

# Data sheet

Order No.: 1190298

Type: LPT 2,5/ 3-5,0

PCB terminal block, Lever Push-in connection



## 1 Main features



- |                           |                          |                        |                     |
|---------------------------|--------------------------|------------------------|---------------------|
| • No. of pos.             | 3                        | • Nominal current      | 24 A                |
| • Conductor cross section | 2.5 mm <sup>2</sup>      | • Nominal voltage      | 400 V               |
| • Color                   | green (6021)             | • Connection direction | 0 °                 |
| • 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/1190298](https://phoenixcontact.net/product/1190298)

**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	General Technical Data .....	4
6	Conductor connection .....	5
7	Material properties.....	5
8	Dimensions.....	6
9	Series drawing.....	7
10	Application.....	8
11	Packaging information .....	8
12	Mechanical tests.....	9
13	Electrical tests .....	10
14	Current carrying capacity/derating curves .....	12
15	Environmental and durability tests .....	13
16	Commercial Data.....	14

1190298 LPT 2,5/ 3-5,0

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



**1190298 LPT 2,5/ 3-5,0****5 General Technical Data****5.1 item properties**

Order No.	1190298
Type	LPT 2,5/ 3-5,0
Product type	PCB terminal block
Range of articles	LPT 2,5/
Pitch	5 mm
Number of positions	3
Number of levels	1
Number of connections	3
Number of potentials	3
Connection method	Lever Push-in connection
Mounting type	Wave soldering
Connection direction of the conductor to the PCB	0 °
Pin layout	Linear double pinning

**1190298 LPT 2,5/ 3-5,0****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**

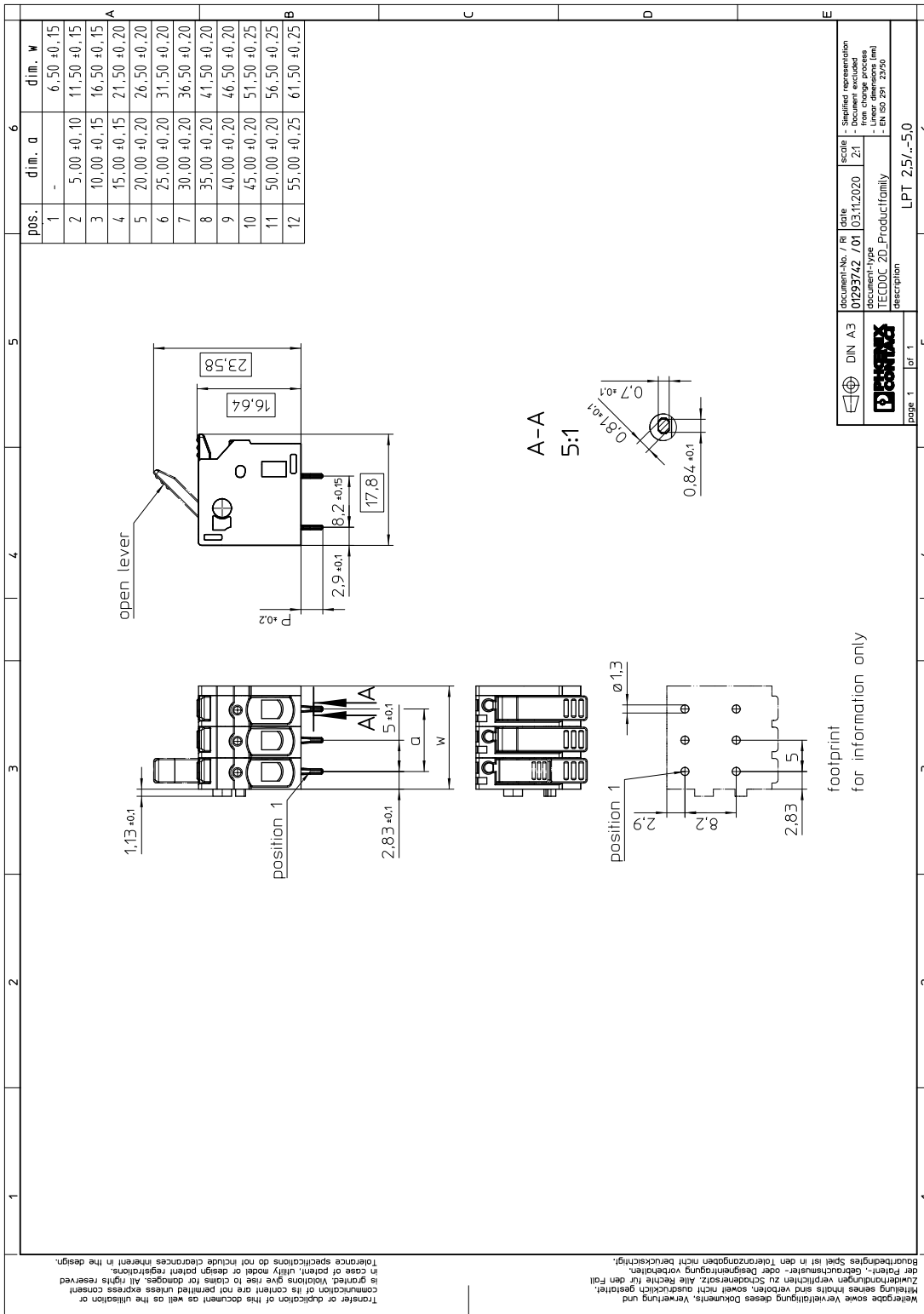
	Housing	Actuation element
Color	green (6021)	orange (2003)
Insulating material	PA	PA GF
Insulating material group	I	I
CTI according to IEC 60112	600	600
Flammability rating according to UL 94	V0	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850	
Glow wire ignition temperature GWIT according to EN 60695-2-13	775	
Temperature for the ball pressure test according to EN 60695-10-2	125 °C	

**1190298 LPT 2,5/ 3-5,0****8 Dimensions****8.1 Dimensions for the product**

Length	17.8 mm
Width	16.5 mm
Height (without solder pin)	16.64 mm
Total height	20.24 mm
Solder pin [P]	3.5 mm

1190298 LPT 2,5/ 3-5,0

9 Series drawing



## 10 Application

## 11 Packaging information

Type of packaging	packed in cardboard
Pieces per package	100

### 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)



**1190298 LPT 2,5/ 3-5,0****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

**1190298 LPT 2,5/ 3-5,0****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	0.34 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>	0.34 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>	0.36 mΩ / 4 mm <sup>2</sup>
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

**13.4 Insulation resistance**

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

**1190298 LPT 2,5/ 3-5,0****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**

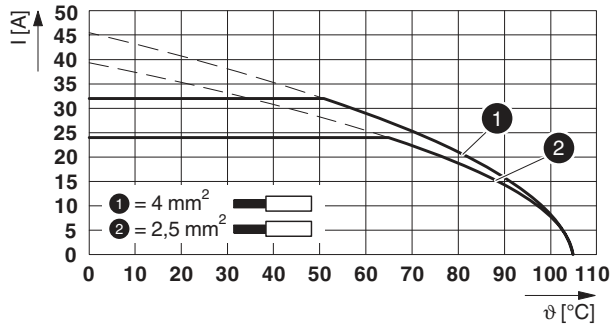
Specification	IEC 60947-7-4:2019-01
Result	Test passed
Requirement temperature-rise test	The sum of ambient temperature and temperature rise of the PCB terminal block shall not exceed the upper limiting temperature.
Conductor cross section/test current/temperature rise	2.5 mm <sup>2</sup> / 24 A / 40.2 K
Conductor cross section/test current/temperature rise	4 mm <sup>2</sup> / 32 A / 53.6 K

## 1190298 LPT 2,5/ 3-5,0

## 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: LPT 2,5/...-5,0



**1190298 LPT 2,5/ 3-5,0****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

**1190298 LPT 2,5/ 3-5,0****16 Commercial Data**

Order No.	1190298
Type	LPT 2,5/ 3-5,0
Pieces per package	100
Net weight	5.49 g
GTIN	4063151239480
	Information that applies locally, see link on page 1
	Information that applies locally, see link on page 1