

PCB terminal block - PTSA 1,5/ 5-3,5-Z



1985221

<https://www.phoenixcontact.com/us/products/1985221>

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PCB terminal block, nominal current: 8 A, rated voltage (III/2): 400 V, nominal cross section: 1.5 mm², number of potentials: 5, number of rows: 1, number of positions per row: 5, product range: PTSA 1,5, pitch: 3.5 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]: 3.5 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 | 1985221 |
| Packing unit | 1 pc |
| Minimum order quantity | 180 pc |
| Sales Key | A03 |
| Product Key | AALBDA |
| Catalog Page | Page 413 (C-1-2013) |
| GTIN | 4017918922306 |
| Weight per Piece (including packing) | 2.777 g |
| Weight per Piece (excluding packing) | 2.424 g |
| Customs tariff number | 85369010 |
| Country of origin | CN |

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Technical Data

Product properties

| | |
|---------------------------|--------------------------------|
| Type | PC termination block |
| Product line | COMBICON Terminals S |
| Product type | Printed circuit board terminal |
| Number of positions | 5 |
| Pitch | 3.5 mm |
| Number of connections | 5 |
| Number of rows | 1 |
| Number of potentials | 5 |
| Pin layout | Zigzag pinning M |
| Solder pins per potential | 1 |

Electrical properties

| | |
|-----------------------------|-------|
| Nominal current I_N | 8 A |
| Nominal voltage U_N | 400 V |
| Degree of pollution | 3 |
| Rated voltage (III/3) | 250 V |
| Rated surge voltage (III/3) | 4 kV |
| Rated voltage (III/2) | 400 V |
| Rated surge voltage (III/2) | 4 kV |

Connection data

Connection technology

| | |
|-----------------------|----------------------|
| Type | PC termination block |
| Nominal cross section | 1.5 mm ² |

Conductor connection

| | |
|---|--|
| Connection method | Push-in spring connection |
| Conductor cross section solid | 0.2 mm ² ... 1.5 mm ² |
| Conductor cross section flexible | 0.2 mm ² ... 1.5 mm ² |
| Conductor cross section AWG | 24 ... 16 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm ² ... 1 mm ² |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.25 mm ² ... 0.5 mm ² |
| 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 - 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 |

Material data – actuating element

| | |
|------------------------------|--------------|
| Color of the actuating lever | green (6021) |
|------------------------------|--------------|

Dimensions

| | |
|-----------------------|---------|
| Dimensional drawing | |
| Pitch | 3.5 mm |
| Width [w] | 19 mm |
| Height [h] | 16.7 mm |
| Length [l] | 12 mm |
| Installed height | 13.1 mm |
| Solder pin length [P] | 3.5 mm |

PCB design

| | |
|-------------|--------|
| Pin spacing | 3.5 mm |
|-------------|--------|

Mechanical tests

Test for conductor damage and slackening

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

Pull-out test

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| | |
|---|---|
| Specification | IEC 60999-1:1999-11 |
| Conductor cross section/conductor type/tractive force setpoint/actual value | 0.2 mm ² / solid / > 10 N |
| | 0.2 mm ² / flexible / > 10 N |
| | 1.5 mm ² / solid / > 40 N |
| | 1.5 mm ² / flexible / > 40 N |

Electrical tests

Temperature-rise test

| | |
|-----------------------------------|--|
| Specification | IEC 60947-7-4:2013-08 |
| 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 60947-7-4:2013-08 |
|---------------|-----------------------|

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) | 250 V |
| Rated surge voltage (III/3) | 4 kV |
| minimum clearance value - non-homogenous field (III/3) | 3 mm |
| minimum creepage distance (III/3) | 3.2 mm |
| Note on connection cross section | With connected conductor 1.5 mm ² (solid). |
| Rated insulation voltage (III/2) | 400 V |
| Rated surge voltage (III/2) | 4 kV |
| minimum clearance value - non-homogenous field (III/2) | 3 mm |
| minimum creepage distance (III/2) | 3 mm |
| Rated insulation voltage (II/2) | 630 V |
| Rated surge voltage (II/2) | 4 kV |
| minimum clearance value - non-homogenous field (II/2) | 3 mm |
| minimum creepage distance (II/2) | 3.2 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 - 60.1 Hz) |
| Sweep speed | 5g (60.1 - 150 Hz) |

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| | |
|------------------------|-------|
| Test duration per axis | 2.5 h |
|------------------------|-------|

Glow-wire test

| | |
|------------------|------------------------|
| Specification | IEC 60695-2-10:2000-10 |
| Temperature | 850 °C |
| Time of exposure | 5 s |

Aging

| | |
|---------------|-----------------------|
| Specification | IEC 60947-7-4:2013-08 |
|---------------|-----------------------|

Ambient conditions

| | |
|---|---|
| Ambient temperature (operation) | -40 °C ... 100 °C (Depending on the current carrying capacity/derating curve) |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Relative humidity (storage/transport) | 30 % ... 70 % |
| Ambient temperature (assembly) | -5 °C ... 85 °C |

Packaging specifications

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

PCB terminal block - PTSA 1,5/ 5-3,5-Z

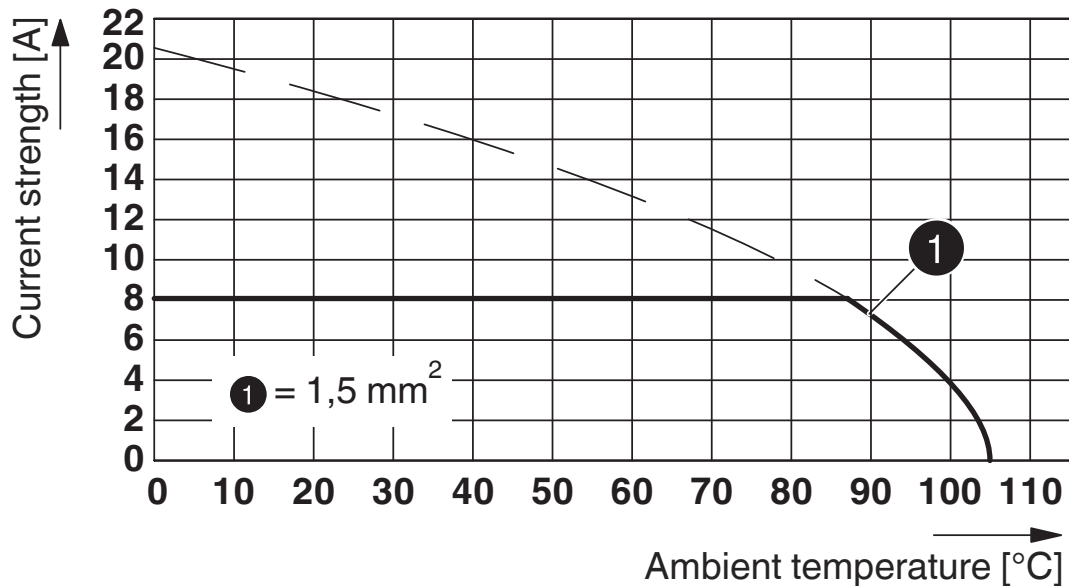


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Drawings

Diagram



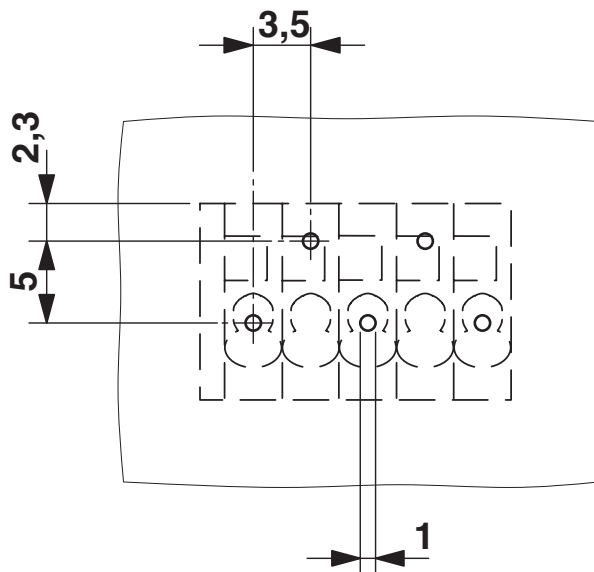
Type: PTSA 1,5/4-3,5-Z

Tested in accordance with DIN EN 60512-5-2:2003-01

Reduction factor = 1

Number of positions: 4

Drilling plan/solder pad geometry



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

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Approvals



EAC

Approval ID: B.01687



cULus Recognized

Approval ID: E60425-20030527

| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
|-------------|-----------------------|-----------------------|-------------------|-----------------------------|
| Use group B | | | | |
| | 300 V | 5 A | 24 - 16 | - |
| Use group D | | | | |
| | 300 V | 5 A | 24 - 16 | - |

CCA

Approval ID: CCA/DE1 34182/33276

| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | | 2 A | - | - 0.75 |



VDE report with production monitoring

Approval ID: 40018594

| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | 250 V | 2 A | - | 0.5 - 0.75 |

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Classifications

ECLASS

| | |
|---------------|----------|
| ECLASS-9.0 | 27440401 |
| ECLASS-10.0.1 | 27440401 |
| ECLASS-11.0 | 27460101 |

ETIM

| | |
|----------|----------|
| ETIM 8.0 | EC002643 |
|----------|----------|

UNSPSC

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

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Environmental Product Compliance

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

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Accessories

Screwdriver

Screwdriver - SZS 0,4X2,5 VDE - 1205037

<https://www.phoenixcontact.com/us/products/1205037>



Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

Crimping pliers

Crimping pliers - CRIMPFOX 6 - 1212034

<https://www.phoenixcontact.com/us/products/1212034>



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

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