

# PCB terminal block - PTSA 1,5/23-3,5-Z - 1985409

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PCB terminal block, nominal current: 8 A, rated voltage (III/2): 400 V, nominal cross section: 1.5 mm<sup>2</sup>, pitch: 3.5 mm, number of positions: 23, connection method: Push-in spring connection, mounting: Wave soldering, conductor/PCB connection direction: 45 °, color: green, Pin layout: Zigzag pinning M, Solder pin [P]: 3.6 mm. Offset soldering legs, two-rowed


The figure shows a 10-position version of the product

## Your advantages

- Time saving push-in connection, tools not required
- Defined contact force ensures that contact remains stable over the long term
- Angled connection enables multi-row arrangement on the PCB



## Key Commercial Data

Packing unit	40 pc
Minimum order quantity	40 pc
GTIN	 4 017918 922474
GTIN	4017918922474

## Technical data

### Item properties

Brief article description	PCB terminal block
Range of articles	PTSA 1,5
Pitch	3.5 mm
Number of positions	23
Connection method	Push-in spring connection
Mounting type	Wave soldering
Pin layout	Zigzag pinning M
Number of levels	1
Number of connections	23
Number of potentials	23

### Electrical parameters

# PCB terminal block - PTSA 1,5/23-3,5-Z - 1985409

## Technical data

### Electrical parameters

Nominal current	8 A
Nom. voltage	400 V
Rated voltage	250 V
Rated voltage (III/2)	400 V
Rated voltage (II/2)	630 V
Rated surge voltage (III/3)	4 kV
Rated surge voltage (III/2)	4 kV
Rated surge voltage (II/2)	4 kV

### Connection capacity

Connection method	Push-in spring connection
pluggable	no
Conductor cross section solid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG / kcmil	24 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 1 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Stripping length	9 mm

### 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

Housing color	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 for the product

Caption	The figure shows the dimensional drawing of the 5-position product version
Length [ l ]	12 mm
Width [ w ]	82 mm
Height [ h ]	16.7 mm
Pitch	3.5 mm

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### Dimensions for the product

Height (without solder pin)	13.1 mm
Solder pin [P]	3.6 mm
Pin spacing	3.5 mm
Pin dimensions	0.4 x 0.75 mm

### Dimensions for PCB design

Hole diameter	1 mm
Pin spacing	3.5 mm

### Packaging information

Type of packaging	packed in cardboard
Pieces per package	40
Denomination packing units	Pcs.

### Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Ambient temperature (assembly)	-5 °C ... 85 °C
Ambient temperature (operation)	-40 °C ... 100 °C (Depending on the current carrying capacity/derating curve)

### Termination and connection method

Test for conductor damage and slackening	IEC 60999-1:1999-11
	Test passed

### Pull-out test

Pull-out test	IEC 60999-1:1999-11
	Test passed
Conductor cross section / conductor type / tensile force	0.2 mm <sup>2</sup> / solid / > 10 N
	0.2 mm <sup>2</sup> / flexible / > 10 N
	1.5 mm <sup>2</sup> / solid / > 40 N
	1.5 mm <sup>2</sup> / flexible / > 40 N

### Mechanical tests according to standard

Test specification	IEC 60947-7-4
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### Electrical tests

Rated current	8 A
Conductor cross section	1.5 mm <sup>2</sup>
Rated voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV

### Air clearances and creepage distances

Clearances and creepage distances	IEC 60947-1:2007-06 + A1:2010-12 + A2:2014-09
Specification	IEC 60947-1:2007-06 + A1:2010-12 + A2:2014-09
Minimum clearance - inhomogeneous field (III/3)	3 mm
Minimum clearance - inhomogeneous field (III/2)	3 mm

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## Technical data

### Air clearances and creepage distances

Minimum clearance - inhomogeneous field (II/2)	3 mm
Minimum creepage distance value (III/3)	3.2 mm
Minimum creepage distance value (III/2)	3 mm
Minimum creepage distance value (II/2)	3.2 mm
Note on connection cross section	With connected conductor 1.5 mm <sup>2</sup> (solid).

### Temperature-rise test

Specification	IEC 60947-7-4:2013-08
Result	Test passed
Requirement temperature-rise test	The sum of ambient temperature and temperature rise of the PCB terminal block shall not exceed the upper limiting temperature.

### Current carrying capacity / derating curves

Caption	Type: PTSA 1,5/4-3,5-Z Tested in accordance with DIN EN 60512-5-2:2003-01 Reduction factor = 1 Number of positions: 4
Specification	IEC 60947-7-4:2013-08
Number of positions	4
Reduction factor	1
Note	Representation based on IEC 60512-5-2:2002-02

### Vibration test

Specification	IEC 60068-2-6:2007-12
Result	Test passed
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 - 60.1 Hz)
Acceleration	5 g (60.1 - 150 Hz)
Test duration per axis	2.5 h

### Insulation resistance

Specification	IEC 60512-3-1:2002-02
Result	Test passed
Insulation resistance, neighboring positions	> 1 TΩ

### Glow-wire test

Specification	IEC 60695-2-10:2000-10
Result	Test passed
Temperature	850 °C
Time of exposure	5 s

### Alternating climate test

Result	Test passed
Specification	ISO 6988:1985-02

## PCB terminal block - PTSA 1,5/23-3,5-Z - 1985409

### Technical data

#### Alternating climate test

Corrosive stress	KFW 0.2 S/1 cycle
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#### Standards and Regulations

Connection in acc. with standard	EN-VDE
	CUL
Flammability rating according to UL 94	V0

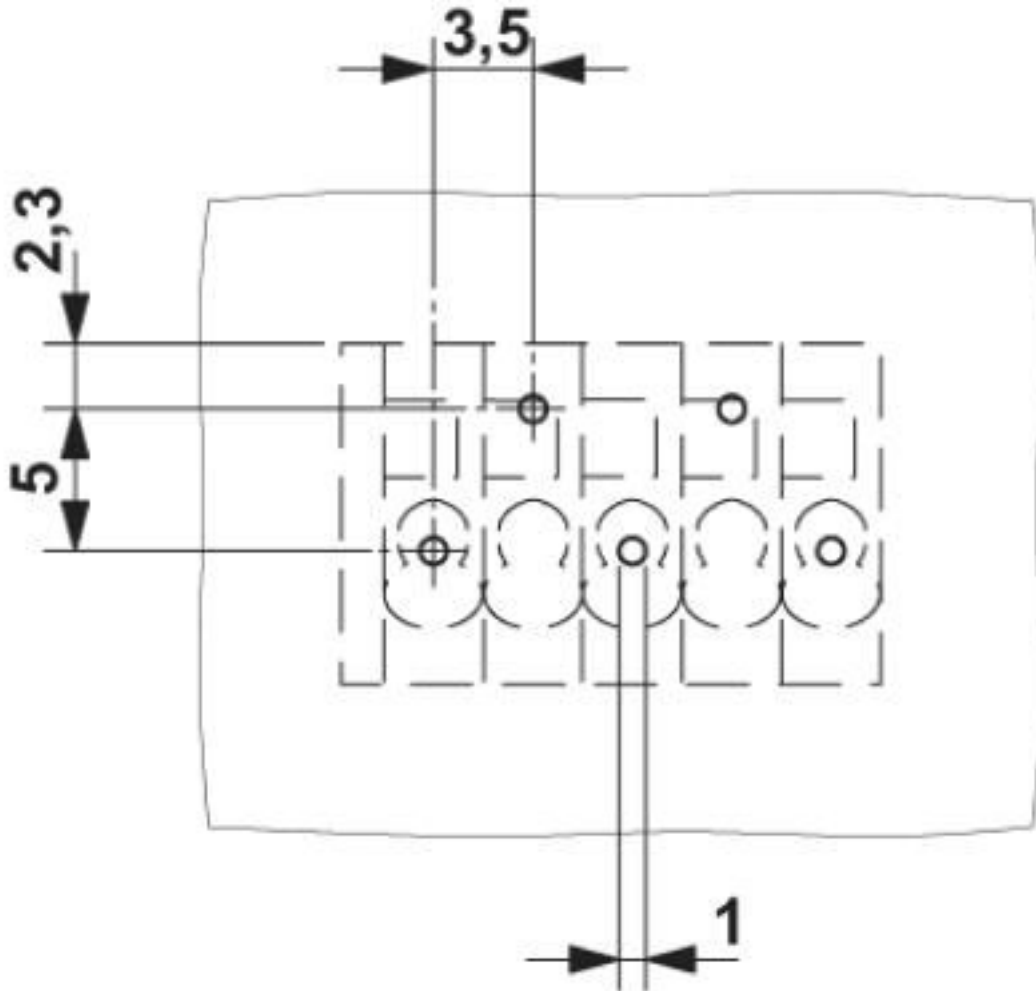
#### Environmental Product Compliance

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

### Drawings

# PCB terminal block - PTSA 1,5/23-3,5-Z - 1985409

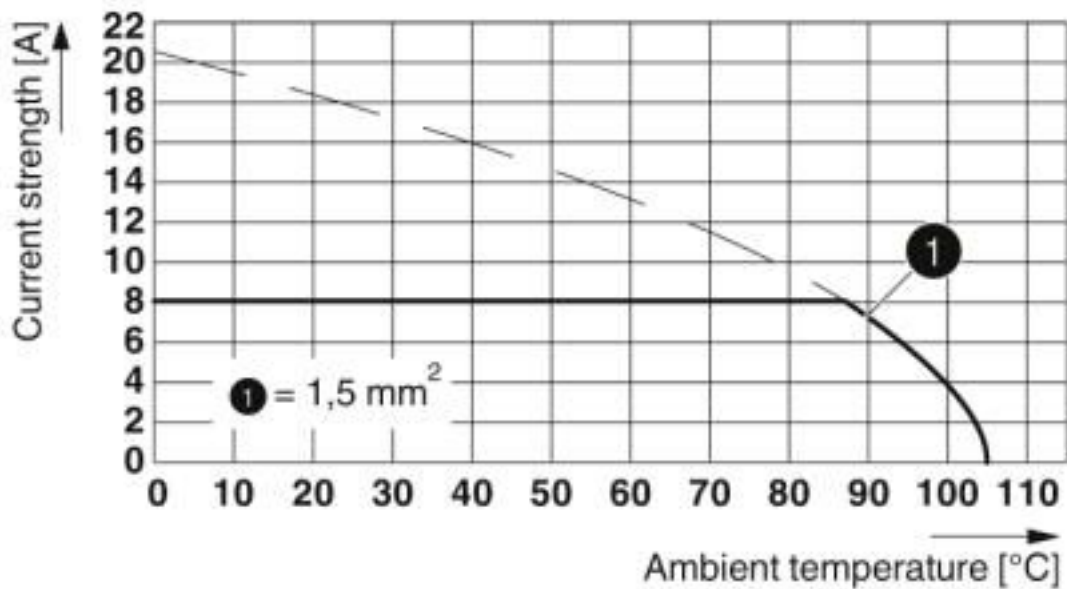
Drilling diagram



The figure shows the drilling plan of the 5-pos. version of the article – Zig-zag pinning starts at the right-hand position. Other pinning available on request.

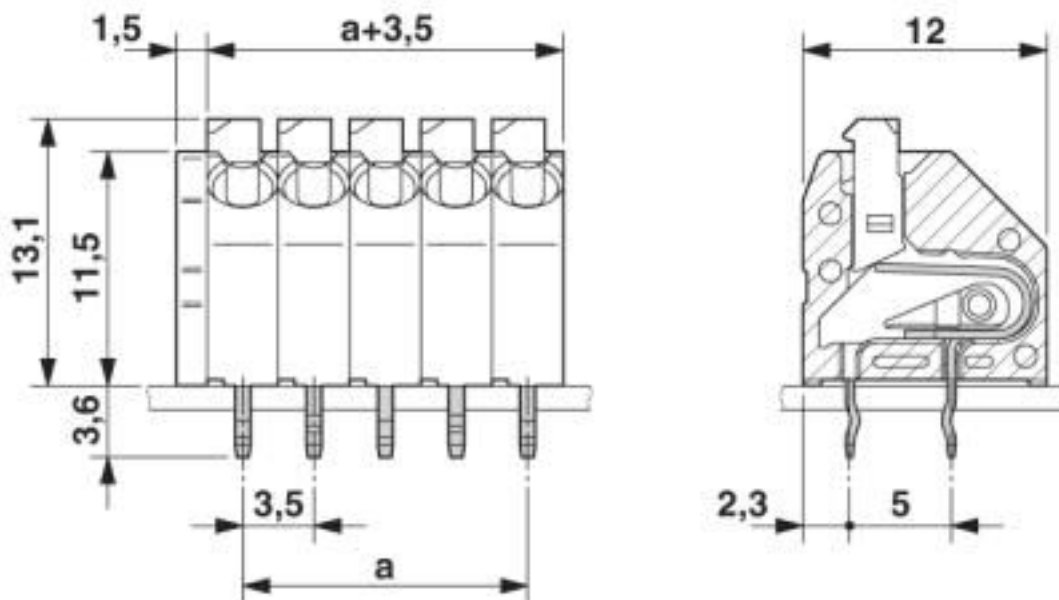
# PCB terminal block - PTSA 1,5/23-3,5-Z - 1985409

Diagram



Type: PTSA 1,5/4-3,5-Z  
Tested in accordance with DIN EN 60512-5-2:2003-01  
Reduction factor = 1  
Number of positions: 4

Dimensional drawing



The figure shows the dimensional drawing of the 5-position product version

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## Classifications

### eCl@ss

eCl@ss 10.0.1	27440401
eCl@ss 4.0	27260700
eCl@ss 4.1	27141100
eCl@ss 5.0	27141100
eCl@ss 5.1	27261100
eCl@ss 6.0	27261100
eCl@ss 7.0	27440401
eCl@ss 8.0	27440401
eCl@ss 9.0	27440401

### ETIM

ETIM 3.0	EC001121
ETIM 4.0	EC002643
ETIM 5.0	EC002643
ETIM 6.0	EC002643
ETIM 7.0	EC002643

### UNSPSC

UNSPSC 6.01	30211801
UNSPSC 7.0901	39121432
UNSPSC 11	34131203
UNSPSC 12.01	39121432
UNSPSC 13.2	39121432
UNSPSC 18.0	39121432
UNSPSC 19.0	39121432
UNSPSC 20.0	39121432
UNSPSC 21.0	39121432

## Approvals

### Approvals

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#### Approvals

CCA / VDE Gutachten mit Fertigungsüberwachung / EAC / cULus Recognized

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#### Ex Approvals

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### Approval details



# PCB terminal block - PTSA 1,5/23-3,5-Z - 1985409

## Approvals

CCA	CCA/DE1 34182/33276
Nominal current I <sub>N</sub>	2 A
mm <sup>2</sup> /AWG/kcmil	0.75

VDE Gutachten mit Fertigungsüberwachung		<a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/ VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a>	40018594
Nominal voltage U <sub>N</sub>	250 V		
Nominal current I <sub>N</sub>	2 A		
mm <sup>2</sup> /AWG/kcmil	0.5-.75		

EAC		B.01687
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cULus Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	E60425-20030527
	B	D	
Nominal voltage U <sub>N</sub>	300 V	300 V	
Nominal current I <sub>N</sub>	5 A	5 A	
mm <sup>2</sup> /AWG/kcmil	24-16	24-16	

## Accessories

### Accessories

#### Crimping tool

Crimping pliers - CRIMPFOX 6 - 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<sup>2</sup> ... 6.0 mm<sup>2</sup>, lateral entry, trapezoidal crimp

#### Screwdriver tools

## PCB terminal block - PTSA 1,5/23-3,5-Z - 1985409

### Accessories

Screwdriver - SZS 0,4X2,5 VDE - 1205037



Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

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