

PCB terminal block - PTSA 0,5/21-2,5-F - 1989939

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PCB terminal block, nominal current: 2 A, rated voltage (III/2): 250 V, nominal cross section: 0.5 mm², pitch: 2.5 mm, number of positions: 21, 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 | 50 pc |
| GTIN |  4 017918 973537 |
| GTIN | 4017918973537 |

Technical data

Item properties

| | |
|---------------------------|---------------------------|
| Brief article description | PCB terminal block |
| Range of articles | PTSA 0,5 |
| Pitch | 2.5 mm |
| Number of positions | 21 |
| Connection method | Push-in spring connection |
| Mounting type | Wave soldering |
| Pin layout | Linear pinning |
| Number of levels | 1 |
| Number of connections | 21 |
| Number of potentials | 21 |

Electrical parameters

PCB terminal block - PTSA 0,5/21-2,5-F - 1989939

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 ² ... 0.5 mm ² |
| Conductor cross section flexible | 0.2 mm ² ... 0.5 mm ² |
| 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] | 54 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 | 50 |
| 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 ² / solid / > 7 N |
| | 0.2 mm ² / flexible / > 10 N |
| | 0.5 mm ² / solid / > 30 N |
| | 0.5 mm ² / 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 ² |
| 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 ≤ 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

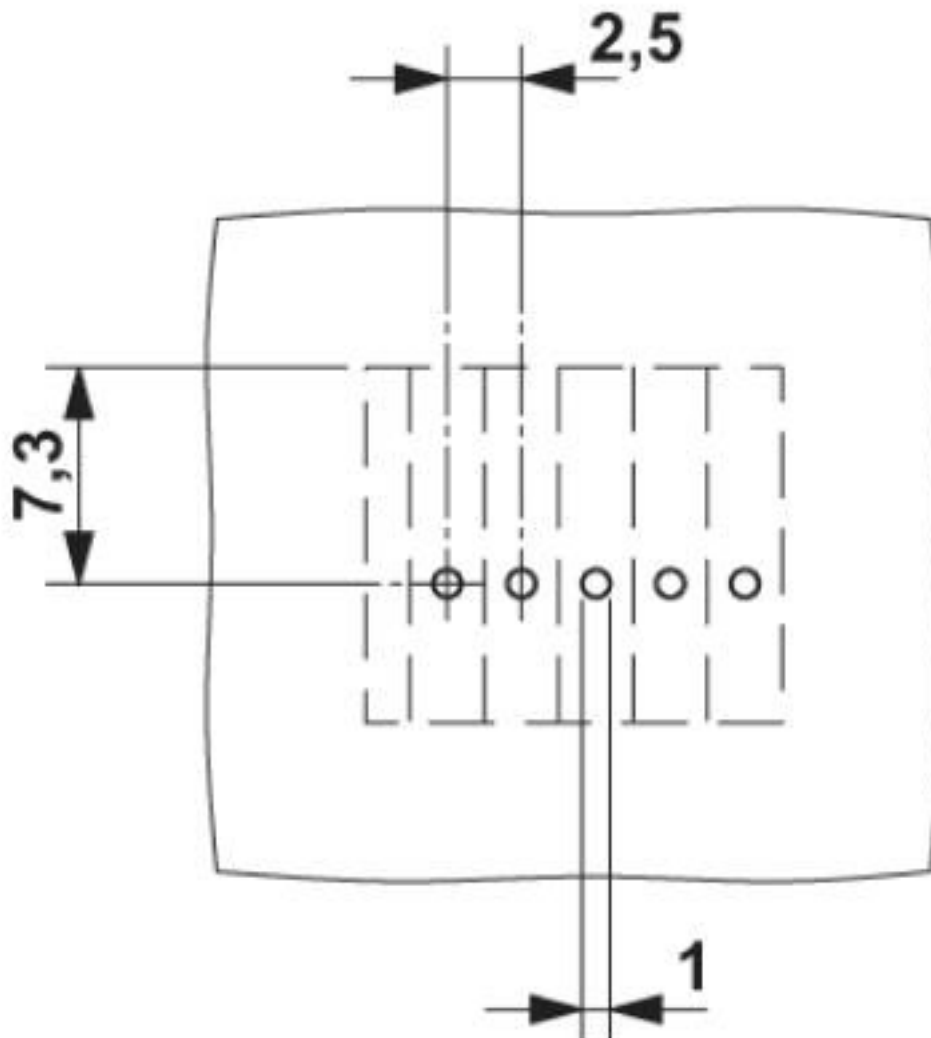
| | |
|----------------------------------|--------|
| Connection in acc. with standard | EN-VDE |
| | CUL |

Environmental Product Compliance

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

Drawings

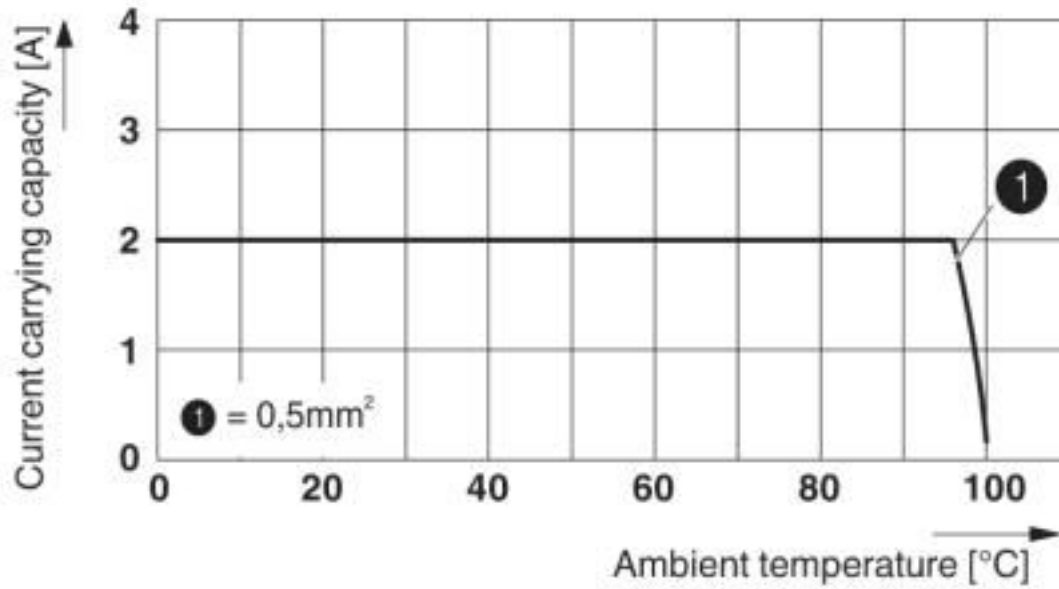
Drilling diagram



The figure shows the 5-pos. version

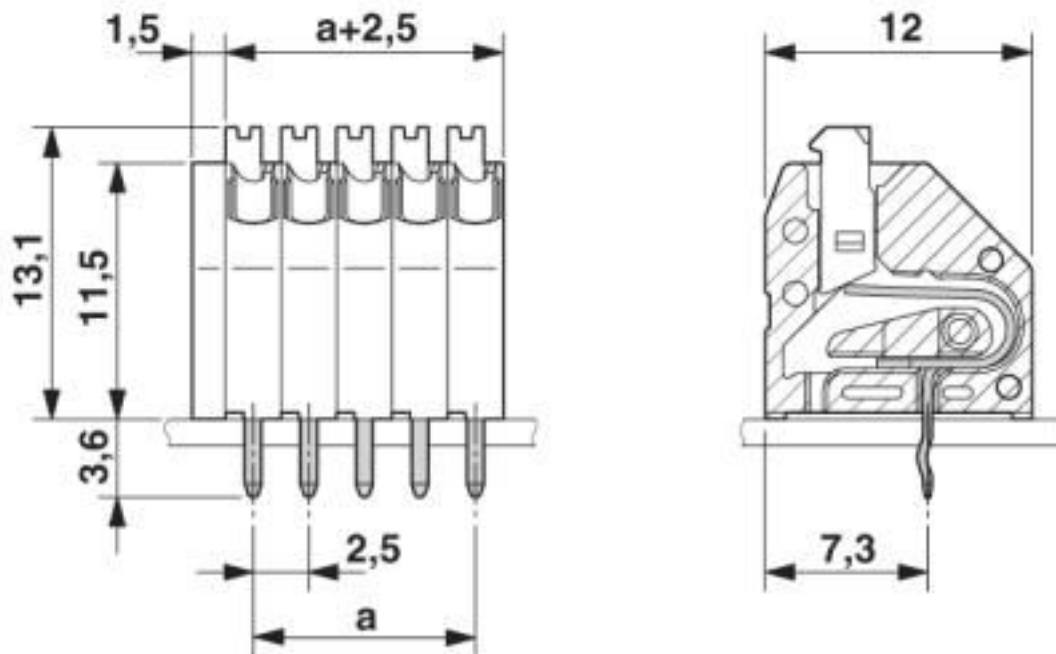
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Diagram



Derating diagram for 5 pins;reduction factor=1

Dimensional drawing



The figure shows the 5-pos. version

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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

Approvals

CCA / VDE Gutachten mit Fertigungsüberwachung / EAC / cULus Recognized

Ex Approvals

Approval details

PCB terminal block - PTSA 0,5/21-2,5-F - 1989939

Approvals

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

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

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

| | | | |
|----------------------------|-------|---|-----------------|
| cULus Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | E60425-20030527 |
| | B | D | |
| Nominal voltage UN | 150 V | 300 V | |
| Nominal current IN | 2 A | 2 A | |
| mm ² /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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