

## PCB terminal block - PTSA 0,5/ 9-2,5-F - 1989816

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PCB terminal block, nominal current: 2 A, rated voltage (III/2): 250 V, nominal cross section: 0.5 mm<sup>2</sup>, pitch: 2.5 mm, number of positions: 9, connection method: Push-in spring connection, mounting: Wave soldering, conductor/PCB connection direction: 45 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 3.6 mm. Soldering legs in front area, one-rowed


The figure shows a 10-position version of the product

### 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



### Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 100 pc  |
| GTIN         | <br>4 017918 973414 |
| GTIN         | 4017918973414   |

### Technical data

#### Item properties

|                           |                           |
|---------------------------|---------------------------|
| Brief article description | PCB terminal block        |
| Range of articles         | PTSA 0,5                  |
| Pitch                     | 2.5 mm                    |
| Number of positions       | 9                         |
| Connection method         | Push-in spring connection |
| Mounting type             | Wave soldering            |
| Pin layout                | Linear pinning            |
| Number of levels          | 1                         |
| Number of connections     | 9                         |
| Number of potentials      | 9                         |

#### Electrical parameters

# PCB terminal block - PTSA 0,5/ 9-2,5-F - 1989816

## Technical data

### Electrical parameters

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

### Connection capacity

|                                     |  |
|-------------------------------------|--|
| Connection method                   | Push-in spring connection                    |
| pluggable                           | no   |
| Conductor cross section solid       | 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 / kcmil | 24 ... 20                                    |
| Stripping length                    | 9 mm   |

### 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

|   |              |
|---|--------------|
| 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

|                             |                                     |
|-----------------------------|-------------------------------------|
| Caption                     | The figure shows the 5-pos. version |
| Length [ l ]                | 12 mm                               |
| Width [ w ]                 | 24 mm                               |
| Height [ h ]                | 16.7 mm                             |
| Pitch                       | 2.5 mm                              |
| Height (without solder pin) | 13.1 mm                             |
| Solder pin [P]              | 3.6 mm                              |

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## Technical data

### Dimensions for the product

|                |               |
|----------------|---------------|
| Pin spacing    | 2.5 mm        |
| Pin dimensions | 0.4 x 0.75 mm |

### Dimensions for PCB design

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

### Packaging information

|                            |                     |
|----------------------------|---------------------|
| Type of packaging          | packed in cardboard |
| Pieces per package         | 100                 |
| Denomination packing units | Pcs.                |

### Ambient conditions

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

### Termination and connection method

|  |                       |
|--|-----------------------|
| Connection test                          | IEC 60998-2-2:1991-10 |
| Test result                              | Test passed           |
| Test for conductor damage and slackening | IEC 60998-2-2:1991-10 |
|  | Test passed           |

### Pull-out test

|  |   |
|--|---|
| Pull-out test  | IEC 60998-2-2:1991-10                   |
|  | Test passed                             |
| Conductor cross section / conductor type / tensile force | 0.14 mm <sup>2</sup> / solid / > 7 N    |
|  | 0.2 mm <sup>2</sup> / flexible / > 10 N |
|  | 0.5 mm <sup>2</sup> / solid / > 30 N    |
|  | 0.5 mm <sup>2</sup> / flexible / > 30 N |

### Mechanical tests according to standard

|                    |                          |
|--------------------|--------------------------|
| Test specification | IEC 60998-2-2 (in parts) |
|--------------------|--------------------------|

### Electrical tests

|                             |                     |
|-----------------------------|---------------------|
| Rated current               | 2 A                 |
| Conductor cross section     | 0.5 mm <sup>2</sup> |
| Rated voltage (III/2)       | 250 V               |
| Rated surge voltage (III/2) | 2.5 kV              |

### Air clearances and creepage distances

|   |   |
|---|---|
| Clearances and creepage distances               | IEC 60947-1:2007-06 + A1:2010-12 + A2:2014-09 |
| Specification                                   | IEC 60947-1:2007-06 + A1:2010-12 + A2:2014-09 |
| Minimum clearance - inhomogeneous field (III/3) | 1.5 mm  |
| Minimum clearance - inhomogeneous field (III/2) | 1.5 mm  |

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## Technical data

### Air clearances and creepage distances

|  |        |
|--|--------|
| Minimum clearance - inhomogeneous field (II/2) | 1.5 mm |
| Minimum creepage distance value (III/3)        | 1.6 mm |
| Minimum creepage distance value (III/2)        | 1.5 mm |
| Minimum creepage distance value (II/2)         | 1.6 mm |

### Temperature-rise test

|                                   |                                     |
|-----------------------------------|-------------------------------------|
| Specification                     | IEC 60998-2-1:1990-04               |
| Result                            | Test passed                         |
| Requirement temperature-rise test | Increase in temperature $\leq 45$ K |

### Current carrying capacity / derating curves

|                     |  |
|---------------------|--|
| Caption             | Derating diagram for 5 pins;reduction factor=1 |
| Specification       | Following IEC 60512-5-2:2002-02                |
| Number of positions | 5  |
| Reduction factor    | 1  |

### Vibration test

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

### Resistance to ageing, humidity and penetration of solids

|            |                 |
|------------|-----------------|
| Dry heat   | 168 h/100°C     |
| Humid heat | 48 h/30 °C/92 % |

### Insulation resistance

|  |                       |
|--|-----------------------|
| Specification                                | IEC 60998-2-2:1991-10 |
| Result                                       | Test passed           |
| Insulation resistance, neighboring positions | $10^9 \Omega$         |

### Glow-wire test

|                  |                       |
|------------------|-----------------------|
| Specification    | IEC 60998-2-2:1991-10 |
| Result           | Test passed           |
| Temperature      | 850 °C                |
| Time of exposure | 5 s                   |

### Mechanical strength/tumbling barrel test

|                       |                     |
|-----------------------|---------------------|
| Specification         | IEC 60998-1:1990-04 |
| Height of fall        | 50 cm               |
| Number of drop cycles | 50                  |

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## Technical data

### Standards and Regulations

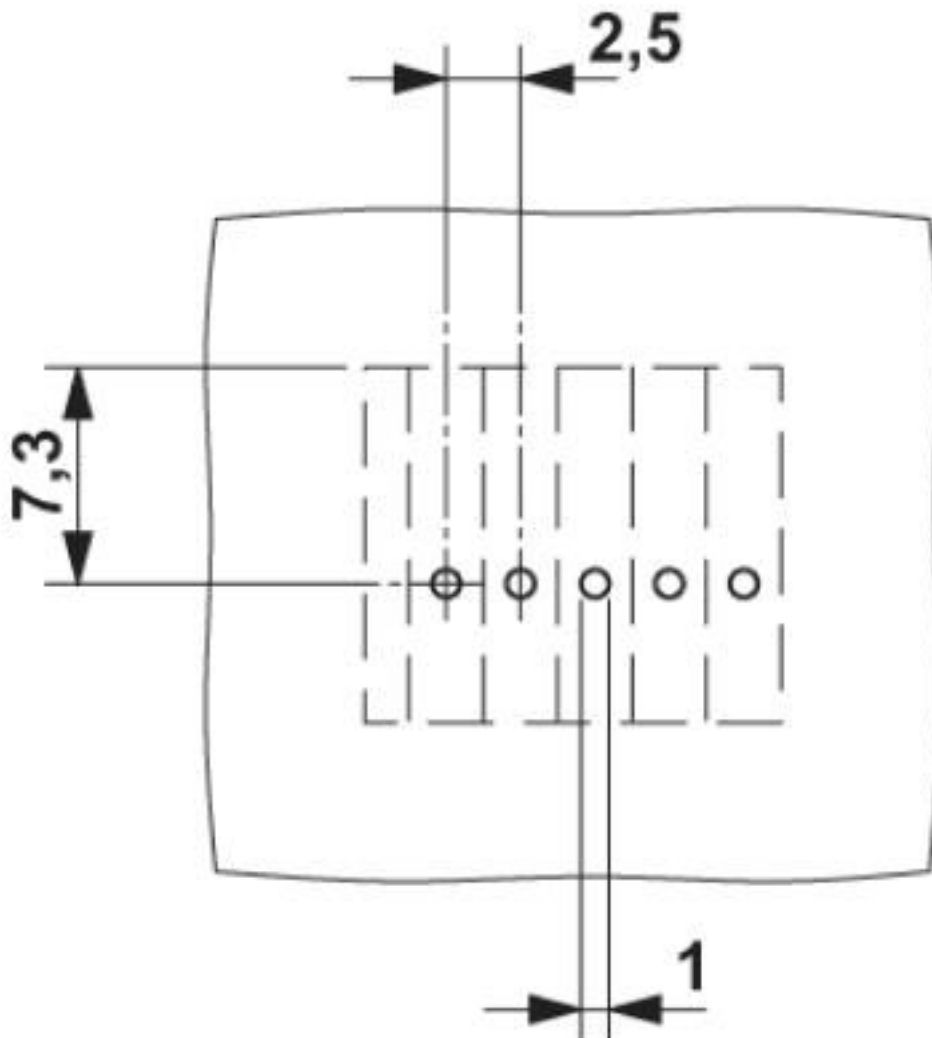
|                                  |        |
|----------------------------------|--------|
| Connection in acc. with standard | EN-VDE |
|                                  | CUL    |

### Environmental Product Compliance

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

## Drawings

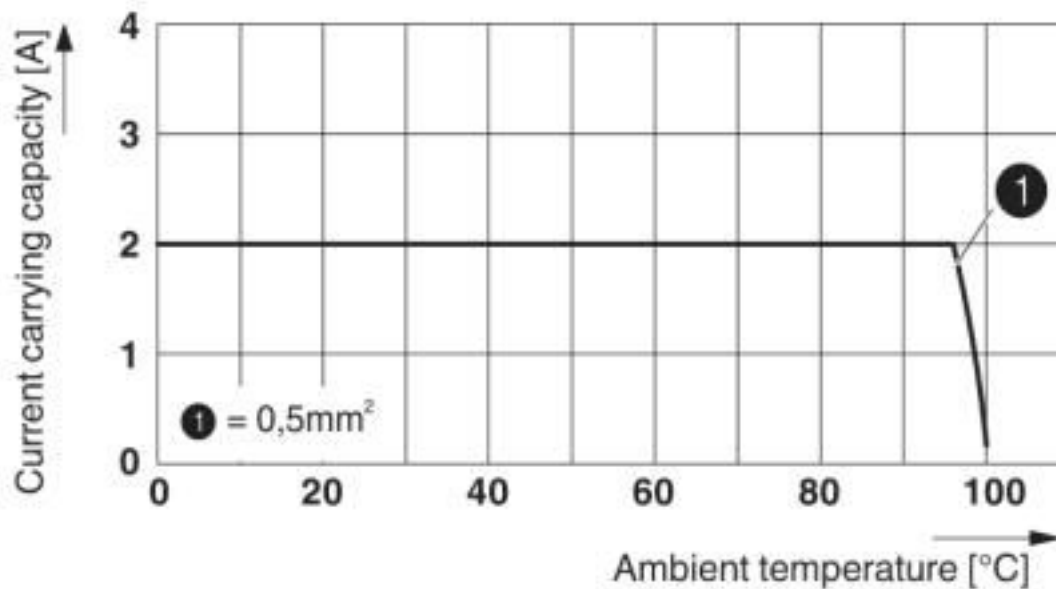
Drilling diagram



The figure shows the 5-pos. version

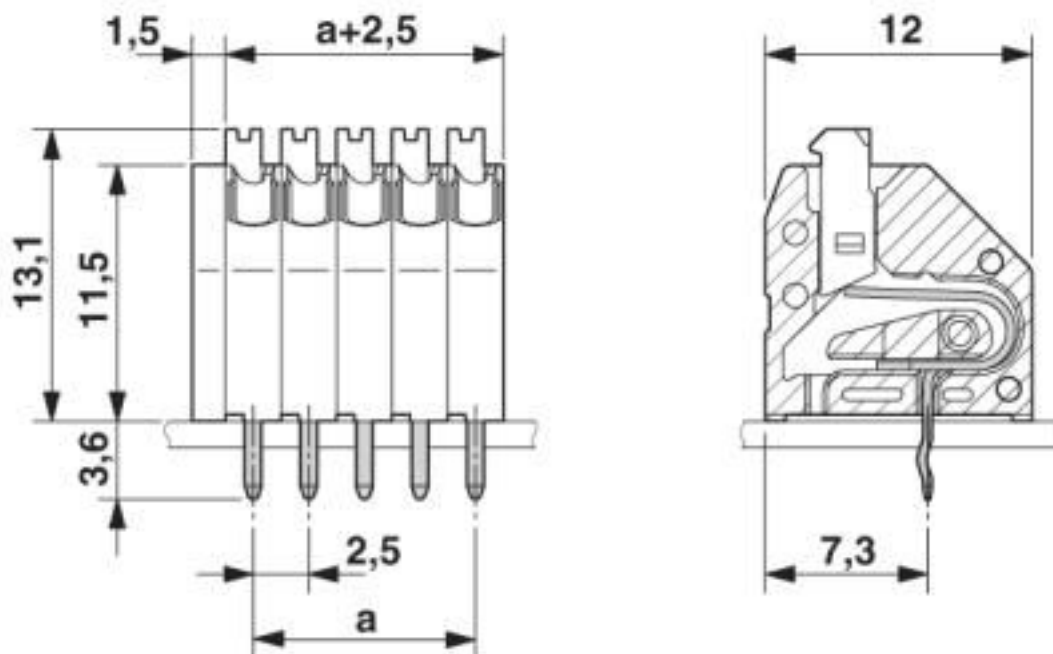
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Diagram



Derating diagram for 5 pins;reduction factor=1

Dimensional drawing



The figure shows the 5-pos. version

# PCB terminal block - PTSA 0,5/ 9-2,5-F - 1989816

## Classifications

### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440401 |
| eCl@ss 4.0    | 27260700 |
| eCl@ss 4.1    | 27260700 |
| eCl@ss 5.0    | 27141100 |
| eCl@ss 5.1    | 27261100 |
| eCl@ss 6.0    | 27261100 |
| eCl@ss 7.0    | 27440401 |
| eCl@ss 8.0    | 27440401 |
| eCl@ss 9.0    | 27440401 |

### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002643 |
| ETIM 5.0 | EC002643 |
| ETIM 6.0 | EC002643 |
| ETIM 7.0 | EC002643 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211801 |
| UNSPSC 7.0901 | 39121432 |
| UNSPSC 11     | 34131203 |
| UNSPSC 12.01  | 39121432 |
| UNSPSC 13.2   | 39121432 |
| UNSPSC 18.0   | 39121432 |
| UNSPSC 19.0   | 39121432 |
| UNSPSC 20.0   | 39121432 |
| UNSPSC 21.0   | 39121432 |

## Approvals

### Approvals

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#### Approvals

CCA / VDE Gutachten mit Fertigungsüberwachung / EAC / cULus Recognized

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#### Ex Approvals

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### Approval details

# PCB terminal block - PTSA 0,5/ 9-2,5-F - 1989816

## Approvals

|                            |               |
|----------------------------|---------------|
| CCA                        | CCA/DE1 34204 |
| Nominal current IN         | 2 A           |
| mm <sup>2</sup> /AWG/kcmil | 0.5           |

|   |       |   |          |
|---|-------|---|----------|
| VDE Gutachten mit Fertigungsüberwachung |       | <a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a> | 40013932 |
| Nominal voltage UN                      | 130 V |   |          |
| Nominal current IN                      | 2 A   |   |          |
| mm <sup>2</sup> /AWG/kcmil              | 0.5   |   |          |

|     |  |         |
|-----|--|---------|
| 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> | E60425-20030527 |
|                            | B     | D   |                 |
| Nominal voltage UN         | 150 V | 300 V   |                 |
| Nominal current IN         | 2 A   | 2 A   |                 |
| mm <sup>2</sup> /AWG/kcmil | 26-20 | 26-20   |                 |

## Accessories

### Accessories

#### Screwdriver tools

Screwdriver - SZF 0-0,4X2,5 - 1204504



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.4 x 2.5 x 75 mm, 2-component grip, with non-slip grip



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