

1135291
<https://www.phoenixcontact.com/us/products/1135291>

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PCB terminal block, nominal current: 32 A, rated voltage (III/2): 400 V, nominal cross section: 4 mm², number of potentials: 12, number of rows: 1, number of positions per row: 12, product range: SPT 2,5/...-H-THR, pitch: 5 mm, connection method: Push-in spring connection, mounting: THR 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: 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 operation due to color-coded actuating push button
- Operation and conductor connection from one direction enable integration into front of device
- Designed for integration into the SMT soldering process

Commercial data

Item number	1135291
Packing unit	125 pc
Minimum order quantity	125 pc
Note	Made to order (non-returnable)
Sales key	AA13
Product key	AAMCAA
GTIN	4063151068806
Weight per piece (including packing)	23.83 g
Weight per piece (excluding packing)	18.2 g
Customs tariff number	85369010
Country of origin	PL

SPT-THR 2,5/12-H-5,0 P20 R88 - PCB terminal block



1135291

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Technical data

Product properties

Product line	COMBICON Terminals M
Product type	Printed circuit board terminal
Product family	SPT 2,5/..-H-THR
Number of positions	12
Pitch	5 mm
Number of connections	12
Number of rows	1
Number of potentials	12
Pin layout	Linear pinning
Solder pins per potential	2

Electrical properties

Nominal current I_N	32 A
Nominal voltage U_N	400 V
Degree of pollution	3
Rated voltage (III/3)	320 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV
Rated voltage (II/2)	500 V
Rated surge voltage (II/2)	4 kV

Connection data

Connection technology

Nominal cross section	4 mm ²
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Conductor connection

Connection method	Push-in spring connection
Conductor cross section rigid	0.2 mm ² ... 4 mm ² (Conductor connection with open terminal point)
	0.5 mm ² ... 4 mm ² (Push-in connection)
Conductor cross section flexible	0.2 mm ² ... 4 mm ²
Conductor cross section AWG	24 ... 12
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 2.5 mm ²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 2.5 mm ²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm ² ... 0.5 mm ²
Stripping length	10 mm

Mounting

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1135291

<https://www.phoenixcontact.com/us/products/1135291>

Mounting type	THR 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
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	200 °C

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

Assembly instruction:	This item is not suitable for PCB cleaning with liquids.
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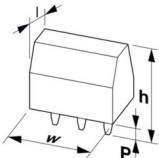
Dimensions

SPT-THR 2,5/12-H-5,0 P20 R88 - PCB terminal block



1135291

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Dimensional drawing	
Pitch	5 mm
Width [w]	60.8 mm
Height [h]	14.8 mm
Length [l]	19.15 mm
Installed height	12.8 mm
Solder pin length [P]	2 mm

PCB design

Hole diameter	1.2 mm
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Mechanical tests

Test for conductor damage and slackening

Specification	IEC 60999-1:1999-11
Result	Test passed

Pull-out test

Specification	IEC 60999-1:1999-11
Conductor cross section/conductor type/tractive force setpoint/actual value	0.2 mm ² / solid / > 10 N
	0.2 mm ² / flexible / > 10 N
	4 mm ² / solid / > 60 N
	4 mm ² / flexible / > 60 N
	0.5 mm ² / solid / > 20 N

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.

Short-time withstand current

Specification	IEC 60947-7-4:2019-01
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Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 MΩ

Air clearances and creepage distances |

Specification	IEC 60947-7-4:2019-01
Insulating material group	IIIa

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1135291

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Comparative tracking index (IEC 60112)	CTI 175
Rated insulation voltage (III/3)	320 V
Rated surge voltage (III/3)	4 kV
minimum clearance value - non-homogenous field (III/3)	3 mm
minimum creepage distance (III/3)	5 mm
Rated insulation voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV
minimum clearance value - non-homogenous field (III/2)	3 mm
minimum creepage distance (III/2)	4 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
minimum creepage distance (II/2)	5 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)
Sweep speed	50 m/s ² (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h

Glow-wire test

Specification	IEC 60695-2-10:2013-04
Temperature	850 °C
Time of exposure	5 s

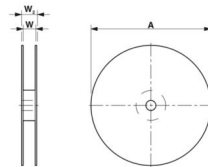
Aging

Specification	IEC 60947-7-4:2019-01
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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

Dimensional drawing	
Type of packaging	88 mm wide tape

SPT-THR 2,5/12-H-5,0 P20 R88 - PCB terminal block



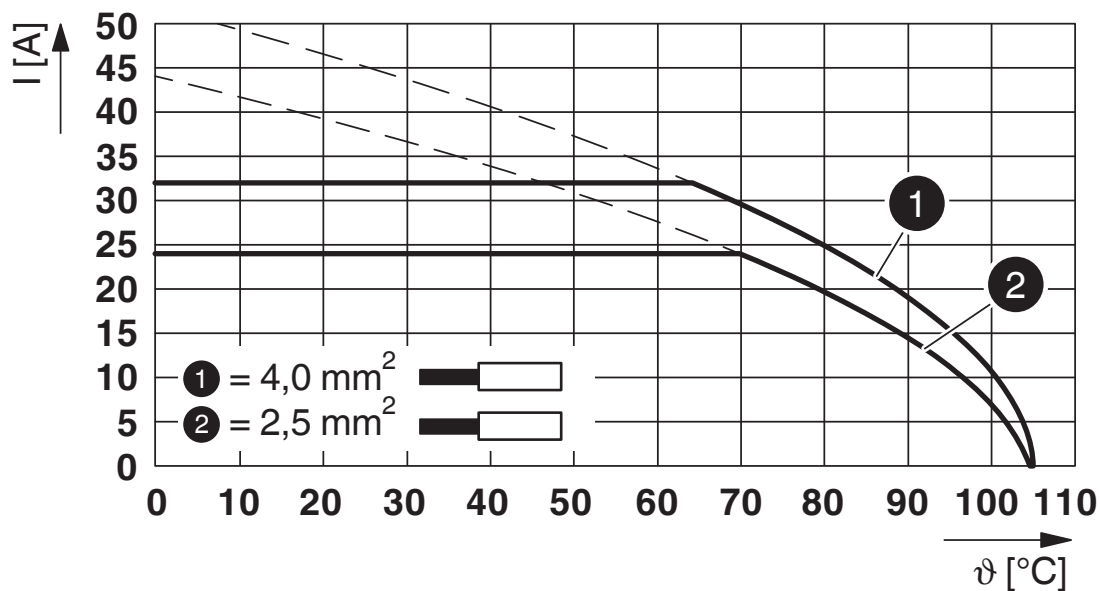
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[W] tape width	88 mm
[W2] coil overall dimension	94.4 mm
[A] coil diameter	330 mm
Outer packaging type	Transparent-Bag
ESD level	(D) electrostatically conductive
Specification	DIN EN 61340-5-1 (VDE 0300-5-1): 2008-07

Drawings

Diagram



Type: SPT-THR 2,5/...-H-5,0 P...

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Approvals

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	 VDE Zeichengenehmigung Approval ID: 40046113			
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	400 V	32 A	-	0.2 - 4

	 cULus Recognized Approval ID: E60425-20061129			
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B				
Standard	300 V	20 A	24 - 12	-
Use group F				
USR application only	500 V	20 A	24 - 12	-
Use group D				
Alternative 1	300 V	10 A	24 - 12	-

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Classifications

ECLASS

ECLASS-11.0	27460101
ECLASS-12.0	27460101
ECLASS-13.0	27460101

ETIM

ETIM 9.0	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

SZF 1-0,6X3,5 - Screwdriver

1204517

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Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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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