

# PTSA 0,5/ 6-2,5-Z - PCB terminal block

1990041

<https://www.phoenixcontact.com/us/products/1990041>

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PCB terminal block, nominal current: 2 A, rated voltage (III/2): 250 V, nominal cross section: 0.5 mm<sup>2</sup>, number of potentials: 6, number of rows: 1, number of positions per row: 6, product range: PTSA 0,5, pitch: 2.5 mm, connection method: Push-in spring connection, mounting: Wave soldering, conductor/PCB connection direction: 45 °, color: green, Pin layout: Zigzag pinning W, Solder pin [P]: 3.6 mm, number of solder pins per potential: 1, type of packaging: packed in cardboard. Offset soldering legs, two-rowed

## 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

## Commercial data

Item number	1990041
Packing unit	100 pc
Minimum order quantity	100 pc
Sales key	AA11
Product key	AAKBDA
GTIN	4017918973612
Weight per piece (including packing)	2.452 g
Weight per piece (excluding packing)	2.229 g
Customs tariff number	85369010
Country of origin	PL

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## Technical data

### Product properties

Product type	PCB terminal block
Product family	PTSA 0,5
Product line	COMBICON Terminals XS
Type	PC termination block
Number of positions	6
Pitch	2.5 mm
Number of connections	6
Number of rows	1
Number of potentials	6
Pin layout	Zigzag pinning W
Solder pins per potential	1

### Electrical properties

#### Properties

Nominal current $I_N$	2 A
Nominal voltage $U_N$	250 V
Rated voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	250 V
Rated surge voltage (III/2)	2.5 kV
Rated voltage (II/2)	400 V
Rated surge voltage (II/2)	2.5 kV

### Connection data

#### Connection technology

Type	PC termination block
Nominal cross section	0.5 mm <sup>2</sup>

#### Conductor connection

Connection method	Push-in spring connection
Conductor cross-section rigid	0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Conductor cross-section flexible	0.2 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 20
Stripping length	9 mm

### Mounting

Mounting type	Wave soldering
Pin layout	Zigzag pinning W

### Material specifications

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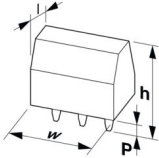
## Material data - contact

Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Surface characteristics	hot-dip tin-plated
Metal surface terminal point (top layer)	Tin (4 µm - 8 µm Sn)
Metal surface soldering area (top layer)	Tin (4 µm - 8 µm Sn)

## Material data - housing

Color (Housing)	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

## Dimensions

Dimensional drawing	
Pitch	2.5 mm
Width [w]	16.5 mm
Height [h]	16.7 mm
Length [l]	12 mm
Installed height	13.1 mm
Solder pin length [P]	3.6 mm
Pin dimensions	0.4 x 0.75 mm

## PCB design

Pin spacing	2.5 mm
Hole diameter	1 mm

## Mechanical tests

### Connection test

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

### Test for conductor damage and slackening

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

## Electrical tests

### Temperature-rise test

Specification	IEC 60998-2-1:1990-04
Requirement temperature-rise test	Increase in temperature ≤ 45 K

### Insulation resistance

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

### Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
minimum clearance value - non-homogenous field (III/3)	1.5 mm
minimum creepage distance (III/3)	2 mm
Rated insulation voltage (III/2)	250 V
Rated surge voltage (III/2)	2.5 kV
minimum clearance value - non-homogenous field (III/2)	1.5 mm
minimum creepage distance (III/2)	1.5 mm
Rated insulation voltage (II/2)	400 V
Rated surge voltage (II/2)	2.5 kV
minimum clearance value - non-homogenous field (II/2)	1.5 mm
minimum creepage distance (II/2)	2 mm

## Environmental and real-life conditions

### Vibration test

Specification	IEC 60068-2-6:1995-03
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 Hz ... 60.1 Hz)
Acceleration	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

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## Glow-wire test

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

## Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 55 °C
Ambient temperature (operation)	-40 °C ... 85 °C

## Packaging specifications

Type of packaging	packed in cardboard
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## Drawings

Dimensional drawing



The figure shows the 5-pos. version

Diagram



Derating diagram for 5 pins;reduction factor=1

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Drilling plan/solder pad geometry



The figure shows the 5-pos. version – Zig-zag pinning starts at the right-hand position. Other pinning available on request.

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1990041>

 <b>cULus Recognized</b> Approval ID: E60425-20030527				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
<b>B</b>				
Field wiring	300 V	1 A	26 - 20	-
Factory wiring	300 V	2 A	26 - 20	-
<b>D</b>				
Field wiring	300 V	1 A	26 - 20	-
Factory wiring	300 V	2 A	26 - 20	-

 <b>VDE report with production monitoring</b> Approval ID: 40013932				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
keine				
	250 V	2 A	-	- 0.5

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## Classifications

### ECLASS

ECLASS-13.0	27460101
ECLASS-15.0	27460101

### ETIM

ETIM 10.0	EC002643
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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### EF3.1 Climate Change

CO2e kg	0.016 kg CO2e
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