PCB terminal block - SPT-THR 1,5/10-V-3,81 P26

1822503

https://www.phoenixcontact.com/pc/products/1822503

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PCB terminal block, nominal current: 13.5 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm^2, number of potentials: 10, number of rows: 1, number of positions per row: 10, product range: SPT 1,5/..-V-THR, pitch: 3.81 mm, connection method: Push-in spring connection, mounting: THR soldering, conductor/PCB connection direction: 90 °, color: black, Pin layout: Linear pinning, Solder pin [P]: 2.6 mm, number of solder pins per potential: 2, type of packaging: packed in cardboard

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
- 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	1822503
Packing unit	90 pc
Minimum order quantity	90 pc
Note	Made to Order (non-returnable)
Product Key	AALCCH
Catalog Page	Page 11 (NTK-2014)
GTIN	4046356812221
Weight per Piece (including packing)	5.66 g
Weight per Piece (excluding packing)	5.66 g
Customs tariff number	85369010
Country of origin	PL

Technical Data

Product properties

Product line	COMBICON Terminals S
Product type	Printed circuit board terminal
Number of positions	10
Pitch	3.81 mm
Number of connections	10
Number of rows	1
Number of potentials	10
Pin layout	Linear pinning
Solder pins per potential	2

Electrical properties

Nominal current I_N	13.5 A
Nominal voltage U_N	160 V
Degree of pollution	3
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

Connection data

Connection technology

Nominal cross section	1.5 mm²

Conductor connection

Connection method	Push-in spring connection
Conductor cross section solid	0.2 mm² ... 1.5 mm²
Conductor cross section flexible	0.2 mm² ... 1.5 mm²
Conductor cross section AWG	24 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.2 mm² ... 1.5 mm²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.2 mm² ... 0.75 mm²
Stripping length	8 mm

Mounting

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

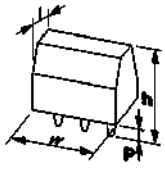
Material data – actuating element

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

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

Dimensions

Dimensional drawing	
Pitch	3.81 mm
Width [w]	38.29 mm
Height [h]	16.2 mm
Length [l]	7.7 mm
Installed height	13.6 mm
Solder pin length [P]	2.6 mm

PCB design

Pin spacing	5.5 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 mm² / solid / > 10 N
	0.2 mm² / flexible / > 10 N
	1.5 mm² / solid / > 40 N
	1.5 mm² / 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 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)
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

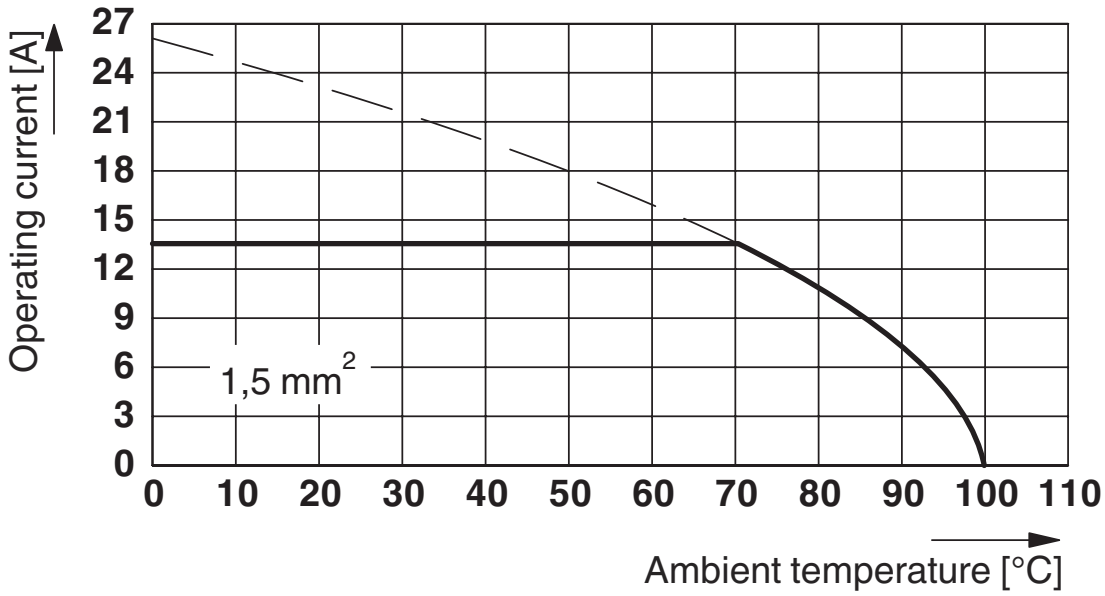
Ambient temperature (operation)	-40 °C ... 100 °C (Depending on the current carrying capacity/derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Packaging specifications

Type of packaging	packed in cardboard

Drawings

Diagram



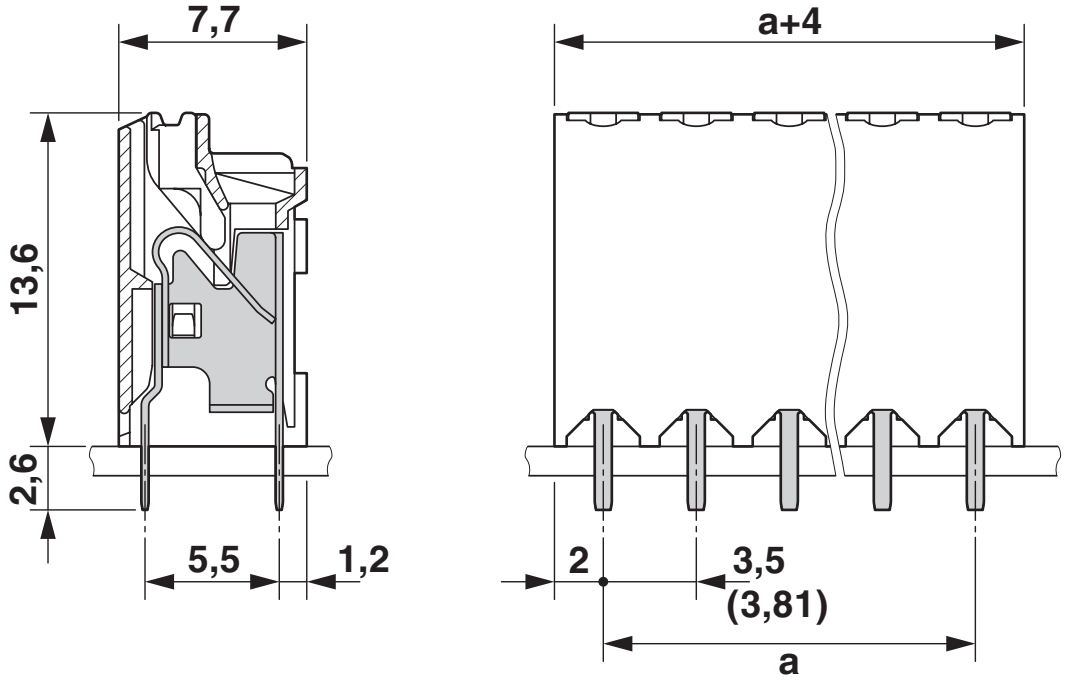
Type: SPT-THR 1,5/ 5-V-3,5(3,81) P26

Tested according to DIN EN 60512-5-2:2003-01

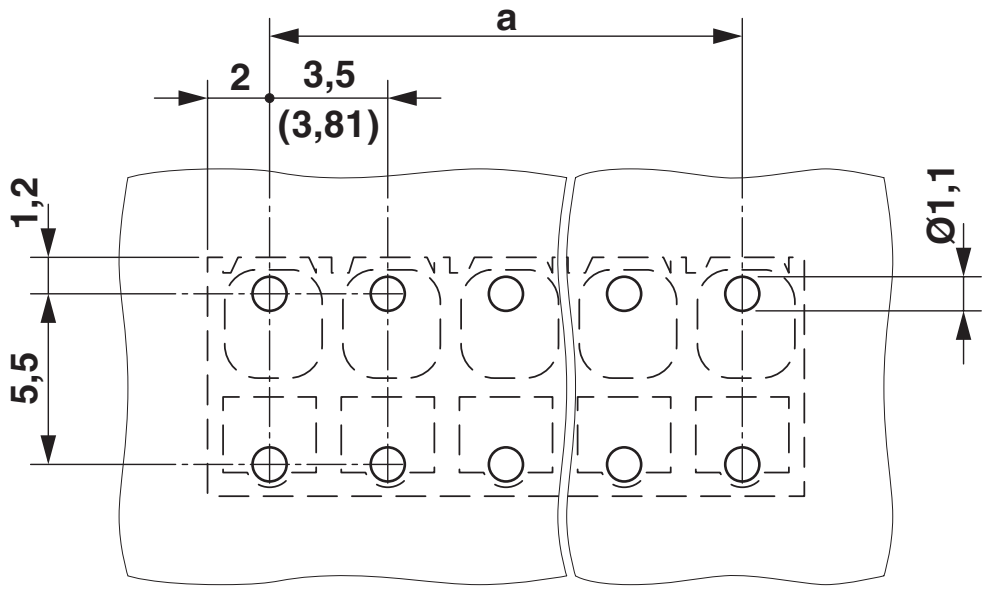
Reduction factor = 1

Number of positions: 5

Dimensional drawing



Drilling plan/solder pad geometry



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
	160 V	13.5 A	-	0.2 - 1.5

Classifications

ECLASS

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

ETIM

ETIM 8.0	EC002643

UNSPSC

UNSPSC 21.0	39121400

Environmental Product Compliance

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

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

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

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

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

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 mm^2 ... 6.0 mm^2, lateral entry, trapezoidal crimp

Accessories

Accessories - MPS-MT 1-S4-B RD - 1982800

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

Test plug terminal block, Accessories



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