

# PST 1,0/12-3,5 - Pin strip

1945193

<https://www.phoenixcontact.com/pc/products/1945193>



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Pin strip, nominal cross section: 0.5 mm<sup>2</sup>, color: black, nominal current: 8 A (depends on the plug used), rated voltage (III/2): 250 V, contact surface: Tin, type of contact: Pin, number of potentials: 12, number of rows: 1, number of positions: 12, number of connections: 12, product range: PST 1,0/...-V, pitch: 3.5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 3.8 mm, plug-in system: COMBICON PST 1,0, locking: without, mounting: without, type of packaging: packed in cardboard, The maximum current depends on the plug used. The lower of the two current values apply for plug and pin strip. The pin strip is made of highly temperature resistant plastic and is thus suitable for the reflow process.

## Your advantages

- Suitable for wave and reflow soldering processes
- Optimum pin geometry for all COMBICON pin strip connectors

## Commercial Data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1945193             |
| Packing unit                         | 100 pc              |
| Minimum order quantity               | 1 pc                |
| Product Key                          | AABTKA              |
| Catalog Page                         | Page 432 (C-1-2013) |
| GTIN                                 | 4017918883362       |
| Weight per Piece (including packing) | 1.36 g              |
| Weight per Piece (excluding packing) | 1.279 g             |
| Customs tariff number                | 85366930            |
| Country of origin                    | DE                  |

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## Technical Data

### Product properties

|                       |                       |
|-----------------------|-----------------------|
| Type                  | Pin strip             |
| Product line          | COMBICON Connectors S |
| Product type          | Pin strip             |
| Product family        | PST 1,0/...-V         |
| Number of positions   | 12                    |
| Pitch                 | 3.5 mm                |
| Number of connections | 12                    |
| Number of rows        | 1                     |
| Mounting flange       | without               |
| Number of potentials  | 12                    |
| Pin layout            | Linear pinning        |

### Electrical properties

|                             |                                |
|-----------------------------|--------------------------------|
| Nominal current $I_N$       | 8 A (depends on the plug used) |
| Nominal voltage $U_N$       | 250 V                          |
| Degree of pollution         | 3                              |
| Contact resistance          | 1.8 mΩ                         |
| Rated voltage (III/3)       | 160 V                          |
| Rated surge voltage (III/3) | 2.5 kV                         |
| Rated voltage (III/2)       | 250 V                          |
| Rated surge voltage (III/2) | 2.5 kV                         |
| Rated voltage (II/2)        | 250 V                          |
| Rated surge voltage (II/2)  | 2.5 kV                         |

### Mounting

|               |                |
|---------------|----------------|
| Mounting type | THR soldering  |
| Pin layout    | Linear pinning |

### 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                     | Tin-plated                                                                       |
| Metal surface contact area (top layer)      | Tin (3 - 5 μm Sn)                                                                |
| Metal surface contact area (middle layer)   | Nickel (1 - 3 μm Ni)                                                             |
| Metal surface soldering area (top layer)    | Tin (3 - 5 μm Sn)                                                                |
| Metal surface soldering area (middle layer) | Nickel (1 - 3 μm Ni)                                                             |

#### Material data - housing

|                 |              |
|-----------------|--------------|
| Color (Housing) | black (9005) |
|-----------------|--------------|

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|                                                                   |        |
|-------------------------------------------------------------------|--------|
| Insulating material                                               | PA     |
| Insulating material group                                         | IIIa   |
| CTI according to IEC 60112                                        | 250    |
| 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                 | 3.5 mm |
| Width [w]             | 42 mm  |
| Height [h]            | 13 mm  |
| Length [l]            | 2.8 mm |
| Installed height      | 9.2 mm |
| Solder pin length [P] | 3.8 mm |
| Pin dimensions        | ø 1 mm |

## Mechanical tests

### Visual inspection

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60512-1-1:2002-02 |
| Result        | Test passed           |

### Dimension check

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60512-1-2:2002-02 |
| Result        | Test passed           |

### Insertion and withdrawal forces

|                                     |             |
|-------------------------------------|-------------|
| Result                              | Test passed |
| No. of cycles                       | 10          |
| Insertion strength per pos. approx. | 6 N         |
| Withdraw strength per pos. approx.  | 5 N         |

### Contact holder in insert

|                                             |                     |
|---------------------------------------------|---------------------|
| Specification                               | IEC 60512-8:1993-01 |
| Contact holder in insert Requirements >20 N | Test passed         |

### Resistance of inscriptions

|               |                        |
|---------------|------------------------|
| Specification | IEC 60068-2-70:1995-12 |
|---------------|------------------------|

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|        |             |
|--------|-------------|
| Result | Test passed |
|--------|-------------|

## Electrical tests

### Thermal test | Test group C

|                            |                       |
|----------------------------|-----------------------|
| Specification              | IEC 60512-5-1:2002-02 |
| Tested number of positions | 16                    |

### Insulation resistance

|                                              |                       |
|----------------------------------------------|-----------------------|
| Specification                                | IEC 60512-3-1:2002-02 |
| Insulation resistance, neighboring positions | $10^{12} \Omega$      |

### Temperature cycles

|               |                     |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
| Result        | Test passed         |

### Air clearances and creepage distances |

|                                                        |                     |
|--------------------------------------------------------|---------------------|
| Specification                                          | IEC 60664-1:2007-04 |
| Insulating material group                              | IIIa                |
| Comparative tracking index (IEC 60112)                 | CTI 250             |
| Rated insulation voltage (III/3)                       | 160 V               |
| Rated surge voltage (III/3)                            | 2.5 kV              |
| minimum clearance value - non-homogenous field (III/3) | 1.5 mm              |
| minimum creepage distance (III/3)                      | 2.5 mm              |
| Rated insulation voltage (III/2)                       | 250 V               |
| Rated surge voltage (III/2)                            | 2.5 kV              |
| minimum clearance value - non-homogenous field (III/2) | 1.5 mm              |
| minimum creepage distance (III/2)                      | 2.5 mm              |
| Rated insulation voltage (II/2)                        | 250 V               |
| Rated surge voltage (II/2)                             | 2.5 kV              |
| minimum clearance value - non-homogenous field (II/2)  | 1.5 mm              |
| minimum creepage distance (II/2)                       | 2.5 mm              |

## Environmental and real-life conditions

### Vibration test

|                        |                             |
|------------------------|-----------------------------|
| Specification          | IEC 60068-2-6:1995-03       |
| Frequency              | 10 - 150 - 10 Hz            |
| Sweep speed            | 1 octave/min                |
| Amplitude              | 0.35 mm (10 Hz ... 60.1 Hz) |
| Sweep speed            | 5g (60.1 Hz ... 150 Hz)     |
| Test duration per axis | 2.5 h                       |

### Durability test

|                                        |                     |
|----------------------------------------|---------------------|
| Specification                          | IEC 60512-5:1992-08 |
| Impulse withstand voltage at sea level | 2.95 kV             |
| Contact resistance $R_1$               | 1.8 m $\Omega$      |

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|                             |                |
|-----------------------------|----------------|
| Contact resistance $R_2$    | 1.9 m $\Omega$ |
| Insertion/withdrawal cycles | 10             |

## Climatic test

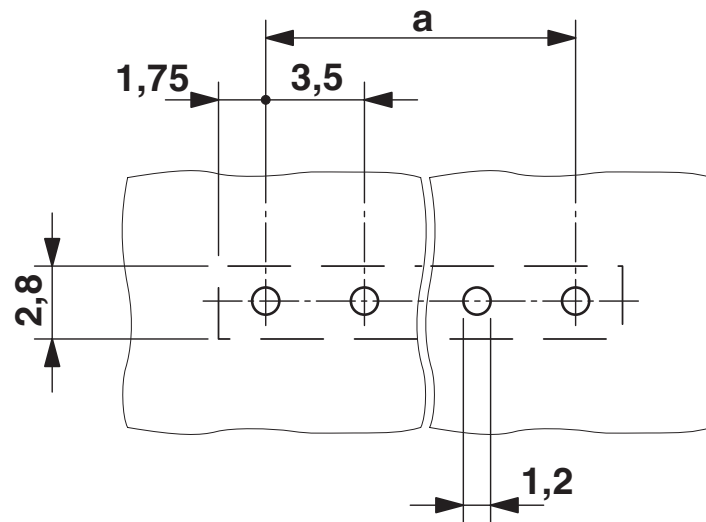
|                                   |                                                                           |
|-----------------------------------|---------------------------------------------------------------------------|
| Specification                     | ISO 6988:1985-02                                                          |
| Corrosive stress                  | 0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle |
| Thermal stress                    | 100 °C/168 h                                                              |
| Power-frequency withstand voltage | 1.39 kV                                                                   |

## Ambient conditions

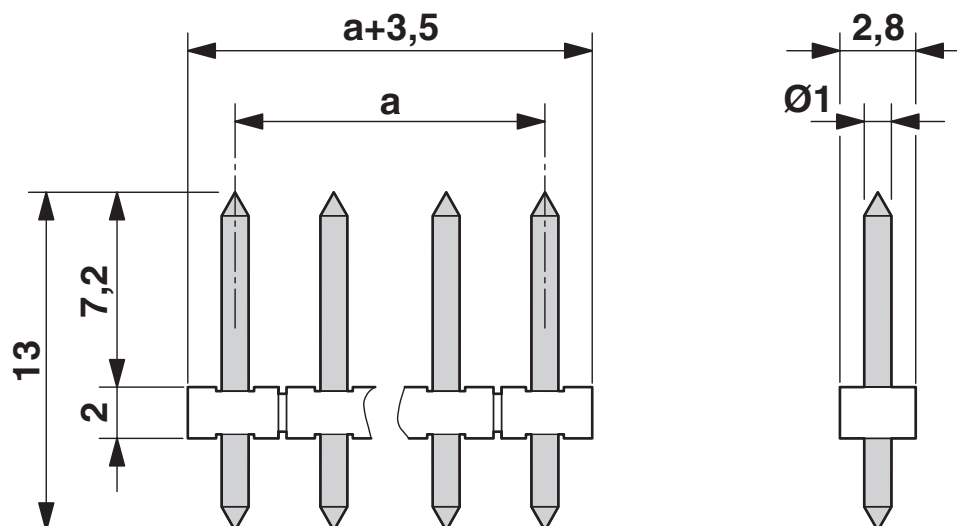
|                                         |                                                     |
|-----------------------------------------|-----------------------------------------------------|
| Ambient temperature (operation)         | -40 °C ... 100 °C (dependent on the derating curve) |
| Ambient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

## Drawings

Drilling plan/solder pad geometry



Dimensional drawing



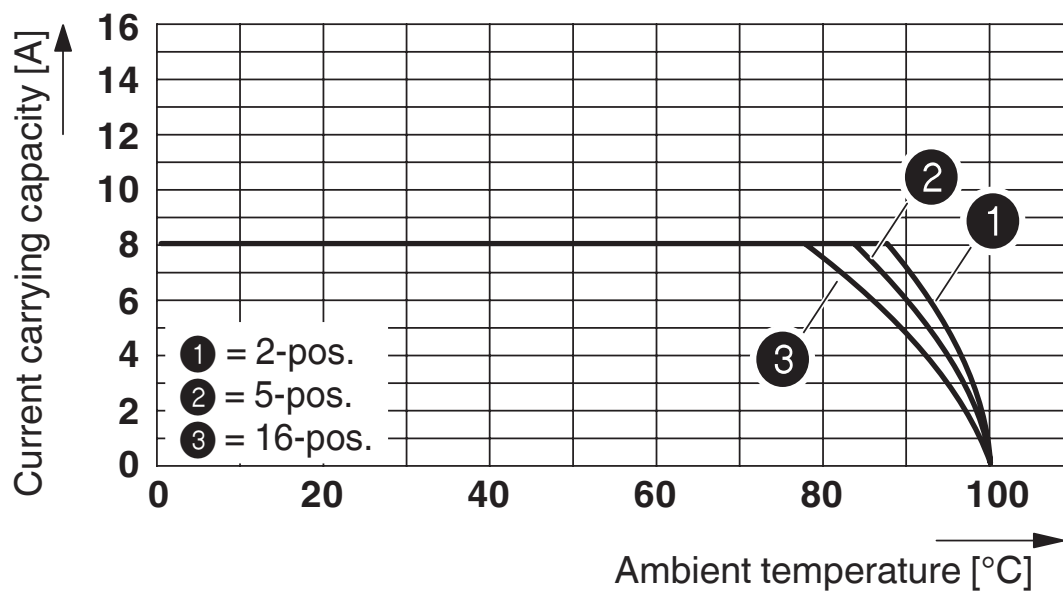
# PST 1,0/12-3,5 - Pin strip

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<https://www.phoenixcontact.com/pc/products/1945193>

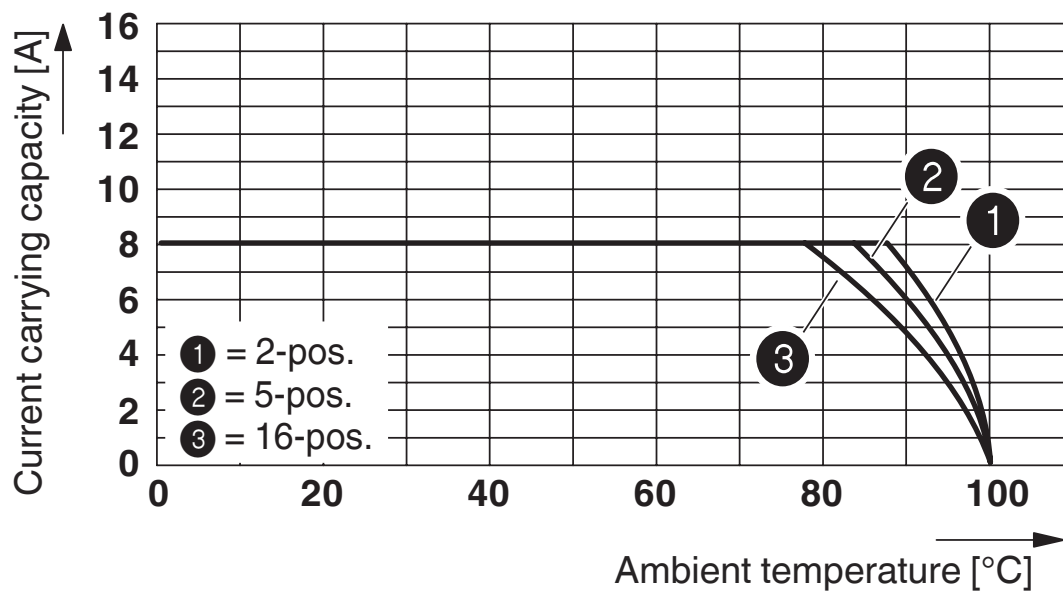


Diagram



Type: PT 1,5/...-PH-3,5 with PST 1,0/...-3,5

Diagram

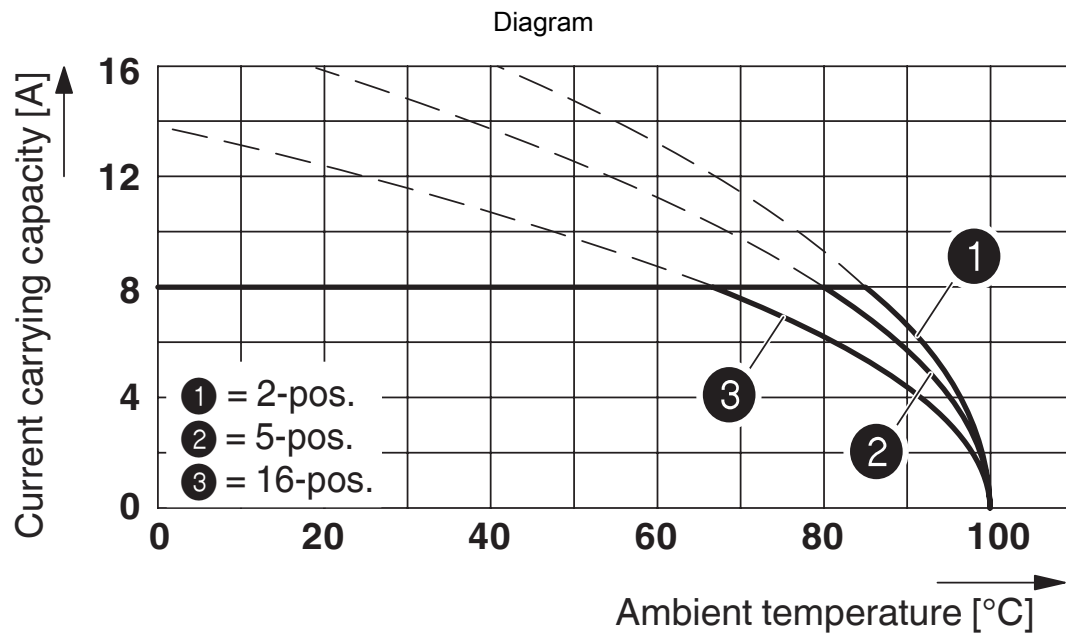


Type: PT 1,5/...-PVH-3,5 with PST 1,0/...-3,5

# PST 1,0/12-3,5 - Pin strip

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Derating curve for: PTDA 1,5/..-PH-3,5 with PST 1,0/..-3,5

# PST 1,0/12-3,5 - Pin strip

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/1945193>



**EAC**

Approval ID: B.01687



**cULus Recognized**

Approval ID: E60425-20030211

|             | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|-------------|-----------------------|-----------------------|-------------------|-----------------------------|
| Use group B |                       |                       |                   |                             |
|             | 300 V                 | 10 A                  | -                 | -                           |



**IECEE CB Scheme**

Approval ID: DE1-66607

|  | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 250 V                 | 8 A                   | -                 | -                           |



**VDE Zeichengenehmigung**

Approval ID: 40055514

|  | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 250 V                 | 8 A                   | -                 | -                           |

# PST 1,0/12-3,5 - Pin strip

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27460201 |
| ECLASS-12.0 | 27460201 |
| ECLASS-13.0 | 27460201 |

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | EC002637 |
|----------|----------|

### UNSPSC

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

# PST 1,0/12-3,5 - Pin strip

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<https://www.phoenixcontact.com/pc/products/1945193>



## Environmental Product Compliance

|            |                                                         |
|------------|---------------------------------------------------------|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

# PST 1,0/12-3,5 - Pin strip

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<https://www.phoenixcontact.com/pc/products/1945193>

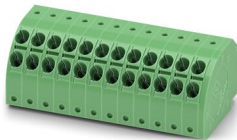


## Accessories

### PTDA 1,5/12-PH-3,5 - PCB connector

1725237

<https://www.phoenixcontact.com/pc/products/1725237>



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 240 V, contact surface: Tin, type of contact: Socket, number of potentials: 12, number of rows: 1, number of positions: 12, number of connections: 24, product range: PTDA 1,5/..-PH, pitch: 3.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 45 °, pin layout: Linear double pinning, plug-in system: COMBICON PST 1,0, locking: without, mounting: without, type of packaging: packed in cardboard

### PTDA 1,5/ 2-PH-3,5 - PCB connector

1725107

<https://www.phoenixcontact.com/pc/products/1725107>



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 240 V, contact surface: Tin, type of contact: Socket, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 4, product range: PTDA 1,5/..-PH, pitch: 3.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 45 °, pin layout: Linear double pinning, plug-in system: COMBICON PST 1,0, locking: without, mounting: without, type of packaging: packed in cardboard

# PST 1,0/12-3,5 - Pin strip

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## FK-MPT 0,5/12-ST-3,5 - PCB connector

1914030

<https://www.phoenixcontact.com/pc/products/1914030>



PCB connector, nominal cross section: 0.5 mm<sup>2</sup>, color: green, nominal current: 4 A, rated voltage (III/2): 250 V, contact surface: Tin, type of contact: Socket, number of potentials: 12, number of rows: 1, number of positions: 12, number of connections: 24, product range: FK-MPT 0,5/...-ST, pitch: 3.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON PST 1,0, locking: without, mounting: without, type of packaging: packed in cardboard

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## FK-MPT 0,5/ 2-ST-3,5 - PCB connector

1913921

<https://www.phoenixcontact.com/pc/products/1913921>



PCB connector, nominal cross section: 0.5 mm<sup>2</sup>, color: green, nominal current: 4 A, rated voltage (III/2): 250 V, contact surface: Tin, type of contact: Socket, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 4, product range: FK-MPT 0,5/...-ST, pitch: 3.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON PST 1,0, locking: without, mounting: without, type of packaging: packed in cardboard

# PST 1,0/12-3,5 - Pin strip

1945193

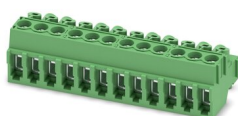
<https://www.phoenixcontact.com/pc/products/1945193>



## PT 1,5/12-PVH-3,5 - PCB connector

1984112

<https://www.phoenixcontact.com/pc/products/1984112>



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 200 V, contact surface: Tin, type of contact: Socket, number of potentials: 12, number of rows: 1, number of positions: 12, number of connections: 12, product range: PT 1,5/...-PVH, pitch: 3.5 mm, connection method: Screw connection with wire protector, screw head form: L Slotted, conductor/PCB connection direction: 0 °, plug-in system: COMBICON PST 1,0, locking: without, mounting: without, type of packaging: packed in cardboard

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## PT 1,5/ 2-PVH-3,5 - PCB connector

1984015

<https://www.phoenixcontact.com/pc/products/1984015>



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 200 V, contact surface: Tin, type of contact: Socket, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: PT 1,5/...-PVH, pitch: 3.5 mm, connection method: Screw connection with wire protector, screw head form: H1L Slotted Phillips recess, conductor/PCB connection direction: 0 °, plug-in system: COMBICON PST 1,0, locking: without, mounting: without, type of packaging: packed in cardboard

# PST 1,0/12-3,5 - Pin strip

1945193

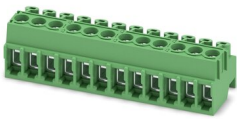
<https://www.phoenixcontact.com/pc/products/1945193>



## PT 1,5/12-PH-3,5 - PCB connector

1984413

<https://www.phoenixcontact.com/pc/products/1984413>

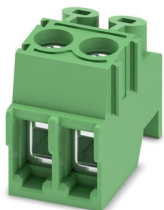


PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 200 V, contact surface: Tin, type of contact: Socket, number of potentials: 12, number of rows: 1, number of positions: 12, number of connections: 12, product range: PT 1,5/..-PH, pitch: 3.5 mm, connection method: Screw connection with wire protector, screw head form: L Slotted, conductor/PCB connection direction: 0 °, plug-in system: COMBICON PST 1,0, locking: without, mounting: without, type of packaging: packed in cardboard

## PT 1,5/ 2-PH-3,5 - PCB connector

1984316

<https://www.phoenixcontact.com/pc/products/1984316>



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 200 V, contact surface: Tin, type of contact: Socket, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: PT 1,5/..-PH, pitch: 3.5 mm, connection method: Screw connection with wire protector, screw head form: H1L Slotted Phillips recess, conductor/PCB connection direction: 0 °, plug-in system: COMBICON PST 1,0, locking: without, mounting: without, type of packaging: packed in cardboard

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