

# Data sheet

Order No.: 1989803

Type: PTSA 0,5/ 8-2,5-F

PCB terminal block, Push-in spring connection



The figure shows a 10-position version of the product

## 1 Main features



- |                           |                           |                        |                     |
|---------------------------|---------------------------|------------------------|---------------------|
| • No. of pos.             | 8                         | • Nominal current      | 2 A                 |
| • Conductor cross section | 0.5 mm <sup>2</sup>       | • Nominal voltage      | 250 V               |
| • Color                   | green                     | • Connection direction | 45 °                |
| • Pitch                   | 2.5 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/1989803](http://phoenixcontact.net/product/1989803)

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



**1989803 PTSA 0,5/ 8-2,5-F****5 item properties**

Order No.	1989803
Type	PTSA 0,5/ 8-2,5-F
Range of articles	PTSA 0,5
Pitch	2.5 mm
Number of positions	8
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	0.14 mm <sup>2</sup> to 0.5 mm <sup>2</sup>
Conductor cross section, flexible	0.2 mm <sup>2</sup> to 0.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil	24 to 20
Stripping length	9 mm

**5.2 Material data**

<b>Material of metal parts</b>		
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	
<b>Insulating material data</b>		
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	21.5 mm
Height (without solder pin)	13.1 mm
Total height	16.7 mm
Solder pin [P]	3.6 mm
Dimension a	17.5 mm

**6.2 Dimensions for PCB design**

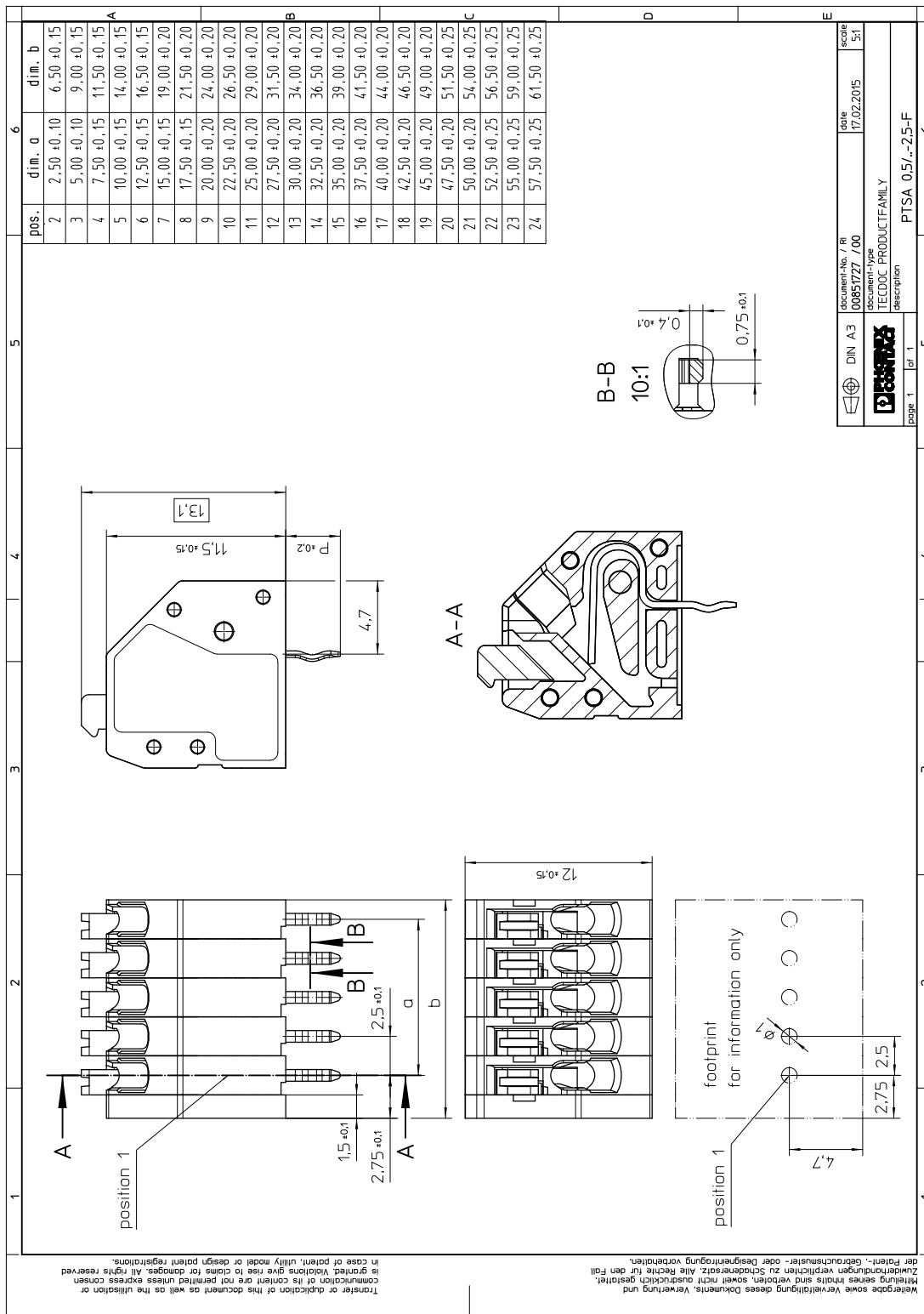
**1989803 PTSA 0,5/ 8-2,5-F**

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Hole diameter	1 mm
Pin dimensions	0,4 x 0,75 mm
Pin spacing	2.5 mm

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7 Series drawing



**1989803 PTSA 0,5/ 8-2,5-F****8 Packaging information**

Type of packaging	packed in cardboard
Pieces per package	100

**9 Application****9.1 Temperature limit values**

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Ambient temperature (assembly)	-5 °C ... 55 °C
Ambient temperature (operation)	-40 °C ... 85 °C

**1989803 PTSA 0,5/ 8-2,5-F****10 Mechanical tests****10.1 Connection test**

Specification	IEC 60998-2-2:1991-10
Result	Test passed

**10.2 Electrical performance test**

Specification	IEC 60998-2-2:1991-10
Result	Test passed

**10.3 Check for damage to conductor or loosening**

Specification	IEC 60998-2-2:1991-10
Result	Test passed

**10.4 Pull-out test**

Specification	IEC 60998-2-2:1991-10
Result	Test passed
Conductor cross section/conductor type/tractive force actual value	0.14 mm <sup>2</sup> / solid / > 7 N
Conductor cross section/conductor type/tractive force actual value	0.2 mm <sup>2</sup> / stranded / > 10 N
Conductor cross section/conductor type/tractive force actual value	0.5 mm <sup>2</sup> / solid / > 30 N
Conductor cross section/conductor type/tractive force actual value	0.5 mm <sup>2</sup> / stranded / > 30 N

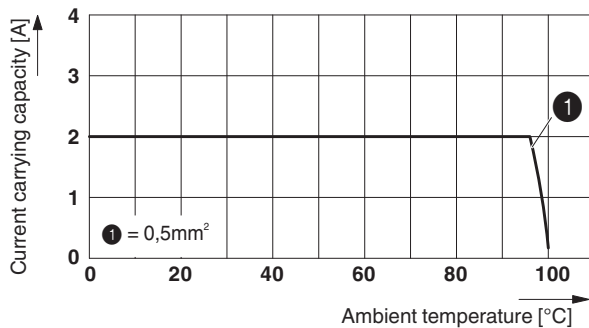


**1989803 PTSA 0,5/ 8-2,5-F****11 Electrical tests****11.1 Electrical data**

Rated current / conductor cross section	2 A / 0.5 mm <sup>2</sup>
Rated insulation voltage (III/2)	250 V
Rated surge voltage (III/2)	2.5 kV
Contact resistance	2.6 mΩ
Degree of pollution	2

**11.2 Temperature rise test**

Specification	IEC 60998-2-1:1990-04
Result	Test passed
Requirement temperature-rise test	Increase in temperature ≤ 45 K
Conductor cross section/test current/temperature rise	0.5 mm <sup>2</sup> / 2 A / 3 K
Specification	Following IEC 60512-5-2:2002-02
Result	Test passed
Conductor cross section/test current/temperature rise	0.5 mm <sup>2</sup> / 2 A / 5 K

**Derating diagram for 5 pins;reduction factor=1**

**1989803 PTSA 0,5/ 8-2,5-F****12 Environmental and durability tests****12.1 Resistance to ageing, humidity and penetration of solids**

Specification	IEC 60998-2-2:1991-10
Result	Test passed
Dry heat	168 h/100°C
Damp heat	48 h/30 °C/92 %

**12.2 Insulation resistance**

Specification	IEC 60998-2-2:1991-10
Result	Test passed
Insulation resistance, neighboring positions	10 <sup>9</sup> Ω

**12.3 Test of the power frequency electric strength**

Specification	IEC 60998-2-2:1991-10
Result	Test passed
Test voltage between neighboring positions	2 kV

**12.4 Glow-wire test**

Specification	IEC 60998-2-2:1991-10
Result	Test passed
Temperature	850 °C
Time of exposure	5 s

**12.5 Mechanical strength/tumbling barrel**

Specification	IEC 60998-1:1990-04
Result	Test passed
Height of fall	50 cm
Number of drop cycles	50

**12.6 Vibration test**

Specification	IEC 60068-2-6:1995-03
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

**12.7 Testing in a saturated atmosphere in the presence of sulfur dioxide**

**1989803 PTSA 0,5/ 8-2,5-F**


Specification	DIN 50018-EN:1997-06
Result	Test passed
Corrosive stress	KFW 1.0 S/1 cycle
Conductor cross section	0.2 mm <sup>2</sup> to 0.5 mm <sup>2</sup>
Specification	IEC 61032:1997-12
Note	unenclosed basic insulation - protected against finger contact with IP20 test finger in acc. with IEC 60529 when connected, above the PCB

**1989803 PTSA 0,5/ 8-2,5-F****13 Type approval and special tests****14 Approvals****UL Recognized** 

Use group	B	D		
mm <sup>2</sup> /AWG/kcmil	26-20	26-20		
Voltage	150 V	300 V		
Current	2 A	2 A		

**VDE Gutachten mit Fertigungsüberwachung** 


mm <sup>2</sup> /AWG/kcmil	0.5			
Voltage	130 V			
Current	2 A			

**cUL Recognized** 

Use group	B	D		
mm <sup>2</sup> /AWG/kcmil	26-20	26-20		
Voltage	150 V	300 V		
Current	2 A	2 A		

**CCA**

mm <sup>2</sup> /AWG/kcmil	0.5			
Voltage				
Current	2 A			

**EAC** **cULus Recognized** 

**1989803 PTSA 0,5/ 8-2,5-F****15 Commercial Data**

Order No.	1989803
Type	PTSA 0,5/ 8-2,5-F
Pieces per package	100
Net weight	2.73 g
GTIN	4017918973407
	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
Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.4 x 2.5 x 75 mm, 2-component grip, with non-slip grip	1204504	SZF 0-0,4X2,5