

SPTA 5/ 4-7,5-ZB - PCB terminal block

1819105

<https://www.phoenixcontact.com/us/products/1819105>

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Printed circuit board terminal, nominal current: 41 A, rated voltage (III/2): 1000 V, nominal cross section: 6 mm², number of potentials: 4, number of rows: 1, number of positions per row: 4, product range: SPTA 5/, pitch: 7.5 mm, connection method: Push-in spring connection, mounting: Wave soldering, conductor/PCB connection direction: 60 °, color: green, Pin layout: Zigzag pinning W, Solder pin [P]: 4.6 mm, 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
- Clamping space opened by means of fixed screwdriver enables convenient conductor connection
- Unrestricted 600-V-UL approval thanks to compact zig-zag pinning
- Angled connection enables multi-row arrangement on the PCB

Commercial data

Item number	1819105
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AA14
Product key	AANBBD
GTIN	4046356787215
Weight per piece (including packing)	20.55 g
Weight per piece (excluding packing)	19.3 g
Customs tariff number	85369010
Country of origin	IN

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Technical data

Product properties

Product type	Printed circuit board terminal
Product family	SPTA 5/
Product line	COMBICON Terminals L
Number of positions	4
Pitch	7.5 mm
Number of connections	4
Number of rows	1
Number of potentials	4
Pin layout	Zigzag pinning W

Electrical properties

Properties

Nominal current I_N	41 A
Nominal voltage U_N	1000 V
Rated voltage (III/3)	800 V
Rated surge voltage (III/3)	8 kV
Rated voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
Rated voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV

Connection data

Connection technology

Nominal cross section	6 mm ²
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Conductor connection

Connection method	Push-in spring connection
Conductor cross-section rigid	0.2 mm ² ... 6 mm ²
Conductor cross-section flexible	0.2 mm ² ... 6 mm ²
Conductor cross-section AWG	24 ... 8
Conductor cross-section, flexible, with ferrule, without plastic sleeve	0.25 mm ² ... 6 mm ²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 4 mm ²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.25 mm ² ... 1.5 mm ²
Stripping length	15 mm

Mounting

Mounting type	Wave soldering
Pin layout	Zigzag pinning W

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Material specifications

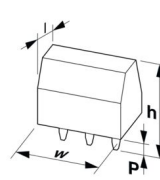
Material data - contact

Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Surface characteristics	Tin-plated
Metal surface terminal point (top layer)	Tin (10 µm - 16 µm Sn)
Metal surface soldering area (top layer)	Tin (10 µm - 16 µm Sn)

Material data - housing

Color (Housing)	green (6021)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
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	125 °C

Dimensions

Dimensional drawing	
Pitch	7.5 mm
Width [w]	31.8 mm
Height [h]	38.6 mm
Length [l]	29 mm
Installed height	34 mm
Solder pin length [P]	4.6 mm
Pin dimensions	1.7 x 0.8 mm

PCB design

Pin spacing	14 mm
Hole diameter	2.1 mm

Mechanical tests

Conductor connection

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

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Test for conductor damage and slackening

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

Repeated connection and disconnection

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
	6 mm ² / solid / > 80 N
	6 mm ² / flexible / > 80 N

Electrical tests

Temperature-rise test

Specification	IEC 60947-7-4:2013-08
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 60947-7-4:2013-08
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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 60947-1:2007-06 + A1:2010-12
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	800 V
Rated surge voltage (III/3)	8 kV
minimum clearance value - non-homogenous field (III/3)	8 mm
minimum creepage distance (III/3)	10 mm
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	8 mm
Rated insulation voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV
minimum clearance value - non-homogenous field (II/2)	5.5 mm
minimum creepage distance (II/2)	5.5 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)
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 60695-2-10:2000-10
Temperature	850 °C
Time of exposure	5 s

Aging

Specification	IEC 60947-7-4:2013-08
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Ambient conditions

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

Packaging specifications

Type of packaging	packed in cardboard
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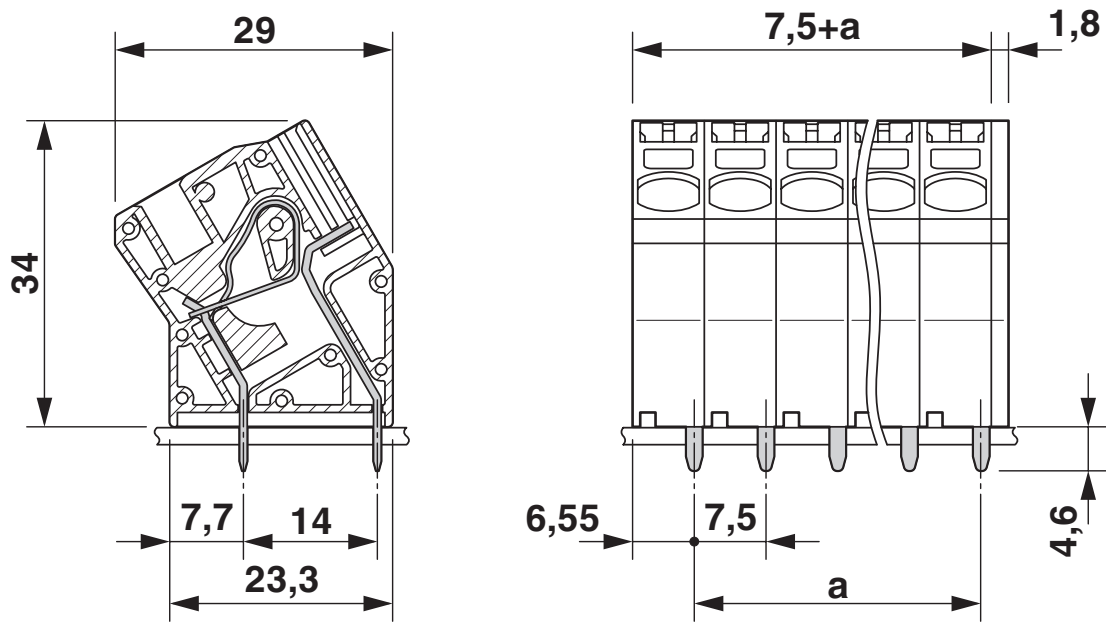
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Drawings

Dimensional drawing



Diagram



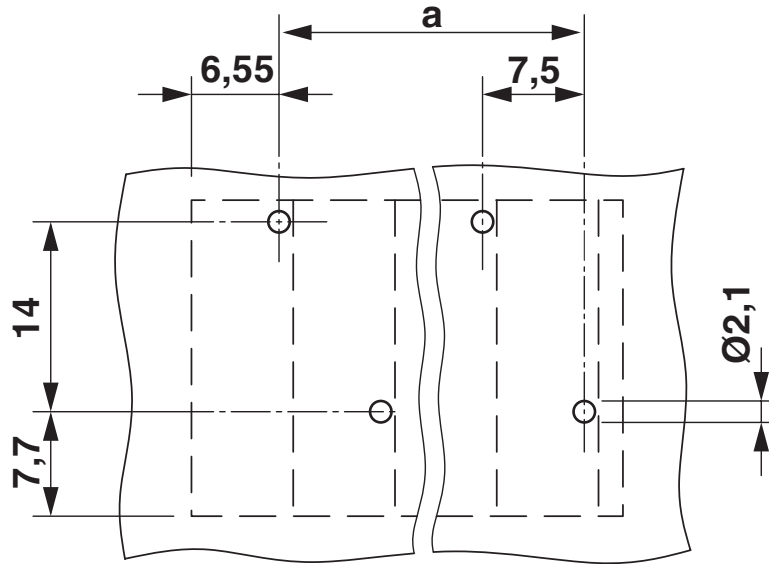
Type: SPTA 5/...-7,5(-ZB)

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Drilling plan/solder pad geometry



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Approvals

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 cULus Recognized Approval ID: E60425-20061129				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B	600 V	33 A	24 - 8	-
C	600 V	33 A	24 - 8	-

 VDE Zeichengenehmigung Approval ID: 40041641				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine	1000 V	41 A	-	0.2 - 10

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Classifications

ECLASS

ECLASS-13.0	27460101
ECLASS-15.0	27460101

ETIM

ETIM 10.0	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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EF3.1 Climate Change

CO2e kg	0.079 kg CO2e
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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com