# PCB terminal block - SPTAF 1/10-3,5-IL - 1862013

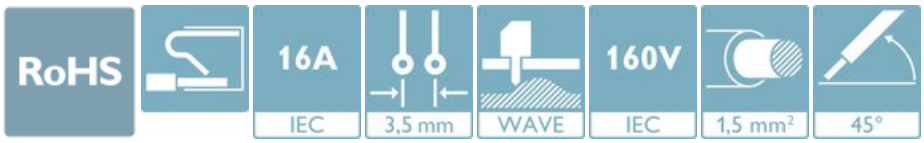
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PCB terminal block, nominal current: 16 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of potentials: 10, Number of rows: 1, Number of positions per row: 10, product range: SPTAF 1/..-IL, pitch: 3.5 mm, connection method: Push-in spring connection, mounting: Wave soldering, conductor/PCB connection direction: 45 °, color: green, Pin layout: Linear double pinning, Solder pin [P]: 2.6 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
- Intuitive use through colour coded actuation lever
- Small component size for applications where space is at a premium
- Quick and convenient testing using integrated test option




## Key Commercial Data

| | |
|---|---|
| Packing unit | 80 pc |
| Minimum order quantity | 80 pc |
| GTIN | 4 055626 135052 |
| GTIN | 4055626135052 |

## Technical data

### Item properties

| | |
|---|---|
| Brief article description | PCB terminal block |
| Range of articles | SPTAF 1/..-IL |
| Pitch | 3.5 mm |
| Number of positions | 10 |
| Mounting type | Wave soldering |
| Pin layout | Linear double pinning |
| Number of rows | 1 |
| Number of connections | 10 |
| Number of potentials | 10 |

### Electrical parameters

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## Technical data

### Electrical parameters

| | |
|---|---|
| Nominal current | 16 A |
| Nom. voltage | 160 V |
| Contact resistance | Test passed IEC 60512-2-1:2002-02 |
| Rated voltage (III/3) | 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 |
| Conductor cross section solid | 0.2 mm² ... 1.5 mm² (When connecting and possibly adjusting a solid conductor of 1.5 mm², the mechanical lateral forces, which can affect the terminal block, have to be absorbed by lateral support.) |
| Conductor cross section flexible | 0.2 mm² ... 1.5 mm² |
| Conductor cross section AWG / kcmil | 24 ... 16 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm² ... 0.75 mm² |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.25 mm² ... 0.75 mm² |
| Stripping length | 8 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 (2 - 4 µm Sn) |
| Metal surface soldering area (top layer) | Tin (2 - 4 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 | Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center |
| Length [ l ] | 11 mm |
| Width [ w ] | 36.5 mm |

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## Technical data

### Dimensions for the product

| | |
|---|---|
| Height [ h ] | 10.6 mm |
| Pitch | 3.5 mm |
| Height (without solder pin) | 8 mm |
| Solder pin [P] | 2.6 mm |
| Pin spacing | 5 mm |
| Pin dimensions | 0.75 x 0.3 mm |

### Dimensions for PCB design

| | |
|---|---|
| Hole diameter | 1.1 mm |
| Pin spacing | 5 mm |

### Packaging information

| | |
|---|---|
| Type of packaging | packed in cardboard |
| Pieces per package | 80 |
| Denomination packing units | Pcs. |

### General product information

| | |
|---|---|
| Type of note | Note on application |
| Note | Maximum permissible outer diameter of the wire insulation ≤ 3 mm |

### Processing notes

| | |
|---|---|
| Process | Wave soldering |
| Specification | Following IEC 61760-1:2006-04 |
| | Following IEC 60068-2-54:2006-04 |

### Ambient conditions

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

### Termination and connection method

| | |
|---|---|
| Test – repeated connection and release | IEC 60999-1:1999-11 |
| | Test passed |
| Test for conductor damage and slackening | IEC 60999-1:1999-11 |
| | Test passed |

### Pull-out test

| | |
|---|---|
| Pull-out test | IEC 60999-1:1999-11 |
| Conductor cross section / conductor type / tensile force | 0.2 mm² / solid / > 10 N |
| | 0.25 mm² / flexible / > 10 N |
| | 1.5 mm² / solid / > 40 N |
| | 1.5 mm² / flexible / > 40 N |

### Mechanical tests according to standard

| | |
|---|---|
| Test specification | IEC 60947-7-4 |

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## Technical data

### Electrical tests

| | |
|---|---|
| Rated current | 16 A |
| Conductor cross section | 1.5 mm² |
| Rated voltage (III/2) | 160 V |
| Rated surge voltage (III/2) | 2.5 kV |

### Air clearances and creepage distances

| | |
|---|---|
| Clearances and creepage distances | IEC 60947-1:2007-06 + A1:2010-12 |
| Specification | IEC 60947-1:2007-06 + A1:2010-12 |
| 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

| | |
|---|---|
| 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. |

### Current carrying capacity / derating curves

| | |
|---|---|
| Caption | Type: SPTAF 1/...-3,5-IL(EL) |

### Vibration test

| | |
|---|---|
| Specification | IEC 60068-2-6:2007-12 |
| Frequency | 10 - 150 - 10 Hz |
| Sweep speed | 1 octave/min |
| Amplitude | 0.35 mm (10 - 60.1 Hz) |
| Acceleration | 5g (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 | > 5 MΩ |

### Glow-wire test

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

### Alternating climate test

| | |
|---|---|
| Result | Test passed |
| Specification | ISO 6988:1985-02 |

### Standards and Regulations

# PCB terminal block - SPTAF 1/10-3,5-IL - 1862013

## Technical data

### Standards and Regulations

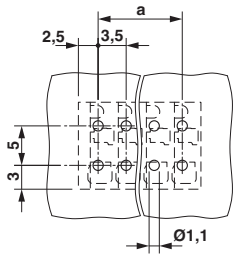
| | |
|---|---|
| Connection in acc. with standard | EN-VDE |

### Environmental Product Compliance

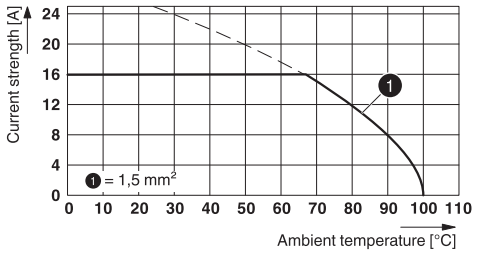
| | |
|---|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

## Drawings

Drilling diagram

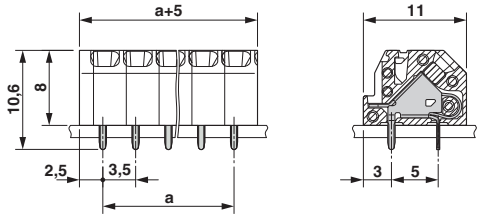



Diagram




Type: SPTAF 1/...-3,5-IL(EL)

Dimensional drawing




## Classifications

### eCl@ss

| | |
|---|---|
| eCl@ss 10.0.1 | 27440401 |
| eCl@ss 11.0 | 27460101 |
| eCl@ss 5.1 | 27261100 |
| eCl@ss 6.0 | 27261100 |
| eCl@ss 7.0 | 27440401 |
| eCl@ss 9.0 | 27440401 |

### ETIM

| | |
|---|---|
| ETIM 6.0 | EC002643 |
| ETIM 7.0 | EC002643 |

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## Classifications

### UNSPSC

| | |
|---|---|
| UNSPSC 13.2 | 39121432 |
| UNSPSC 18.0 | 39121432 |
| UNSPSC 19.0 | 39121432 |
| UNSPSC 20.0 | 39121432 |
| UNSPSC 21.0 | 39121432 |

## Approvals

### Approvals

Approvals

VDE Zeichengenehmigung / IECEE CB Scheme / EAC / cULus Recognized

Ex Approvals

### Approval details

| | | | |
|---|---|---|---|
| VDE Zeichengenehmigung | | http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx | 40047107 |

| | |
|---|---|
| Nominal voltage UN | 160 V |
| Nominal current IN | 16 A |
| mm²/AWG/kcmil | 0.2-1.5 |

| | | | |
|---|---|---|---|
| IECEE CB Scheme | | http://www.iecee.org/ | DE1-61914 |

| | |
|---|---|
| Nominal voltage UN | 160 V |
| Nominal current IN | 16 A |
| mm²/AWG/kcmil | 0.2-1.5 |

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

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## Approvals

| | | | |
|---|---|---|---|
| cULus Recognized | c US | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | E60425-20061129 |

| | B | D |
|---|---|---|
| Nominal voltage UN | 300 V | 300 V |
| Nominal current IN | 8 A | 8 A |
| mm²/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 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

### Screwdriver tools

Screwdriver - SZF 0-0,4X2,5 - 1204504



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.4 x 2.5 x 75 mm, 2-component grip, with non-slip grip

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