

# PCB terminal block - SPT-SMD 1,5/10-V-5,0 R88 - 1824381

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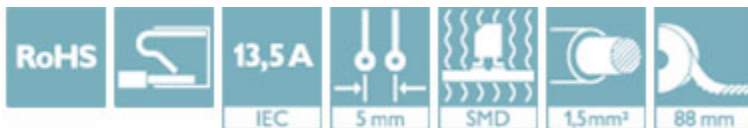
PCB terminal block, nominal current: 13.5 A, rated voltage (III/2): 320 V, Nominal cross section: 1.5 mm<sup>2</sup>, pitch: 5 mm, number of positions: 10, connection method: Push-in spring connection, mounting: SMD soldering, conductor/PCB connection direction: 90 °, color: black, Pin layout: Linear pad geometry. Sample values available under SAMPLE SPT...



The figure shows the 10-position version

## Your advantages

- Time saving push-in connection, tools not required
- Defined contact force ensures that contact remains stable over the long term
- Intuitive use through colour coded actuation lever
- Designed for integration into the SMT soldering process
- Operation and conductor connection from one direction enable integration into front of device
- Quick and convenient testing using integrated test option
- Two soldering spots per position reduce the mechanical strain on the soldering spots



## Key Commercial Data

Packing unit	1 pc
Minimum order quantity	200 pc
GTIN	
GTIN	4046356816489
Weight per Piece (excluding packing)	8.600 g
Custom tariff number	85369010
Country of origin	Poland

## Technical data

### Item properties

Brief article description	PCB terminal block
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# PCB terminal block - SPT-SMD 1,5/10-V-5,0 R88 - 1824381

## Technical data

### Item properties

Range of articles	SPT 1,5/...-V-SMD
Pitch	5 mm
Number of positions	10
Connection method	Push-in spring connection
Mounting type	SMD soldering
Pin layout	Linear pad geometry
Number of levels	1
Number of connections	10
Number of potentials	10

### Electrical parameters

Nom. voltage	320 V
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### Connection capacity

Connection method	Push-in spring connection
Conductor cross section solid	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 / kcmil	24 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.2 mm <sup>2</sup> ... 0.75 mm <sup>2</sup>
Stripping length	8 mm

### 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 - 8 µm Sn)
Metal surface soldering area (top layer)	Tin (4 - 8 µm Sn)

### Material data - housing

Insulating material	LCP
Insulating material group	IIIa
CTI according to IEC 60112	175
Flammability rating according to UL 94	V0

### Dimensions for the product

Length [ l ]	7.7 mm
Width [ w ]	49 mm
Height [ h ]	13.6 mm

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## Technical data

### Dimensions for the product

Pitch	5 mm
Height (without solder pin)	13.6 mm
Pin spacing	7 mm
Pin dimensions	0.7 x 0.3 mm
Dimension a	45 mm

### Dimensions for PCB design

Hole diameter	1.1 mm
Pin spacing	7 mm

### Packaging information

Type of packaging	88 mm wide tape
Pieces per package	200
Denomination packing units	Pcs.
[W] tape width	88 mm
[A] coil diameter	330 mm
[W2] coil overall dimension	94.4 mm
Outer packaging type	Transparent-Bag

### General product information

Type of note	Assembly instruction:
Note	This item is not suitable for PCB cleaning with liquids.

### Processing notes

Process	Reflow soldering
Specification	Following IPC/JEDEC J-STD-020D.1:2008-03
	Following IEC 60068-2-58:2005-02
Moisture Sensitive Level	MSL 1
Classification temperature T <sub>c</sub>	260 °C
Solder cycles in the reflow	3

### Ambient conditions

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

### Termination and connection method

Connection test	IEC 60998-2-2:2002-12
Test result	Test passed
Test for conductor damage and slackening	IEC 60998-2-2:2002-12

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## Technical data

### Termination and connection method

	Test passed
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### Pull-out test

Pull-out test	IEC 60998-2-2:2002-12
	Test passed
Conductor cross section / conductor type / tensile force	0.2 mm <sup>2</sup> / solid / > 10 N
	0.2 mm <sup>2</sup> / flexible / > 10 N
	1.5 mm <sup>2</sup> / solid / > 40 N
	1.5 mm <sup>2</sup> / flexible / > 40 N

### Electrical tests

Rated current	13.5 A
Conductor cross section	1.5 mm <sup>2</sup>
Rated voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV

### Air clearances and creepage distances

Clearances and creepage distances	IEC 60664-1:2007-04
Specification	IEC 60664-1:2007-04
Rated insulation voltage (III/3)	250 V
Rated insulation voltage (III/2)	320 V
Rated insulation voltage (II/2)	500 V
Rated surge voltage (III/3)	4 kV
Rated surge voltage (III/2)	4 kV
Rated surge voltage (II/2)	4 kV
Minimum clearance - inhomogeneous field (III/3)	3 mm
Minimum clearance - inhomogeneous field (III/2)	3 mm
Minimum clearance - inhomogeneous field (II/2)	3 mm
Minimum creepage distance value (III/3)	4 mm
Minimum creepage distance value (III/2)	3.2 mm
Minimum creepage distance value (II/2)	5 mm

### Current carrying capacity / derating curves

### Vibration test

Specification	IEC 60068-2-6:2007-12
Result	Test passed
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 - 60.1 Hz)

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## Technical data

### Vibration test

Acceleration	5 g (60.1 - 150 Hz)
Test duration per axis	2.5 h

### Resistance to ageing, humidity and penetration of solids

Dry heat	168 h/100°C
Humid heat	48 h/30 °C/92 %

### Standards and Regulations

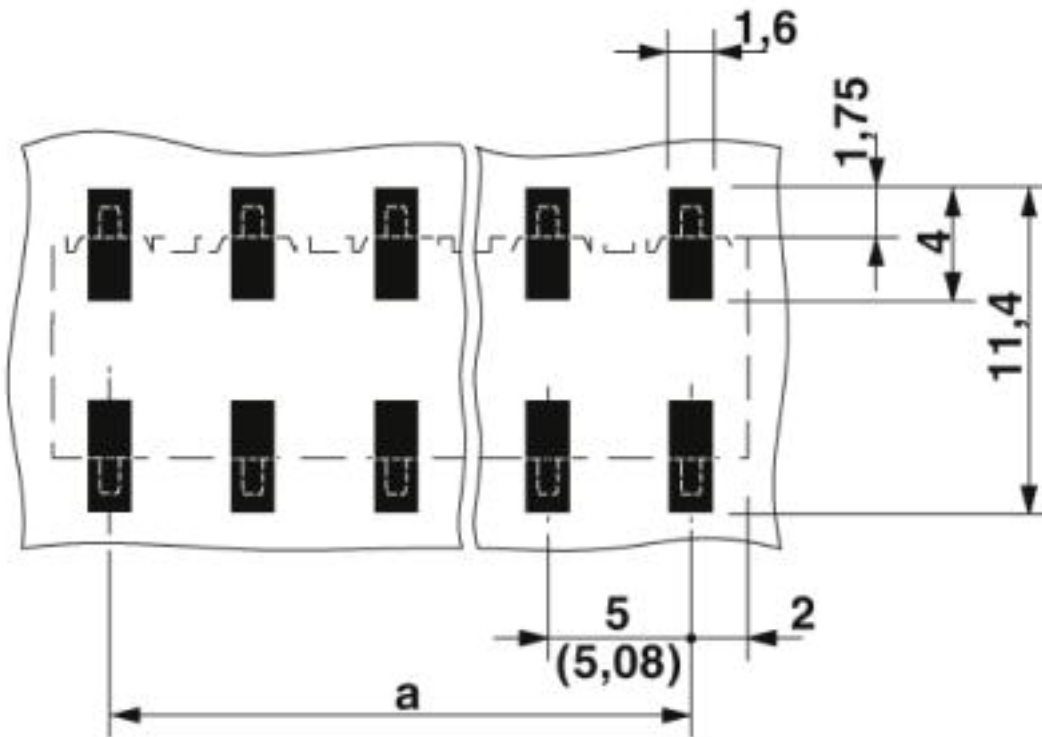
Connection in acc. with standard	EN-VDE
Flammability rating according to UL 94	V0

### Environmental Product Compliance

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

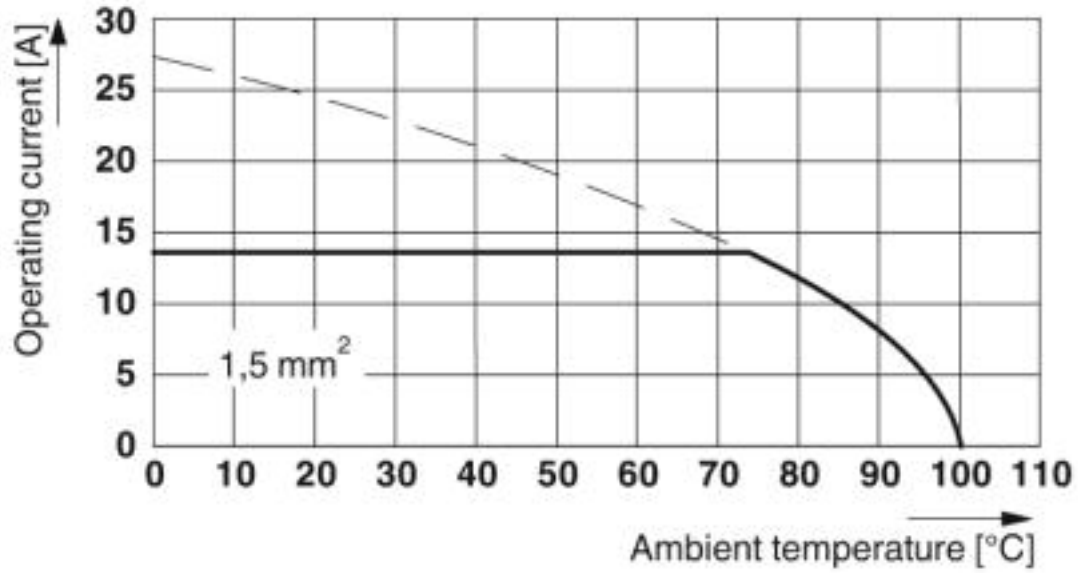
## Drawings

Drilling diagram



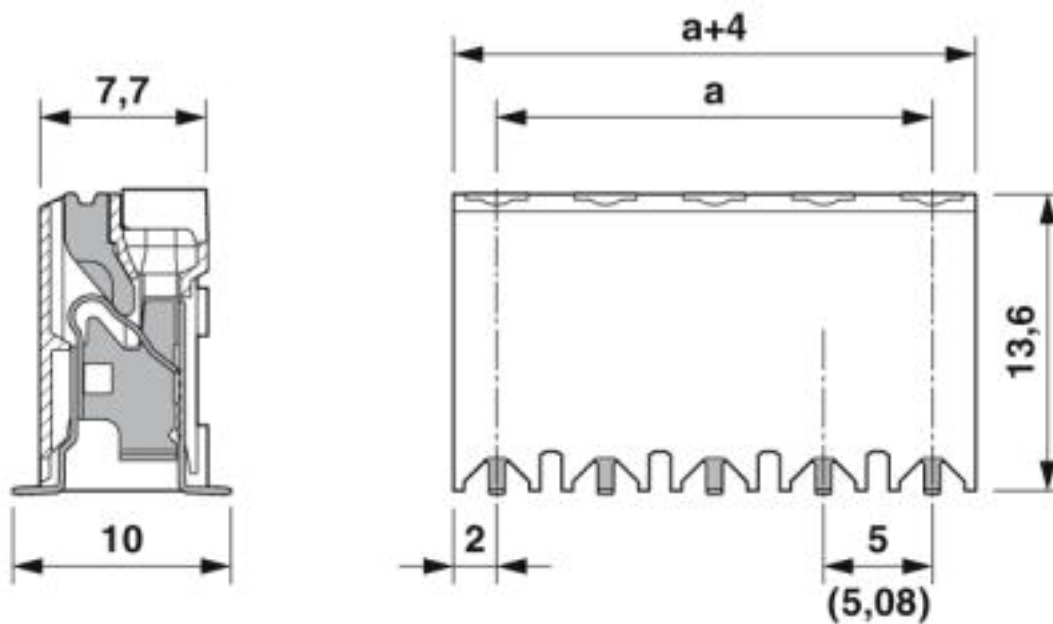
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Diagram



Type: SPT-SMD 1,5/...-V-5,0(5,08) R..  
Tested in accordance with DIN EN 60512-5-2:2003-01  
Reduction factor = 1  
Number of positions: 5

Dimensional drawing



## PCB terminal block - SPT-SMD 1,5/10-V-5,0 R88 - 1824381

### Classifications

#### eCl@ss

eCl@ss 4.0	27141100
eCl@ss 4.1	27141100
eCl@ss 5.0	27141100
eCl@ss 5.1	27261100
eCl@ss 6.0	27261100
eCl@ss 7.0	27440401
eCl@ss 8.0	27440401
eCl@ss 9.0	27440401

#### ETIM

ETIM 3.0	EC001121
ETIM 4.0	EC002643
ETIM 5.0	EC002643
ETIM 6.0	EC002643
ETIM 7.0	EC002643

#### UNSPSC

UNSPSC 6.01	30211801
UNSPSC 7.0901	39121432
UNSPSC 11	39121432
UNSPSC 12.01	39121432
UNSPSC 13.2	39121432
UNSPSC 18.0	39121432
UNSPSC 19.0	39121432
UNSPSC 20.0	39121432
UNSPSC 21.0	39121432

### Approvals

#### Approvals

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#### Approvals

IECEE CB Scheme / VDE Zeichengenehmigung / EAC / cULus Recognized

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#### Ex Approvals


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# PCB terminal block - SPT-SMD 1,5/10-V-5,0 R88 - 1824381


## Approvals

### Approval details

IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	DE1-60621
Nominal voltage UN	320 V		
Nominal current IN	13.5 A		
mm <sup>2</sup> /AWG/kcmil	0.2-1.5		

VDE Zeichengenehmigung		<a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a>	40046113
Nominal voltage UN	320 V		
Nominal current IN	13.5 A		
mm <sup>2</sup> /AWG/kcmil	0.2-1.5		

EAC			B.01742
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cULus Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	E60425-20061129
	B	D	
Nominal voltage UN	300 V	300 V	
Nominal current IN	10 A	10 A	
mm <sup>2</sup> /AWG/kcmil	24-16	24-16	

## Accessories

### Accessories

Cable end sleeve

## PCB terminal block - SPT-SMD 1,5/10-V-5,0 R88 - 1824381

### Accessories

Ferrule - A 0,5 - 8 - 3202481



Ferrule, length: 8 mm, color: silver

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Ferrule - A 0,75- 8 - 3202504



Ferrule, length: 8 mm, color: silver

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Ferrule - A 1 - 8 - 3202517



Ferrule, length: 8 mm, color: silver

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Ferrule - AI 0,25- 8 YE - 3203037



Ferrule, sleeve length: 8 mm, length: 12.5 mm, color: yellow

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Ferrule - AI 0,5 - 8 WH - 3200014



Ferrule, sleeve length: 8 mm, length: 14 mm, color: white

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## PCB terminal block - SPT-SMD 1,5/10-V-5,0 R88 - 1824381

### Accessories

Ferrule - AI 0,5 - 8 WH -1000 - 3200881



Ferrule, sleeve length: 8 mm, length: 14 mm, color: white

Ferrule - AI 0,75- 8 GY - 3200519



Ferrule, sleeve length: 8 mm, length: 14 mm, color: gray

Ferrule - AI 0,75- 8 GY -1000 - 3200894



Ferrule, sleeve length: 8 mm, length: 14 mm, color: gray

### Crimping tool

Crimping pliers - CRIMPFOX 6 - 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

### Printed circuit board terminal

Sample set - SAMPLE SPT-SMD 1,5/10-V-5,0 - 1838571



PCB terminal block, nominal current: 13.5 A, rated voltage (III/2): 320 V, Nominal cross section: 1.5 mm<sup>2</sup>, pitch: 5 mm, number of positions: 10, connection method: Push-in spring connection, mounting: SMD soldering, conductor/PCB connection direction: 90 °, color: black, Pin layout: Linear pad geometry. SAMPLE set with 5 items in belt section. When used as part of soldering process, please use items without SAMPLE marking

## PCB terminal block - SPT-SMD 1,5/10-V-5,0 R88 - 1824381

### Accessories

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#### Screwdriver tools

Screwdriver - SZS 0,4X2,5 VDE - 1205037



Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

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