

## PCB terminal block - SPTA 1/13-3,5 - 1704904

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PCB terminal block, nominal current: 9 A, rated voltage (III/2): 200 V, nominal cross section: 1 mm<sup>2</sup>, pitch: 3.5 mm, number of positions: 13, connection method: Push-in spring connection, mounting: Wave soldering, conductor/PCB connection direction: 65 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 3.5 mm




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
- Angled connection enables multi-row arrangement on the PCB
- Quick and convenient testing using integrated test option



### Key Commercial Data

Packing unit	50 pc
GTIN	 4 046356 743853
GTIN	4046356743853

### Technical data

#### Item properties

Brief article description	PCB terminal block
Range of articles	SPTA 1/
Pitch	3.5 mm
Number of positions	13
Connection method	Push-in spring connection
Mounting type	Wave soldering
Pin layout	Linear pinning
Number of levels	1
Number of connections	13
Number of potentials	13

# PCB terminal block - SPTA 1/13-3,5 - 1704904

## Technical data

### Electrical parameters

Nominal current	9 A
Nom. voltage	200 V
Rated voltage	160 V
Rated voltage (III/2)	200 V
Rated voltage (II/2)	400 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

### Connection capacity

Connection method	Push-in spring connection
pluggable	no
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	0.25 mm <sup>2</sup> ... 0.75 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	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	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 for the product

Length [ l ]	10 mm
Width [ w ]	46.1 mm
Height [ h ]	15.9 mm
Pitch	3.5 mm
Height (without solder pin)	12.4 mm

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## Technical data

### Dimensions for the product

Solder pin [P]	3.5 mm
Pin spacing	3.5 mm
Pin dimensions	0.6 x 1 mm

### Dimensions for PCB design

Hole diameter	1.1 mm
Pin spacing	3.5 mm

### Packaging information

Type of packaging	packed in cardboard
Pieces per package	50
Denomination packing units	Pcs.

### 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
	Test passed

### 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

### Mechanical tests according to standard

Test specification	IEC 60998-2-2 (in parts)
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### Electrical tests

Rated current	9 A
Conductor cross section	1.5 mm <sup>2</sup>
Rated voltage (III/2)	200 V
Rated surge voltage (III/2)	2.5 kV

### Air clearances and creepage distances

Clearances and creepage distances	IEC 60947-1:2007-06 + A1:2010-12 + A2:2014-09
Specification	IEC 60947-1:2007-06 + A1:2010-12 + A2:2014-09
Minimum clearance - inhomogeneous field (III/3)	1.5 mm

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### Technical data

#### Air clearances and creepage distances

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 mm
Minimum creepage distance value (III/2)	1.5 mm
Minimum creepage distance value (II/2)	2 mm

#### Temperature-rise test

Specification	IEC 60998-2-1:2002-12
Result	Test passed
Requirement temperature-rise test	Increase in temperature $\leq 45$ K

#### Current carrying capacity / derating curves

Caption	Type: SPTA 1 ...3,5 Test following DIN EN 60512-5-2:2003-01 Reduction factor = 1 No. of positions: 5
Specification	Following IEC 60512-5-2:2002-02
Number of positions	5
Reduction factor	1

#### 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)
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 %

#### Insulation resistance

Specification	IEC 60998-1:2002-12
Result	Test passed
Insulation resistance, neighboring positions	1.3 GΩ

#### Glow-wire test

Specification	IEC 60998-1:2002-12
Result	Test passed
Temperature	850 °C
Time of exposure	5 s

#### Mechanical strength/tumbling barrel test

Specification	IEC 60998-1:2002-12
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# PCB terminal block - SPTA 1/13-3,5 - 1704904

## Technical data

### Mechanical strength/tumbling barrel test

Height of fall	50 cm
Number of drop cycles	50
Rotation speed	5 rpm

### Standards and Regulations

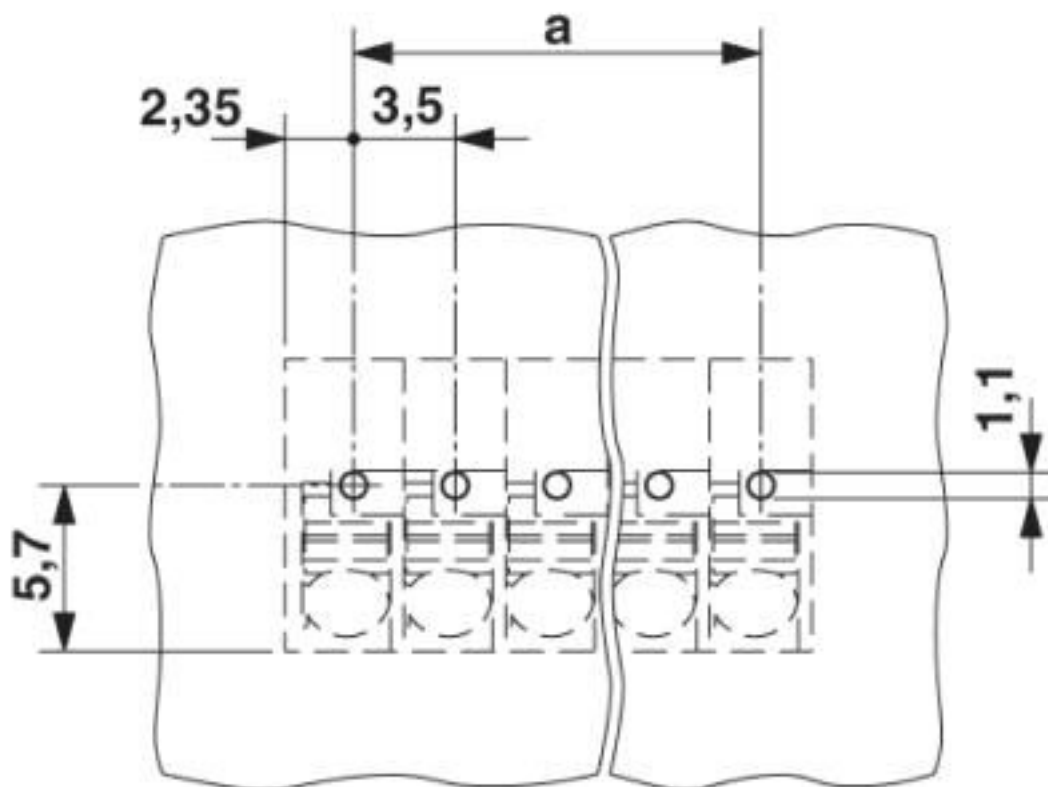
Connection in acc. with standard	EN-VDE
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### Environmental Product Compliance

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

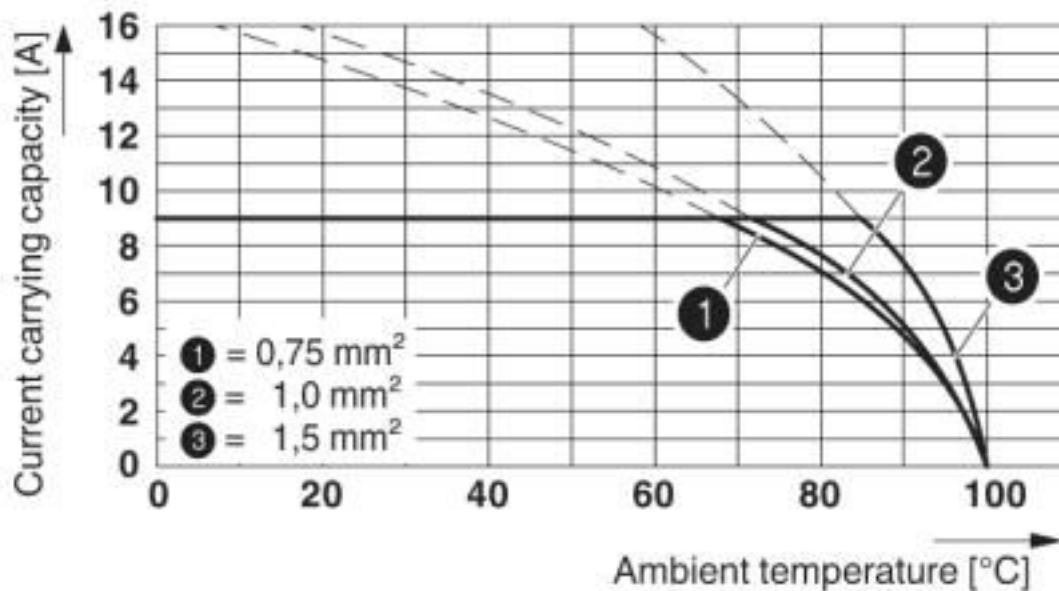
## Drawings

Drilling diagram



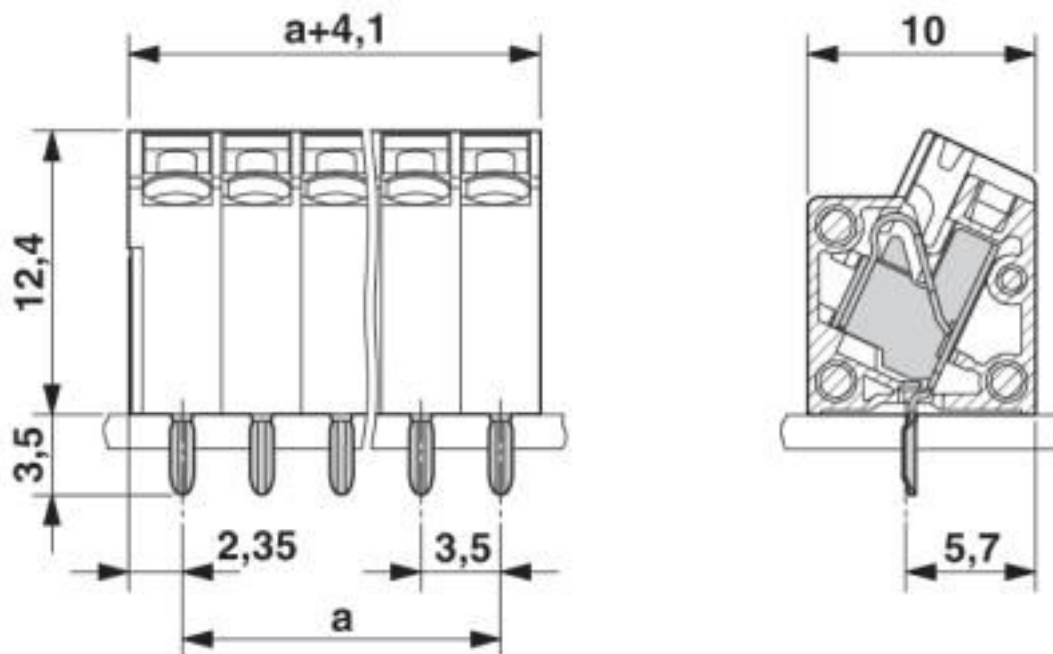
# PCB terminal block - SPTA 1/13-3,5 - 1704904

Diagram



Type: SPTA 1 ...3,5  
Test following DIN EN 60512-5-2:2003-01  
Reduction factor = 1  
No. of positions: 5

Dimensional drawing



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## Classifications

### eCl@ss

eCl@ss 10.0.1	27440401
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 Gutachten mit Fertigungsüberwachung / EAC / cULus Recognized

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#### Ex Approvals

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### Approval details

# PCB terminal block - SPTA 1/13-3,5 - 1704904

## Approvals

IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	DE1-58146
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VDE Gutachten mit Fertigungsüberwachung		<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>	40029329
Nominal voltage UN	130 V		
Nominal current IN	9 A		
mm <sup>2</sup> /AWG/kcmil	0.2-1.5		

EAC		B.01687
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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	150 V	300 V	
Nominal current IN	10 A	10 A	
mm <sup>2</sup> /AWG/kcmil	26-16	26-16	

## Accessories

### Accessories

#### 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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