

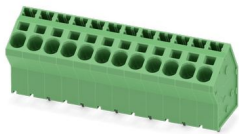
# SPTA 5/12-7,5-ZB - PCB terminal block



1819189

<https://www.phoenixcontact.com/gb/products/1819189>

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PCB terminal block, nominal current: 41 A, rated voltage (III/2): 1000 V, nominal cross section: 6 mm<sup>2</sup>, number of potentials: 12, number of rows: 1, number of positions per row: 12, product range: SPTA 5/, pitch: 7.5 mm, connection method: Push-in spring connection, mounting: Wave soldering, conductor/PCB connection direction: 60 °, color: green, Pin layout: Zigzag pinning W, Solder pin [P]: 4.6 mm, type of packaging: packed in cardboard

## Your advantages

- Time saving push-in connection, tools not required
- Defined contact force ensures that contact remains stable over the long term
- Clamping space opened by means of fixed screwdriver enables convenient conductor connection
- Unrestricted 600-V-UL approval thanks to compact zig-zag pinning
- Angled connection enables multi-row arrangement on the PCB

## Commercial data

Item number	1819189
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AANBBD
Product key	AANBBD
Catalog page	Page 25 (NTK-2014)
GTIN	4046356787291
Weight per piece (including packing)	63.88 g
Weight per piece (excluding packing)	63.88 g
Customs tariff number	85369010
Country of origin	DE

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## Technical data

### Product properties

Product line	COMBICON Terminals L
Product type	Printed circuit board terminal
Product family	SPTA 5/
Number of positions	12
Pitch	7.5 mm
Number of connections	12
Number of rows	1
Number of potentials	12
Pin layout	Zigzag pinning W

### Electrical properties

Nominal current $I_N$	41 A
Nominal voltage $U_N$	1000 V
Degree of pollution	3
Rated voltage (III/3)	800 V
Rated surge voltage (III/3)	8 kV
Rated voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
Rated voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV

### Connection data

#### Connection technology

Nominal cross section	6 mm <sup>2</sup>
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#### Conductor connection

Connection method	Push-in spring connection
Conductor cross section rigid	0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross section AWG	24 ... 8
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Stripping length	15 mm

### Mounting

Mounting type	Wave soldering
Pin layout	Zigzag pinning W
Connection method	Push-in spring connection

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## Material specifications

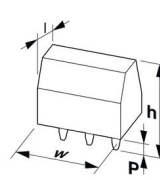
### Material data - contact

Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Surface characteristics	Tin-plated
Metal surface terminal point (top layer)	Tin (10 - 16 $\mu\text{m}$ Sn)
Metal surface soldering area (top layer)	Tin (10 - 16 $\mu\text{m}$ 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	7.5 mm
Width [w]	91.8 mm
Height [h]	38.6 mm
Length [l]	29 mm
Installed height	34 mm
Solder pin length [P]	4.6 mm
Pin dimensions	1.7 x 0.8 mm

### PCB design

Pin spacing	14 mm
Hole diameter	2.1 mm

## Mechanical tests

### Conductor connection

Specification	IEC 60999-1:1999-11
Result	Test passed

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## Test for conductor damage and slackening

Specification	IEC 60999-1:1999-11
Result	Test passed

## Repeated connection and disconnection

Specification	IEC 60999-1:1999-11
Result	Test passed

## Pull-out test

Specification	IEC 60999-1:1999-11
Conductor cross section/conductor type/tractive force setpoint/actual value	0.2 mm <sup>2</sup> / solid / > 10 N
	0.2 mm <sup>2</sup> / flexible / > 10 N
	6 mm <sup>2</sup> / solid / > 80 N
	6 mm <sup>2</sup> / flexible / > 80 N

## Electrical tests

### Temperature-rise test

Specification	IEC 60947-7-4:2013-08
Requirement temperature-rise test	The sum of ambient temperature and temperature rise of the PCB terminal block shall not exceed the upper limiting temperature.

### Short-time withstand current

Specification	IEC 60947-7-4:2013-08
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### Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 MΩ

### 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)	800 V
Rated surge voltage (III/3)	8 kV
minimum clearance value - non-homogenous field (III/3)	8 mm
minimum creepage distance (III/3)	10 mm
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	8 mm
Rated insulation voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV
minimum clearance value - non-homogenous field (II/2)	5.5 mm
minimum creepage distance (II/2)	5.5 mm

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## Environmental and real-life conditions

### Vibration test

Specification	IEC 60068-2-6:2007-12
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 Hz ... 60.1 Hz)
Sweep speed	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h

### Glow-wire test

Specification	IEC 60695-2-10:2000-10
Temperature	850 °C
Time of exposure	5 s

### Aging

Specification	IEC 60947-7-4:2013-08
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### Ambient conditions

Ambient temperature (operation)	-40 °C ... 100 °C (Depending on the current carrying capacity/derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

## Packaging specifications

Type of packaging	packed in cardboard
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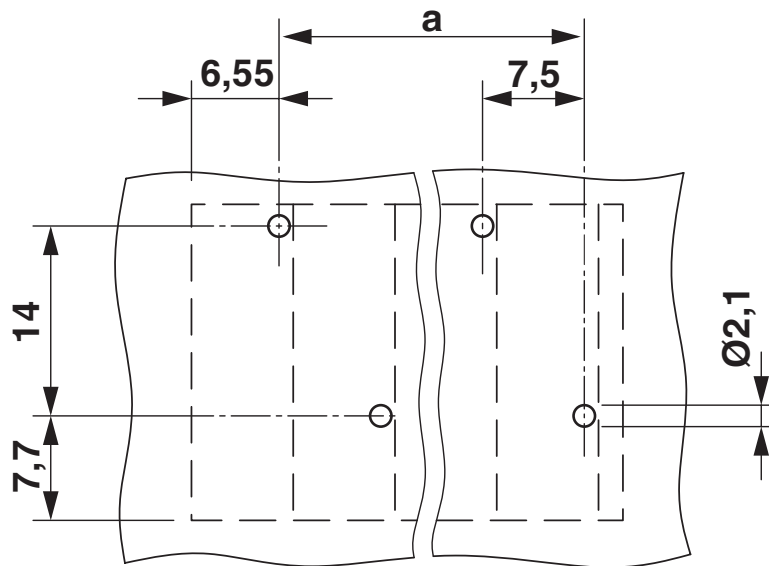
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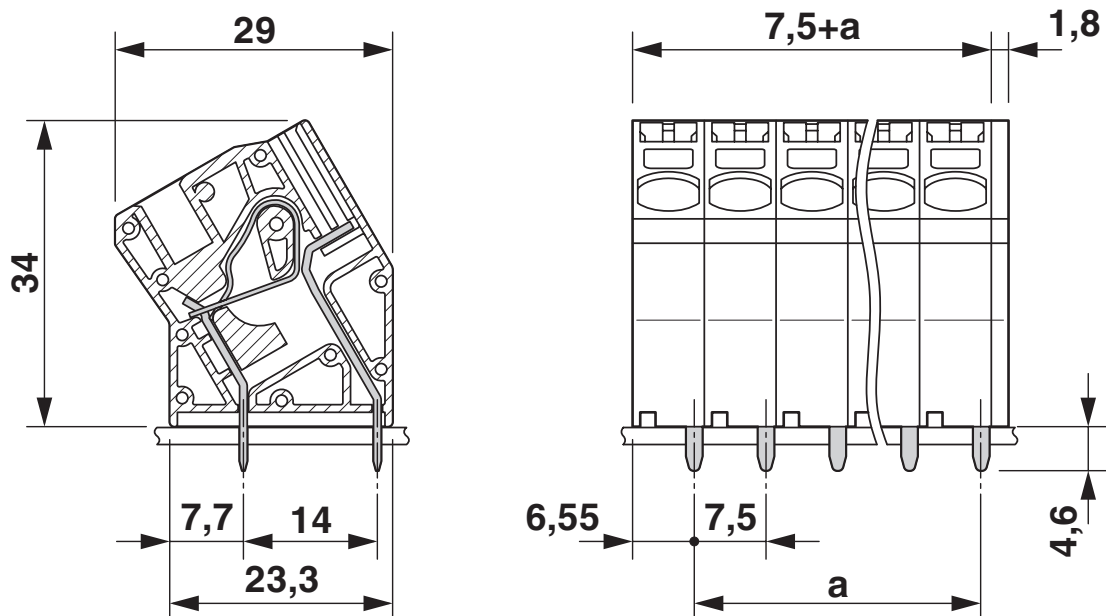
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## Drawings

Drilling plan/solder pad geometry



Dimensional drawing

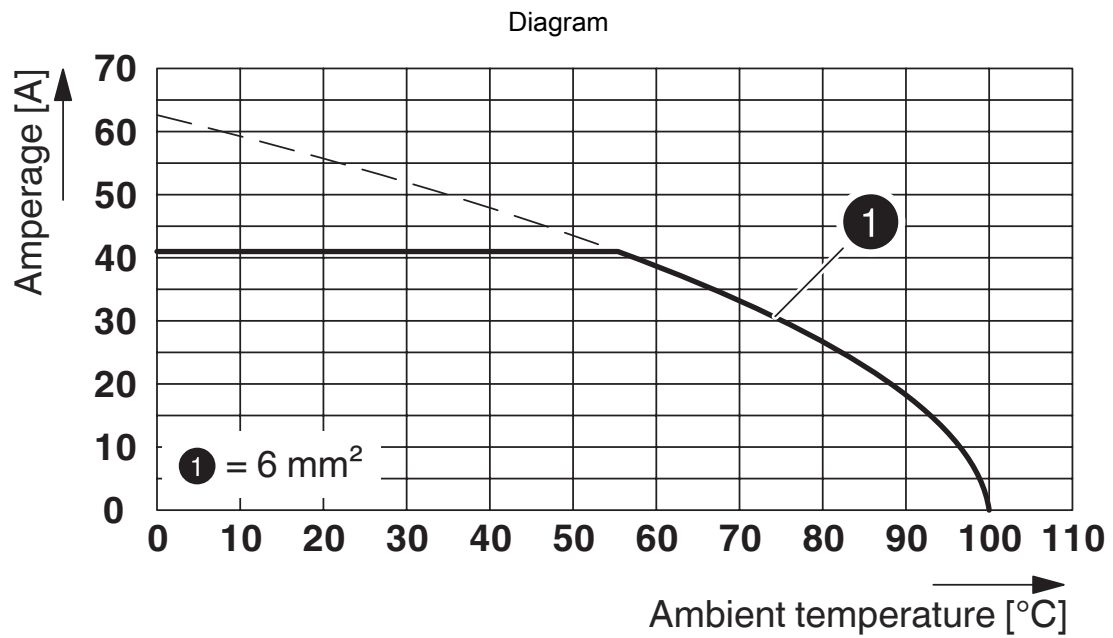


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Type: SPTA 5/...-7,5(-ZB)

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/1819189>

 <b>cULus Recognized</b> Approval ID: E60425-20061129				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B	600 V	33 A	24 - 8	-
Use group C	600 V	33 A	24 - 8	-

 <b>VDE Zeichengenehmigung</b> Approval ID: 40041641				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	1000 V	41 A	-	0.2 - 6

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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

China RoHS	Environmentally friendly use period: unlimited = EFUP-e No hazardous substances above threshold values
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