

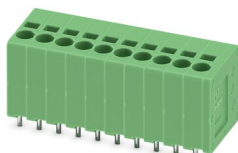
# SPT 1,5/10-V-3,5 - PCB terminal block



1990931

<https://www.phoenixcontact.com/us/products/1990931>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



PCB terminal block, nominal current: 17.5 A, rated voltage (III/2): 200 V, nominal cross section: 1.5 mm<sup>2</sup>, number of potentials: 10, number of rows: 1, number of positions per row: 10, product range: SPT 1,5/..-V, pitch: 3.5 mm, connection method: Push-in spring connection, mounting: Wave soldering, conductor/PCB connection direction: 90 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 2.5 mm, number of solder pins per potential: 2, 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
- Operation and conductor connection from one direction enable integration into front of device
- Two solder pins reduce the mechanical strain on the soldering spots

## Commercial data

Item number	1990931
Packing unit	1 pc
Minimum order quantity	60 pc
Sales key	AA12
Product key	AALBFC
Catalog page	Page 141 (C-1-2013)
GTIN	4046356104562
Weight per piece (including packing)	9.41 g
Weight per piece (excluding packing)	8.35 g
Customs tariff number	85369010
Country of origin	SK

# SPT 1,5/10-V-3,5 - PCB terminal block



1990931

<https://www.phoenixcontact.com/us/products/1990931>

## Technical data

### Product properties

Product line	COMBICON Terminals S
Product type	Printed circuit board terminal
Product family	SPT 1,5/..-V
Number of positions	10
Pitch	3.5 mm
Number of connections	10
Number of rows	1
Number of potentials	10
Pin layout	Linear pinning
Solder pins per potential	2

### Electrical properties

Nominal current $I_N$	17.5 A
Nominal voltage $U_N$	200 V
Degree of pollution	3
Rated voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	200 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

Nominal cross section	1.5 mm <sup>2</sup>
-----------------------	---------------------

#### Conductor connection

Connection method	Push-in spring connection
Conductor cross section rigid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	24 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 0.75 mm <sup>2</sup>
Stripping length	10 mm

#### Specifications for ferrules without insulating collar

recommended crimping tool	1212034 CRIMPFOX 6
ferrules without insulating collar, according to DIN 46228-1	Cross section: 0.25 mm <sup>2</sup> ; Length: 7 mm

#### Specifications for ferrules with insulating collar

recommended crimping tool	1212034 CRIMPFOX 6
---------------------------	--------------------

# SPT 1,5/10-V-3,5 - PCB terminal block



1990931

<https://www.phoenixcontact.com/us/products/1990931>

ferrules with insulating collar, according to DIN 46228-4

Cross section: 0.25 mm<sup>2</sup>; Length: 8 mm

## Mounting

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

## 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 (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

Pitch	3.5 mm
Width [w]	36.4 mm
Height [h]	16.9 mm
Length [l]	13.5 mm
Installed height	14.4 mm
Solder pin length [P]	2.5 mm

### PCB design

Pin spacing	8.2 mm
Hole diameter	1.1 mm

## Electrical tests

### Air clearances and creepage distances | 1. Insulation coordination

Application	without pitch spacer
Specification	IEC 60947-7-4:2019-01
Insulating material group	I

# SPT 1,5/10-V-3,5 - PCB terminal block



1990931

<https://www.phoenixcontact.com/us/products/1990931>

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)	200 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

## Air clearances and creepage distances | 2. Insulation coordination

Application	with RZ-SPT 2,5-2,5
Specification	IEC 60947-7-4:2019-01
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	320 V
Rated surge voltage (III/3)	4 kV
minimum clearance value - non-homogenous field (III/3)	3 mm
minimum creepage distance (III/3)	4 mm
Rated insulation voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV
minimum clearance value - non-homogenous field (III/2)	3 mm
minimum creepage distance (III/2)	3 mm
Rated insulation voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV
minimum clearance value - non-homogenous field (II/2)	3 mm
minimum creepage distance (II/2)	3.2 mm

## Air clearances and creepage distances | 3. Insulation coordination

Application	with RZ-SPT 2,5-5,0
Specification	IEC 60947-7-4:2019-01
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	500 V
Rated surge voltage (III/3)	6 kV
minimum clearance value - non-homogenous field (III/3)	5.5 mm
minimum creepage distance (III/3)	6.3 mm
Rated insulation voltage (III/2)	630 V
Rated surge voltage (III/2)	6 kV
minimum clearance value - non-homogenous field (III/2)	5.5 mm
minimum creepage distance (III/2)	5.5 mm

# SPT 1,5/10-V-3,5 - PCB terminal block



1990931

<https://www.phoenixcontact.com/us/products/1990931>

Rated insulation voltage (II/2)	800 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

## Environmental and real-life conditions

### Ambient conditions

Ambient temperature (operation)	-40 °C ... 105 °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
-------------------	---------------------

# SPT 1,5/10-V-3,5 - PCB terminal block

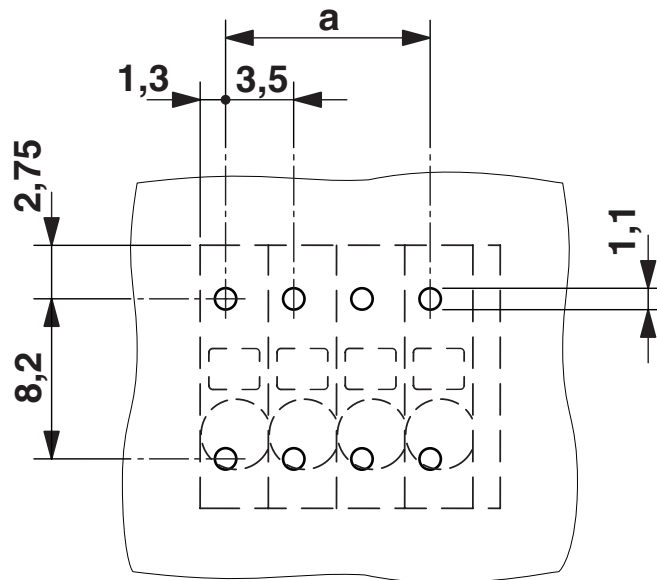


1990931

<https://www.phoenixcontact.com/us/products/1990931>

## Drawings

Drilling plan/solder pad geometry



# SPT 1,5/10-V-3,5 - PCB terminal block



1990931

<https://www.phoenixcontact.com/us/products/1990931>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1990931>



### VDE Zeichengenehmigung

Approval ID: 40042909

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	200 V	17.5 A	-	0.2 - 1.5



### EAC

Approval ID: B.01687



### cULus Recognized

Approval ID: E60425-20061129

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B				
	300 V	10 A	24 - 16	-
Use group D				
	300 V	10 A	24 - 16	-

# SPT 1,5/10-V-3,5 - PCB terminal block



1990931

<https://www.phoenixcontact.com/us/products/1990931>

## Classifications

### ECLASS

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

### ETIM

ETIM 8.0	EC002643
----------	----------

### UNSPSC

UNSPSC 21.0	39121400
-------------	----------



# SPT 1,5/10-V-3,5 - PCB terminal block



1990931

<https://www.phoenixcontact.com/us/products/1990931>

## Environmental product compliance

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

# SPT 1,5/10-V-3,5 - PCB terminal block



1990931

<https://www.phoenixcontact.com/us/products/1990931>

## Accessories

### SZF 0-0,4X2,5 - Screwdriver

1204504

<https://www.phoenixcontact.com/us/products/1204504>



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

---

### CRIMPFOX 6 - Crimping pliers

1212034

<https://www.phoenixcontact.com/us/products/1212034>



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm<sup>2</sup> ... 6.0 mm<sup>2</sup>, lateral entry, trapezoidal crimp

---

Phoenix Contact 2023 © - all rights reserved

<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)