

PCB terminal block - SPT-SMD 1,5/10-H-5,08 R88



1824938

<https://www.phoenixcontact.com/pc/products/1824938>

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PCB terminal block, nominal current: 13.5 A, rated voltage (III/2): 320 V, nominal cross section: 1.5 mm², number of potentials: 10, number of rows: 1, number of positions per row: 10, product range: SPT 1,5/..-H-SMD, pitch: 5.08 mm, connection method: Push-in spring connection, mounting: SMD soldering, conductor/PCB connection direction: 0 °, color: black, Pin layout: Linear pinning, number of solder pins per potential: 1, type of packaging: 88 mm wide tape



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
- Quick and convenient testing using integrated test option
- Operation and conductor connection from one direction enable integration into front of device

Commercial Data

Item number	1824938
Packing unit	300 pc
Minimum order quantity	300 pc
Note	Made to Order (non-returnable)
Product Key	AALDAD
Catalog Page	Page 9 (NTK-2014)
GTIN	4046356817134
Weight per Piece (including packing)	7.513 g
Weight per Piece (excluding packing)	7.513 g
Customs tariff number	85369010
Country of origin	PL

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Technical Data

Product properties

Product line	COMBICON Terminals S
Product type	Printed circuit board terminal
Number of positions	10
Pitch	5.08 mm
Number of connections	10
Number of rows	1
Number of potentials	10
Pin layout	Linear pinning
Solder pins per potential	1

Electrical properties

Nominal current I_N	13.5 A
Nominal voltage U_N	320 V
Degree of pollution	3
Rated voltage (III/3)	250 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV

Connection data

Connection technology

Nominal cross section	1.5 mm ²
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Conductor connection

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

Mounting

Mounting type	SMD soldering
Pin layout	Linear pinning

Processing notes

Process	Reflow soldering
Moisture Sensitive Level	MSL 1
Classification temperature T_c	260 °C

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Solder cycles in the reflow	3
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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	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

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

Material data – actuating element

Color ()	white (9010)
Insulating material	PA GF
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

Notes

Notes on operation	The solder anchors on the outer poles reduce the mechanical strain on the SMD soldering spots.
Assembly instruction:	This item is not suitable for PCB cleaning with liquids.

Dimensions

Dimensional drawing	
Pitch	5.08 mm
Width [w]	49.72 mm
Height [h]	7.7 mm
Length [l]	13.6 mm
Installed height	7.7 mm

PCB design

Pad geometry	1.6 x 4 mm
Pin spacing	7 mm

Mechanical tests

Connection test

Specification	IEC 60998-2-2:2002-12
Result	Test passed

Test for conductor damage and slackening

Specification	IEC 60998-2-2:2002-12
Result	Test passed

Pull-out test

Specification	IEC 60998-2-2:2002-12
Conductor cross section/conductor type/tractive force setpoint/actual value	0.2 mm ² / solid / > 10 N
	0.2 mm ² / flexible / > 10 N
	1.5 mm ² / solid / > 40 N
	1.5 mm ² / flexible / > 40 N

Flexion test

Specification	IEC 60998-2-2:2002-12
Result	Test passed

Electrical tests

Temperature-rise test

Specification	IEC 60998-2-1:2002-12
Requirement temperature-rise test	Increase in temperature ≤ 45 K

Insulation resistance

Specification	IEC 60998-1:2002-12
Insulation resistance, neighboring positions	> 5 MΩ

Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	IIIa
Comparative tracking index (IEC 60112)	CTI 175
Rated insulation voltage (III/3)	250 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)	320 V
Rated surge voltage (III/2)	4 kV
minimum clearance value - non-homogenous field (III/2)	3 mm
minimum creepage distance (III/2)	3.2 mm
Rated insulation voltage (II/2)	500 V
Rated surge voltage (II/2)	4 kV
minimum clearance value - non-homogenous field (II/2)	3 mm

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minimum creepage distance (II/2)	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

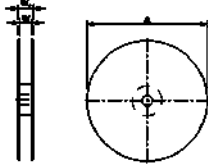
Glow-wire test

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

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

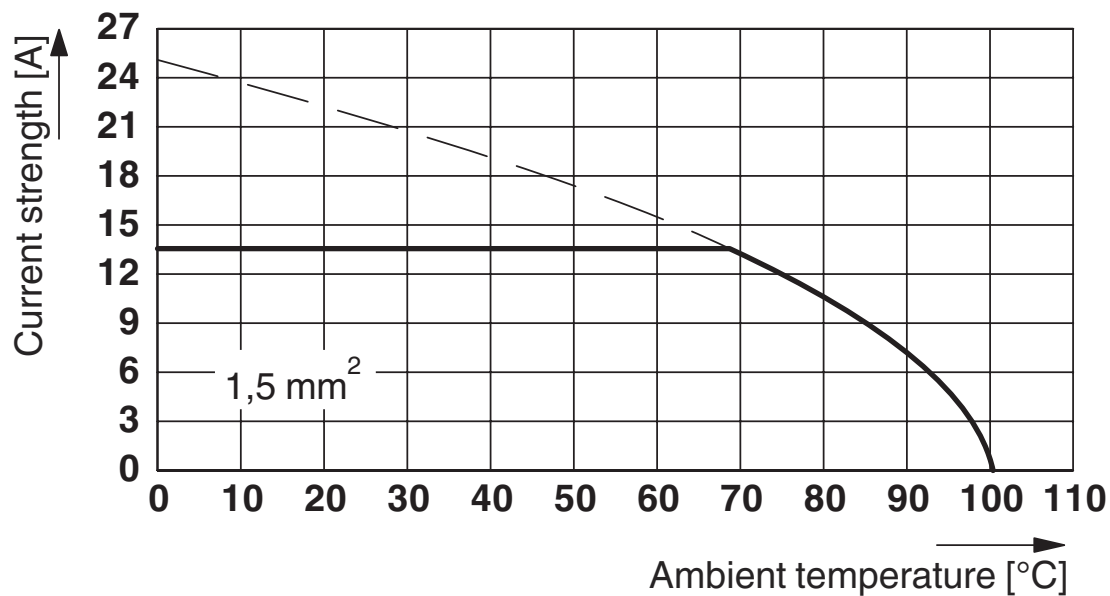
Dimensional drawing	
Type of packaging	88 mm wide tape
[W] tape width	88 mm
[W2] coil overall dimension	94.4 mm
[A] coil diameter	330 mm
Outer packaging type	Transparent-Bag
ESD level	(D) electrostatically conductive
Specification	DIN EN 61340-5-1 (VDE 0300-5-1): 2008-07

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Drawings

Diagram



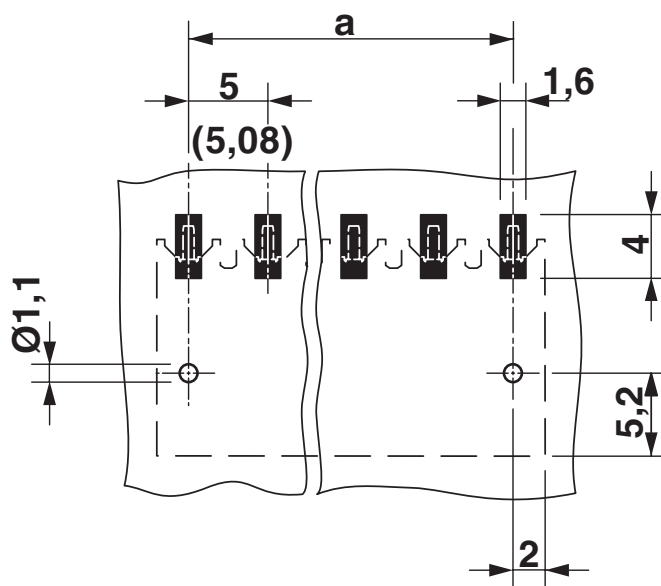
Type: SPT-SMD 1,5/...-H-5,0(5,08) R..

Tested in accordance with DIN EN 60512-5-2:2003-01

Reduction factor = 1

Number of positions: 5

Drilling plan/solder pad geometry



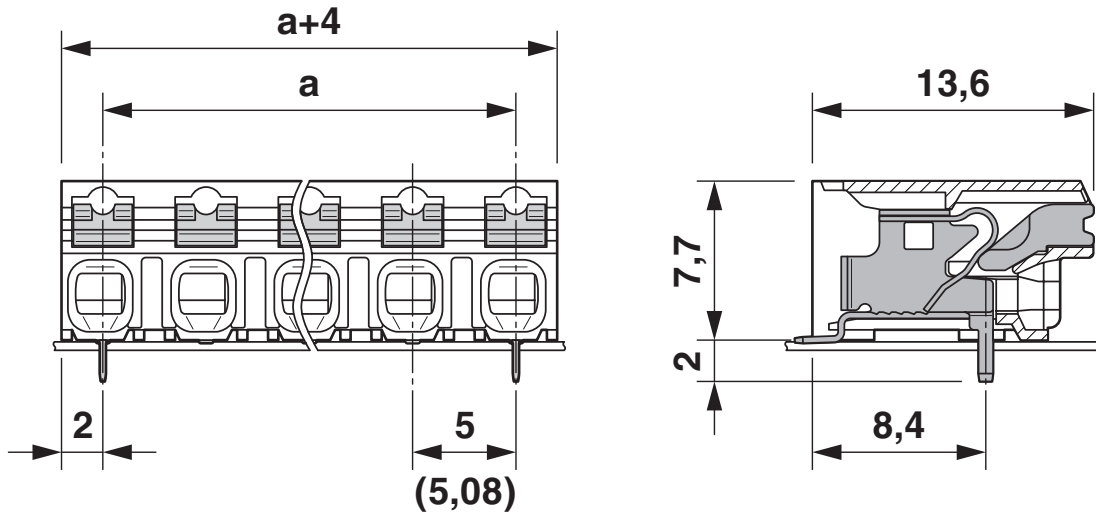
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Dimensional drawing



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Approvals



EAC

Approval ID: B.01687



cULus Recognized

Approval ID: E60425-20061129

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Use group B				
	300 V	10 A	24 - 16	-
Use group D				
	300 V	10 A	24 - 16	-



VDE Zeichengenehmigung

Approval ID: 40046113

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	320 V	13.5 A	-	0.2 - 1.5

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Classifications

ECLASS

ECLASS-9.0	27440401
ECLASS-10.0.1	27440401
ECLASS-11.0	27460101

ETIM

ETIM 8.0	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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Accessories

Screwdriver

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

<https://www.phoenixcontact.com/pc/products/1205037>



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

Ferrule

Ferrule - A 0,5 - 8 - 3202481

<https://www.phoenixcontact.com/pc/products/3202481>



Ferrule, length: 8 mm, color: silver

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Ferrule

Ferrule - A 0,75- 8 - 3202504

<https://www.phoenixcontact.com/pc/products/3202504>



Ferrule, length: 8 mm, color: silver

Ferrule

Ferrule - A 1 - 8 - 3202517

<https://www.phoenixcontact.com/pc/products/3202517>



Ferrule, length: 8 mm, color: silver

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Ferrule

Ferrule - AI 0,25- 8 YE - 3203037

<https://www.phoenixcontact.com/pc/products/3203037>



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

Ferrule

Ferrule - AI 0,5 - 8 WH - 3200014

<https://www.phoenixcontact.com/pc/products/3200014>



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

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Ferrule

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

<https://www.phoenixcontact.com/pc/products/3200881>



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

Ferrule

Ferrule - AI 0,75- 8 GY - 3200519

<https://www.phoenixcontact.com/pc/products/3200519>



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

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Ferrule

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

<https://www.phoenixcontact.com/pc/products/3200894>

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



Crimping pliers

Crimping pliers - CRIMPFOX 6 - 1212034

<https://www.phoenixcontact.com/pc/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 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

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