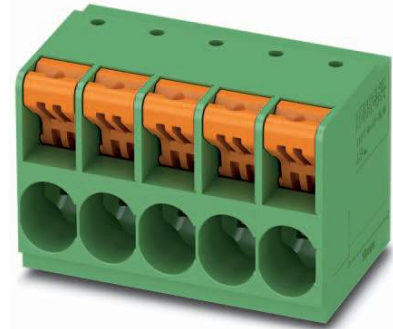


Data sheet

Order No.: 1017534

Type: TDPT 16/ 5-SP-10,16-ZB

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



1 Main features



- | | | | |
|---------------------------|---------------------------|------------------------|---------------------|
| • No. of pos. | 5 | • Nominal current | 76 A |
| • Conductor cross section | 16 mm ² | • Nominal voltage | 1000 V |
| • Color | green | • Connection direction | 0° |
| • Pitch | 10.16 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/1017534

3 Table of contents

| | | |
|----|--|----|
| 1 | Main features..... | 1 |
| 2 | Your advantages | 1 |
| 3 | Table of contents | 2 |
| 4 | 3D model in PDF can be activated (Acrobat Reader only)..... | 3 |
| 5 | item properties..... | 4 |
| | 5.1 Connection capacity | 4 |
| | 5.2 Material data | 4 |
| 6 | Dimensions..... | 4 |
| | 6.1 Dimensions for the product | 4 |
| | 6.2 Dimensions for PCB design..... | 5 |
| 7 | Series drawing..... | 6 |
| 8 | Packaging information | 7 |
| 9 | Application..... | 7 |
| | 9.1 Processing notes | 7 |
| | 9.2 Temperature limit values | 7 |
| | 9.3 Termination and connection method..... | 7 |
| | 9.4 Pull-out test | 7 |
| 10 | Electrical tests | 8 |
| | 10.1 Electrical data | 8 |
| | 10.2 Air clearances and creepage distances | 8 |
| | 10.3 Short-time withstand current test | 8 |
| | 10.4 Aging test (climatic impact and corrosion testing)..... | 8 |
| | 10.5 Insulation resistance | 8 |
| | 10.6 Mechanical connection test for the PCB terminal block | 9 |
| | 10.7 Temperature-rise test | 9 |
| 11 | Current carrying capacity/derating curves | 10 |
| 12 | Environmental and durability tests | 11 |
| | 12.1 Assessment of fire risk (glow wire test)..... | 11 |
| | 12.2 Vibration test | 11 |
| 13 | Approvals | 11 |
| 14 | Commercial Data..... | 12 |
| 15 | Accessories..... | 12 |

1017534 TDPT 16/ 5-SP-10,16-ZB

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



1017534 TDPT 16/ 5-SP-10,16-ZB**5 item properties**

| | |
|---------------------|---------------------------|
| Order No. | 1017534 |
| Type | TDPT 16/ 5-SP-10,16-ZB |
| Range of articles | TDPT 16/...-SP |
| Pitch | 10.16 mm |
| Number of positions | 5 |
| Connection method | Push-in spring connection |
| Mounting type | Wave soldering |
| Pin layout | Zigzag pinning W |

5.1 Connection capacity

| | |
|--|--|
| Conductor cross section, solid | 0.75 mm ² to 16 mm ² |
| Conductor cross section, multi-stranded | 0.75 mm ² to 16 mm ² |
| Conductor cross section, flexible | 0.75 mm ² to 16 mm ² |
| Conductor cross section AWG/kcmil | 20 to 6 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.75 mm ² to 16 mm ² |
| Conductor cross section flexible, with ferrule with plastic sleeve | 0.75 mm ² to 16 mm ² |
| 2 conductors with same cross section, stranded, with TWIN ferrules with plastic sleeve | 0.75 mm ² to 6 mm ² |
| Stripping length | 18 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 | 31.9 mm |
| Width | 48.22 mm |
| Height (without solder pin) | 31.2 mm |

1017534 TDPT 16/ 5-SP-10,16-ZB

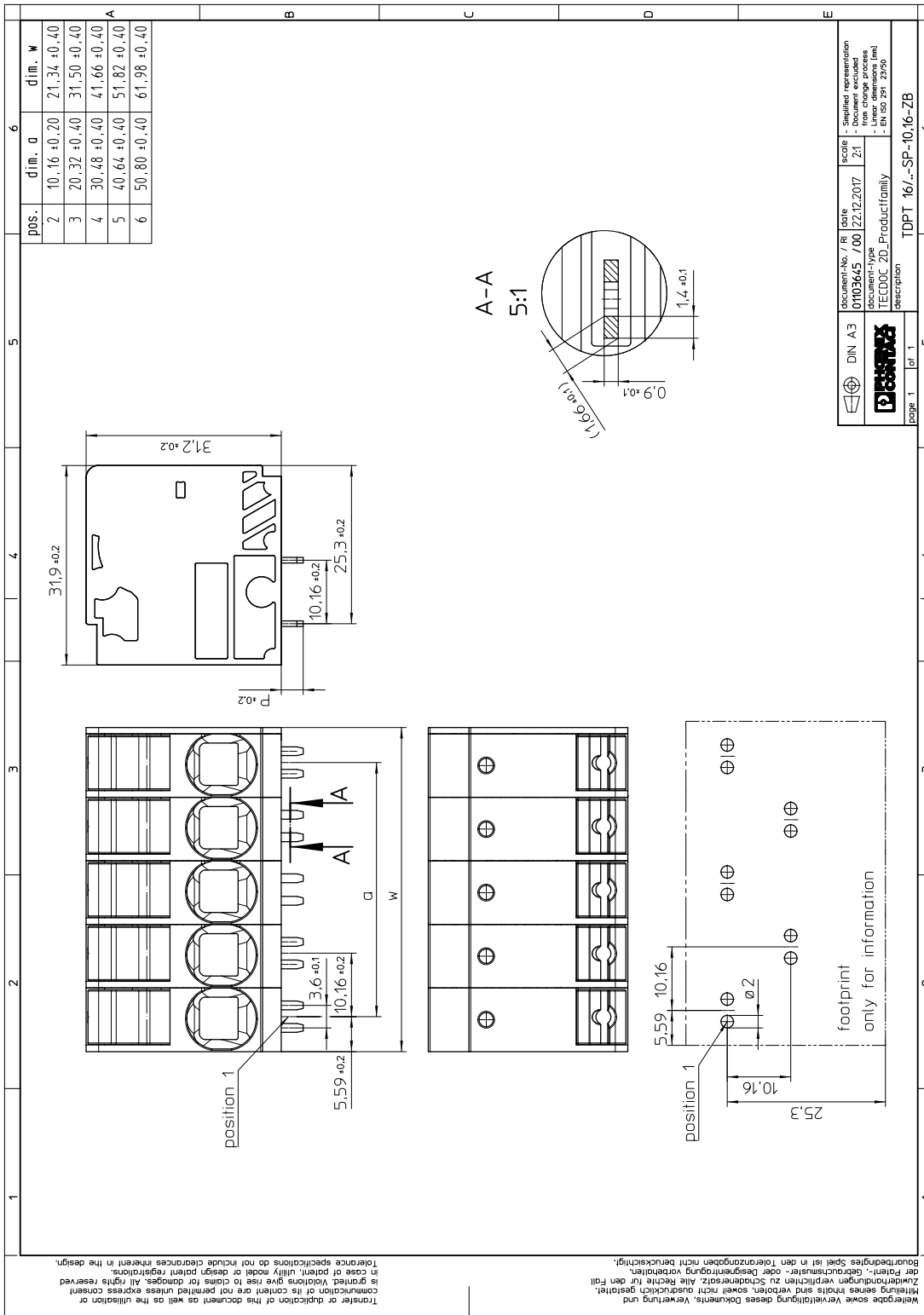
| | |
|----------------|----------|
| Total height | 34.7 mm |
| Solder pin [P] | 3.5 mm |
| Dimension a | 40.64 mm |

6.2 Dimensions for PCB design

| | |
|----------------|--------------|
| Hole diameter | 2 mm |
| Pin dimensions | 1,4 x 0,9 mm |

1017534 TDPT 16/ 5-SP-10,16-ZB

7 Series drawing



1017534 TDPT 16/ 5-SP-10,16-ZB**8 Packaging information**

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

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 | 0.75 mm ² / solid / > 30 N |
| Conductor cross section/conductor type/tractive force actual value | 0.75 mm ² / stranded / > 30 N |
| Conductor cross section/conductor type/tractive force actual value | 16 mm ² / solid / > 100 N |
| Conductor cross section/conductor type/tractive force actual value | 16 mm ² / stranded / > 100 N |

1017534 TDPT 16/ 5-SP-10,16-ZB**10 Electrical tests****10.1 Electrical data**

| | |
|---|---------------------------|
| Rated current / conductor cross section | 76 A / 16 mm ² |
| Rated insulation voltage (III/2) | 1000 V |
| Rated surge voltage (III/2) | 8 kV |
| Contact resistance | 0.39 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 | 800 V | 1000 V | 1000 V |
| Rated surge voltage | 8 kV | 8 kV | 6 kV |
| Degree of pollution | 3 | 2 | 2 |
| Overvoltage category | III | III | II |
| Minimum clearance case A (inhomogeneous field) | 8 mm | 8 mm | 5.5 mm |
| Minimum value of the creepage path requirement in acc. with table | 10 mm | 8 mm | 5.5 mm |

10.3 Short-time withstand current test

| | |
|--|------------------------------|
| Specification | IEC 60947-7-4:2013-08 |
| Result | Test passed |
| Conductor cross section/short-time current | 16 mm ² / 302.4 A |

10.4 Aging test (climatic impact and corrosion testing)

| | |
|--|------------------------------|
| Specification | IEC 60947-7-4:2013-08 |
| Result | Test passed |
| Contact resistance R ₁ | 0.39 mΩ / 16 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 | 0.19 mΩ / 16 mm ² |
| 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 |

10.5 Insulation resistance

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

1017534 TDPT 16/ 5-SP-10,16-ZB

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

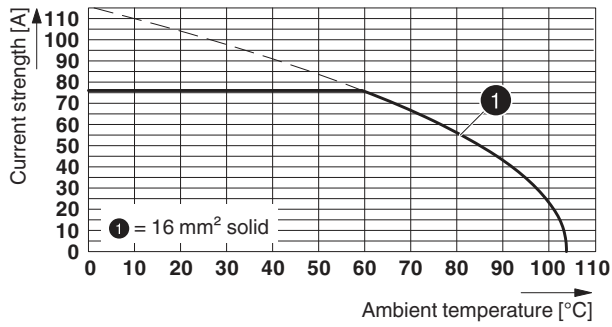
| | |
|---------------|-----------------------|
| Specification | IEC 60947-7-4:2013-08 |
| Result | Test passed |

1017534 TDPT 16/ 5-SP-10,16-ZB

11 Current carrying capacity/derating curves

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

Type: TDPT 16/...-SP-10,16-ZB



1017534 TDPT 16/ 5-SP-10,16-ZB**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  | | | | |
| Use group | B | C | D | |
| mm ² /AWG/kcmil | 20-6 | 20-6 | 20-6 | |
| Voltage | 600 V | 600 V | 300 V | |
| Current | 58 A | 58 A | 10 A | |

1017534 TDPT 16/ 5-SP-10,16-ZB**14 Commercial Data**

| | |
|--------------------|--|
| Order No. | 1017534 |
| Type | TDPT 16/ 5-SP-10,16-ZB |
| Pieces per package | 50 |
| Net weight | 37.88 g |
| GTIN | 4055626501666 |
| | 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 |
|---|-----------|-----------------|
| Screwdriver, slot-headed, VDE insulated, size: 1.2 x 8.0 x 175 mm, 2-component grip, with non-slip grip | 1205082 | SZS 1,2X8,0 VDE |