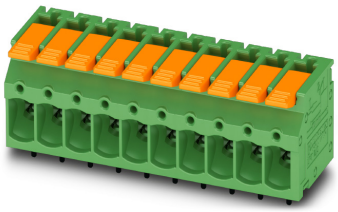
2021-04-14
Product version 00
Document revision 00

Data sheet

Order No.: 1190299

Type: LPT 2,5/ 4-5,0

PCB terminal block, Lever Push-in connection



1 Main features



- No. of pos. 4
- Conductor cross section 2.5 mm²
- Color green (6021)
- Pitch 5 mm
- Connection method Lever Push-in connection
- Nominal current 24 A
- Nominal voltage 400 V
- Connection direction 0 °
- Type of packaging packed in cardboard

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/1190299

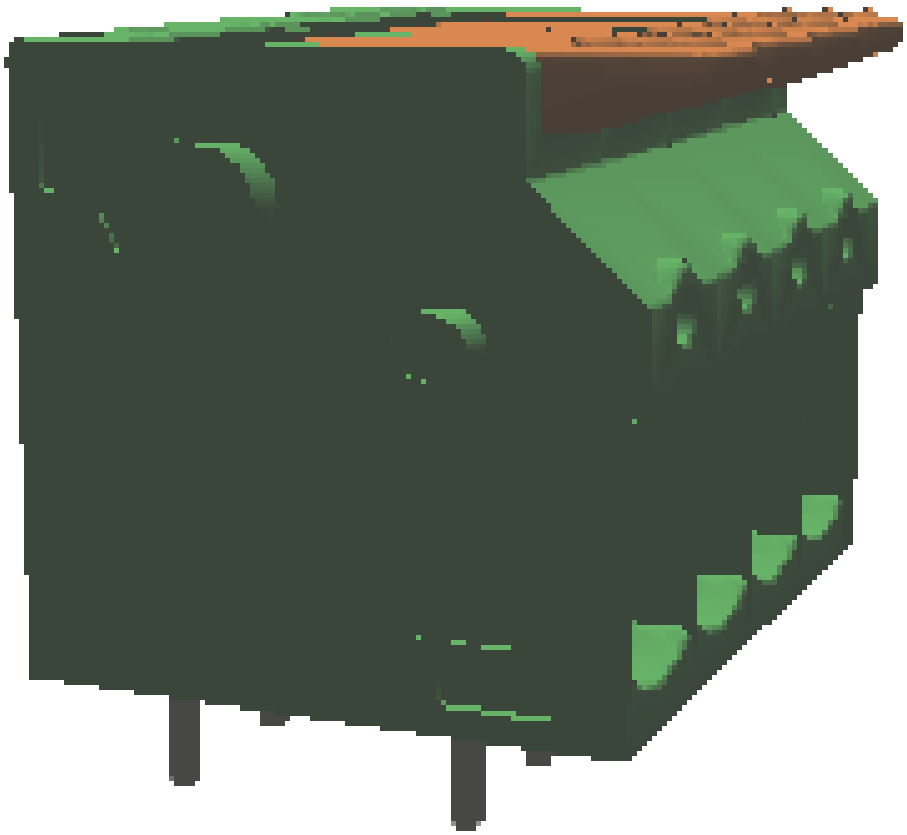
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4 3D model in PDF can be activated (Acrobat Reader only)



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5 General Technical Data

5.1 item properties

Order No.	1190299
Type	LPT 2,5/ 4-5,0
Product type	PCB terminal block
Range of articles	LPT 2,5/
Pitch	5 mm
Number of positions	4
Number of levels	1
Number of connections	4
Number of potentials	4
Connection method	Lever Push-in connection
Mounting type	Wave soldering
Connection direction of the conductor to the PCB	0 °
Pin layout	Linear double pinning

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6 Conductor connection

6.1 Connection capacity

Conductor cross section, rigid	0.2 mm² ... 4 mm² (Conductor connection with open terminal point)
Conductor cross section, rigid	0.5 mm² ... 4 mm² (Push-in connection)
Conductor cross section, flexible	0.2 mm² ... 4 mm²
Conductor cross section flexible, with ferrule without plastic sleeve	0.2 mm² ... 2.5 mm² (Conductor connection with open terminal point)
Conductor cross section flexible, with ferrule with plastic sleeve	0.2 mm² ... 2.5 mm² (Conductor connection with open terminal point)
2 conductors with the same cross section flexible with TWIN ferrule and plastic sleeve	0.5 mm² ... 1.5 mm²
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	

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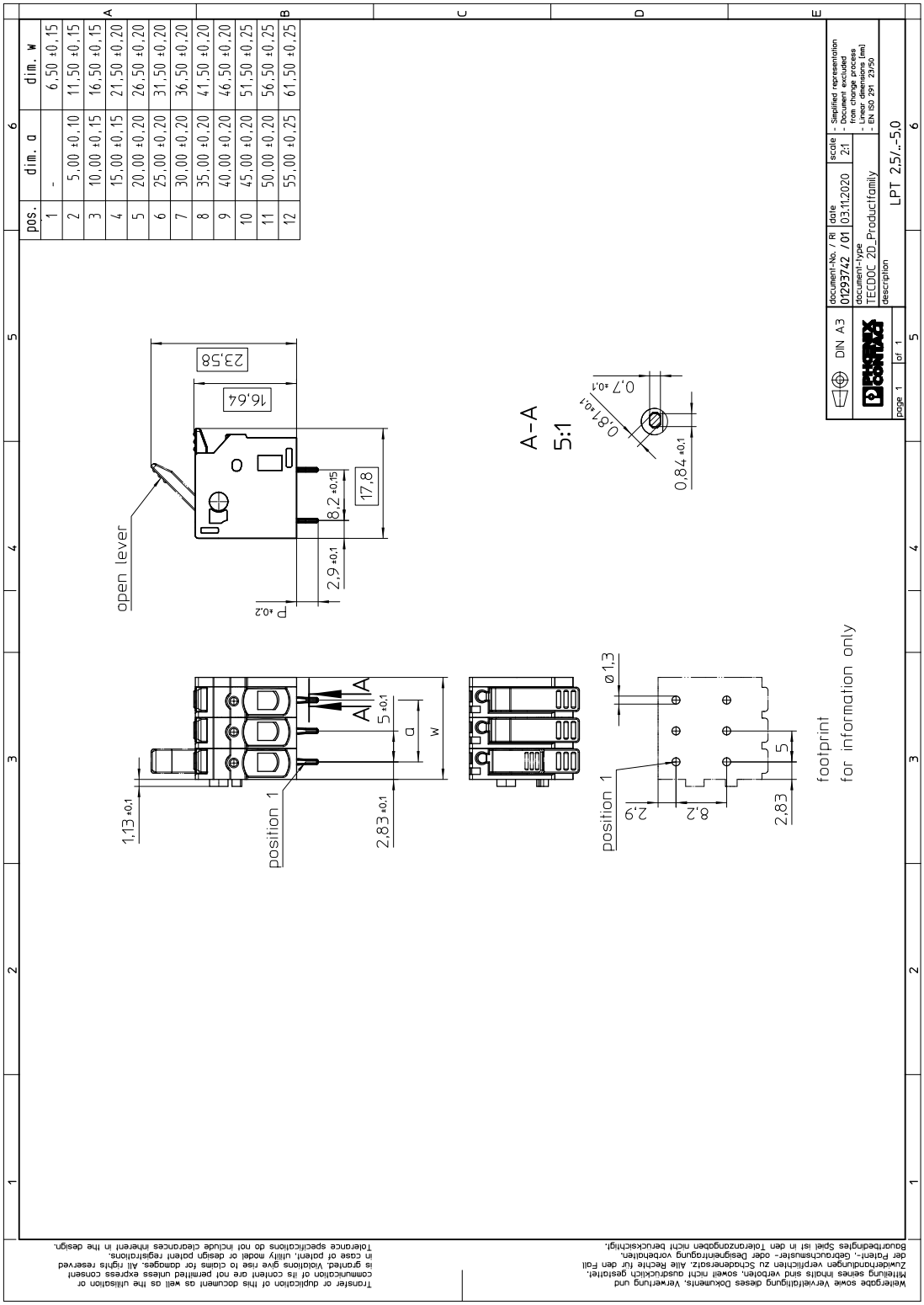
8 Dimensions

8.1 Dimensions for the product

Length	17.8 mm
Width	21.5 mm
Height (without solder pin)	16.64 mm
Total height	20.24 mm
Solder pin [P]	3.5 mm

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9 Series drawing



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Dimensions in this drawing are not to be understood as tolerance specifications.

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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)

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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 mm² / solid / > 10 N
Conductor cross section/conductor type/tractive force actual value	0.2 mm² / flexible / > 10 N
Conductor cross section/conductor type/tractive force actual value	4 mm² / solid / > 60 N
Conductor cross section/conductor type/tractive force actual value	4 mm² / flexible / > 60 N
Conductor cross section/conductor type/tractive force actual value	0.5 mm² / solid / > 20 N

12.2 Check for damage to conductor or loosening

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

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13 Electrical tests

Rated current / conductor cross section	24 A / 2.5 mm²
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 mm² / 168 A

13.3 Aging test (climatic impact and corrosion testing)

Specification	IEC 60947-7-4:2019-01
Result	Test passed
Contact resistance R_1	0.34 mΩ / 4 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	0.36 mΩ / 4 mm²
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

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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

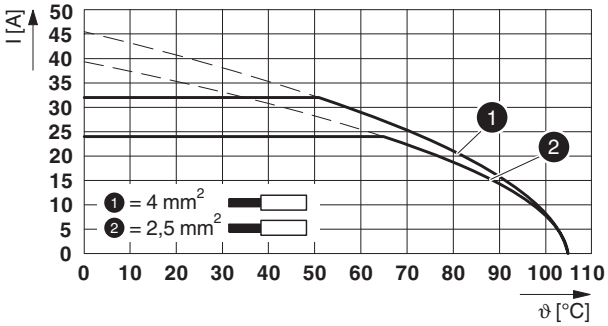
Specification	IEC 60947-7-4:2019-01
Result	Test passed
Requirement temperature-rise test	The sum of ambient temperature and temperature rise of the PCB terminal block shall not exceed the upper limiting temperature.
Conductor cross section/test current/temperature rise	2.5 mm^2 / 24 A / 40.2 K
Conductor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

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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 mm²

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



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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^2 (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

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16 Commercial Data

Order No.	1190299
Type	LPT 2,5/ 4-5,0
Pieces per package	100
Net weight	2.22 g
GTIN	4063151238971
	Information that applies locally, see link on page 1
	Information that applies locally, see link on page 1

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