

SPT-THR 1,5/ 4-V-3,5 P20 R44 - PCB terminal block



1823214

<https://www.phoenixcontact.com/pc/products/1823214>

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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/..-V-THR, pitch: 3.5 mm, connection method: Push-in spring connection, mounting: THR soldering / wave soldering, conductor/PCB connection direction: 90 °, color: black, Pin layout: Linear pinning, Solder pin [P]: 2 mm, number of solder pins per potential: 2, type of packaging: 44 mm wide tape. Suitable for CAT5

Your advantages

- Satisfies CAT5 requirements in accordance with EN 50173 and ISO/IEC 11801
- Time saving push-in connection, tools not required
- Defined contact force ensures that contact remains stable over the long term
- Intuitive operation due to color-coded actuating push button
- 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 solder pins reduce the mechanical strain on the soldering spots

Commercial data

Item number	1823214
Packing unit	200 pc
Minimum order quantity	200 pc
Product key	AALCCG
GTIN	4046356814973
Weight per piece (including packing)	4.185 g
Weight per piece (excluding packing)	4.085 g
Customs tariff number	85369010
Country of origin	PL

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1823214

<https://www.phoenixcontact.com/pc/products/1823214>

Technical data

Product properties

Product type	Printed circuit board terminal
Product family	SPT 1,5/...-V-THR
Product line	COMBICON Terminals S
Number of positions	4
Pitch	3.5 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

SPT-THR 1,5/ 4-V-3,5 P20 R44 - PCB terminal block



1823214

<https://www.phoenixcontact.com/pc/products/1823214>

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.

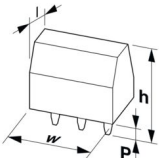
Dimensions

SPT-THR 1,5/ 4-V-3,5 P20 R44 - PCB terminal block



1823214

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Dimensional drawing	
Pitch	3.5 mm
Width [w]	14.5 mm
Height [h]	15.6 mm
Length [l]	7.7 mm
Installed height	13.6 mm
Solder pin length [P]	2 mm
Pin dimensions	0.7 x 0.3 mm

PCB design

Pin spacing	5.5 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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1823214

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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

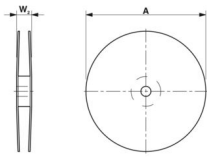
Packaging specifications

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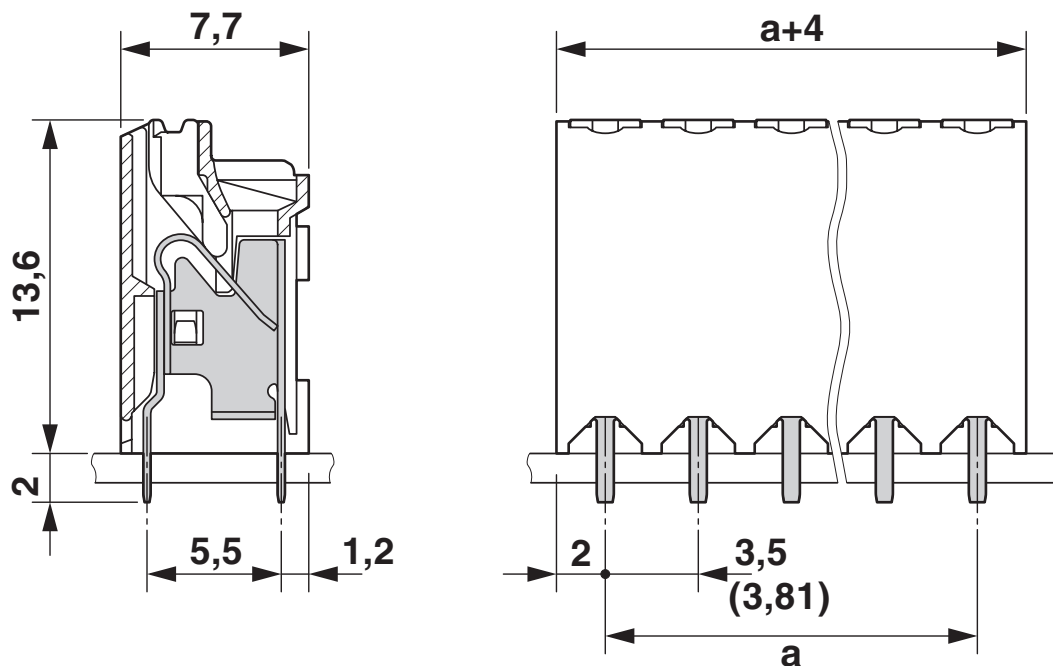
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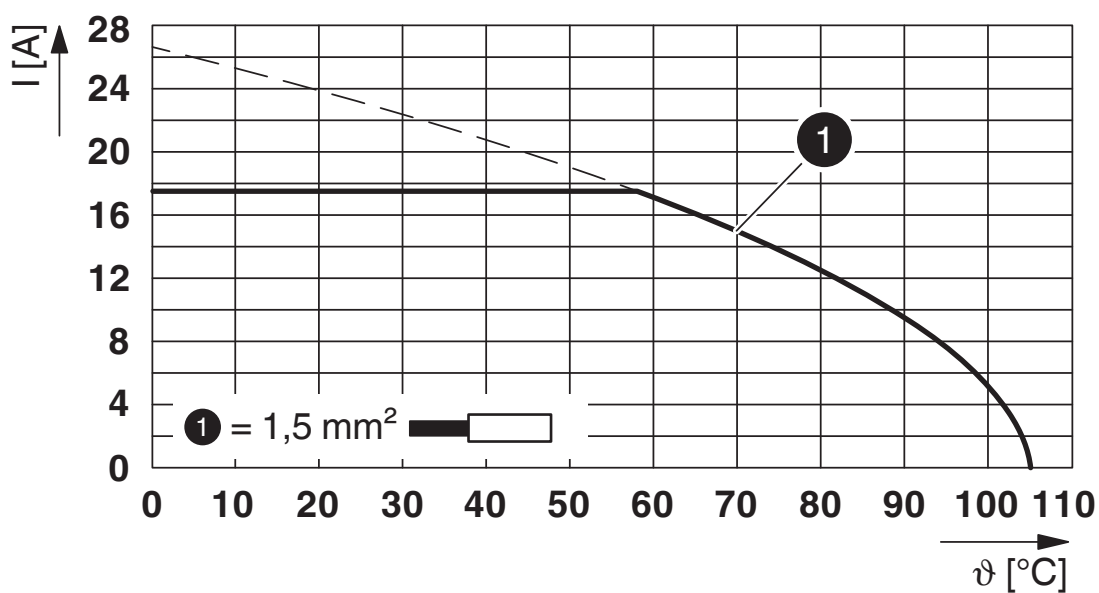
Dimensional drawing	
Type of packaging	44 mm wide tape
[W] tape width	44 mm
[W2] coil overall dimension	≤ 50.4 mm
[A] coil diameter	≤ 330 mm
Outer packaging type	Transparent-Bag

Drawings

Dimensional drawing



Diagram



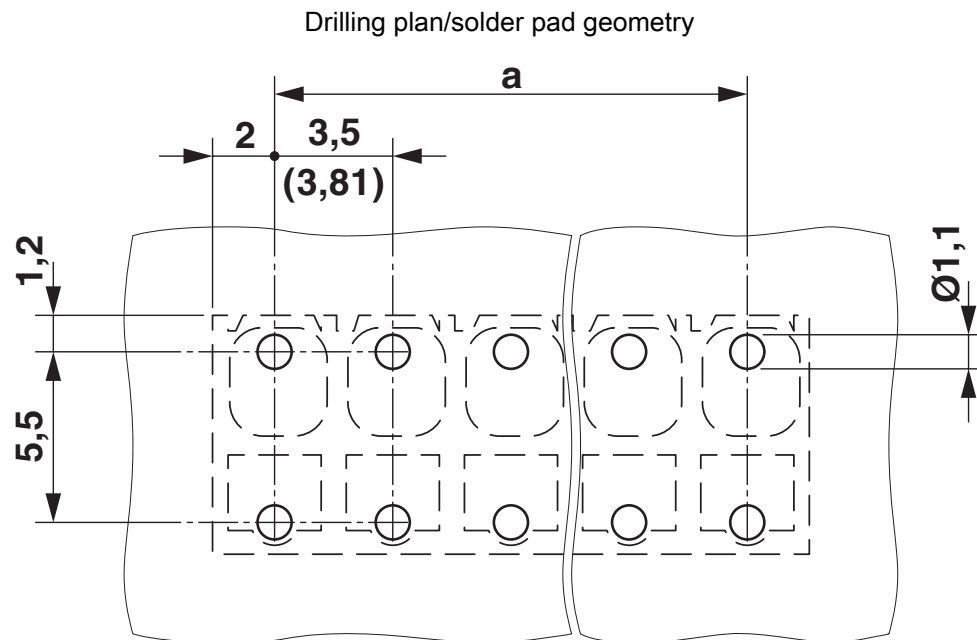
Type: SPT-THR 1,5/...-V-3,5 P...

SPT-THR 1,5/ 4-V-3,5 P20 R44 - PCB terminal block



1823214

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/1823214>

 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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1823214

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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
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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Accessories

SZS 0,4X2,5 VDE - Screwdriver

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

A 0,5 - 8 - Ferrule

3202481

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



Ferrule, Length contact range: 8 mm, sleeve length: 8 mm, color: silver-colored

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A 0,75- 8 - Ferrule

3202504

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



Ferrule, Length contact range: 8 mm, sleeve length: 8 mm, color: silver-colored

A 1 - 8 - Ferrule

3202517

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



Ferrule, Length contact range: 8 mm, sleeve length: 8 mm, color: silver-colored

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AI 0,25- 8 YE - Ferrule

3203037

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Ferrule, Length contact range: 8 mm, sleeve length: 12.5 mm, color: yellow

AI 0,5 - 8 WH - Ferrule

3200014

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Ferrule, Length contact range: 8 mm, sleeve length: 14 mm, color: white

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AI 0,5 - 8 WH -1000 - Ferrule

3200881

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Ferrule, Length contact range: 8 mm, sleeve length: 14 mm, color: white

AI 0,75- 8 GY - Ferrule

3200519

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



Ferrule, Length contact range: 8 mm, sleeve length: 14 mm, color: gray

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AI 0,75- 8 GY -1000 - Ferrule

3200894

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



Ferrule, Length contact range: 8 mm, sleeve length: 14 mm, color: gray

CRIMPFOX 6 - Crimping pliers

1212034

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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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SH-PCB 6 - Shield connection terminal block

1322664

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Shield connection, connection method: Spring-cage connection, product range: ZUBEHOER, width: 11 mm

MPS-MT 1-S4-B RD - Accessories

1982800

<https://www.phoenixcontact.com/pc/products/1982800>

Test plug terminal block



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