

# PCB terminal block - SPT-SMD 1,5/ 2-V-3,81 R24 - 1824190

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PCB terminal block, nominal current: 13.5 A, nom. voltage: 160 V, pitch: 3.81 mm, number of positions: 2, connection method: Push-in spring connection, mounting: SMD soldering, conductor/PCB connection direction: 90 °, color: black. Sample values available under SAMPLE SPT...



The figure shows the 10-position version

## Why buy this product

- 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 STK
Minimum order quantity	200 STK
GTIN	 4 046356 816298
GTIN	4046356816298
Weight per Piece (excluding packing)	3.100 g
Custom tariff number	85369010
Country of origin	Germany

## Technical data

### Item properties

Brief article description	PCB terminal block
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# PCB terminal block - SPT-SMD 1,5/ 2-V-3,81 R24 - 1824190

## Technical data

### Item properties

Range of articles	SPT 1,5/...-V-SMD
Pitch	3.81 mm
Number of positions	2
Connection method	Push-in spring connection
Mounting type	SMD soldering
Pin layout	Linear pad geometry
Number of levels	1

### Electrical parameters

Rated current	13.5 A
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV

### Connection capacity

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

Housing color	black (9005)
Insulating material	LCP
CTI according to IEC 60112	175
Flammability rating according to UL 94	V0

### Dimensions for the product

Length [ l ]	7.7 mm
Width [ w ]	7.81 mm
Height [ h ]	13.6 mm
Pitch	3.81 mm

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## Technical data

### Dimensions for the product

Height (without solder pin)	13.6 mm
Dimension a	3.81 mm
Pin spacing	7 mm

### Dimensions for PCB design

Hole diameter	1.1 mm
Pin spacing	7 mm

### Packaging information

Type of packaging	24 mm wide tape
Pieces per package	200
Denomination packing units	Pcs.
[W] tape width	24 mm
[A] coil diameter	330 mm
[W2] coil overall dimension	30.4 mm
Outer packaging type	Transparent-Bag

### 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 $T_c$	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

### Electrical tests

Rated current	13.5 A
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV

### Air clearances and creepage distances

Insulating material group	IIIa
Comparative tracking index (IEC 60112:2003-01)	CTI 175
Voltage	160 V
Rated insulation voltage (III/3)	160 V
Rated insulation voltage (III/2)	160 V

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## Technical data

### Air clearances and creepage distances

Rated insulation voltage (II/2)	320 V
Rated surge voltage (III/3)	2.5 kV
Rated surge voltage (III/2)	2.5 kV
Rated surge voltage (II/2)	2.5 kV
Minimum clearance - inhomogeneous field (III/3)	1.5 mm
Minimum clearance - inhomogeneous field (III/2)	1.5 mm
Minimum clearance - inhomogeneous field (II/2)	1.5 mm
Minimum creepage distance value (III/3)	2.5 mm
Minimum creepage distance value (III/2)	1.6 mm
Minimum creepage distance value (II/2)	3.2 mm

### Current carrying capacity / derating curves

### Standards and Regulations

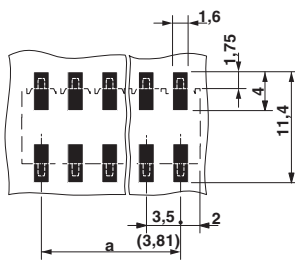
Connection in acc. with standard	EN-VDE
Flammability rating according to UL 94	V0

### Environmental Product Compliance

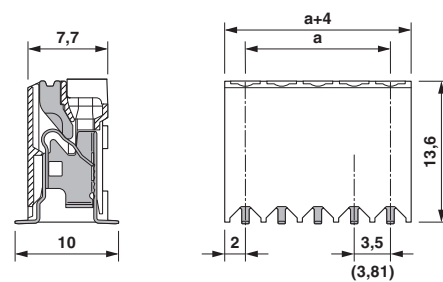
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Drawings

Drilling diagram

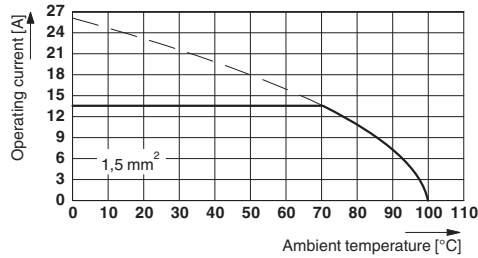


Dimensional drawing



# PCB terminal block - SPT-SMD 1,5/ 2-V-3,81 R24 - 1824190

Diagram



Type: SPT-SMD 1,5/...-V-3,5(3,81) R..  
 Tested in accordance with DIN EN 60512-5-2:2003-01  
 Reduction factor = 1  
 Number of positions: 5

## Classifications

eCl@ss

eCl@ss 4.0	27141111
eCl@ss 4.1	27141109
eCl@ss 5.0	27141190
eCl@ss 5.1	27141190
eCl@ss 6.0	27261101
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

UNSPSC

UNSPSC 6.01	30211801
UNSPSC 7.0901	39121432
UNSPSC 11	39121432
UNSPSC 12.01	39121432
UNSPSC 13.2	39121432

## Approvals

Approvals

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## Approvals


### Approvals


EAC / VDE approval of drawings / cULus Recognized / IECEE CB Scheme


### Ex Approvals

### Approval details

EAC			B.01742
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VDE approval of drawings		<a href="http://www.vde.com/en/Institute/OnlineService/VDE-approved-products/Pages/Online-Search.aspx">http://www.vde.com/en/Institute/OnlineService/VDE-approved-products/Pages/Online-Search.aspx</a>	40046113
mm <sup>2</sup> /AWG/kcmil	0.2-1.5		
Nominal current I <sub>N</sub>	13.5 A		
Nominal voltage U <sub>N</sub>	160 V		

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	
mm <sup>2</sup> /AWG/kcmil	24-16	24-16	
Nominal current I <sub>N</sub>	10 A	10 A	
Nominal voltage U <sub>N</sub>	300 V	300 V	

IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	DE1-59311
mm <sup>2</sup> /AWG/kcmil	0.2-1.5		
Nominal current I <sub>N</sub>	13.5 A		
Nominal voltage U <sub>N</sub>	160 V		

## Accessories

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## PCB terminal block - SPT-SMD 1,5/ 2-V-3,81 R24 - 1824190

### Accessories

#### Connector

Ferrule - A 0,5 - 8 - 3202481



Ferrule, sleeve length: 8 mm, length: 8 mm, color: silver

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Ferrule - A 0,75- 8 - 3202504



Ferrule, sleeve length: 8 mm, length: 8 mm, color: silver

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Ferrule - A 1 - 8 - 3202517



Ferrule, sleeve length: 8 mm, 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/ 2-V-3,81 R24 - 1824190

### Accessories

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



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

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Ferrule - AI 0,75- 8 GY - 3200519



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

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



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

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### 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

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### Printed circuit board terminal

Sample set - SAMPLE SPT-SMD 1,5/ 2-V-3,81 - 1843469



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### 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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