

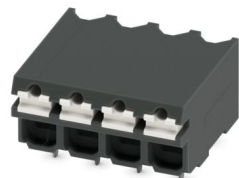
SPT-THR 1,5/ 4-H-3,81 P20 R32 - PCB terminal block



1823764

<https://www.phoenixcontact.com/ae/products/1823764>

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Printed circuit board terminal, nominal current: 17.5 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of potentials: 4, number of rows: 1, number of positions per row: 4, product range: SPT 1,5/...-H-THR, pitch: 3.81 mm, connection method: Push-in spring connection, mounting: THR soldering / wave soldering, conductor/PCB connection direction: 0 °, color: black, Pin layout: Linear pinning, Solder pin [P]: 2 mm, number of solder pins per potential: 2, type of packaging: 32 mm wide tape. Suitable for CAT5

Your advantages

- Satisfies CAT5 requirements in accordance with EN 50173 and ISO/IEC 11801

Commercial data

Item number	1823764
Packing unit	250 pc
Minimum order quantity	250 pc
Note	Made to order (non-returnable)
Sales key	AA
Product key	AALCCD
GTIN	4046356814416
Weight per piece (including packing)	3.49 g
Weight per piece (excluding packing)	3.49 g
Customs tariff number	85369010
Country of origin	PL

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Technical data

Product properties

Product type	Printed circuit board terminal
Product family	SPT 1,5/..-H-THR
Product line	COMBICON Terminals S
Number of positions	4
Pitch	3.81 mm
Number of connections	4
Number of rows	1
Number of potentials	4
Pin layout	Linear pinning
Solder pins per potential	2

Electrical properties

Properties

Nominal current I_N	17.5 A
Nominal voltage U_N	160 V
Rated voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Rated voltage (II/2)	320 V
Rated surge voltage (II/2)	2.5 kV

Data transmission

Signal type	Ethernet
Frequency range	to 100 MHz
Transmission medium	Copper
Transmission characteristics (category)	CAT5 (IEC 11801)
Data transmission rate	100 Mbps

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 rigid	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

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Stripping length	8 mm
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Mounting

Mounting type	THR soldering / wave soldering
Pin layout	Linear pinning

Processing notes

Process	Reflow/wave soldering
Moisture Sensitive Level	MSL 1
Classification temperature T _c	260 °C
Solder cycles in the reflow	3

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

Notes

Note on application	The item is qualified for CAT5 Ethernet applications. For this reason, it is suited for use in IoT devices.
Assembly note	This item is not suitable for PCB cleaning with liquids.

Dimensions

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Dimensional drawing	
Pitch	3.81 mm
Width [w]	15.43 mm
Height [h]	9.7 mm
Length [l]	13.7 mm
Installed height	7.7 mm
Solder pin length [P]	2 mm
Pin dimensions	0.7 x 0.3 mm

PCB design

Pin spacing	7 mm
Hole diameter	1.1 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 60947-7-4:2019-01
Requirement temperature-rise test	The sum of ambient temperature and temperature rise of the PCB terminal block shall not exceed the upper limiting temperature.

Insulation resistance

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

Air clearances and creepage distances |

Specification	IEC 60947-7-4:2013-08
Insulating material group	IIIa
Comparative tracking index (IEC 60112)	CTI 175
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)	2.5 mm
Rated insulation voltage (III/2)	160 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)	1.6 mm
Rated insulation voltage (II/2)	320 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)	3.2 mm

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)
Acceleration	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

Glow-wire test

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

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

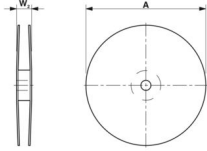
Packaging specifications

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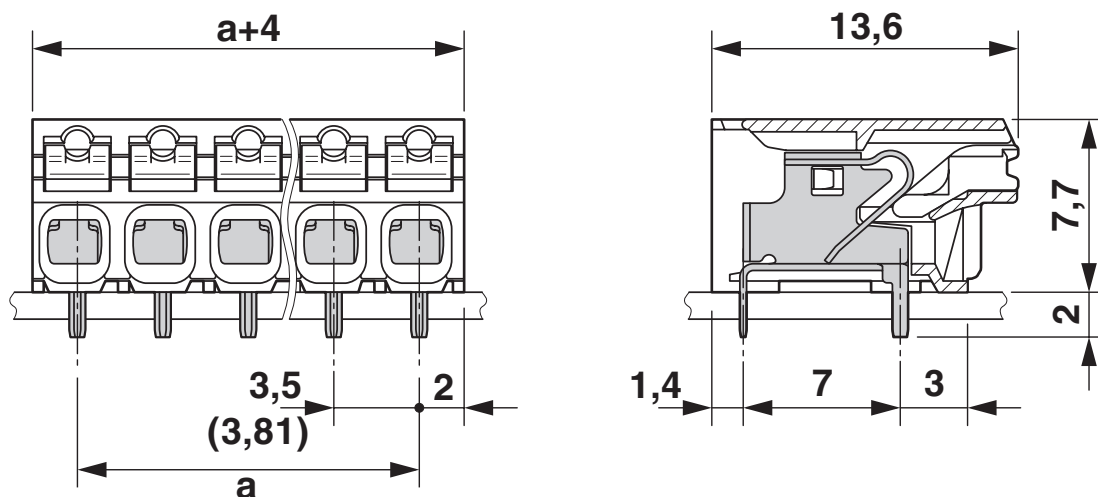
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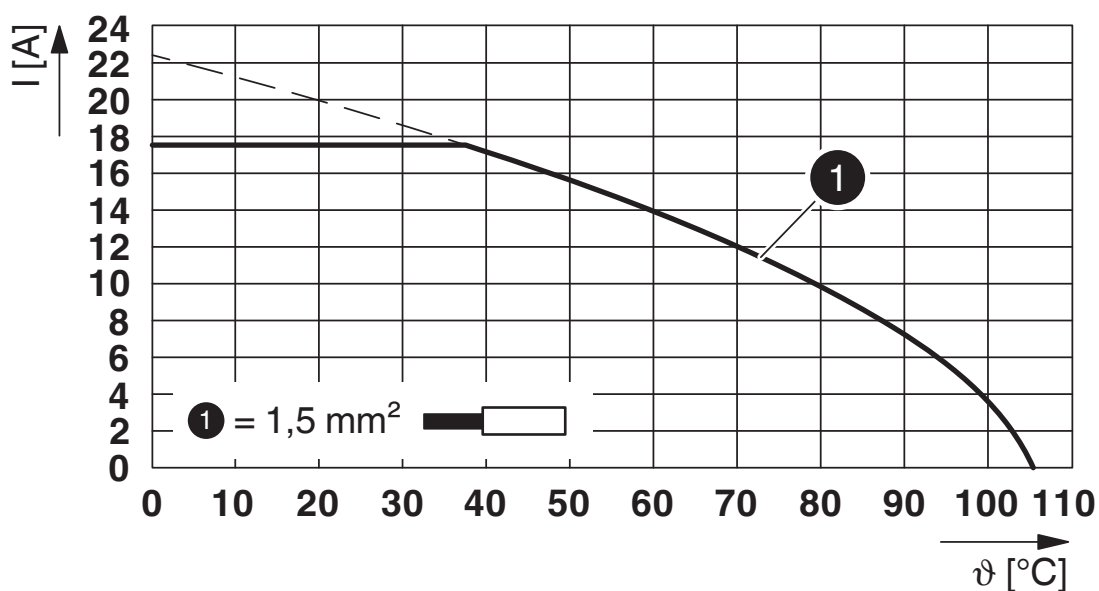
Dimensional drawing	
Type of packaging	32 mm wide tape
[W] tape width	32 mm
[W2] coil overall dimension	≤ 38.4 mm
[A] coil diameter	≤ 330 mm
Outer packaging type	Transparent-Bag

Drawings

Dimensional drawing



Diagram



Type: SPT-THR 1,5/...-H-3,81 P...

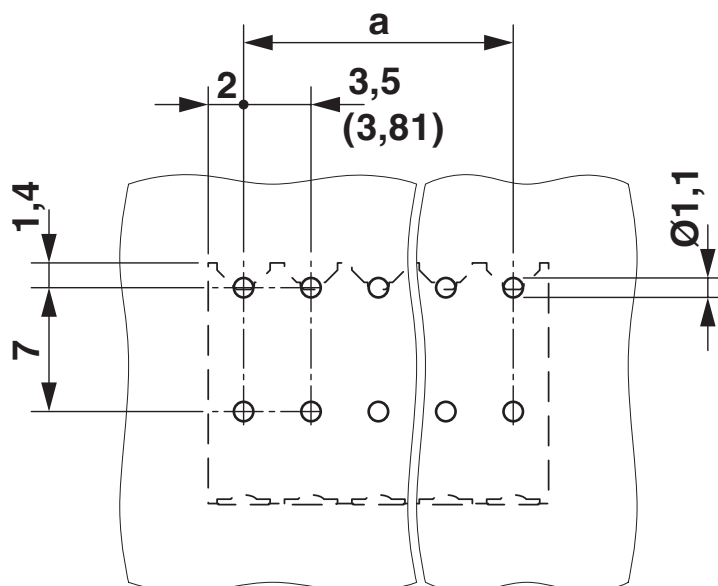
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Drilling plan/solder pad geometry



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/ae/products/1823764>

 cULus Recognized Approval ID: E60425-20061129				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	300 V	10 A	24 - 16	-
D				
	300 V	10 A	24 - 16	-

 VDE approval of drawings Approval ID: 40046113				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	160 V	17.5 A	-	0.2 - 1.5

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Classifications

ECLASS

ECLASS-13.0	27460101
ECLASS-15.0	27460101

ETIM

ETIM 9.0	EC002643
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UNSPSC

UNSPSC 21.0	39121400
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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