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Data sheet

Order No.: 1985001

Type: PTSA 1,5/ 6-3,5-F

PCB terminal block, Push-in spring connection



The figure shows a 10-position version of the product

1 Main features



- | | | | |
|---------------------------|---------------------------|------------------------|---------------------|
| • No. of pos. | 6 | • Nominal current | 8 A |
| • Conductor cross section | 1.5 mm ² | • Nominal voltage | 250 V |
| • Color | green | • Connection direction | 45 ° |
| • Pitch | 3.5 mm | • Type of packaging | packed in cardboard |
| • Connection method | Push-in spring connection | | |

2 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



Make sure you always use the latest documentation.

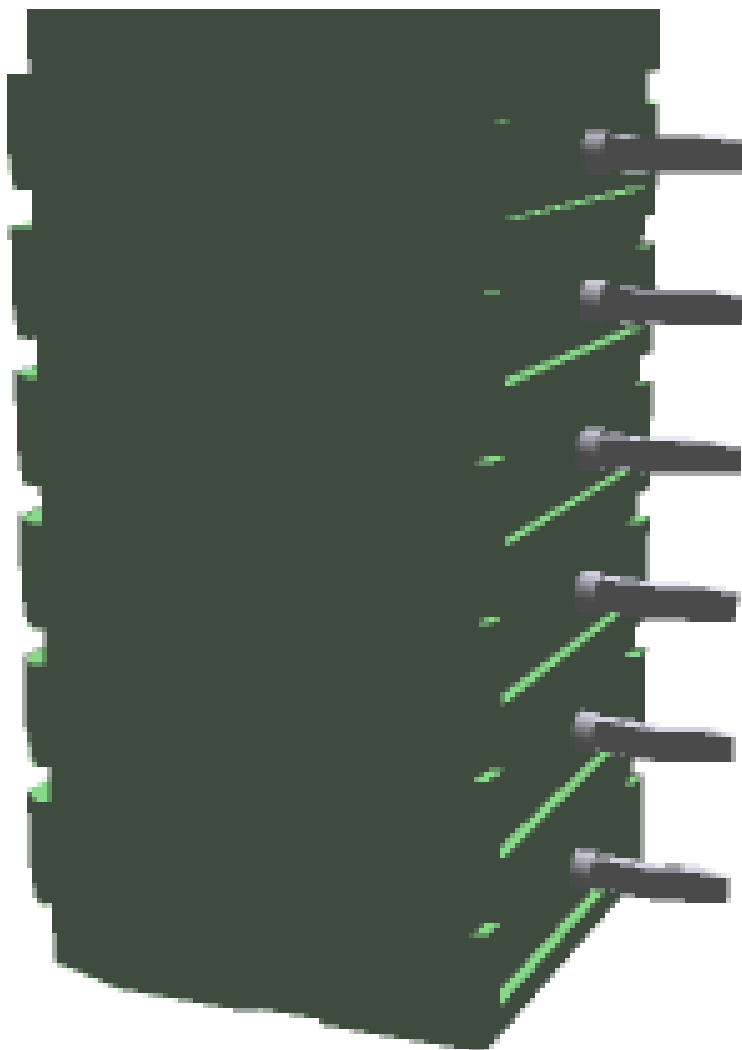
It can be downloaded at: phoenixcontact.net/product/1985001

1985001 PTSA 1,5/ 6-3,5-F**3 Table of contents**

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4 3D model in PDF can be activated (Acrobat Reader only)



1985001 PTSA 1,5/ 6-3,5-F**5 item properties**

| | |
|---------------------|---|
| Order No. | 1985001 |
| Type | PTSA 1,5/ 6-3,5-F |
| Range of articles | PTSA 1,5 |
| Pitch | 3.5 mm |
| Number of positions | 6 |
| Connection method | Push-in spring connection |
| Mounting type | Wave soldering |
| Pin layout | Linear pinning |
| Product note | Soldering legs in front area, one-rowed |

5.1 Connection capacity

| | |
|---|---|
| Conductor cross section, solid | 0.2 mm ² to 1.5 mm ² |
| Conductor cross section, flexible | 0.2 mm ² to 1.5 mm ² |
| Conductor cross section AWG/kcmil | 24 to 16 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm ² to 1 mm ² |
| Conductor cross section flexible, with ferrule with plastic sleeve | 0.25 mm ² to 0.5 mm ² |
| Stripping length | 9 mm |

5.2 Material data

| | | |
|---|---|-----|
| Material of metal parts | | |
| Note | WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201 | |
| Contact material | Cu alloy | |
| Terminal point surface | Sn 4 µm ... 8 µm | |
| Soldering area surface | Sn 4 µm ... 8 µm | |
| Surface characteristics | hot-dip tin-plated | |
| Insulating material data | | |
| Insulating material | Housing | PA |
| CTI according to IEC 60112 | 600 | 600 |
| Flammability rating according to UL 94 | V0 | V0 |
| Color | green (6021) | |
| 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 | |

6 Dimensions**6.1 Dimensions for the product**

| | |
|-----------------------------|---------|
| Length | 12 mm |
| Width | 22.5 mm |
| Height (without solder pin) | 13.1 mm |
| Total height | 16.7 mm |
| Solder pin [P] | 3.6 mm |
| Dimension a | 17.5 mm |

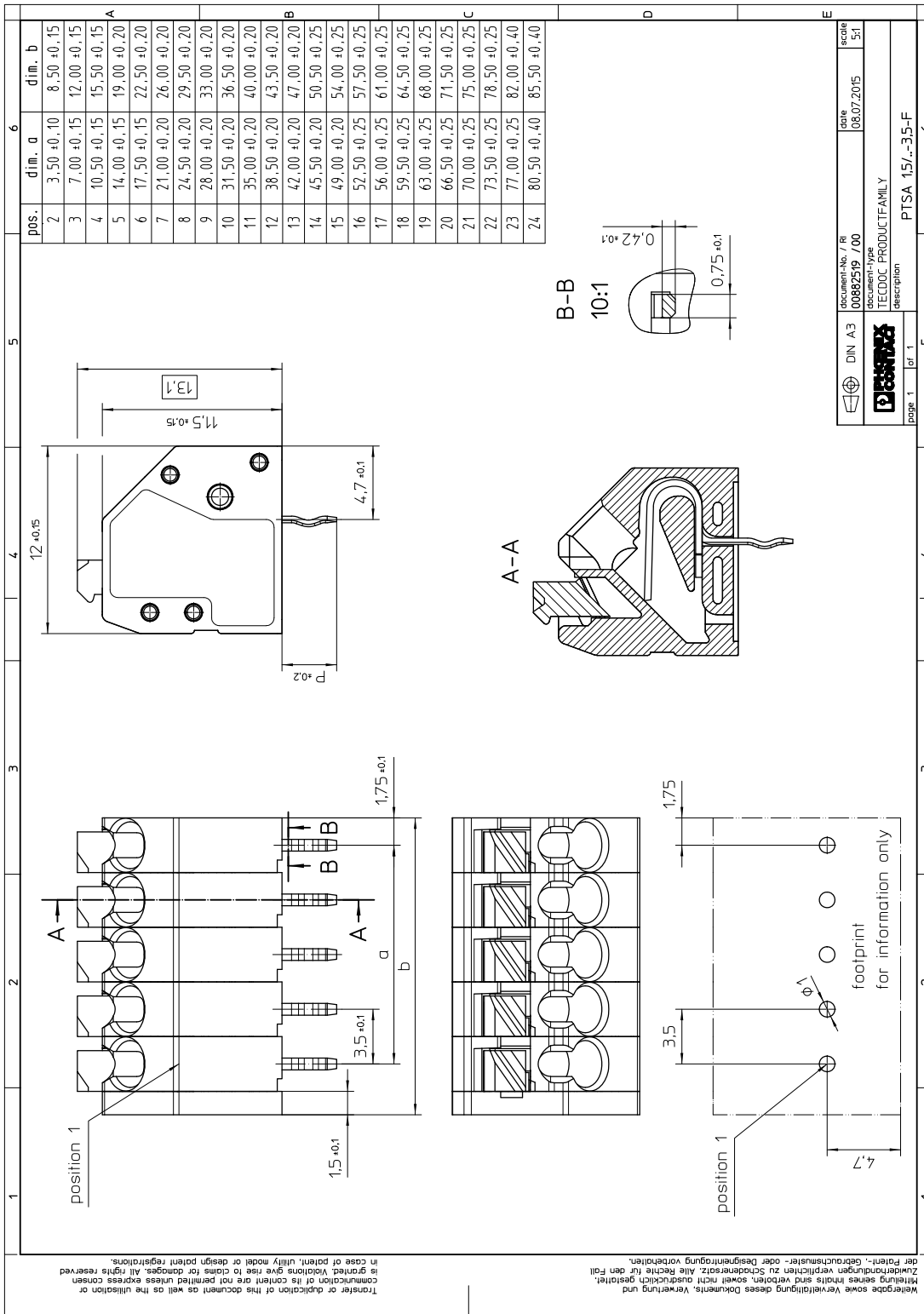
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6.2 Dimensions for PCB design

| | |
|----------------|---------------|
| Hole diameter | 1 mm |
| Pin dimensions | 0,4 x 0,75 mm |
| Pin spacing | 3.5 mm |

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7 Series drawing



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8 Packaging information

| | |
|--------------------|---------------------|
| Type of packaging | packed in cardboard |
| Pieces per package | 160 |

9 Application**9.1 Temperature limit values**

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

1985001 PTSA 1,5/ 6-3,5-F**10 Mechanical tests****10.1 Termination and connection method**

| | |
|--|---------------------|
| Termination and connection method | |
| Specification | IEC 60999-1:1999-11 |
| Check for damage to conductor or loosening | Test passed |

10.2 Pull-out test

| | |
|--|---|
| Termination and connection method: pull-out test | |
| Specification | IEC 60999-1:1999-11 |
| Result | Test passed |
| Conductor cross section/conductor type/tractive force actual value | 0.5 mm ² / solid / > 20 N |
| Conductor cross section/conductor type/tractive force actual value | 0.5 mm ² / stranded / > 20 N |
| Conductor cross section/conductor type/tractive force actual value | 1.5 mm ² / solid / > 40 N |
| Conductor cross section/conductor type/tractive force actual value | 1.5 mm ² / stranded / > 40 N |

1985001 PTSA 1,5/ 6-3,5-F**11 Electrical tests****11.1 Electrical data**

| | |
|---|---------------------------|
| Rated current / conductor cross section | 8 A / 1.5 mm ² |
| Rated insulation voltage (III/2) | 250 V |
| Rated surge voltage (III/2) | 2.5 kV |
| Contact resistance | 1.94 mΩ |
| Degree of pollution | 2 |

11.2 Air clearances and creepage distances

| | | | |
|---|---|---------|--------|
| Specification | IEC 60947-1:2007-06 + A1:2010-12 | | |
| Mains type | unearthed mains | | |
| Insulating material group | I | | |
| Comparative tracking index (IEC 60112:2003-01) | CTI 600 | | |
| Rated insulation voltage | 200 V | 250 V | 400 V |
| Rated surge voltage | 2.5 kV | 2.5 kV | 2.5 kV |
| Degree of pollution | 3 | 2 | 2 |
| Overvoltage category | III | III | II |
| Minimum clearance case A (inhomogeneous field) | 2 mm | 2 mm | 2 mm |
| Minimum value of the creepage path requirement in acc. with table | 2.5 mm | 1.25 mm | 2 mm |
| Note on connection cross section | With connected conductor 1.5 mm ² (solid). | | |

11.3 Short-time withstand current test

| | |
|--|----------------------------|
| Specification | IEC 60947-7-4:2013-08 |
| Result | Test passed |
| Conductor cross section/short-time current | 1.5 mm ² / 40 A |

11.4 Aging test (climatic impact and corrosion testing)

| | |
|--|-------------------------------|
| Specification | IEC 60947-7-4:2013-08 |
| Result | Test passed |
| Contact resistance R ₁ | 1.94 mΩ / 1.5 mm ² |
| Test sequence 1: low temperature storage | -40 °C / 2 h |
| Test sequence 2: heat storage | 168 h/100°C |
| Test sequence 3: noxious gas storage (ISO 6988) | KFW 0.2 S/1 cycle |
| Contact resistance R ₂ | 1.82 mΩ / 1.5 mm ² |
| Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs) | 3 kV |
| Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz) | 2.2 kV |

11.5 Insulation resistance

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| | |
|--|-----------------------|
| Specification | IEC 60512-3-1:2002-02 |
| Result | Test passed |
| Insulation resistance, neighboring positions | > 1 TΩ |

11.6 Mechanical connection test for the PCB terminal block

| | |
|---------------|-----------------------|
| Specification | IEC 60947-7-4:2013-08 |
| Result | Test passed |

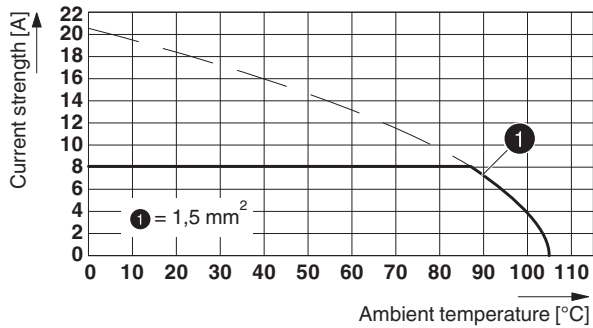
11.7 Temperature-rise test

| | |
|---------------|-----------------------|
| Specification | IEC 60947-7-4:2013-08 |
| Result | Test passed |

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12 Current carrying capacity/derating curves

| | |
|---------------------|-----------------------|
| Specification | IEC 60512-5-2:2002-02 |
| Reduction factor | 1 |
| Number of positions | 4 |

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**


1985001 PTSA 1,5/ 6-3,5-F**13 Environmental and durability tests****13.1 Assessment of fire risk (glow wire test)**


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


13.2 Vibration test

| | |
|------------------------|------------------------|
| Specification | IEC 60068-2-6:2007-12 |
| 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 |
| Test directions | X-, Y- and Z-axis |
| Contact interruption | |

14 Approvals

| | | | |
|--|-------|-------|--|
| UL Recognized  | | | |
| Use group | B | D | |
| mm ² /AWG/kcmil | 24-16 | 24-16 | |
| Voltage | 300 V | 300 V | |
| Current | 5 A | 5 A | |

| | | | |
|--|----------|--|--|
| VDE Gutachten mit Fertigungsüberwachung  | | | |
| mm ² /AWG/kcmil | 0.5-0.75 | | |
| Voltage | 130 V | | |
| Current | 2 A | | |

| | | | |
|---|-------|-------|--|
| cUL Recognized  | | | |
| Use group | B | D | |
| mm ² /AWG/kcmil | 24-16 | 24-16 | |
| Voltage | 300 V | 300 V | |
| Current | 5 A | 5 A | |

| | | | |
|----------------------------|------|--|--|
| CCA | | | |
| mm ² /AWG/kcmil | 0.75 | | |
| Voltage | | | |
| Current | 2 A | | |

| | | | |
|--|--|--|--|
| EAC  | | | |
|--|--|--|--|

| | | | |
|---|--|--|--|
| cULus Recognized  | | | |
|---|--|--|--|

1985001 PTSA 1,5/ 6-3,5-F**15 Commercial Data**

| | |
|--------------------|--|
| Order No. | 1985001 |
| Type | PTSA 1,5/ 6-3,5-F |
| Pieces per package | 160 |
| Net weight | 2.919 g |
| GTIN | 4017918922085 |
| | Information that applies locally, see link on page 1 |
| Country of origin | Information that applies locally, see link on page 1 |

16 Accessories

| Description | Order No. | Type |
|--|-----------|-----------------|
| Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip | 1205037 | SZS 0,4X2,5 VDE |
| 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 mm ² ... 6.0 mm ² , lateral entry, trapezoidal crimp | 1212034 | CRIMPFOX 6 |