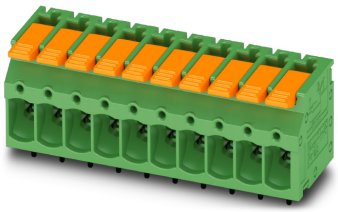
2021-04-14
Product version 00
Document revision 00

Data sheet

Order No.: 1190305

Type: LPT 2,5/ 9-5,0

PCB terminal block, Lever Push-in connection



1 Main features



- No. of pos. 9
- 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/1190305

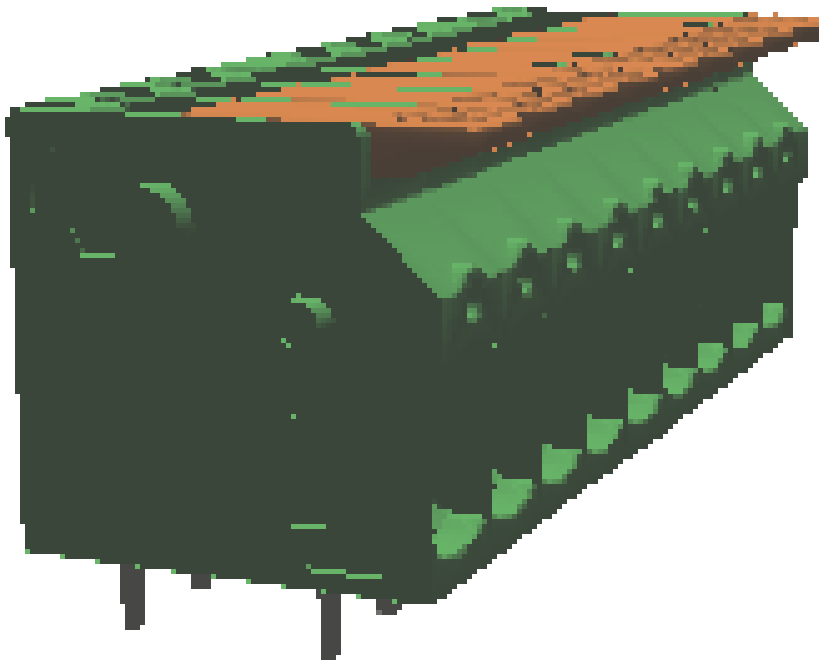
© PHOENIX CONTACT 2021

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

© PHOENIX CONTACT 2021

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



© PHOENIX CONTACT 2021

5 General Technical Data

5.1 item properties

Order No.	1190305
Type	LPT 2,5/ 9-5,0
Product type	PCB terminal block
Range of articles	LPT 2,5/
Pitch	5 mm
Number of positions	9
Number of levels	1
Number of connections	9
Number of potentials	9
Connection method	Lever Push-in connection
Mounting type	Wave soldering
Connection direction of the conductor to the PCB	0 °
Pin layout	Linear double pinning

© PHOENIX CONTACT 2021

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	

© PHOENIX CONTACT 2021

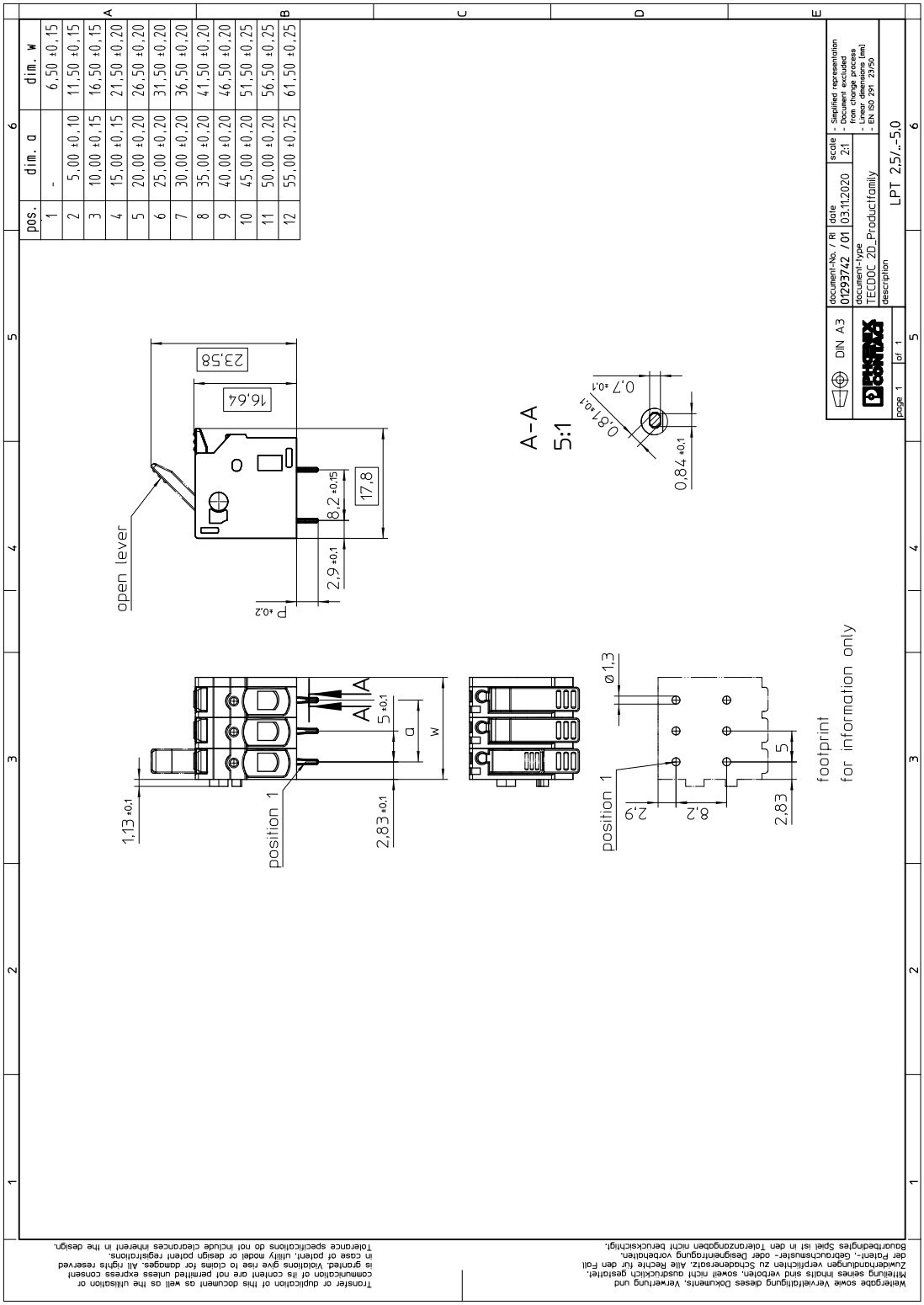
8 Dimensions

8.1 Dimensions for the product

Length	17.8 mm
Width	46.5 mm
Height (without solder pin)	16.64 mm
Total height	20.24 mm
Solder pin [P]	3.5 mm

© PHOENIX CONTACT 2021

9 Series drawing



Weitergabe sowie Vervielfältigung dieses Dokuments, Verwertung und Mitteilung seines Inhalts sind verboten, soweit nicht ausdrücklich gestattet. Zuwiderhandlungen verpflichten zu Schadenersatz. Alle Rechte für den Fall der Patent-, Gebrauchsmuster- oder Designeintragung vorbehalten.

Transfer or duplication of this document as well as the utilisation or communication of its content are not permitted unless express consent is granted. Violations give rise to claims for dammages. All rights reserved in case of patent, utility model or design patent registrations.

© PHOENIX CONTACT 2021

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)

© PHOENIX CONTACT 2021

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

© PHOENIX CONTACT 2021

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

© PHOENIX CONTACT 2021

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

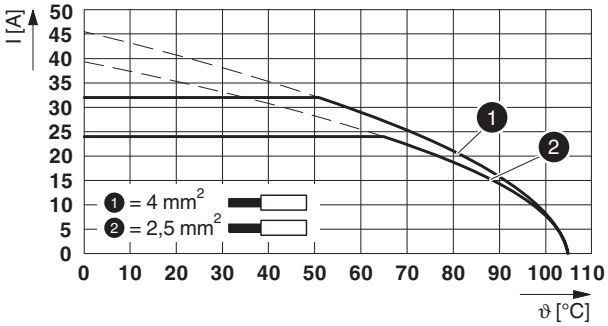
Specification	IEC 60947-7-4:2019-01
Result	Test passed
Requirement temperature-rise test	The sum of ambient temperature and temperature rise of the PCB terminal block shall not exceed the upper limiting temperature.
Conductor cross section/test current/temperature rise	2.5 mm^2 / 24 A / 40.2 K
Conductor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

© PHOENIX CONTACT 2021

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



© PHOENIX CONTACT 2021

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

© PHOENIX CONTACT 2021

16 Commercial Data

Order No.	1190305
Type	LPT 2,5/ 9-5,0
Pieces per package	50
Net weight	2.22 g
GTIN	4063151238988
	Information that applies locally, see link on page 1
	Information that applies locally, see link on page 1

© PHOENIX CONTACT 2021