

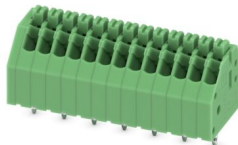
PTSA 0,5/13-2,5-Z - PCB terminal block



1990119

<https://www.phoenixcontact.com/us/products/1990119>

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PCB terminal block, nominal current: 2 A, rated voltage (III/2): 250 V, nominal cross section: 0.5 mm², number of potentials: 13, number of rows: 1, number of positions per row: 13, product range: PTSA 0,5, pitch: 2.5 mm, connection method: Push-in spring connection, mounting: Wave soldering, conductor/PCB connection direction: 45 °, color: green, Pin layout: Zigzag pinning M, Solder pin [P]: 3.6 mm, number of solder pins per potential: 1, type of packaging: packed in cardboard. Offset soldering legs, two-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 | 1990119 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Note | Made to order (non-returnable) |
| Sales key | AA11 |
| Product key | AAKBDA |
| GTIN | 4017918973681 |
| Weight per piece (including packing) | 4.97 g |
| Weight per piece (excluding packing) | 4.7 g |
| Customs tariff number | 85369010 |
| Country of origin | PL |

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Technical data

Product properties

| | |
|---------------------------|-----------------------|
| Product type | PCB terminal block |
| Product family | PTSA 0,5 |
| Product line | COMBICON Terminals XS |
| Type | PC termination block |
| Number of positions | 13 |
| Pitch | 2.5 mm |
| Number of connections | 13 |
| Number of rows | 1 |
| Number of potentials | 13 |
| Pin layout | Zigzag pinning M |
| Solder pins per potential | 1 |

Electrical properties

Properties

| | |
|-----------------------------|--------|
| Nominal current I_N | 2 A |
| Nominal voltage U_N | 250 V |
| 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) | 400 V |
| Rated surge voltage (II/2) | 2.5 kV |

Connection data

Connection technology

| | |
|-----------------------|----------------------|
| Type | PC termination block |
| Nominal cross section | 0.5 mm ² |

Conductor connection

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

Mounting

| | |
|---------------|------------------|
| Mounting type | Wave soldering |
| Pin layout | Zigzag pinning M |

Material specifications

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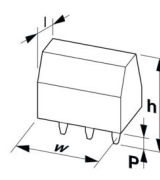
Material data - contact

| | |
|--|--|
| 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 µm - 8 µm Sn) |
| Metal surface soldering area (top layer) | Tin (4 µm - 8 µm 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 | 2.5 mm |
| Width [w] | 34 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

Connection test

| | |
|---------------|-----------------------|
| Specification | IEC 60998-2-2:1991-10 |
| Result | Test passed |

Test for conductor damage and slackening

| | |
|---------------|-----------------------|
| Specification | IEC 60998-2-2:1991-10 |
|---------------|-----------------------|

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| | |
|---|---|
| Result | Test passed |
| Pull-out test | |
| Specification | IEC 60998-2-2:1991-10 |
| Conductor cross-section/conductor type/tractive force setpoint/actual value | 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 |

Electrical tests

Temperature-rise test

| | |
|-----------------------------------|--------------------------------|
| Specification | IEC 60998-2-1:1990-04 |
| Requirement temperature-rise test | Increase in temperature ≤ 45 K |

Insulation resistance

| | |
|--|-----------------------|
| Specification | IEC 60998-2-2:1991-10 |
| Insulation resistance, neighboring positions | 10 ⁹ Ω |

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) | 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 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) | 400 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 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) |
| Acceleration | 5g (60.1 Hz ... 150 Hz) |
| Test duration per axis | 2.5 h |
| Test directions | X-, Y- and Z-axis |

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Glow-wire test

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

Ambient conditions

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

Packaging specifications

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

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Drawings

Dimensional drawing



The figure shows the 5-pos. version

Diagram



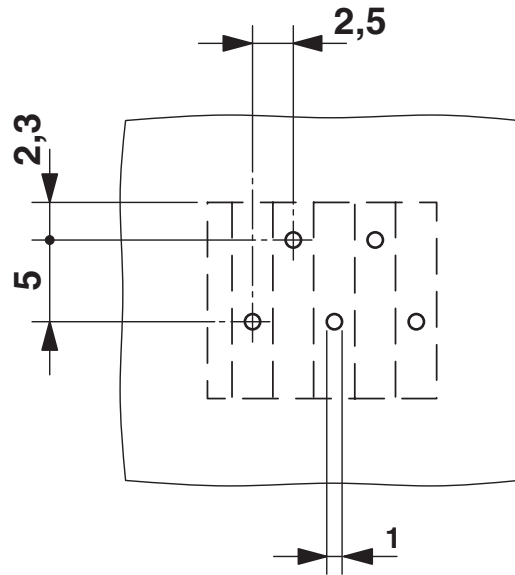
Derating diagram for 5 pins;reduction factor=1

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Drilling plan/solder pad geometry



The figure shows the 5-pos. version – Zig-zag pinning starts at the right-hand position. Other pinning available on request.

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1990119>

|  cULus Recognized Approval ID: E60425-20030527 | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| B | | | | |
| Field wiring | 300 V | 1 A | 26 - 20 | - |
| Factory wiring | 300 V | 2 A | 26 - 20 | - |
| D | | | | |
| Field wiring | 300 V | 1 A | 26 - 20 | - |
| Factory wiring | 300 V | 2 A | 26 - 20 | - |

|  VDE report with production monitoring Approval ID: 40013932 | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | | | | |
| | 250 V | 2 A | - | - 0.5 |

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Classifications

ECLASS

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

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC002643 |
|-----------|----------|

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% |
|-------------------------------------|----------------------------|

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 0.032 kg CO2e |
|---------|---------------|

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