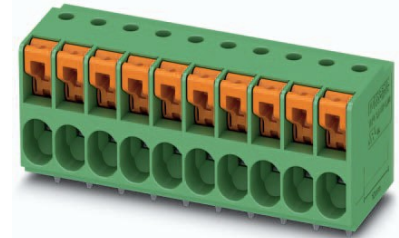


Order No.: 1017503

Type: TDPT 2,5/ 2-SP-5,08

PCB terminal block, Wave soldering, Push-in spring connection



The figure shows a 10-position version of the product

1 Main features



- | | | | |
|---------------------------|---------------------------|------------------------|---------------------|
| • No. of pos. | 2 | • Nominal current | 32 A |
| • Conductor cross section | 2.5 mm ² | • Nominal voltage | 400 V |
| • Color | green | • Connection direction | 0 ° |
| • Pitch | 5.08 mm | • Type of packaging | packed in cardboard |
| • Connection method | Push-in spring connection | | |

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



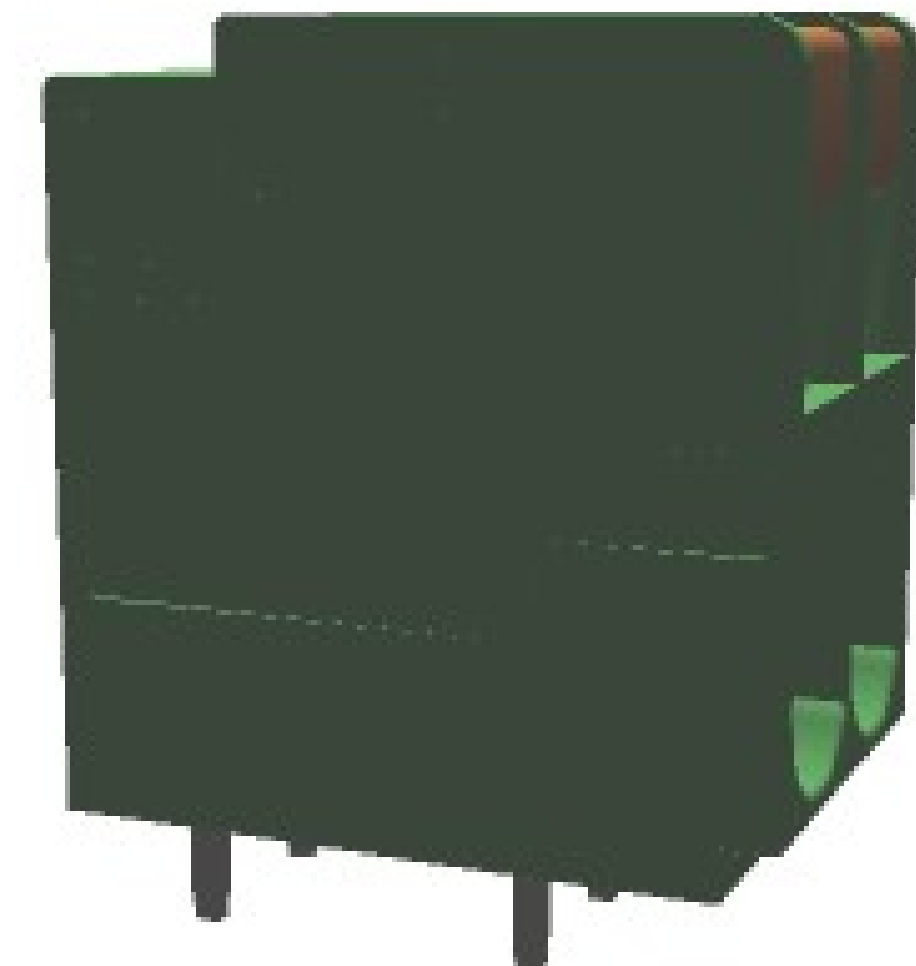
Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1017503

1017503 TDPT 2,5/ 2-SP-5,08**3 Table of contents**

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1017503 TDPT 2,5/ 2-SP-5,08

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



1017503 TDPT 2,5/ 2-SP-5,08**5 item properties**

| | |
|---------------------|---------------------------|
| Order No. | 1017503 |
| Type | TDPT 2,5/ 2-SP-5,08 |
| Range of articles | TDPT 2,5/...-SP |
| Pitch | 5,08 mm |
| Number of positions | 2 |
| Connection method | Push-in spring connection |
| Mounting type | Wave soldering |
| Pin layout | Linear double pinning |

5.1 Connection capacity

| | |
|--|---|
| Conductor cross section, solid | 0.2 mm ² to 4 mm ² |
| Conductor cross section, flexible | 0.2 mm ² to 4 mm ² |
| Conductor cross section AWG/kcmil | 24 to 12 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.2 mm ² to 2.5 mm ² |
| Conductor cross section flexible, with ferrule with plastic sleeve | 0.2 mm ² to 2.5 mm ² |
| 2 conductors with same cross section, stranded, with TWIN ferrules with plastic sleeve | 0.5 mm ² to 0.75 mm ² |
| 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 | |
| Terminal point surface | Sn 10 µm ... 16 µm | |
| Soldering area surface | Sn 10 µm ... 16 µm | |
| Surface characteristics | 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 | |

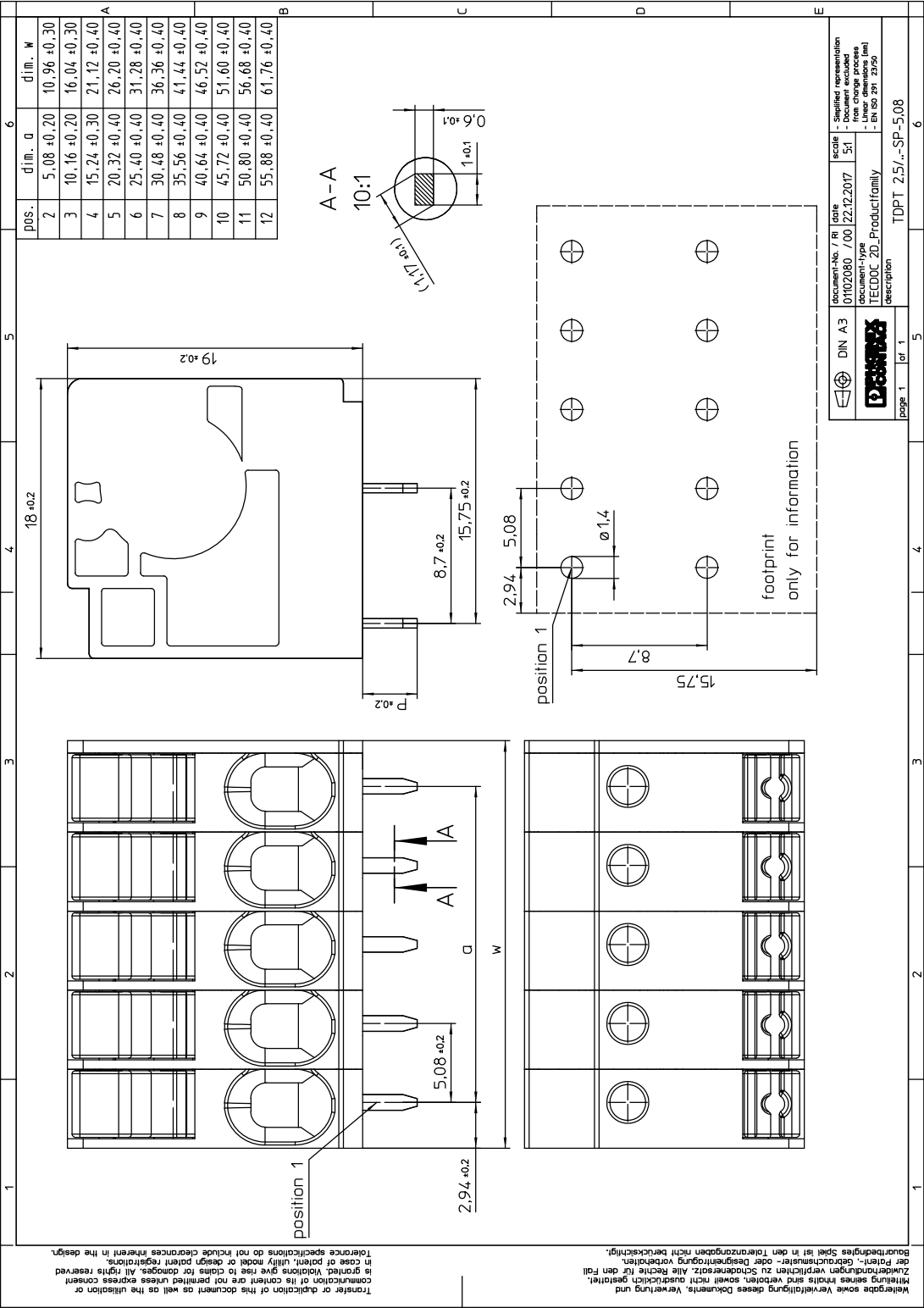
6 Dimensions**6.1 Dimensions for the product**

| | |
|-----------------------------|----------|
| Length | 18 mm |
| Width | 10.96 mm |
| Height (without solder pin) | 19 mm |
| Total height | 22.5 mm |
| Solder pin [P] | 3.5 mm |
| Dimension a | 5.08 mm |

1017503 TDPT 2,5/ 2-SP-5,08**6.2 Dimensions for PCB design**

| | |
|----------------|------------|
| Hole diameter | 1.4 mm |
| Pin dimensions | 1 x 0,6 mm |
| Pin spacing | 8,7 mm |

7 Series drawing



1017503 TDPT 2,5/ 2-SP-5,08**8 Packaging information**

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

9 Application**9.1 Processing notes**

| | |
|---------------|----------------------------------|
| Process | Wave soldering |
| Specification | Following IEC 61760-1:2006-04 |
| Specification | Following IEC 60068-2-54:2006-04 |

9.2 Temperature limit values

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

9.3 Termination and connection method

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

9.4 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 | 4 mm ² / solid / > 60 N |
| Conductor cross section/conductor type/tractive force actual value | 4 mm ² / stranded / > 60 N |

1017503 TDPT 2,5/ 2-SP-5,08**10 Electrical tests****10.1 Electrical data**

| | |
|---|----------------------------|
| Rated current / conductor cross section | 32 A / 2,5 mm ² |
| Rated insulation voltage (III/2) | 400 V |
| Rated surge voltage (III/2) | 4 kV |
| Contact resistance | 1.13 mΩ |
| Degree of pollution | 2 |

10.2 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 | 320 V | 400 V | 630 V |
| Rated surge voltage | 4 kV | 4 kV | 4 kV |
| Degree of pollution | 3 | 2 | 2 |
| Overvoltage category | III | III | II |
| Minimum clearance case A (inhomogeneous field) | 3 mm | 3 mm | 3 mm |
| Minimum value of the creepage path requirement in acc. with table | 4 mm | 3 mm | 3.2 mm |

10.3 Short-time withstand current test

| | |
|--|---------------------------|
| Specification | IEC 60947-7-4:2013-08 |
| Result | Test passed |
| Conductor cross section/short-time current | 4 mm ² / 144 A |

10.4 Aging test (climatic impact and corrosion testing)

| | |
|--|-----------------------------|
| Specification | IEC 60947-7-4:2013-08 |
| Result | Test passed |
| Contact resistance R ₁ | 1.13 mΩ / 4 mm ² |
| 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 | 1.13 mΩ / 4 mm ² |
| Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs) | 4.8 kV |
| Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz) | 3.1 kV |

10.5 Insulation resistance

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

1017503 TDPT 2,5/ 2-SP-5,08**10.6 Mechanical connection test for the PCB terminal block**

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

10.7 Temperature-rise test

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

1017503 TDPT 2,5/ 2-SP-5,08**11 Current carrying capacity/derating curves**

Specification

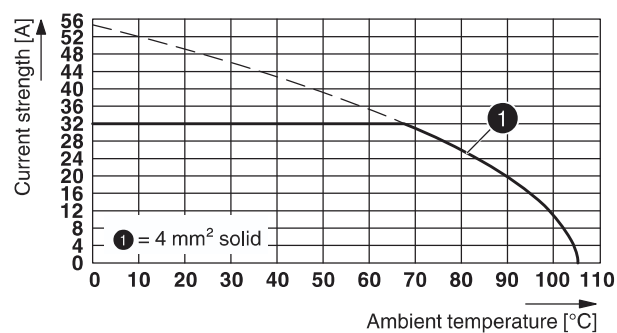
IEC 60512-5-2:2002-02

Reduction factor

1

Number of positions

4

Type: TDPT 2,5/...-SP-5,08

1017503 TDPT 2,5/ 2-SP-5,08**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

1017503 TDPT 2,5/ 2-SP-5,08**14 Commercial Data**

| | |
|--------------------|--|
| Order No. | 1017503 |
| Type | TDPT 2,5/ 2-SP-5,08 |
| Pieces per package | 50 |
| Net weight | 2,78 g |
| GTIN | 4055626501376 |
| | 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: 0.8 x 4.0 x 100 mm, 2-component grip, with non-slip grip | 1204520 | SZF 2-0,8X4,0 |