

Data sheet

2020-04-21
Product version 03
Document revision 01

Order No.: 1985195

Type: PTSA 1,5/ 2-3,5-Z

PCB terminal block, Wave soldering, Push-in spring connection



The figure shows a 10-position version of the product

1 Main features



- | | | | |
|---------------------------|---------------------------|------------------------|---------------------|
| • No. of pos. | 2 | • 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



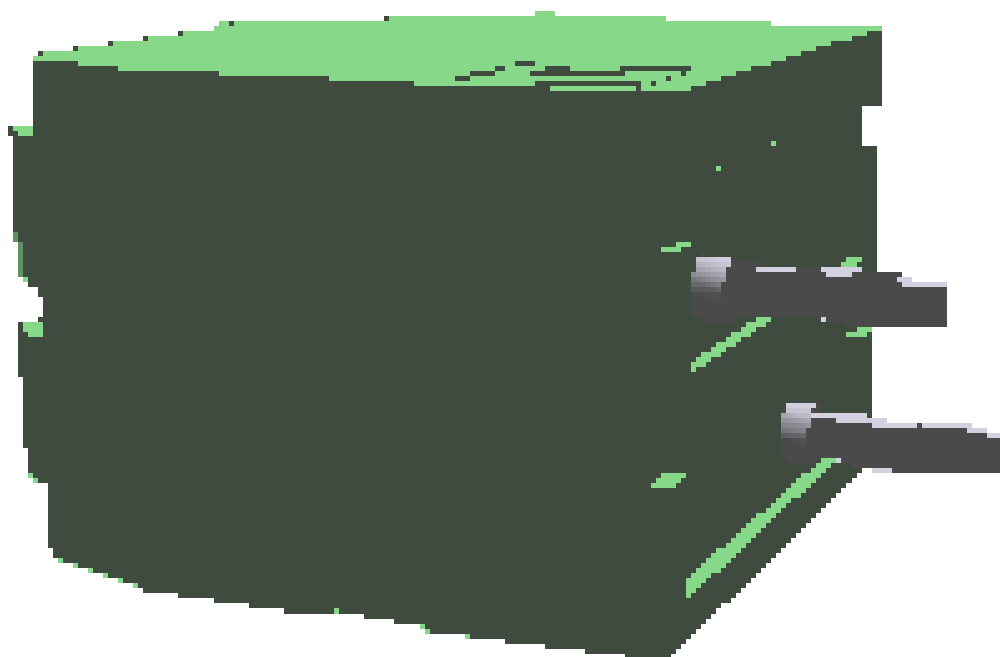
Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1985195

1985195 PTSA 1,5/ 2-3,5-Z**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
5.1	item properties	4
5.2	Connection capacity	4
5.3	Connection capacity AWG	4
6	Material properties	4
6.1	Material of metal parts	4
6.2	Material of plastic parts	4
7	Dimensions	6
7.1	Dimensions for the product	6
8	Series drawing	7
8.1	Dimensions for PCB design	8
9	Application	8
10	Packaging information	8
10.1	Processing notes	8
10.2	Temperature limit values	8
11	Mechanical tests	9
11.1	Pull-out test	9
11.2	Check for damage to conductor or loosening	9
12	Electrical tests	10
12.1	Electrical data	10
12.2	Air and creepage distances	10
12.3	Short-time withstand current test	10
12.4	Aging test (climatic impact and corrosion testing)	10
12.5	Mechanical connection test for the PCB terminal block	10
12.6	Temperature rise test	11
13	Current carrying capacity/derating curves	12
14	Environmental and durability tests	13
14.1	Vibration test	13
14.2	Assessment of fire risk (glow wire test)	13
15	Approvals / Certificates	14
16	Commercial Data	15
17	Accessories	15

1985195 PTSA 1,5/ 2-3,5-Z

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



1985195 PTSA 1,5/ 2-3,5-Z**5 General Technical Data****5.1 item properties**

Order No.	1985195
Type	PTSA 1,5/ 2-3,5-Z
Product type	PCB terminal block
Range of articles	PTSA 1,5
Pitch	3.5 mm
Range of positions	2...24
Number of positions	2
Number of levels	1
Number of connections	2
Number of potentials	2
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

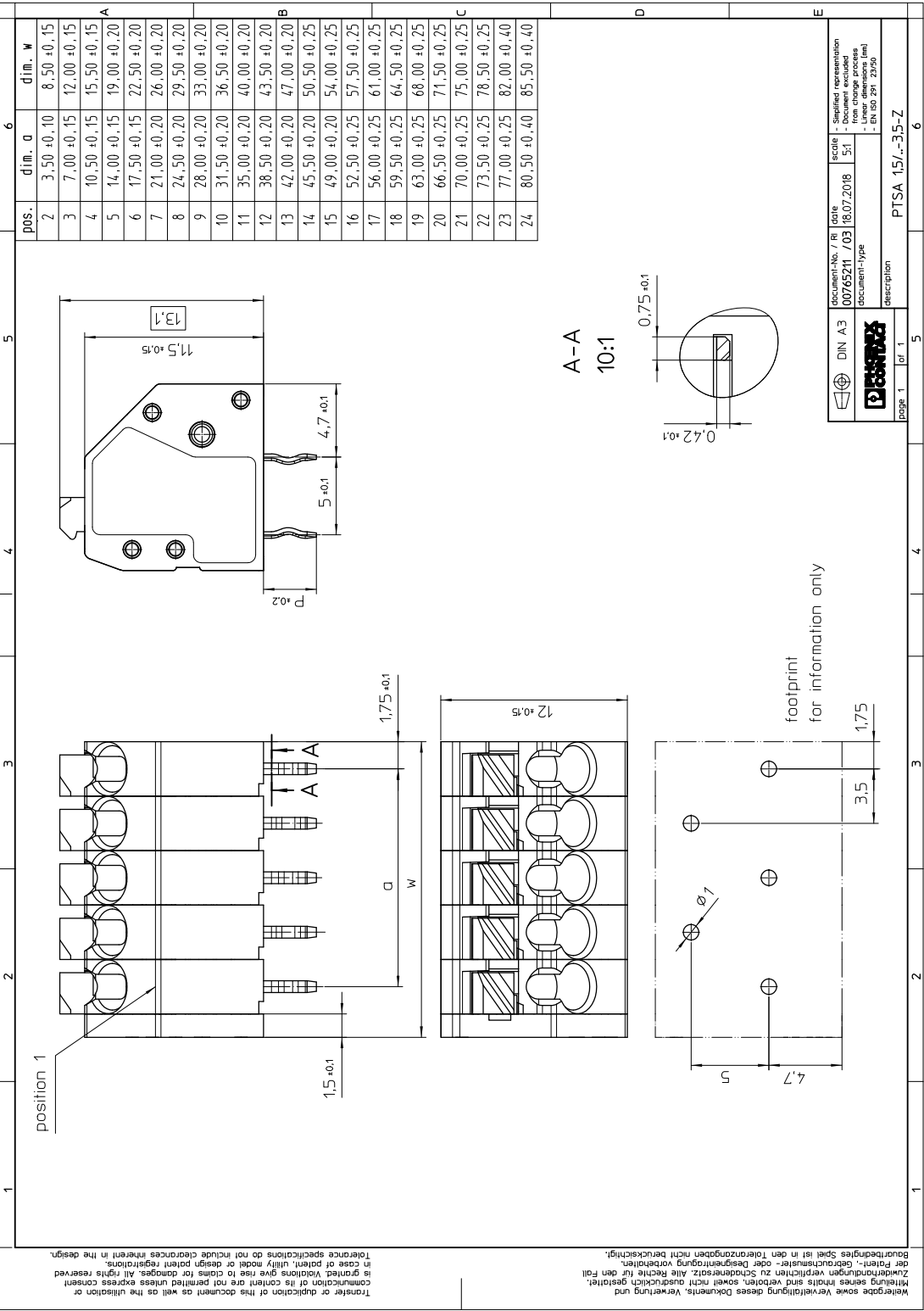
1985195 PTSA 1,5/ 2-3,5-Z

	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

1985195 PTSA 1,5/ 2-3,5-Z**7 Dimensions****7.1 Dimensions for the product**

Length	12 mm
Width	8.5 mm
Height (without solder pin)	13.1 mm
Total height	16.7 mm
Solder pin [P]	3.6 mm
Dimension a	3.5 mm

8 Series drawing



1985195 PTSA 1,5/ 2-3,5-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	420

10.1 Processing notes

Process	Wave soldering
Specification	Following IEC 61760-1:2006-04
Specification	Following IEC 60068-2-54:2006-04

10.2 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)

1985195 PTSA 1,5/ 2-3,5-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

1985195 PTSA 1,5/ 2-3,5-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

1985195 PTSA 1,5/ 2-3,5-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

1985195 PTSA 1,5/ 2-3,5-Z**13 Current carrying capacity/derating curves**

Specification

IEC 60947-7-4:2013-08

Note

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

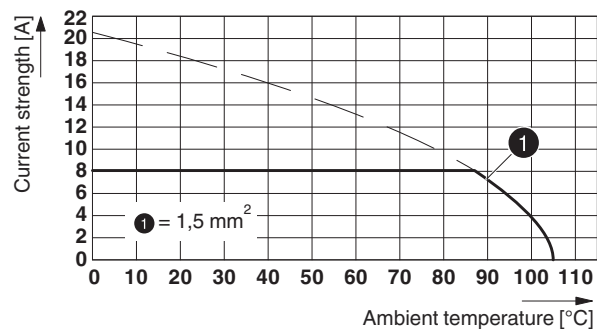
Reduction factor

1

Number of positions

4

Conductor cross section

1.5 mm²**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**

1985195 PTSA 1,5/ 2-3,5-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		

1985195 PTSA 1,5/ 2-3,5-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

1985195 PTSA 1,5/ 2-3,5-Z**16 Commercial Data**

Order No.	1985195
Type	PTSA 1,5/ 2-3,5-Z
Pieces per package	420
Net weight	1.127 g
GTIN	4017918922276
	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