

PTSA 0,5/ 3-2,5-Z - PCB terminal block



1990012

<https://www.phoenixcontact.com/pc/products/1990012>

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Printed circuit board terminal, nominal current: 2 A, rated voltage (III/2): 250 V, nominal cross section: 0.5 mm², number of potentials: 3, number of rows: 1, number of positions per row: 3, 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 M, 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	1990012
Packing unit	250 pc
Minimum order quantity	1 pc
Product key	AAKBDA
Catalog page	Page 411 (C-1-2013)
GTIN	4017918973582
Weight per piece (including packing)	1.307 g
Weight per piece (excluding packing)	1.2 g
Customs tariff number	85369010
Country of origin	PL

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Technical data

Product properties

Product type	Printed circuit board terminal
Product family	PTSA 0,5
Product line	COMBICON Terminals XS
Type	PC termination block
Number of positions	3
Pitch	2.5 mm
Number of connections	3
Number of rows	1
Number of potentials	3
Pin layout	Zigzag pinning M
Solder pins per potential	1

Electrical 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 ²

Conductor connection

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

Mounting

Mounting type	Wave soldering
Pin layout	Zigzag pinning M

Material specifications

Material data - contact

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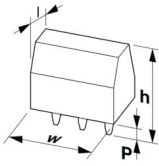
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Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Surface characteristics	hot-dip tin-plated
Metal surface terminal point (top layer)	Tin (4 - 8 μm Sn)
Metal surface soldering area (top layer)	Tin (4 - 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]	9 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
Result	Test passed

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Pull-out test

Specification	IEC 60998-2-2:1991-10
Conductor cross section/conductor type/tractive force setpoint/actual value	0.14 mm ² / solid / > 7 N
	0.2 mm ² / flexible / > 10 N
	0.5 mm ² / solid / > 30 N
	0.5 mm ² / 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 ⁹ 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

Glow-wire test

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

Ambient conditions

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

Packaging specifications

Type of packaging	packed in cardboard
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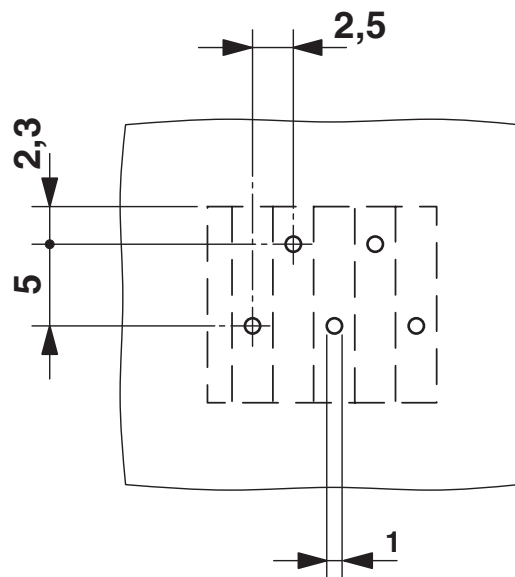
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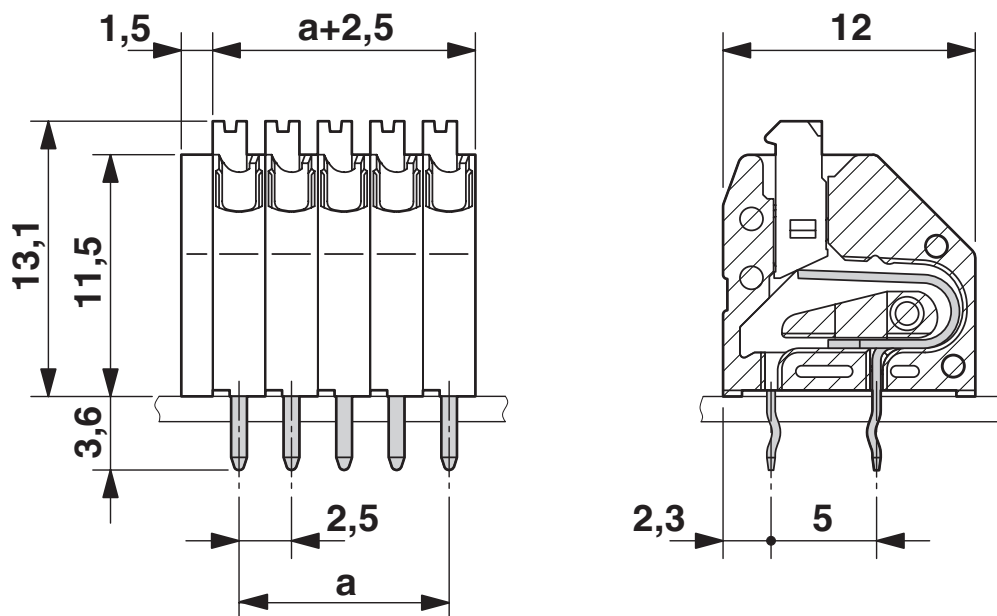
Drawings

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.

Dimensional drawing



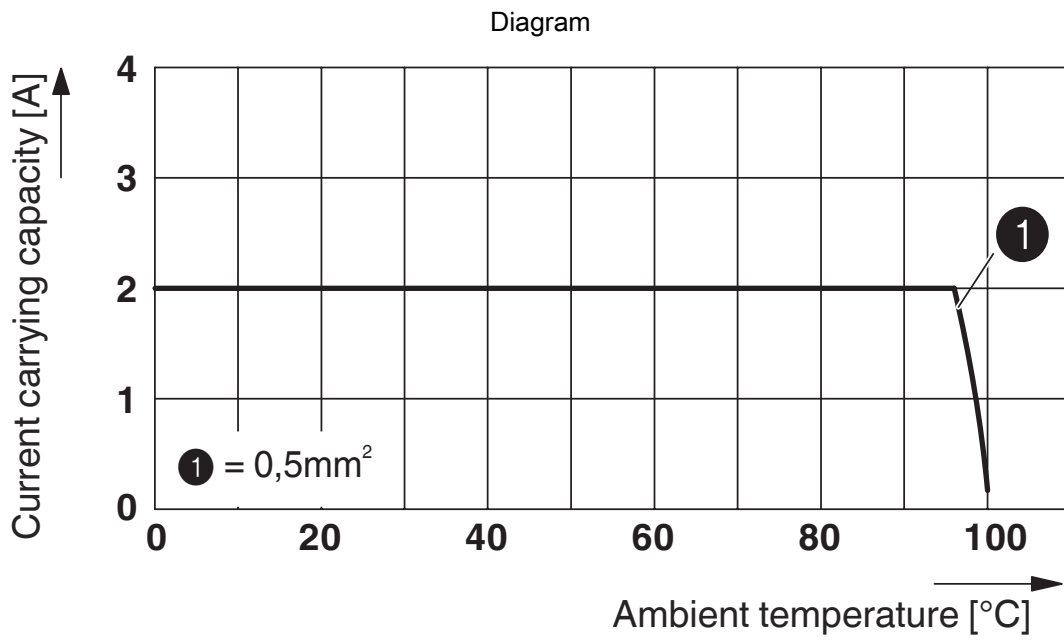
The figure shows the 5-pos. version

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Derating diagram for 5 pins;reduction factor=1

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/1990012>

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

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

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Classifications

ECLASS

ECLASS-11.0	27460101
ECLASS-12.0	27460101
ECLASS-13.0	27460101

ETIM

ETIM 9.0	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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EF3.0 Climate Change

CO2e kg	0.019 kg CO2e
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