

Data sheet

Order No.: 1985001

Type: PTSA 1,5/ 6-3,5-F

PCB terminal block, Push-in spring connection



The figure shows a 10-position version of the product

1 Main features



- | | | | |
|---------------------------|---------------------------|------------------------|---------------------|
| • No. of pos. | 6 | • Nominal current | 8 A |
| • Conductor cross section | 1.5 mm ² | • Nominal voltage | 250 V |
| • Color | green | • 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.

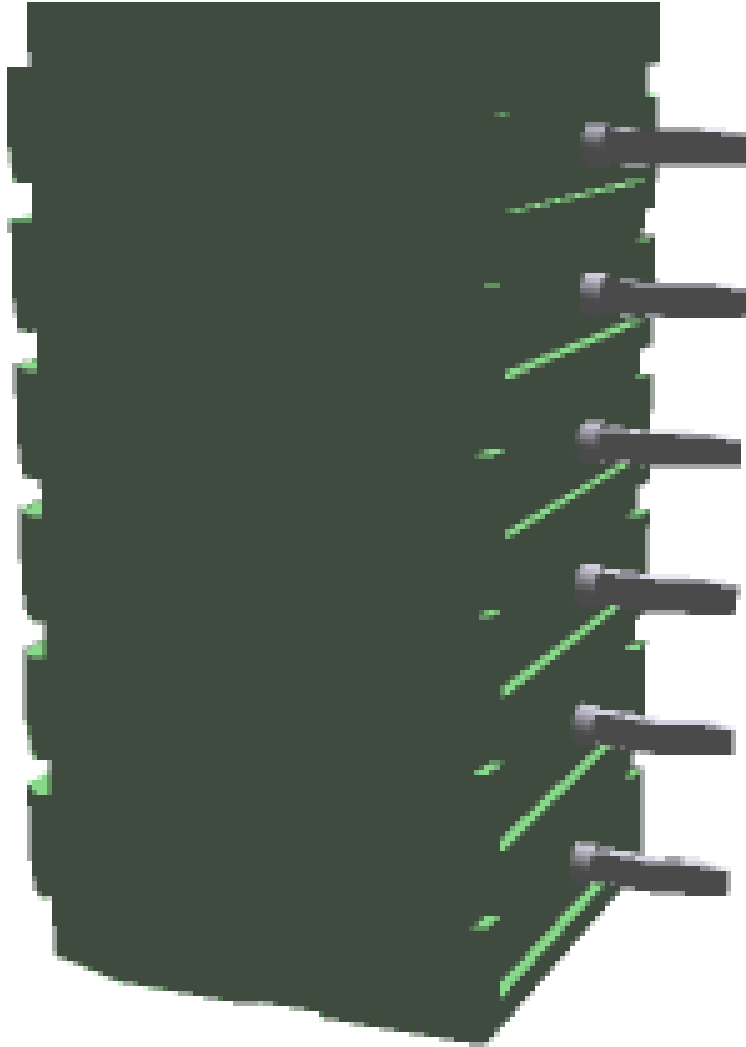
It can be downloaded at: phoenixcontact.net/product/1985001

1985001 PTSA 1,5/ 6-3,5-F**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	item properties.....	4
	5.1 Connection capacity	4
	5.2 Material data	4
6	Dimensions.....	4
	6.1 Dimensions for the product	4
	6.2 Dimensions for PCB design.....	5
7	Series drawing.....	6
8	Packaging information	7
9	Application.....	7
	9.1 Temperature limit values	7
10	Mechanical tests.....	8
	10.1 Termination and connection method.....	8
	10.2 Pull-out test	8
11	Electrical tests	9
	11.1 Electrical data	9
	11.2 Air clearances and creepage distances	9
	11.3 Short-time withstand current test	9
	11.4 Aging test (climatic impact and corrosion testing).....	9
	11.5 Insulation resistance	9
	11.6 Mechanical connection test for the PCB terminal block	10
	11.7 Temperature-rise test	10
12	Current carrying capacity/derating curves	11
13	Environmental and durability tests	12
	13.1 Assessment of fire risk (glow wire test).....	12
	13.2 Vibration test	12
14	Approvals	12
15	Commercial Data.....	13
16	Accessories.....	13

1985001 PTSA 1,5/ 6-3,5-F

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



1985001 PTSA 1,5/ 6-3,5-F**5 item properties**

Order No.	1985001
Type	PTSA 1,5/ 6-3,5-F
Range of articles	PTSA 1,5
Pitch	3.5 mm
Number of positions	6
Connection method	Push-in spring connection
Mounting type	Wave soldering
Pin layout	Linear pinning
Product note	Soldering legs in front area, one-rowed

5.1 Connection capacity

Conductor cross section, solid	0.2 mm ² to 1.5 mm ²
Conductor cross section, flexible	0.2 mm ² to 1.5 mm ²
Conductor cross section AWG/kcmil	24 to 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² to 1 mm ²
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm ² to 0.5 mm ²
Stripping length	9 mm

5.2 Material data

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	Sn 4 µm ... 8 µm	
Soldering area surface	Sn 4 µm ... 8 µm	
Surface characteristics	hot-dip tin-plated	
Insulating material data		
Insulating material	Housing	PA
CTI according to IEC 60112	600	600
Flammability rating according to UL 94	V0	V0
Color	green (6021)	
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	

6 Dimensions**6.1 Dimensions for the product**

Length	12 mm
Width	22.5 mm
Height (without solder pin)	13.1 mm
Total height	16.7 mm
Solder pin [P]	3.6 mm
Dimension a	17.5 mm

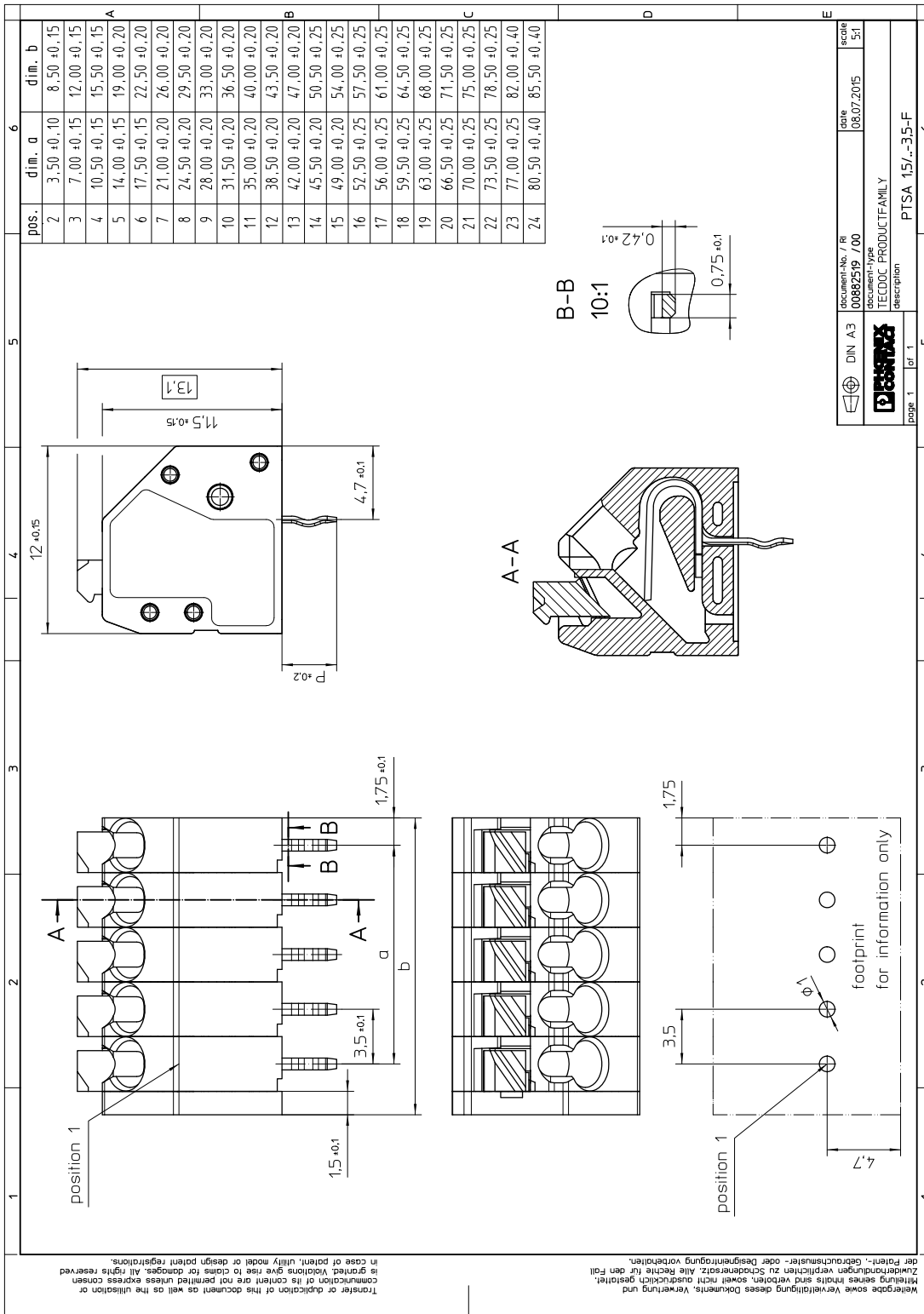
1985001 PTSA 1,5/ 6-3,5-F

6.2 Dimensions for PCB design

Hole diameter	1 mm
Pin dimensions	0,4 x 0,75 mm
Pin spacing	3.5 mm

1985001 PTSA 1,5/ 6-3,5-F

7 Series drawing



1985001 PTSA 1,5/ 6-3,5-F

8 Packaging information

Type of packaging	packed in cardboard
Pieces per package	160

9 Application**9.1 Temperature limit values**

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

1985001 PTSA 1,5/ 6-3,5-F**10 Mechanical tests****10.1 Termination and connection method**

Termination and connection method	
Specification	IEC 60999-1:1999-11
Check for damage to conductor or loosening	Test passed

10.2 Pull-out test

Termination and connection method: pull-out test	
Specification	IEC 60999-1:1999-11
Result	Test passed
Conductor cross section/conductor type/tractive force actual value	0.5 mm ² / solid / > 20 N
Conductor cross section/conductor type/tractive force actual value	0.5 mm ² / stranded / > 20 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 / stranded / > 40 N

1985001 PTSA 1,5/ 6-3,5-F**11 Electrical tests****11.1 Electrical data**

Rated current / conductor cross section	8 A / 1.5 mm ²
Rated insulation voltage (III/2)	250 V
Rated surge voltage (III/2)	2.5 kV
Contact resistance	1.94 mΩ
Degree of pollution	2

11.2 Air clearances and creepage distances

Specification	IEC 60947-1:2007-06 + A1:2010-12		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112:2003-01)	CTI 600		
Rated insulation voltage	200 V	250 V	400 V
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV
Degree of pollution	3	2	2
Overvoltage category	III	III	II
Minimum clearance case A (inhomogeneous field)	2 mm	2 mm	2 mm
Minimum value of the creepage path requirement in acc. with table	2.5 mm	1.25 mm	2 mm
Note on connection cross section	With connected conductor 1.5 mm ² (solid).		

11.3 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

11.4 Aging test (climatic impact and corrosion testing)

Specification	IEC 60947-7-4:2013-08
Result	Test passed
Contact resistance R ₁	1.94 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)	3 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	2.2 kV

11.5 Insulation resistance

1985001 PTSA 1,5/ 6-3,5-F

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

11.6 Mechanical connection test for the PCB terminal block

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

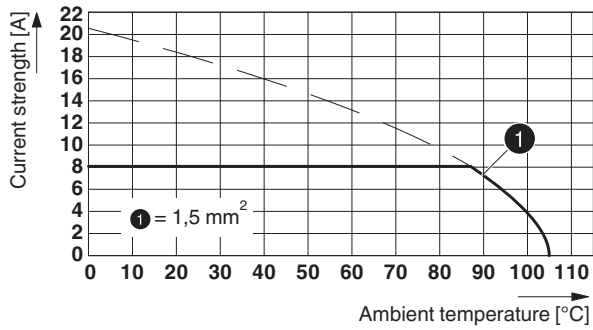
11.7 Temperature-rise test

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

1985001 PTSA 1,5/ 6-3,5-F

12 Current carrying capacity/derating curves

Specification	IEC 60512-5-2:2002-02
Reduction factor	1
Number of positions	4

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**


1985001 PTSA 1,5/ 6-3,5-F**13 Environmental and durability tests****13.1 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		


13.2 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	5 g (60.1 - 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis
Contact interruption	

14 Approvals

UL Recognized 			
Use group	B	D	
mm ² /AWG/kcmil	24-16	24-16	
Voltage	300 V	300 V	
Current	5 A	5 A	

VDE Gutachten mit Fertigungsüberwachung 			
mm ² /AWG/kcmil	0.5-0.75		
Voltage	130 V		
Current	2 A		

cUL Recognized 			
Use group	B	D	
mm ² /AWG/kcmil	24-16	24-16	
Voltage	300 V	300 V	
Current	5 A	5 A	

CCA			
mm ² /AWG/kcmil	0.75		
Voltage			
Current	2 A		

EAC 			
--	--	--	--

cULus Recognized 			
---	--	--	--

1985001 PTSA 1,5/ 6-3,5-F**15 Commercial Data**

Order No.	1985001
Type	PTSA 1,5/ 6-3,5-F
Pieces per package	160
Net weight	2.919 g
GTIN	4017918922085
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

16 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