

PTSA 0,5/ 9-2,5-Z - PCB terminal block



1990070

<https://www.phoenixcontact.com/us/products/1990070>

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.



PCB terminal block, nominal current: 2 A, rated voltage (III/2): 250 V, nominal cross section: 0.5 mm², number of potentials: 9, number of rows: 1, number of positions per row: 9, 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 | 1990070 |
| Packing unit | 100 pc |
| Minimum order quantity | 100 pc |
| Sales key | AA11 |
| Product key | AAKBDA |
| GTIN | 4017918973643 |
| Weight per piece (including packing) | 3.524 g |
| Weight per piece (excluding packing) | 3.514 g |
| Customs tariff number | 85369010 |
| Country of origin | PL |

PTSA 0,5/ 9-2,5-Z - PCB terminal block



1990070

<https://www.phoenixcontact.com/us/products/1990070>

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 | 9 |
| Pitch | 2.5 mm |
| Number of connections | 9 |
| Number of rows | 1 |
| Number of potentials | 9 |
| 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

PTSA 0,5/ 9-2,5-Z - PCB terminal block

1990070

<https://www.phoenixcontact.com/us/products/1990070>

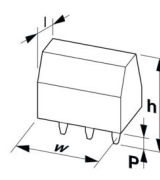
Material data - contact

| | |
|--|--|
| 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] | 24 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 |
|---------------|-----------------------|

PTSA 0,5/ 9-2,5-Z - PCB terminal block



1990070

<https://www.phoenixcontact.com/us/products/1990070>

| 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 |

PTSA 0,5/ 9-2,5-Z - PCB terminal block



1990070

<https://www.phoenixcontact.com/us/products/1990070>

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

PTSA 0,5/ 9-2,5-Z - PCB terminal block

1990070

<https://www.phoenixcontact.com/us/products/1990070>

Drawings

Dimensional drawing



The figure shows the 5-pos. version

Diagram



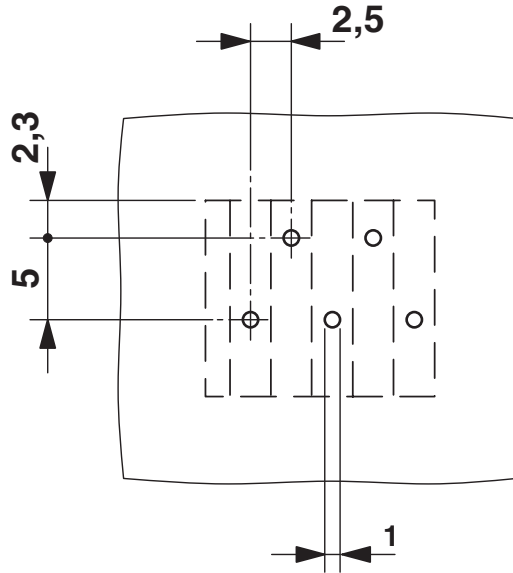
Derating diagram for 5 pins;reduction factor=1

PTSA 0,5/ 9-2,5-Z - PCB terminal block

1990070

<https://www.phoenixcontact.com/us/products/1990070>

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.

PTSA 0,5/ 9-2,5-Z - PCB terminal block




1990070

<https://www.phoenixcontact.com/us/products/1990070>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1990070>

|  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 |

PTSA 0,5/ 9-2,5-Z - PCB terminal block



1990070

<https://www.phoenixcontact.com/us/products/1990070>

Classifications

ECLASS

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

ETIM

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

UNSPSC

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

PTSA 0,5/ 9-2,5-Z - PCB terminal block



1990070

<https://www.phoenixcontact.com/us/products/1990070>

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 | 0.022 kg CO2e |
|---------|---------------|

Phoenix Contact 2026 © - all rights reserved
<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com