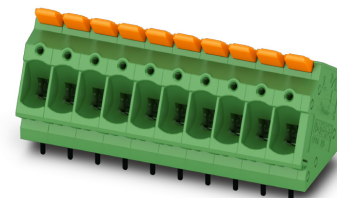


Order No.: 1190370

Type: LPTA 2,5/ 8-5,0

PCB terminal block, Lever Push-in connection



## 1 Main features



- |                           |                          |                        |                     |
|---------------------------|--------------------------|------------------------|---------------------|
| • No. of pos.             | 8                        | • Nominal current      | 24 A                |
| • Conductor cross section | 2.5 mm <sup>2</sup>      | • Nominal voltage      | 400 V               |
| • Color                   | green (6021)             | • Connection direction | 45 °                |
| • Pitch                   | 5 mm                     | • Type of packaging    | packed in cardboard |
| • Connection method       | Lever Push-in connection |                        |                     |

## 2 Your advantages

- ✓ Tool-free lever principle enables time-saving connection and release of conductors with/without ferrules
- ✓ Clear lever positions provide reliable feedback on opened or closed clamping spaces
- ✓ Defined contact force ensures that contact remains stable over the long term
- ✓ Time-saving push-in connection when lever is closed
- ✓ Intuitive operation, thanks to a color-coded actuation lever



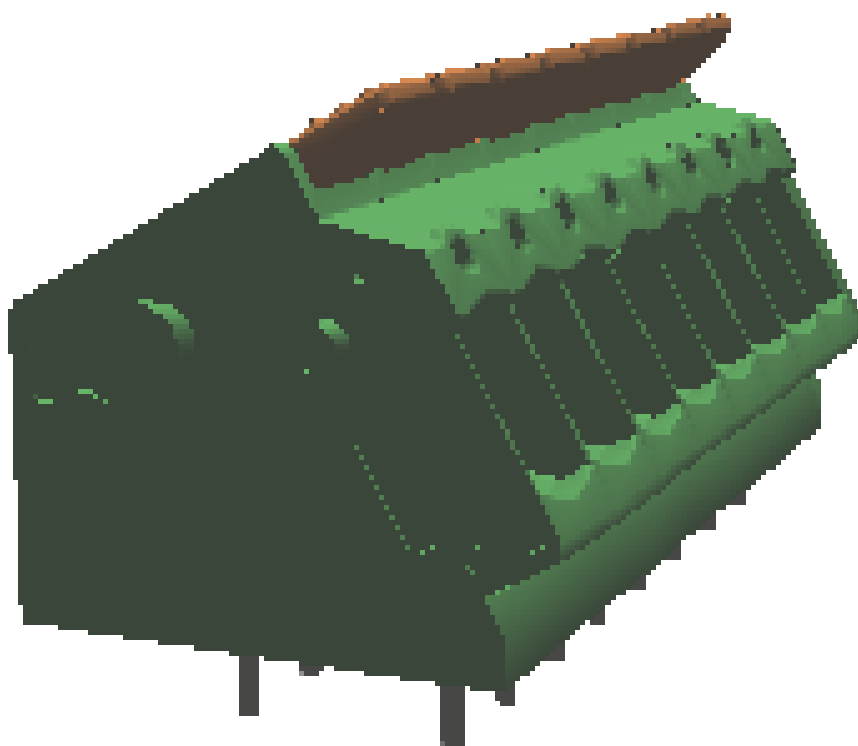
Make sure you always use the latest documentation.  
It can be downloaded at: [phoenixcontact.net/product/1190370](https://phoenixcontact.net/product/1190370)

**1190370 LPTA 2,5/ 8-5,0****3 Table of contents**

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1190370 LPTA 2,5/ 8-5,0

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



**1190370 LPTA 2,5/ 8-5,0****5 General Technical Data****5.1 item properties**

|                                                  |                          |
|--------------------------------------------------|--------------------------|
|                                                  |                          |
| Order No.                                        | 1190370                  |
| Type                                             | LPTA 2,5/ 8-5,0          |
| Product type                                     | PCB terminal block       |
| Range of articles                                | LPTA 2,5/                |
| Pitch                                            | 5 mm                     |
| Number of positions                              | 8                        |
| Number of levels                                 | 1                        |
| Number of connections                            | 8                        |
| Number of potentials                             | 8                        |
| Connection method                                | Lever Push-in connection |
| Mounting type                                    | Wave soldering           |
| Connection direction of the conductor to the PCB | 45 °                     |
| Pin layout                                       | Linear double pinning    |

**1190370 LPTA 2,5/ 8-5,0****6 Conductor connection****6.1 Connection capacity**

|                                                                                        |                                                                                             |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Conductor cross section, rigid                                                         | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup> (Conductor connection with open terminal point)   |
| Conductor cross section, rigid                                                         | 0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup> (Push-in connection)                              |
| Conductor cross section, flexible                                                      | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>                                                   |
| Conductor cross section flexible, with ferrule without plastic sleeve                  | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> (Conductor connection with open terminal point) |
| Conductor cross section flexible, with ferrule with plastic sleeve                     | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> (Conductor connection with open terminal point) |
| 2 conductors with the same cross section flexible with TWIN ferrule and plastic sleeve | 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                                 |
| Stripping length                                                                       | 10 mm ... 12 mm                                                                             |

**6.2 Connection capacity AWG**

|                             |           |
|-----------------------------|-----------|
| Conductor cross section AWG | 24 ... 12 |
|-----------------------------|-----------|

**7 Material properties****7.1 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  | Tin (10 - 16 µm Sn)                                                     |
| Soldering area surface  | Tin (10 - 16 µm Sn)                                                     |
| Surface characteristics | Tin-plated                                                              |

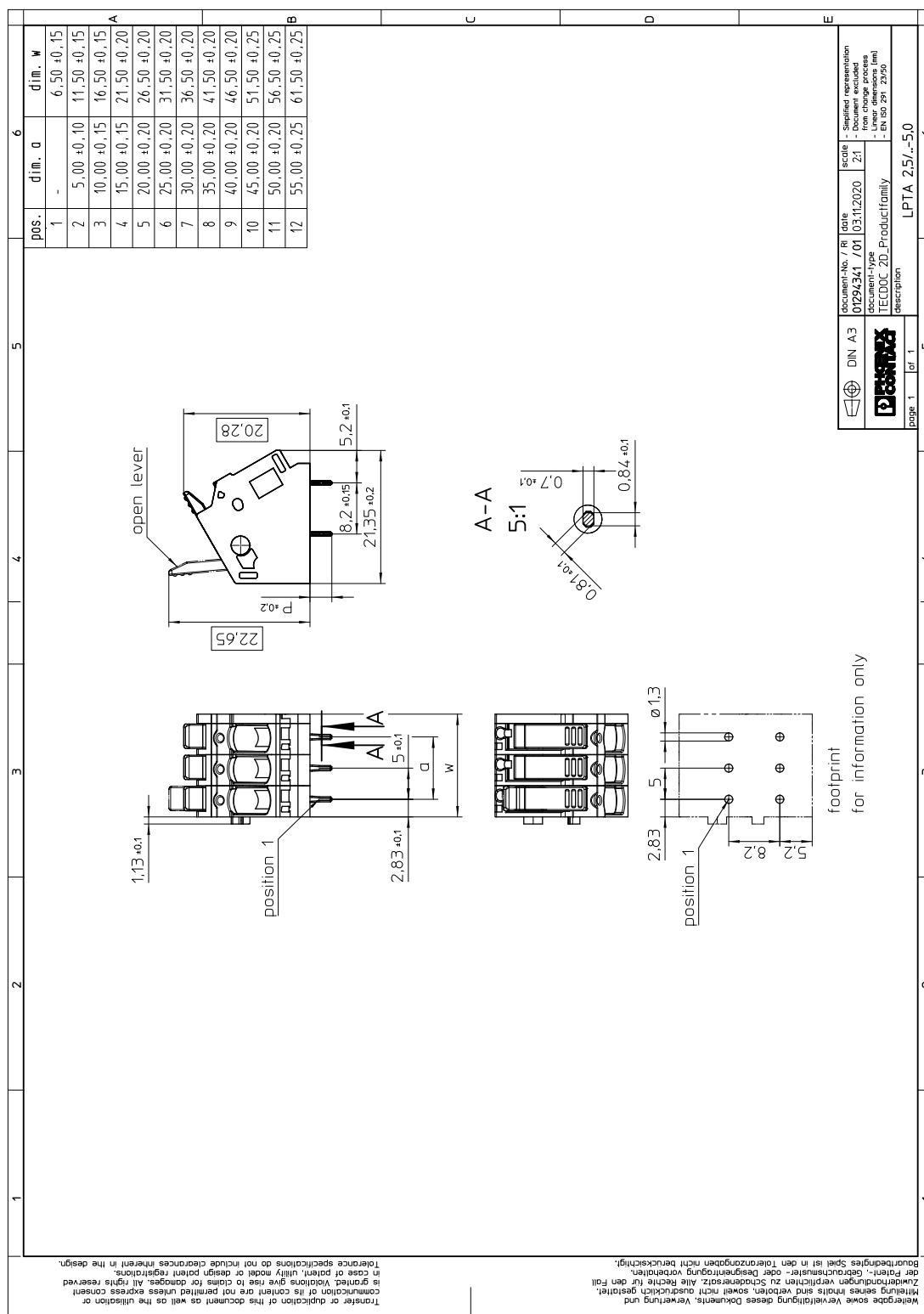
**7.2 Material of plastic parts**

|                                                                   | Housing      | Actuation element |
|-------------------------------------------------------------------|--------------|-------------------|
| Color                                                             | green (6021) | orange (2003)     |
| Insulating material                                               | PA           | PA GF             |
| Insulating material group                                         | I            | I                 |
| CTI according to IEC 60112                                        | 600          | 600               |
| Flammability rating according to UL 94                            | V0           | 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       |                   |

**1190370 LPTA 2,5/ 8-5,0****8 Dimensions****8.1 Dimensions for the product**

|                             |          |
|-----------------------------|----------|
|                             |          |
| Length                      | 21.35 mm |
| Width                       | 41.5 mm  |
| Height (without solder pin) | 20.28 mm |
| Total height                | 23.78 mm |
| Solder pin [P]              | 3.5 mm   |

## 9 Series drawing



**1190370 LPTA 2,5/ 8-5,0****10 Application****11 Packaging information**

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

**11.1 Temperature limit values**

|                                         |                                                                               |
|-----------------------------------------|-------------------------------------------------------------------------------|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C                                                              |
| Ambient temperature (assembly)          | -5 °C ... 100 °C                                                              |
| Ambient temperature (operation)         | -40 °C ... 105 °C (Depending on the current carrying capacity/derating curve) |

**1190370 LPTA 2,5/ 8-5,0****12 Mechanical tests****12.1 Pull-out test**

|                                                                    |                                         |
|--------------------------------------------------------------------|-----------------------------------------|
|                                                                    |                                         |
| Specification                                                      | IEC 60999-1:1999-11                     |
| Result                                                             | Test passed                             |
| Conductor cross section/conductor type/tractive force actual value | 0.2 mm <sup>2</sup> / solid / > 10 N    |
| Conductor cross section/conductor type/tractive force actual value | 0.2 mm <sup>2</sup> / flexible / > 10 N |
| Conductor cross section/conductor type/tractive force actual value | 4 mm <sup>2</sup> / solid / > 60 N      |
| Conductor cross section/conductor type/tractive force actual value | 4 mm <sup>2</sup> / flexible / > 60 N   |
| Conductor cross section/conductor type/tractive force actual value | 0.5 mm <sup>2</sup> / solid / > 20 N    |

**12.2 Check for damage to conductor or loosening**

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

**1190370 LPTA 2,5/ 8-5,0****13 Electrical tests**

|                                         |                            |
|-----------------------------------------|----------------------------|
| Rated current / conductor cross section | 24 A / 2.5 mm <sup>2</sup> |
| Rated insulation voltage (III/2)        | 400 V                      |
| Rated surge voltage (III/2)             | 4 kV                       |
| Contact resistance                      | 0.35 mΩ                    |
| Degree of pollution                     | 2                          |

**13.1 Air and creepage distances**

|                                                                   |                       |       |        |
|-------------------------------------------------------------------|-----------------------|-------|--------|
| Component                                                         | PCB terminal block    |       |        |
| Specification                                                     | IEC 60947-7-4:2019-01 |       |        |
| Mains type                                                        | unearthed mains       |       |        |
| Insulating material group                                         |                       |       |        |
| Comparative tracking index (IEC 60112:2003-01)                    |                       |       |        |
| 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 |

**13.2 Short-time withstand current test**

|                                            |                           |
|--------------------------------------------|---------------------------|
| Specification                              | IEC 60947-7-4:2019-01     |
| Result                                     | Test passed               |
| Conductor cross section/short-time current | 4 mm <sup>2</sup> / 168 A |

**13.3 Aging test (climatic impact and corrosion testing)**

|                                                                      |                             |
|----------------------------------------------------------------------|-----------------------------|
| Specification                                                        | IEC 60947-7-4:2019-01       |
| Result                                                               | Test passed                 |
| Contact resistance R <sub>1</sub>                                    | 0.35 mΩ / 4 mm <sup>2</sup> |
| 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 <sub>2</sub>                                    | 0.41 mΩ / 4 mm <sup>2</sup> |
| Rated impulse voltage at sea level<br>Voltage waveform ≥ (1.2/50 μs) | 4.8 kV                      |
| Power-frequency withstand voltage<br>Voltage waveform ≥ (50/60 Hz)   | 3.1 kV                      |

**13.4 Insulation resistance**

|                                              |                       |
|----------------------------------------------|-----------------------|
| Specification                                | IEC 60512-3-1:2002-02 |
| Result                                       | Test passed           |
| Insulation resistance, neighboring positions | > 5 MΩ                |

**1190370 LPTA 2,5/ 8-5,0****13.5 Mechanical connection test for the PCB terminal block**

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60947-7-4:2019-01 |
| Result        | Test passed           |

**13.6 Temperature rise test**

|                                                       |                                                                                                                                |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Specification                                         | IEC 60947-7-4:2019-01                                                                                                          |
| Result                                                | Test passed                                                                                                                    |
| Requirement temperature-rise test                     | The sum of ambient temperature and temperature rise of the PCB terminal block shall not exceed the upper limiting temperature. |
| Conductor cross section/test current/temperature rise | 2.5 mm <sup>2</sup> / 24 A / 41.4 K                                                                                            |
| Conductor cross section/test current/temperature rise | 4 mm <sup>2</sup> / 32 A / 49.3 K                                                                                              |

**1190370 LPTA 2,5/ 8-5,0****14 Current carrying capacity/derating curves**

Specification

IEC 60947-7-4:2019-01

Note

Representation based on IEC 60512-5-2:2002-02

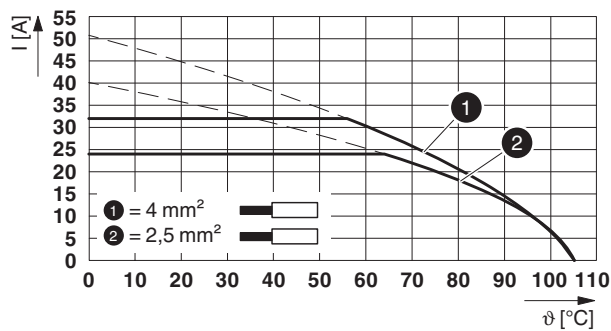
Reduction factor

1

Number of positions

4

Conductor cross section

2.5 mm<sup>2</sup>**Type: LPTA 2,5/...-5,0**

**1190370 LPTA 2,5/ 8-5,0****15 Environmental and durability tests****15.1 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           | 50 m/s <sup>2</sup> (60.1 - 150 Hz) |
| Test duration per axis | 2.5 h                               |
| Test directions        | X-, Y- and Z-axis                   |
| Note                   |                                     |

**15.2 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                    |  |  |

**15.3 Shock protection**

|                                         |                                                                                                                                           |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Specification                           | Following IEC 60529:1989-11 + AMD 1:1999-11 + AMD 2:2013-08                                                                               |
| Back of the hand protection (Ball ø 50) |                                                                                                                                           |
| Finger protection (movable test finger) | guaranteed                                                                                                                                |
| Note                                    | unenclosed basic insulation - protected against finger contact with IP20 test finger in acc. with IEC 60529 when connected, above the PCB |

**1190370 LPTA 2,5/ 8-5,0****16 Commercial Data**

|                    |                                                      |
|--------------------|------------------------------------------------------|
|                    |                                                      |
| Order No.          | 1190370                                              |
| Type               | LPTA 2,5/ 8-5,0                                      |
| Pieces per package | 50                                                   |
| Net weight         | 14.876 g                                             |
| GTIN               | 4063151238674                                        |
|                    | Information that applies locally, see link on page 1 |
|                    | Information that applies locally, see link on page 1 |

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