

Order No.: 1985205

Type: PTSA 1,5/ 3-3,5-Z

PCB terminal block, Push-in spring connection



The figure shows a 10-position version of the product

1 Main features



- | | | | |
|---------------------------|---------------------------|------------------------|---------------------|
| • No. of pos. | 3 | • Nominal current | 8 A |
| • Conductor cross section | 1.5 mm ² | • Nominal voltage | 400 V |
| • Color | green (6021) | • Connection direction | 45 ° |
| • Pitch | 3.5 mm | • Type of packaging | packed in cardboard |
| • Connection method | Push-in spring connection | | |

2 Your advantages

- ✓ Time saving push-in connection, tools not required
- ✓ Defined contact force ensures that contact remains stable over the long term
- ✓ Angled connection enables multi-row arrangement on the PCB



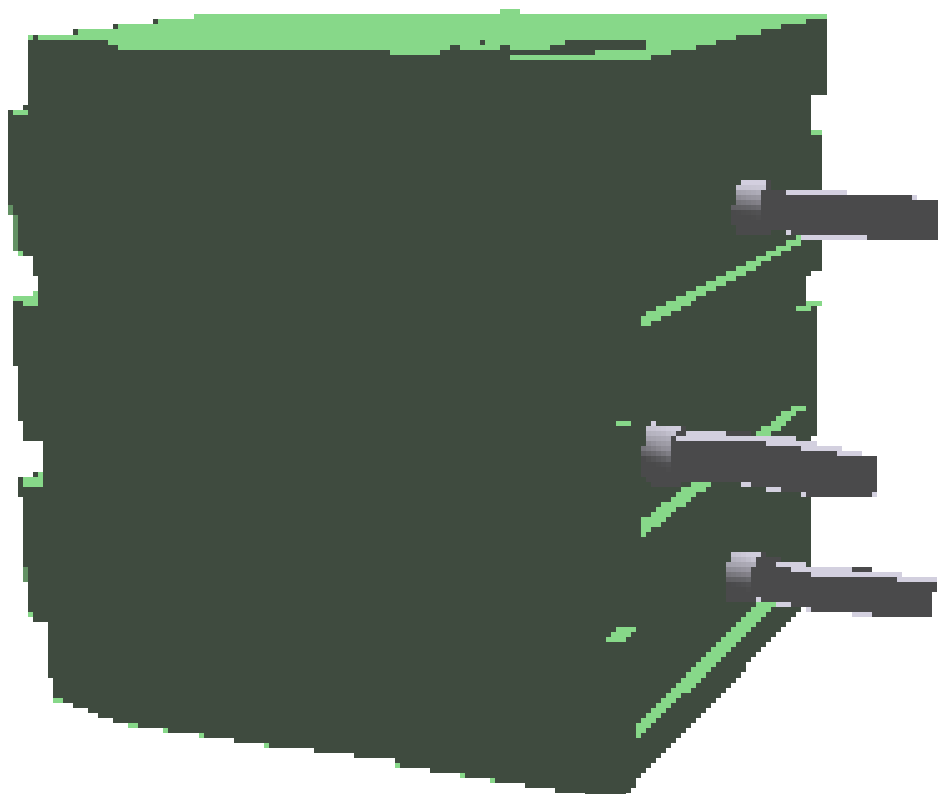
Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1985205

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



1985205 PTSA 1,5/ 3-3,5-Z**5 General Technical Data****5.1 item properties**

Order No.	1985205
Type	PTSA 1,5/ 3-3,5-Z
Product type	PCB terminal block
Range of articles	PTSA 1,5
Pitch	3.5 mm
Range of positions	2...24
Number of positions	3
Number of levels	1
Number of connections	3
Number of potentials	3
Connection method	Push-in spring connection
Mounting type	Wave soldering
Connection direction of the conductor to the PCB	45 °
Pin layout	Zigzag pinning M
Solder pins per potential	1
Product note	Offset soldering legs, two-rowed
Type	PC termination block

5.2 Connection capacity

Conductor cross section, solid	0.2 mm ² ... 1.5 mm ²
Conductor cross section, flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 1 mm ²
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm ² ... 0.5 mm ²
Stripping length	9 mm

5.3 Connection capacity AWG

Conductor cross section AWG	24 ... 16
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6 Material properties**6.1 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 (4 - 8 µm Sn)
Soldering area surface	Tin (4 - 8 µm Sn)
Surface characteristics	hot-dip tin-plated

6.2 Material of plastic parts

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	Housing
Color	green (6021)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	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

1985205 PTSA 1,5/ 3-3,5-Z**7 Dimensions****7.1 Dimensions for the product**

Length	12 mm
Width	12 mm
Height (without solder pin)	13.1 mm
Total height	16.7 mm
Solder pin [P]	3.6 mm
Dimension a	7 mm

8 Series drawing

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1985205 PTSA 1,5/ 3-3,5-Z**8.1 Dimensions for PCB design**

Hole diameter	1 mm
Pin dimensions	0.4 x 0.75 mm
Pin spacing	3.5 mm

9 Application**10 Packaging information**

Type of packaging	packed in cardboard
Pieces per package	300

10.1 Temperature limit values

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Ambient temperature (assembly)	-5 °C ... 85 °C
Ambient temperature (operation)	-40 °C ... 100 °C (Depending on the current carrying capacity/derating curve)

1985205 PTSA 1,5/ 3-3,5-Z**11 Mechanical tests****11.1 Pull-out test**

Specification	IEC 60999-1:1999-11
Result	Test passed
Conductor cross section/conductor type/tractive force actual value	0.2 mm ² / solid / > 10 N
Conductor cross section/conductor type/tractive force actual value	0.2 mm ² / flexible / > 10 N
Conductor cross section/conductor type/tractive force actual value	1.5 mm ² / solid / > 40 N
Conductor cross section/conductor type/tractive force actual value	1.5 mm ² / flexible / > 40 N

11.2 Check for damage to conductor or loosening

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

1985205 PTSA 1,5/ 3-3,5-Z**12 Electrical tests****12.1 Electrical data**

Rated current / conductor cross section	8 A / 1.5 mm ²
Rated insulation voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV
Contact resistance	
Degree of pollution	2

12.2 Air and creepage distances

Component	PCB terminal block		
Specification	IEC 60947-1:2007-06 + A1:2010-12 + A2:2014-09		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112:2003-01)	CTI 600		
Rated insulation voltage	250 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	3.2 mm	3 mm	3.2 mm

12.3 Short-time withstand current test

Specification	IEC 60947-7-4:2013-08
Result	Test passed
Conductor cross section/short-time current	1.5 mm ² / 40 A

12.4 Aging test (climatic impact and corrosion testing)

Specification	IEC 60947-7-4:2013-08
Result	Test passed
Contact resistance R ₁	2 mΩ / 1.5 mm ²
Test sequence 1: low temperature storage	-40 °C / 2 h
Test sequence 2: heat storage	168 h/100°C
Test sequence 3: noxious gas storage (ISO 6988)	KFW 0.2 S/1 cycle
Contact resistance R ₂	1.82 mΩ / 1.5 mm ²
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

12.5 Mechanical connection test for the PCB terminal block

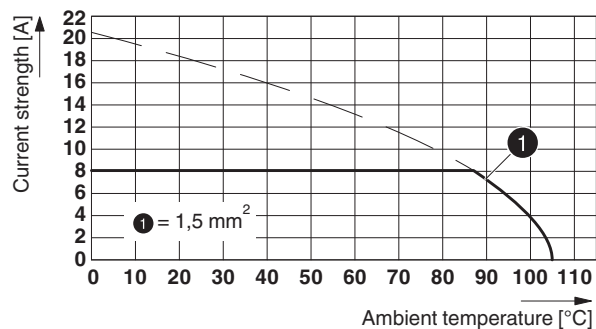
Specification	IEC 60947-7-4:2013-08
Result	Test passed

1985205 PTSA 1,5/ 3-3,5-Z**12.6 Temperature rise test**

Specification	IEC 60947-7-4:2013-08
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	1.5 mm ² / 8 A / 18 K

1985205 PTSA 1,5/ 3-3,5-Z**13 Current carrying capacity/derating curves**

Specification	IEC 60947-7-4:2013-08
Note	Representation based on IEC 60512-5-2:2002-02
Reduction factor	1
Number of positions	4
Conductor cross section	1.5 mm ²

Type: PTSA 1,5/4-3,5-Z**Tested in accordance with DIN EN 60512-5-2:2003-01****Reduction factor = 1****Number of positions: 4**

1985205 PTSA 1,5/ 3-3,5-Z**14 Environmental and durability tests****14.1 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)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis
Note	The connected conductor loops were guided to the test sample at a distance of approx. 10 cm.

14.2 Assessment of fire risk (glow wire test)

Specification	IEC 60695-2-10:2000-10		
Result	Test passed		
Temperature	850 °C		
Time of exposure	5 s		

1985205 PTSA 1,5/ 3-3,5-Z**15 Approvals / Certificates**

EAC 				
VDE Gutachten mit Fertigungsüberwachung 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm²]
	250 V	2 A	-	0.5 - 0.75
cULus Recognized 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm²]
Usegroup B				
	300 V	5 A	24 - 16	-
Usegroup D				
	300 V	5 A	24 - 16	-
CCA	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm²]
	-	2 A	-	0.75

1985205 PTSA 1,5/ 3-3,5-Z**16 Commercial Data**

Order No.	1985205
Type	PTSA 1,5/ 3-3,5-Z
Pieces per package	300
Net weight	1.581 g
GTIN	4017918922283
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

17 Accessories

Description	Order No.	Type
Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip	1205037	SZS 0,4X2,5 VDE
Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm ² ... 6.0 mm ² , lateral entry, trapezoidal crimp	1212034	CRIMPFOX 6