

# Data sheet

2017-11-20  
Product version 02  
Document revision 0

Order No.: 1990025

Type: PTSA 0,5/ 4-2,5-Z

PCB terminal block, Push-in spring connection



The figure shows a 10-position version of the product

## 1 Main features



- |                           |                           |                        |                     |
|---------------------------|---------------------------|------------------------|---------------------|
| • No. of pos.             | 4                         | • 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

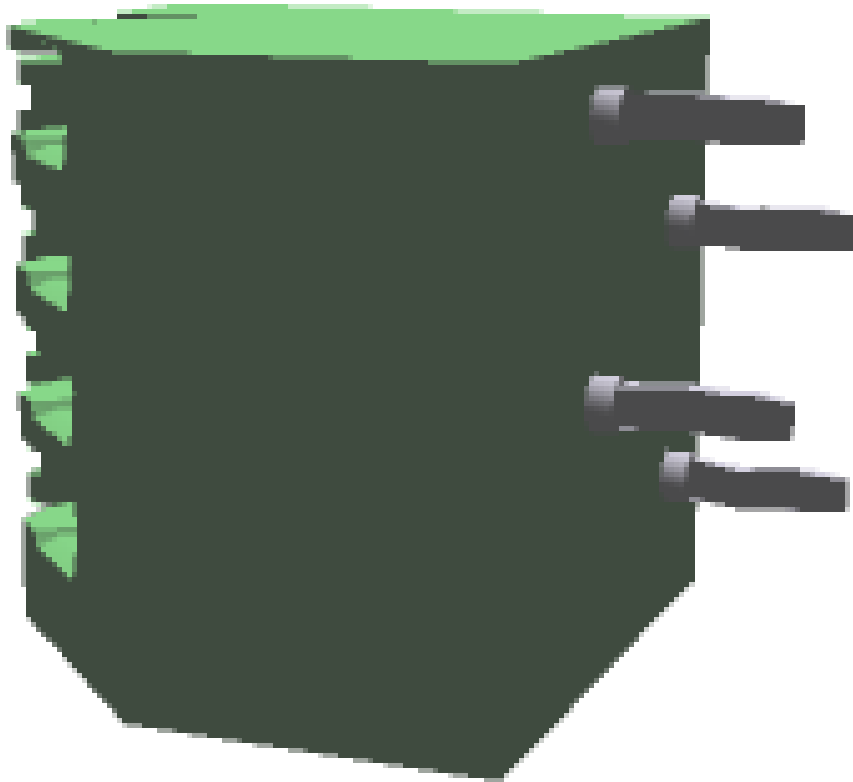


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It can be downloaded at: [phoenixcontact.net/product/1990025](http://phoenixcontact.net/product/1990025)

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



**1990025 PTSA 0,5/ 4-2,5-Z****5 item properties**

Order No.	1990025
Type	PTSA 0,5/ 4-2,5-Z
Range of articles	PTSA 0,5
Pitch	2.5 mm
Number of positions	4
Connection method	Push-in spring connection
Mounting type	Wave soldering
Pin layout	ZB - Zig-zag back pinning W
Product note	Offset soldering legs, two-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**

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	Housing	Housing
Insulating material	PA	
CTI according to IEC 60112	600	
Flammability rating according to UL 94	V0	
Color	green (6021)	

**6 Dimensions****6.1 Dimensions for the product**

Length	12 mm
Width	11.5 mm
Height (without solder pin)	13.1 mm
Total height	16.7 mm
Solder pin [P]	3.6 mm
Dimension a	7.5 mm

**6.2 Dimensions for PCB design**

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

**1990025 PTSA 0,5/ 4-2,5-Z****7 Series drawing****8 Packaging information**

Type of packaging	packed in cardboard
Pieces per package	250

**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

**1990025 PTSA 0,5/ 4-2,5-Z****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

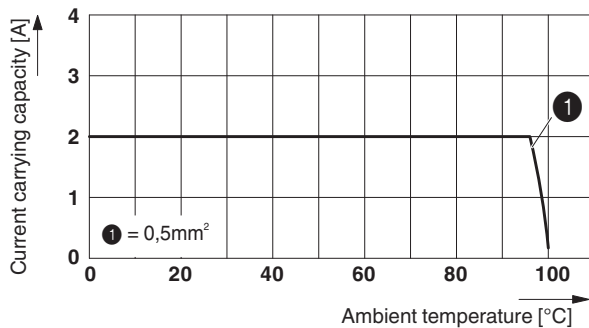
**1990025 PTSA 0,5/ 4-2,5-Z****11 Electrical tests****11.1 Electrical data**

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**

**1990025 PTSA 0,5/ 4-2,5-Z****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	2.5 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**



**1990025 PTSA 0,5/ 4-2,5-Z**

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

**1990025 PTSA 0,5/ 4-2,5-Z****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	300 V	300 V		
Current	2 A	2 A		

**VDE Gutachten mit Fertigungsüberwachung** 


mm <sup>2</sup> /AWG/kcmil	0.5			
Voltage	250 V			
Current	2 A			

**cUL Recognized** 

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

**CCA**

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

**EAC** **cULus Recognized** 

**1990025 PTSA 0,5/ 4-2,5-Z****15 Commercial Data**

Order No.	1990025
Type	PTSA 0,5/ 4-2,5-Z
Pieces per package	250
Net weight	1.539 g
GTIN	4017918973599
	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