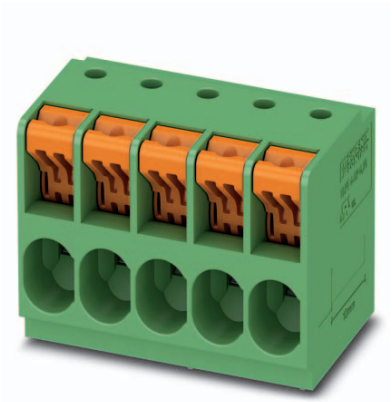
2018-04-23
Product version 00
Document revision 00

# Data sheet

## Order No.: 1017521

## Type: TDPT 4/ 2-SP-6,35-ZB

## PCB terminal block, Push-in spring connection



The figure shows a 5-pos. version of the product

## 1 Main features




- No. of pos. 2
- Conductor cross section 4 mm²
- Color green
- Pitch 6.35 mm
- Connection method Push-in spring connection
- Nominal current 41 A
- Nominal voltage 1000 V
- Connection direction 0 °
- Type of packaging packed in cardboard

## 2 Your advantages

- Easy to adapt, thanks to their identical size and the same pinning for Push-in spring connections as for screw connections
- Time saving push-in connection, tools not required
- Defined contact force ensures that contact remains stable over the long term
- Intuitive use through colour coded actuation lever

Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1017521

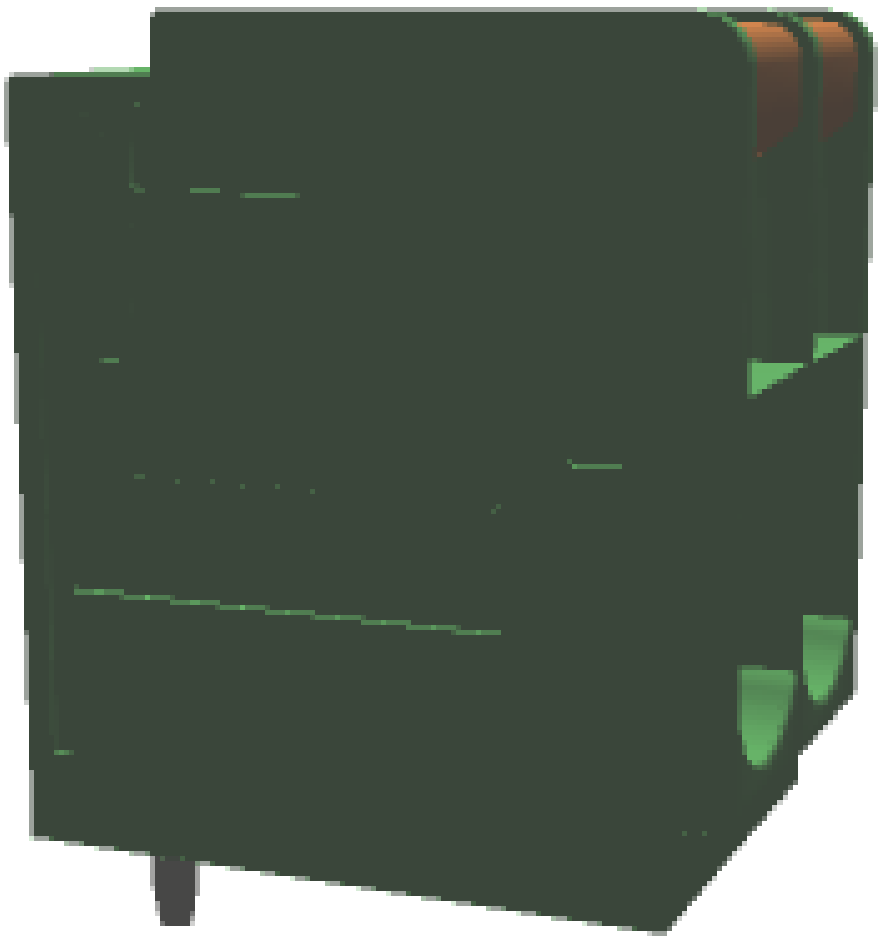
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## 4 3D model in PDF can be activated (Acrobat Reader only)



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# 5 item properties

| | |
|---|---|
| Order No. | 1017521 |
| Type | TDPT 4/ 2-SP-6,35-ZB |
| Range of articles | TDPT 4/..-SP |
| Pitch | 6.35 mm |
| Number of positions | 2 |
| Connection method | Push-in spring connection |
| Mounting type | Wave soldering |
| Pin layout | Zigzag pinning W |

## 5.1 Connection capacity

| | |
|---|---|
| Conductor cross section, solid | 0.2 mm² to 6 mm² |
| Conductor cross section, flexible | 0.2 mm² to 6 mm² |
| Conductor cross section AWG/kcmil | 24 to 10 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.2 mm² to 4 mm² |
| Conductor cross section flexible, with ferrule with plastic sleeve | 0.2 mm² to 4 mm² |
| 2 conductors with same cross section, stranded, with TWIN ferrules with plastic sleeve | 0.5 mm² to 1.5 mm² |
| Stripping length | 10 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 |
| Surface characteristics | hot-dip tin-plated |

| Insulating material data | Housing | Actuation element |
|---|---|---|
| Insulating material | PA | 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 | 20.75 mm |
| Width | 13.5 mm |
| Height (without solder pin) | 23.4 mm |
| Total height | 26.9 mm |
| Solder pin [P] | 3.5 mm |
| Dimension a | 6.35 mm |

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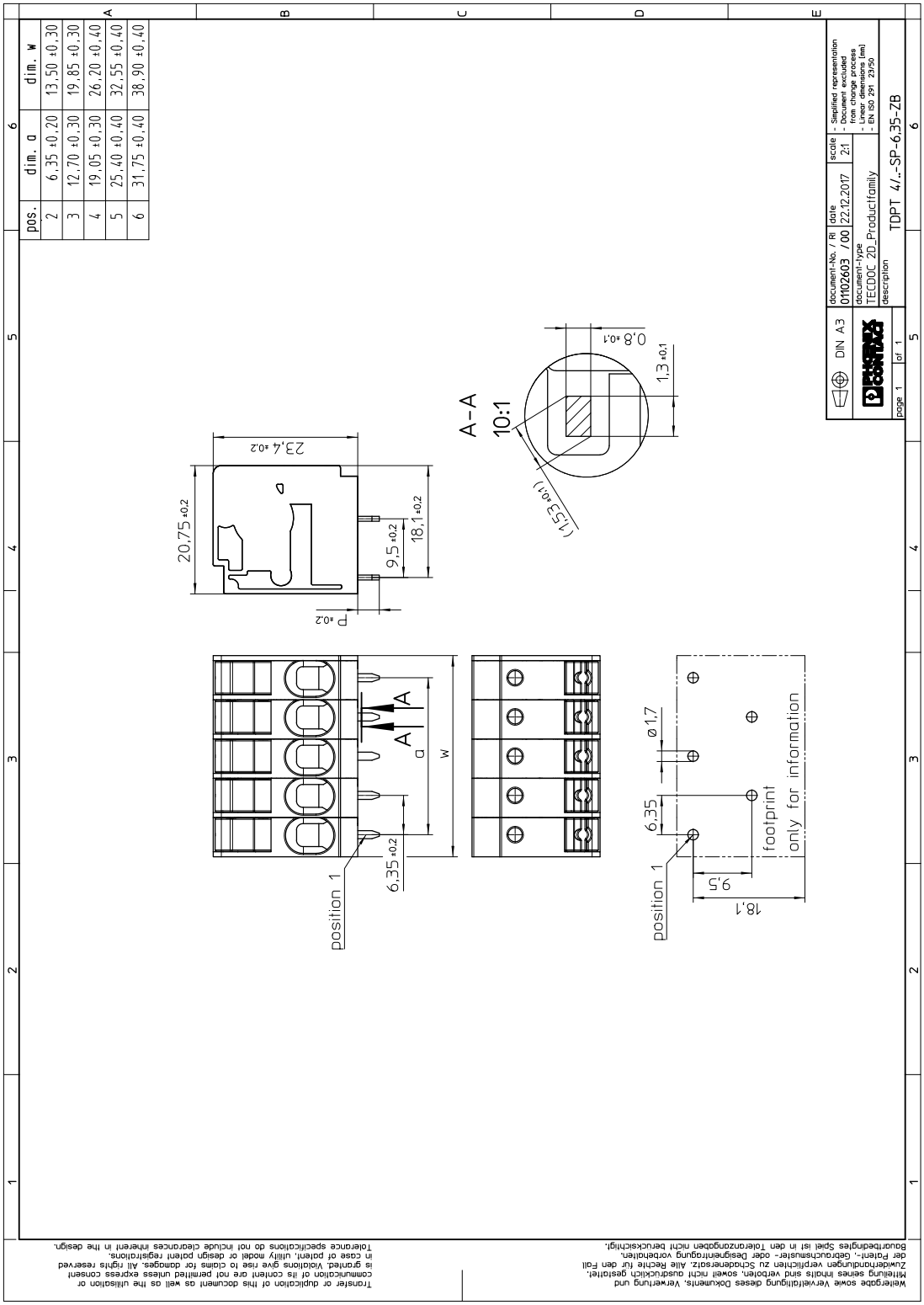
## 6.2 Dimensions for PCB design

| | |
|---|---|
| Hole diameter | 1.7 mm |
| Pin dimensions | 0,8 x 1,3 mm |

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**1017521 TDPT 4/ 2-SP-6,35-ZB**

# 7 Series drawing




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# 8 Packaging information

| | |
|---|---|
| Type of packaging | packed in cardboard |
| Pieces per package | 50 |

# 9 Application

## 9.1 Temperature limit values

| | |
|---|---|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Ambient temperature (assembly) | -5 °C ... 105 °C |
| Ambient temperature (operation) | -40 °C (dependent on the derating curve) |

## 9.2 Termination and connection method

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

## 9.3 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 | 0.2 $mm^2$ / solid / > 10 N |
| Conductor cross section/conductor type/tractive force actual value | 0.2 $mm^2$ / stranded / > 10 N |
| Conductor cross section/conductor type/tractive force actual value | 6 $mm^2$ / solid / > 80 N |
| Conductor cross section/conductor type/tractive force actual value | 6 $mm^2$ / stranded / > 80 N |

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# 10 Electrical tests

## 10.1 Electrical data

| | |
|---|---|
| Rated current / conductor cross section | 41 A / 4 mm² |
| Rated insulation voltage (III/2) | 1000 V |
| Rated surge voltage (III/2) | 8 kV |
| Contact resistance | 0.85 mΩ |
| Degree of pollution | 2 |

## 10.2 Short-time withstand current test

| | |
|---|---|
| Specification | IEC 60947-7-4:2013-08 |
| Result | Test passed |
| Conductor cross section/short-time current | 6 mm² / 124.8 A |

## 10.3 Aging test (climatic impact and corrosion testing)

| | |
|---|---|
| Specification | IEC 60947-7-4:2013-08 |
| Result | Test passed |
| Contact resistance $R_1$ | 0.85 mΩ / 6 mm² |
| Test sequence 1: low temperature storage | -40 °C / 2 h |
| Test sequence 2: heat storage | 168 h/105 °C |
| Test sequence 3: noxious gas storage (ISO 6988) | KFW 0.2 S/1 cycle |
| Contact resistance $R_2$ | 0.32 mΩ / 6 mm² |
| Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 µs) | 9.8 kV |
| Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz) | 4.2 kV |

## 10.4 Insulation resistance

| | |
|---|---|
| Specification | IEC 60512-3-1:2002-02 |
| Result | Test passed |

## 10.5 Mechanical connection test for the PCB terminal block

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

## 10.6 Temperature-rise test

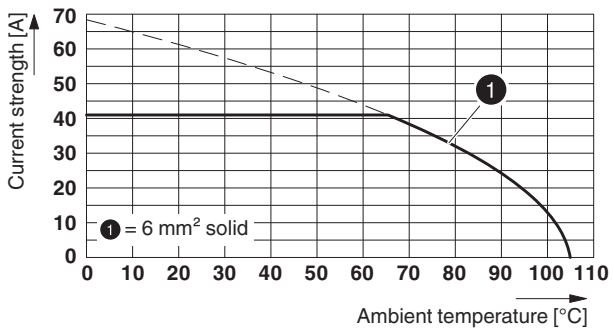
| | |
|---|---|
| Specification | IEC 60947-7-4:2013-08 |
| Result | Test passed |

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# 11 Current carrying capacity/derating curves

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

**Type: TDPT 4/...-SP-6,35-ZB**




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# 12 Environmental and durability tests

## 12.1 Assessment of fire risk (glow wire test)

| | | | |
|---|---|---|---|
| Specification | IEC 60695-2-10:2013-04 | | |
| Result | Test passed | | |
| Temperature | 850 °C | | |
| Time of exposure | 5 s | | |

## 12.2 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 | |

| Shock | |
|---|---|
| Specification | IEC 60068-2-27:2008-02 |
| Specification | |
| Result | Test passed |
| Pulse shape | Semi-sinusoidal |
| Peak acceleration | 30g |
| Shock duration | 18 ms |
| Number of shocks per direction | 3 |
| Test directions | X-, Y- and Z-axis (pos. and neg.) |
| Contact interruption | |

| Test for materials that impair paint application | |
|---|---|
| Specification | WN-CS 21-1:2010-09 |
| Result | Test passed |
| Testing | Inspection for substances that impair surface wetting according to VW/AUDI test specification 3.10.7 February 2005 |

# 13 Approvals

| cULus Recognized c UL us | | | | |
|---|---|---|---|---|
| Use group | B | C | D | |
| mm²/AWG/kcmil | 24-10 | 24-10 | 24-10 | |
| Voltage | 600 V | 600 V | 300 V | |
| Current | 30 A | 30 A | 10 A | |

| cULus Recognized c UL us | | | | |
|---|---|---|---|---|
| Use group | B | C | D | |
| mm²/AWG/kcmil | 24-10 | 24-10 | 24-10 | |
| Voltage | 600 V | 600 V | 300 V | |
| Current | 30 A | 30 A | 10 A | |

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## 14 Commercial Data

| | |
|---|---|
| Order No. | 1017521 |
| Type | TDPT 4/ 2-SP-6,35-ZB |
| Pieces per package | 50 |
| Net weight | 7.702 g |
| GTIN | 4055626501536 |
| | Information that applies locally, see link on page 1 |
| Country of origin | Information that applies locally, see link on page 1 |

## 15 Accessories

| Description | Order No. | Type |
|---|---|---|
| Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 1.0 x 5.5 x 150 mm, 2-component grip, with non-slip grip | 1206612 | SZF 3-1,0X5,5 |

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