-homogenous field (III/2) | 8 mm                |
| minimum creepage distance (III/2)                      | 8 mm                |
| Rated insulation voltage (II/2)                        | 1000 V              |
| Rated surge voltage (II/2)                             | 6 kV                |
| minimum clearance value - non-homogenous field (II/2)  | 5.5 mm              |
| minimum creepage distance (II/2)                       | 5.5 mm              |

## Packaging specifications

|                   |                     |
|-------------------|---------------------|
| Type of packaging | packed in cardboard |
|-------------------|---------------------|

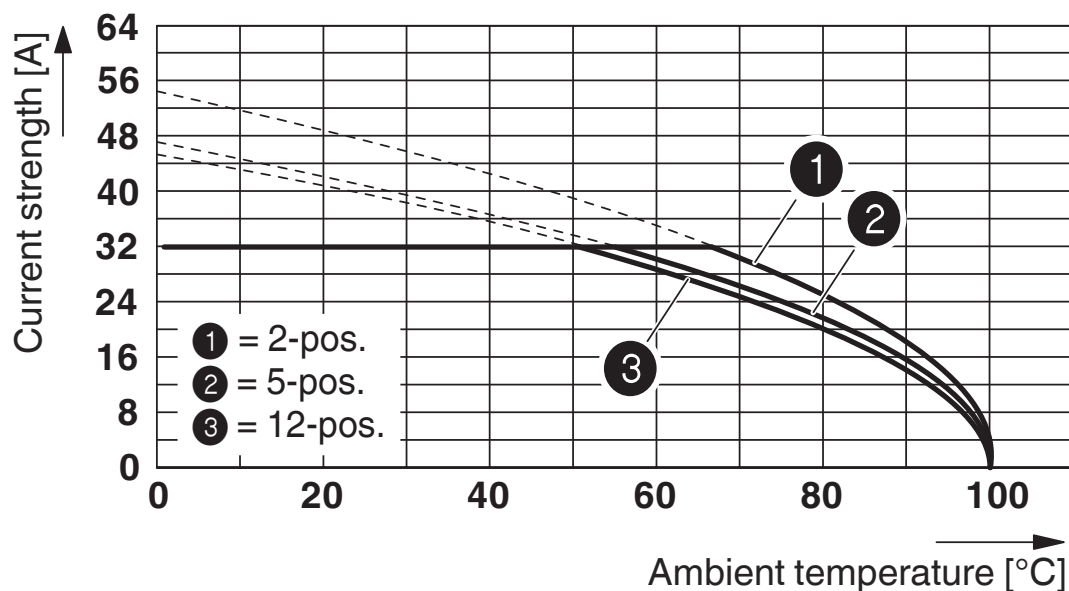
## Drawings

Diagram

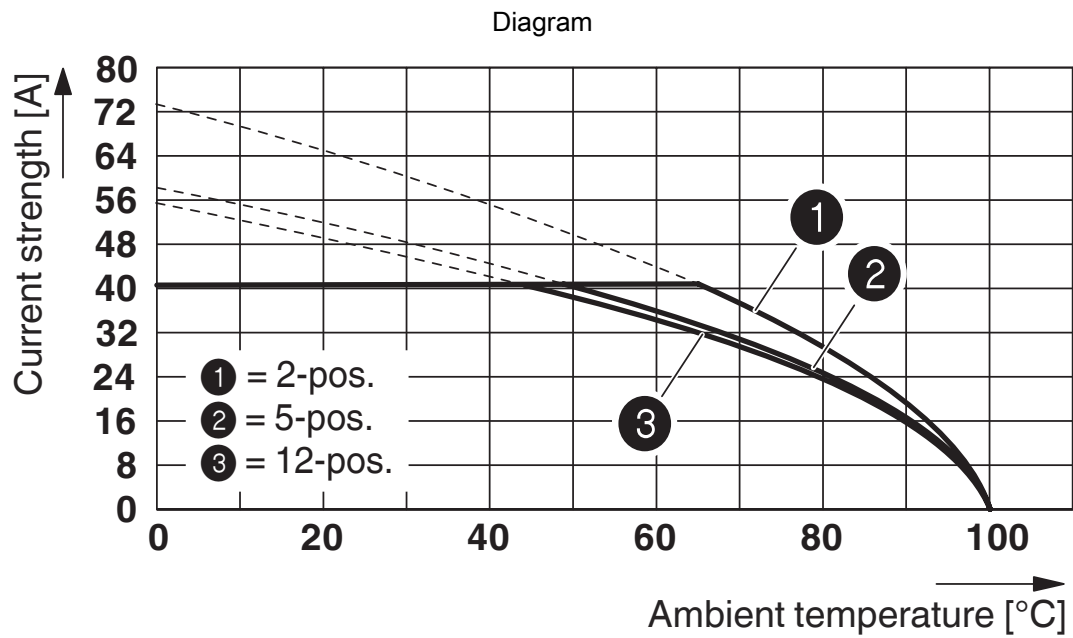


Type: PC 5/...-ST1-7,62 with PC 4/...-G-7,62  
Conductor cross-section: 4 mm<sup>2</sup>

Diagram



Type: PC 5/...-ST1-7,62 with PC 5/...-G-7,62  
Conductor cross-section: 6 mm<sup>2</sup>



Type: PC 5/...-ST1-7,62 with PC 5/...-G-7,62  
 Conductor cross-section: 10 mm<sup>2</sup>

# PC 5/ 7-STF-SH1-7,62 - PCB connector



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1778201>

| <div> <b>cULus Recognized</b><br/>Approval ID: E60425-19920722</div> |                       |                       |                   |                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                                       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                                                                                                                     |                       |                       |                   |                             |
| Multi-conductor connection                                                                                                                            | 600 V                 | 41 A                  | 24 - 12           | -                           |
| Screw connection                                                                                                                                      | 600 V                 | 41 A                  | 24 - 8            | -                           |
| C                                                                                                                                                     |                       |                       |                   |                             |
| Multi-conductor connection                                                                                                                            | 600 V                 | 41 A                  | 24 - 12           | -                           |
| Screw connection                                                                                                                                      | 600 V                 | 41 A                  | 24 - 8            | -                           |

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27460202 |
| ECLASS-15.0 | 27460202 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002638 |
|----------|----------|

### 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.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

### EF3.0 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 0.712 kg CO2e |
|---------|---------------|

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