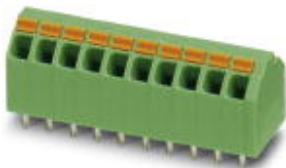


## PCB terminal block - SPTA 1,5/ 7-3,81 - 1743184

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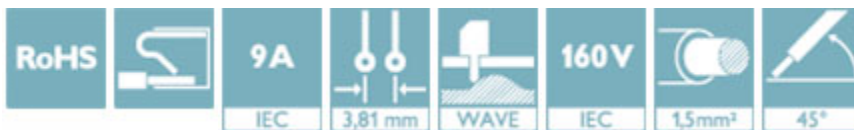


The figure shows the 10-position version

PCB terminal block, nominal current: 9 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, pitch: 3.81 mm, number of positions: 7, connection method: Push-in spring connection, mounting: Wave soldering, conductor/PCB connection direction: 45 °, color: green, Pin layout: Linear double pinning, Solder pin [P]: 3.4 mm

### 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
- ✓ Angled connection enables multi-row arrangement on the PCB
- ✓ Quick and convenient testing using integrated test option
- ✓ Two solder pins reduce the mechanical strain on the soldering spots



### Key Commercial Data

|                                      |                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit                         | 1 pc                                                                                                    |
| Minimum order quantity               | 50 pc                                                                                                   |
| GTIN                                 | <br>4 046356 302852 |
| GTIN                                 | 4046356302852                                                                                           |
| Weight per Piece (excluding packing) | 4.010 g                                                                                                 |
| Custom tariff number                 | 85369010                                                                                                |
| Country of origin                    | Germany                                                                                                 |

### Technical data

#### Item properties

|                           |                    |
|---------------------------|--------------------|
| Brief article description | PCB terminal block |
| Range of articles         | SPTA 1,5/          |

# PCB terminal block - SPTA 1,5/ 7-3,81 - 1743184

## Technical data

### Item properties

|                       |                           |
|-----------------------|---------------------------|
| Pitch                 | 3.81 mm                   |
| Number of positions   | 7                         |
| Connection method     | Push-in spring connection |
| Mounting type         | Wave soldering            |
| Pin layout            | Linear double pinning     |
| Number of levels      | 1                         |
| Number of connections | 7                         |
| Number of potentials  | 7                         |

### Electrical parameters

|                             |        |
|-----------------------------|--------|
| Nominal current             | 9 A    |
| Nom. voltage                | 160 V  |
| Rated voltage               | 160 V  |
| Rated voltage (III/2)       | 160 V  |
| Rated voltage (II/2)        | 320 V  |
| Rated surge voltage (III/3) | 2.5 kV |
| Rated surge voltage (III/2) | 2.5 kV |
| Rated surge voltage (II/2)  | 2.5 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> ... 1.5 mm <sup>2</sup> |
| Conductor cross section, flexible, with ferrule, with plastic sleeve  | 0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Stripping length                                                      | 10 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                  | 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           |

# PCB terminal block - SPTA 1,5/ 7-3,81 - 1743184

## Technical data

### Material data - housing

|                                                                   |        |
|-------------------------------------------------------------------|--------|
| 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

|                             |            |
|-----------------------------|------------|
| Length [ l ]                | 12 mm      |
| Width [ w ]                 | 28.17 mm   |
| Height [ h ]                | 15.4 mm    |
| Pitch                       | 3.81 mm    |
| Height (without solder pin) | 12 mm      |
| Solder pin [P]              | 3.4 mm     |
| Pin spacing                 | 7 mm       |
| Pin dimensions              | 0.6 x 1 mm |

### Dimensions for PCB design

|               |        |
|---------------|--------|
| Hole diameter | 1.1 mm |
| Pin spacing   | 7 mm   |

### Packaging information

|                            |                     |
|----------------------------|---------------------|
| Type of packaging          | packed in cardboard |
| Pieces per package         | 50                  |
| Denomination packing units | Pcs.                |

### Ambient conditions

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

### Termination and connection method

|                                          |                       |
|------------------------------------------|-----------------------|
| Connection test                          | IEC 60998-2-2:2002-12 |
| Test result                              | Test passed           |
| Test for conductor damage and slackening | IEC 60998-2-2:2002-12 |
|                                          | Test passed           |

### Pull-out test

|               |                       |
|---------------|-----------------------|
| Pull-out test | IEC 60998-2-2:2002-12 |
|               | Test passed           |

## PCB terminal block - SPTA 1,5/ 7-3,81 - 1743184

### Technical data

#### Pull-out test

|                                                          |                                         |
|----------------------------------------------------------|-----------------------------------------|
| 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 60998-2-2 (in parts) |
|--------------------|--------------------------|

#### Electrical tests

|                             |                     |
|-----------------------------|---------------------|
| Rated current               | 9 A                 |
| Conductor cross section     | 1.5 mm <sup>2</sup> |
| Rated voltage (III/2)       | 160 V               |
| Rated surge voltage (III/2) | 2.5 kV              |

#### Air clearances and creepage distances

|                                                 |                                               |
|-------------------------------------------------|-----------------------------------------------|
| Clearances and creepage distances               | IEC 60664-1:1992-10 + A1:2000-02 + A2:2002-05 |
| Specification                                   | IEC 60664-1:1992-10 + A1:2000-02 + A2:2002-05 |
| Minimum clearance - inhomogeneous field (III/3) | 1.5 mm                                        |
| Minimum clearance - inhomogeneous field (III/2) | 1.5 mm                                        |
| Minimum clearance - inhomogeneous field (II/2)  | 1.5 mm                                        |
| Minimum creepage distance value (III/3)         | 2 mm                                          |
| Minimum creepage distance value (III/2)         | 0.8 mm                                        |
| Minimum creepage distance value (II/2)          | 1.6 mm                                        |

#### Temperature-rise test

|               |                       |
|---------------|-----------------------|
| Result        | Test passed           |
| Specification | IEC 60998-2-1:2002-12 |

#### Current carrying capacity / derating curves

|               |                          |
|---------------|--------------------------|
| Specification | IEC 60998-2-2 (in parts) |
|---------------|--------------------------|

#### 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                  |

#### Resistance to ageing, humidity and penetration of solids

## PCB terminal block - SPTA 1,5/ 7-3,81 - 1743184

### Technical data

#### Resistance to ageing, humidity and penetration of solids

|            |                 |
|------------|-----------------|
| Dry heat   | 168 h/100°C     |
| Humid heat | 48 h/30 °C/92 % |

#### Standards and Regulations

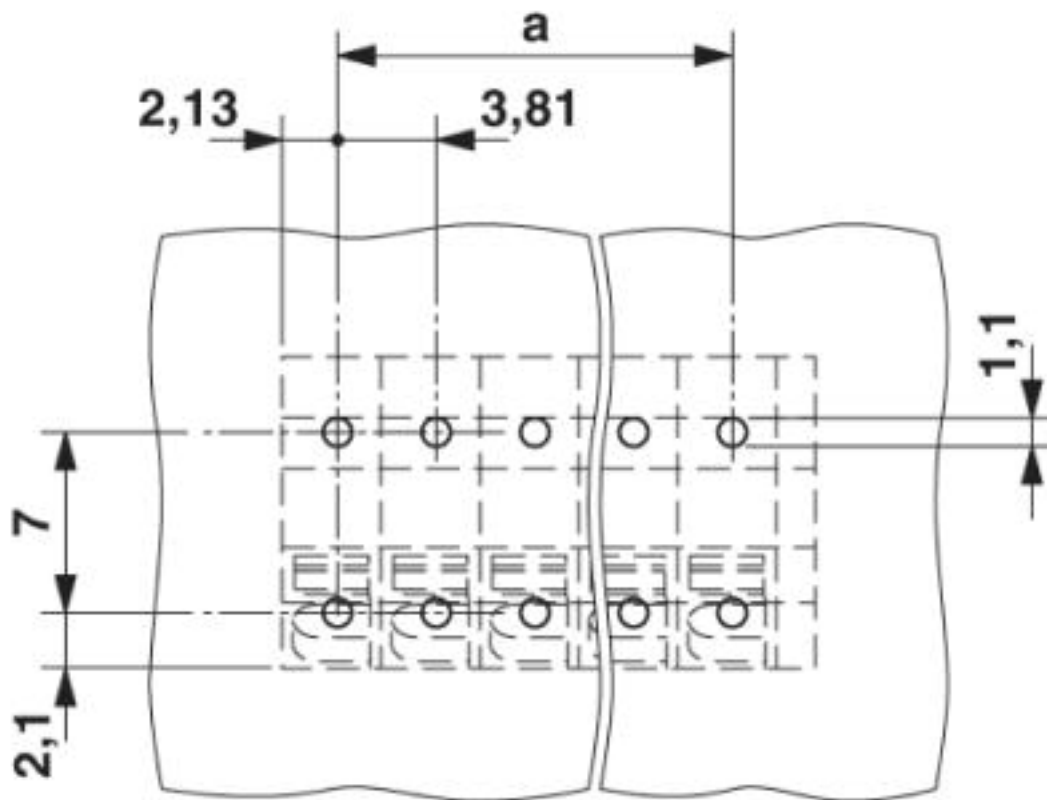
|                                        |        |
|----------------------------------------|--------|
| Connection in acc. with standard       | EN-VDE |
|                                        | CUL    |
| Flammability rating according to UL 94 | V0     |

#### Environmental Product Compliance

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

### Drawings

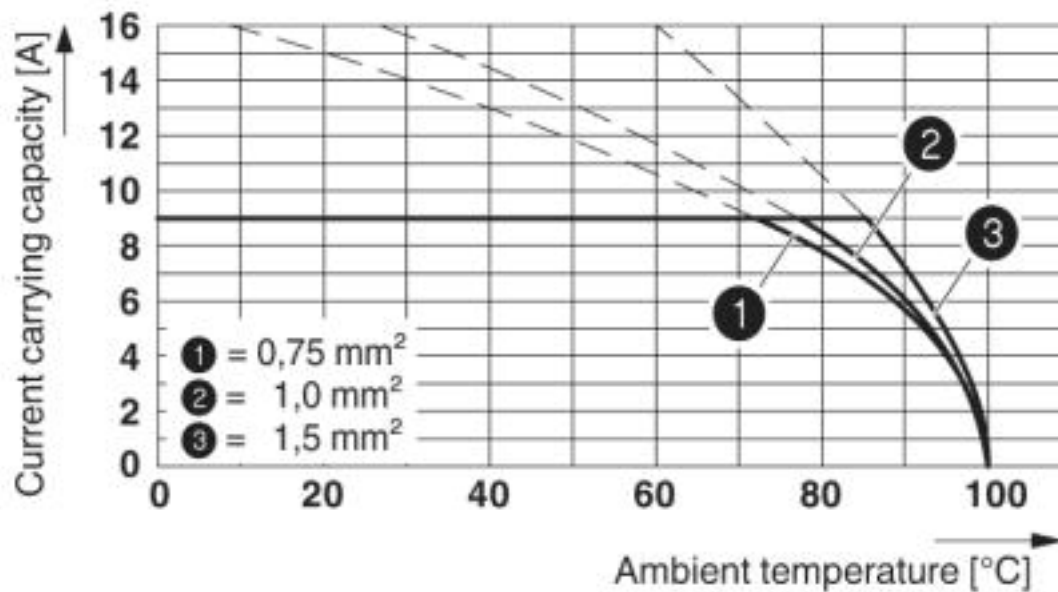
Drilling diagram



The front solder pin is for additional mechanical stability only; it does not have any electrical properties

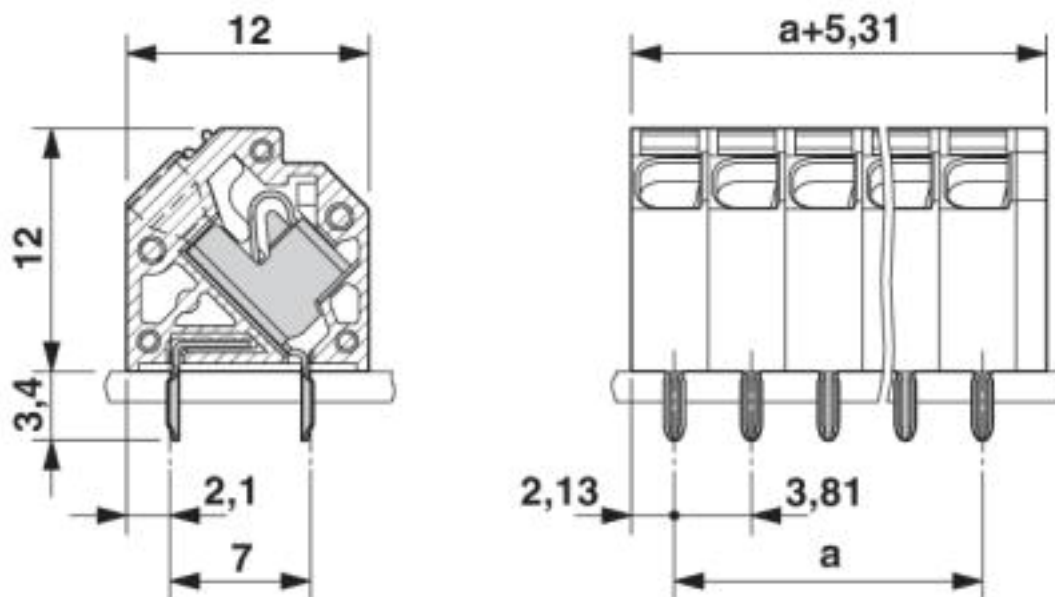
## PCB terminal block - SPTA 1,5/ 7-3,81 - 1743184

Diagram



Type: SPTA 1,5 ...3,81  
 Tested based on DIN EN 60512-5-2:2003-01  
 Reduction factor = 1  
 Number of positions: 5

Dimensional drawing



## PCB terminal block - SPTA 1,5/ 7-3,81 - 1743184

### Classifications

#### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440401 |
| eCl@ss 4.0    | 27141100 |
| 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     | 39121432 |
| 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

IECEE CB Scheme / VDE Gutachten mit Fertigungsüberwachung / EAC / cULus Recognized

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#### Ex Approvals

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## PCB terminal block - SPTA 1,5/ 7-3,81 - 1743184

### Approvals

#### Approval details

|                 |                                                                                   |                                                           |           |
|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------|-----------|
| IECEE CB Scheme |  | <a href="http://www.iecee.org/">http://www.iecee.org/</a> | DE1-58146 |
|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------|-----------|

|                                            |                                                                                   |                                                                                                                                                                                                                |          |
|--------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| VDE Gutachten mit<br>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/<br/>VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a> | 40029329 |
| Nominal voltage UN                         | 130 V                                                                             |                                                                                                                                                                                                                |          |
| Nominal current IN                         | 9 A                                                                               |                                                                                                                                                                                                                |          |
| mm²/AWG/kcmil                              | 0.2-1.5                                                                           |                                                                                                                                                                                                                |          |

|     |                                                                                   |         |  |
|-----|-----------------------------------------------------------------------------------|---------|--|
| EAC |  | B.01687 |  |
|-----|-----------------------------------------------------------------------------------|---------|--|

|                    |                                                                                     |                                                                                                                                                       |                 |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 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> | E60425-20061129 |
| Nominal voltage UN | 300 V                                                                               |                                                                                                                                                       |                 |
| Nominal current IN | 10 A                                                                                |                                                                                                                                                       |                 |
| mm²/AWG/kcmil      | 26-16                                                                               |                                                                                                                                                       |                 |

### 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 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

#### Screwdriver tools

## PCB terminal block - SPTA 1,5/ 7-3,81 - 1743184

### 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