

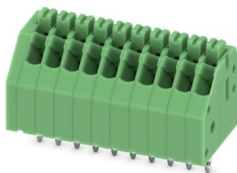
# PTSA 0,5/ 1-2,5-F BU SWO - PCB terminal block



1841160

<https://www.phoenixcontact.com/us/products/1841160>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Printed circuit board terminal, nominal current: 2 A, rated voltage (III/2): 250 V, nominal cross section: 0.5 mm<sup>2</sup>, number of potentials: 1, number of rows: 1, number of positions per row: 1, product range: PTSA 0,5, pitch: 2.5 mm, connection method: Push-in spring connection, mounting: Wave soldering, conductor/PCB connection direction: 45 °, color: blue, Pin layout: Linear pinning, Solder pin [P]: 3.6 mm, number of solder pins per potential: 1, type of packaging: packed in cardboard. Soldering legs in front area, one-rowed

## Your advantages

- Time saving push-in connection, tools not required
- Defined contact force ensures that contact remains stable over the long term
- Angled connection enables multi-row arrangement on the PCB

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1841160                        |
| Packing unit                         | 100 pc                         |
| Minimum order quantity               | 100 pc                         |
| Note                                 | Made to order (non-returnable) |
| Product key                          | AAKBDA                         |
| GTIN                                 | 4046356905312                  |
| Weight per piece (including packing) | 0.411 g                        |
| Weight per piece (excluding packing) | 0.411 g                        |
| Country of origin                    | PL                             |

# PTSA 0,5/ 1-2,5-F BU SWO - PCB terminal block



1841160

<https://www.phoenixcontact.com/us/products/1841160>

## Technical data

### Product properties

|                           |                                |
|---------------------------|--------------------------------|
| Product type              | Printed circuit board terminal |
| Product family            | PTSA 0,5                       |
| Product line              | COMBICON Terminals XS          |
| Type                      | PC termination block           |
| Number of positions       | 1                              |
| Pitch                     | 2.5 mm                         |
| Number of connections     | 1                              |
| Number of rows            | 1                              |
| Number of potentials      | 1                              |
| Pin layout                | Linear pinning                 |
| Solder pins per potential | 1                              |

### Electrical properties

#### Properties

|                             |        |
|-----------------------------|--------|
| Nominal current $I_N$       | 2 A    |
| Nominal voltage $U_N$       | 250 V  |
| Rated voltage (III/3)       | 63 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)        | 320 V  |
| Rated surge voltage (II/2)  | 2.5 kV |

### Connection data

#### Connection technology

|                       |                      |
|-----------------------|----------------------|
| Type                  | PC termination block |
| Nominal cross section | 0.5 mm <sup>2</sup>  |

#### Conductor connection

|                                  |                                              |
|----------------------------------|----------------------------------------------|
| Connection method                | Push-in spring connection                    |
| Conductor cross-section rigid    | 0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup> |
| Conductor cross-section flexible | 0.2 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>  |
| Conductor cross-section AWG      | 24 ... 20                                    |
| Stripping length                 | 9 mm                                         |

### Mounting

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

### Material specifications

# PTSA 0,5/ 1-2,5-F BU SWO - PCB terminal block



1841160

<https://www.phoenixcontact.com/us/products/1841160>

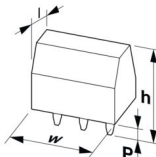
## Material data - contact

|                                          |                                                                                  |
|------------------------------------------|----------------------------------------------------------------------------------|
| 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 soldering area (top layer) | Tin (4 - 8 µm Sn)                                                                |

## Material data - housing

|                                                                   |             |
|-------------------------------------------------------------------|-------------|
| Color (Housing)                                                   | blue (5015) |
| 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                 | 2.5 mm                                                                               |
| Width [w]             | 4 mm                                                                                 |
| Height [h]            | 16.7 mm                                                                              |
| Length [l]            | 12 mm                                                                                |
| Installed height      | 13.1 mm                                                                              |
| Solder pin length [P] | 3.6 mm                                                                               |
| Pin dimensions        | 0.4 x 0.75 mm                                                                        |

## PCB design

|               |        |
|---------------|--------|
| Pin spacing   | 2.5 mm |
| Hole diameter | 1 mm   |

## Mechanical tests

### Test for conductor damage and slackening

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

### Pull-out test

|               |                     |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
|---------------|---------------------|

# PTSA 0,5/ 1-2,5-F BU SWO - PCB terminal block



1841160

<https://www.phoenixcontact.com/us/products/1841160>

|                                                                                |                                         |
|--------------------------------------------------------------------------------|-----------------------------------------|
| Conductor cross-section/conductor type/tractive force<br>setpoint/actual value | 0.14 mm <sup>2</sup> / solid / > 10 N   |
|                                                                                | 0.2 mm <sup>2</sup> / flexible / > 10 N |
|                                                                                | 0.5 mm <sup>2</sup> / solid / > 20 N    |
|                                                                                | 0.5 mm <sup>2</sup> / flexible / > 20 N |

## Electrical tests

### Temperature-rise test

|                                   |                                                                                                                                |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Specification                     | IEC 60947-7-4:2019-01                                                                                                          |
| Requirement temperature-rise test | The sum of ambient temperature and temperature rise of the PCB terminal block shall not exceed the upper limiting temperature. |

### Short-time withstand current

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60947-7-4:2019-01 |
|---------------|-----------------------|

### Insulation resistance

|                                              |                       |
|----------------------------------------------|-----------------------|
| Specification                                | IEC 60512-3-1:2002-02 |
| Insulation resistance, neighboring positions | > 5 MΩ                |

### Air clearances and creepage distances |

|                                                        |                                               |
|--------------------------------------------------------|-----------------------------------------------|
| Specification                                          | IEC 60947-1:2007-06 + A1:2010-12 + A2:2014-09 |
| Insulating material group                              | I                                             |
| Comparative tracking index (IEC 60112)                 | CTI 600                                       |
| Rated insulation voltage (III/3)                       | 63 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)                      | 1.6 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)                      | 1.5 mm                                        |
| Rated insulation voltage (II/2)                        | 320 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)                       | 1.6 mm                                        |

## Environmental and real-life conditions

### Vibration test

|                        |                             |
|------------------------|-----------------------------|
| Specification          | IEC 60068-2-6:2007-12       |
| Frequency              | 10 - 150 - 10 Hz            |
| Sweep speed            | 1 octave/min                |
| Amplitude              | 0.35 mm (10 Hz ... 60.1 Hz) |
| Acceleration           | 5g (60.1 Hz ... 150 Hz)     |
| Test duration per axis | 2.5 h                       |
| Test directions        | X-, Y- and Z-axis           |

# PTSA 0,5/ 1-2,5-F BU SWO - PCB terminal block



1841160

<https://www.phoenixcontact.com/us/products/1841160>

## Glow-wire test

|                  |                        |
|------------------|------------------------|
| Specification    | IEC 60695-2-10:2013-04 |
| Temperature      | 850 °C                 |
| Time of exposure | 5 s                    |

## Aging

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60947-7-4:2019-01 |
|---------------|-----------------------|

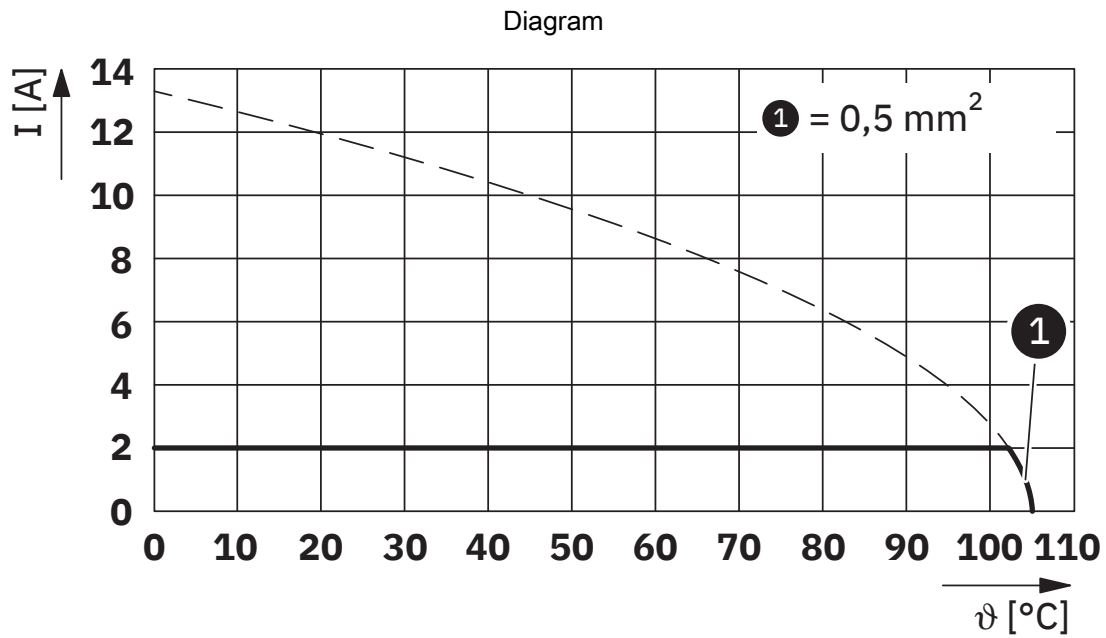
## Ambient conditions

|                                         |                  |
|-----------------------------------------|------------------|
| Ambient temperature (operation)         | -40 °C ... 85 °C |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Relative humidity (storage/transport)   | 30 % ... 70 %    |
| Ambient temperature (assembly)          | -5 °C ... 55 °C  |

## Packaging specifications

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

## Drawings



Type: PTSA 0,5/...-2,5-F

# PTSA 0,5/ 1-2,5-F BU SWO - PCB terminal block



1841160

<https://www.phoenixcontact.com/us/products/1841160>

## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27460101 |
| ECLASS-15.0 | 27460101 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002643 |
|----------|----------|

### UNSPSC

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

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                                 | 0.006 kg CO2e                            |