



Components  
for PCBs

SMD terminal blocks made by BJB  
For all requirements the best connection



Technology for Light

# Product overview

## SMD terminal blocks

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18	Information on material and manufacture
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# Overview of SMD terminal blocks



Wire compatibility

part no.		Name	Solid Conductors	Tinned wire ends	Multiple-Conductors		Cross sectional range	Wiring position	Poles	Rated
46.101.1001.50		SMD Mini	✓	✓			0,34-0,75 mm <sup>2</sup> AWG 24-18	Above PCB	1	ENEC: 9A / 320 V URus: 9A / 300V cUR: 3A / 300V
46.102.1001.50		SMD Mini	✓	✓			0,34-0,75 mm <sup>2</sup> AWG 24-18	Above PCB	2	ENEC: 9A / 320 V URus: 9A / 300V cUR: 3A / 300V
46.131.1001.50		SMD Mini-Flex	✓	✓	✓		0,20-0,75 mm <sup>2</sup> AWG 24-18	Above PCB	1	ENEC: 9A / 320 V URus: 9A / 300V cUR: 3A / 300V
46.132.1001.50		SMD Mini-Flex	✓	✓	✓		0,20-0,75 mm <sup>2</sup> AWG 24-18	Above PCB	2	ENEC: 9A / 320 V URus: 9A / 300V cUR: 3A / 300V
46.111.1001.50		SMD Push-Through Terminal Block	✓	✓			0,20-0,75 mm <sup>2</sup> AWG 24-18	Below PCB	1	ENEC: 9A / 320 V URus: 9A / 300V cUR: 3A / 300V
46.112.1001.50		SMD Push-Through Terminal Block	✓	✓			0,20-0,75 mm <sup>2</sup> AWG 24-18	Below PCB	2	ENEC: 9A / 320 V URus: 9A / 300V cUR: 3A / 300V
46.121.1001.50		SMD Push-Through Terminal Block	✓	✓			0,20-0,75 mm <sup>2</sup> AWG 24-18	Below PCB	1	ENEC: 9A / 320V (EN 60947-7-4) ENEC: 9A / 500V (EN 60598-1) URus: 9A / 600V (UL 1977)

# SMD Mini

BJB SMD Minis. With a height of only 4 mm, they are extremely flat and keep any shadow formation to a minimum.

For efficient assembly of components: SMD Minis from BJB are ADS-compatible and can be wired robotically.



## LED - Lighting and connection technology

SMD Terminal blocks - SMD-Mini

46.101

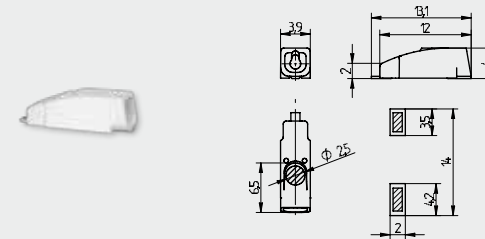


pkg.	wt.	part no.
1800	0,25 g	46.101.1001.50

### SMD-Mini - Terminal block 1-pole

Solder fixing  
Housing: PPA  
Contacts: Cu / CrNi  
Approval according to: IEC 60947-7-4  
Rating: ENEC: 9 A / 320 V  
cULus: 3 A / 300V  
UL: 9 A / 300V

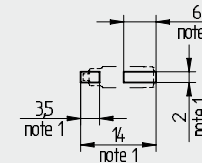
- No tools required! Wires can be released by twisting and pulling the wire simultaneously.



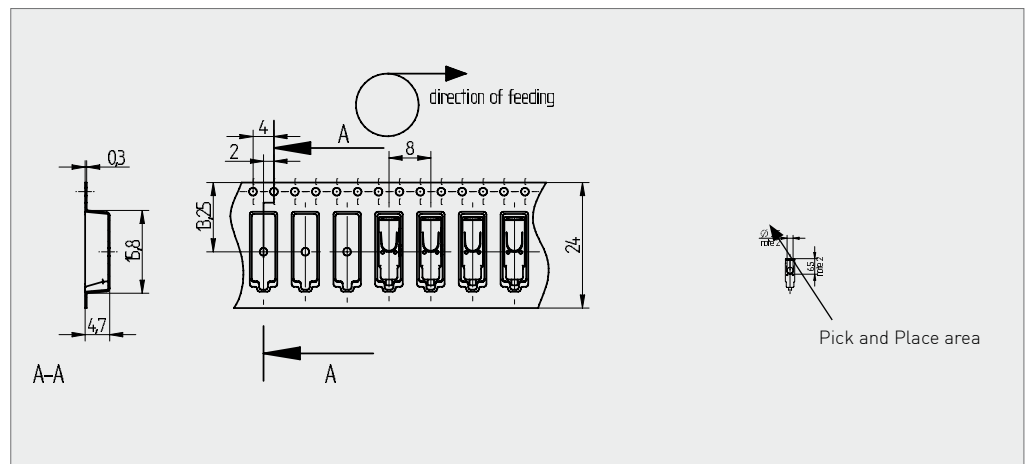
U<sub>imp</sub> 2,5 kV

CAD i

Note 1:  
Recommended dimensions for solder mask  
Recommended thickness of solder 0.15 mm



General note: It is recommended to make an electrical connection between both poles of each polarity on the solder mask.



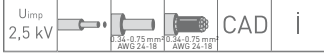
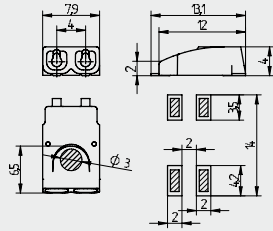


pkg. wt. part no.  
1200 0,25 g 46.102.1001.50

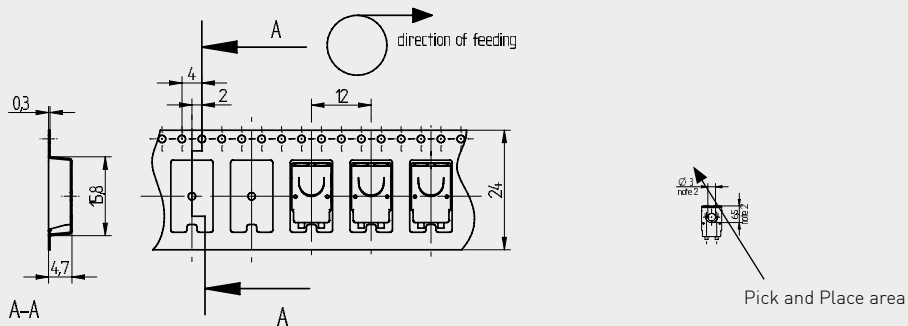
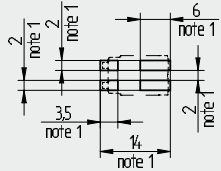
**SMD-Mini - Terminal block 2-poles**

Solder fixing  
Housing: PPA  
Contacts: Cu / CrNi  
Approval according to: IEC 60947-7-4  
Rating: ENEC: 9 A / 320 V  
cULus: 3 A / 300V  
UL: 9 A / 300V

- No tools required! Wires can be re-leased by twisting and pulling the wire simultaneously.



Note 1:  
Recommended dimensions for solder mask  
Recommended thickness of solder 0.15 mm  
  
General note: It is recommended to make an electrical connection between both poles of each polarity on the solder mask.



46.131



SMD Mini-Flex Terminal Block 1-pole

46.132



SMD Mini-Flex Terminal Block 2-poles

## SMD Mini-Flex Terminal Blocks

Our new Mini-Flex SMD terminal block is designed to take both solid and stranded wires and has a release function.

It is also suitable for automatic assembly with BJB robots. With a diverse range of applications, the SMD Mini-Flex is used by LED PCB manufacturers in the lighting industry, home appliance manufacturer and consumer electronic sectors.

## LED - Lighting and connection technology

46.131

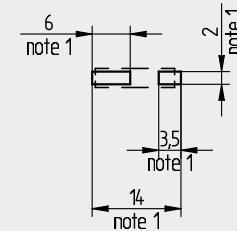
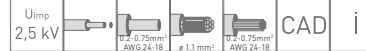
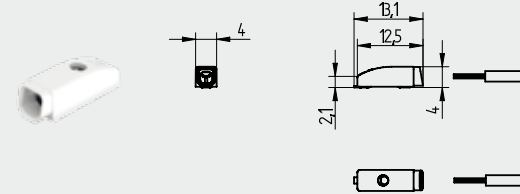
SMD Terminal blocks - SMD-Mini-Flex for stranded- and solid-wires



pkg. wt. part no.  
1800 0,2 g 46.131.1001.50

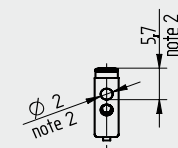
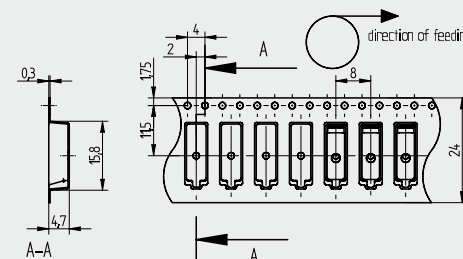
### SMD Mini-Flex - Terminal Block 1-pole

Solder fixing  
Housing: PPA  
Contacts: Cu alloy  
Approval according to: IEC 60947-1, UL 1977  
Rating: ENEC: 9 A / 320 V  
cULus: 3 A / 300 V  
UL: 9 A / 300 V  
Compatible with stranded wires



Note 1:  
Recommended dimensions for solder mask  
Recommended thickness of solder 0.15 mm

General note: It is recommended to make an electrical connection between both poles of each polarity on the solder mask.

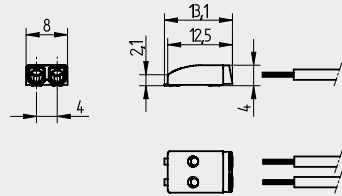


Note 2:  
Recommended Pick and Place area

## LED - Lighting and connection technology

SMD Terminal blocks - SMD-Mini-Flex for stranded- and solid-wires

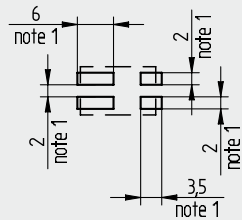
46.132



pkg. wt. part no.  
1200 0,4 g 46.132.1001.50

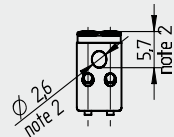
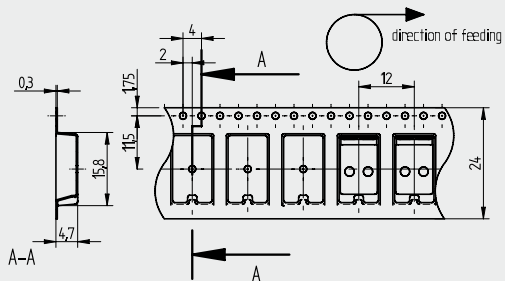
### SMD Mini-Flex - Terminal Block 2-poles

Solder fixing  
Housing: PPA  
Contacts: Cu alloy  
Approval according to: IEC 60947-1, UL 1977  
Rating: ENEC: 9 A / 320 V  
cULus: 3 A / 300 V  
UL: 9 A / 300 V  
Compatible with stranded wires



Note 1:  
Recommended dimensions for solder mask  
Recommended thickness of solder 0.15 mm

General note: It is recommended to make an electrical connection between both poles of each polarity on the solder mask.

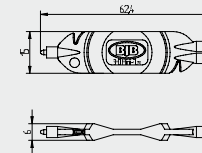


Note 2:  
Recommended Pick and Place area

## LED - Lighting and connection technology

Wire release tool for SMD Mini-Flex

46.131



pkg. wt. part no.  
1 5 g 46.131.-398.50

### Wire release tool

Suitable for SMD Min-Flex terminal blocks 46.131 and 46.132

Material: PC

- Opens contacts for removal of wires which have already been inserted
- To open contacts for insertion of stranded wires
- With integrated wire-stripping function for conductor ends already cut but not stripped

CAD i

pkg. wt. part no.  
1 5 g 46.131.U801.89

### Wire release tool

Suitable for SMD Min-Flex terminal blocks 46.131 and 46.132

Material: Metal

- Opens contacts for removal of wires which have already been inserted
- To open contacts for insertion of stranded wires



CAD i

## SMD Push-Through Terminal Blocks

There is no need to turn the luminaire during assembly as the control gear and wiring are on the same side.

No shadow formation due to protruding components.

46.111 / 46.121



SMD Push Through Terminal Blocks  
1-pole

46.112



SMD Push Through Terminal Block  
2-pole

## LED - Lighting and connection technology

SMD Push through terminal block - 1 pole

46.111



pkg.	wt.	part no.
700	0,5 g	46.111.1001.50

**SMD Push through terminal block - 1 pole**  
**For wiring below the PCB / metal work**  
 Solder fixing  
 Housing: PPA  
 Contacts: Cu alloy  
 cUR Rating: 3A / 300V  
 ENEC Rating: 9A / 320V  
 URus: 9A / 300V

- No tools required! Wires can be released by twisting and pulling the wire simultaneously.
- Terminal block and ballast on same working level

Note 1: Maximum thickness of PCB and heatsink should not exceed 3.6 mm

U<sub>imp</sub> 2,5 kV

12,0 0,75 mm AWG 24-18

CAD i

**Note 2:** Recommendation for opening in heatsink is shown with minimum diameter. For other shaped pockets in heatsink the minimum creepage and clearance distances and manufacturing tolerances have to be considered.

**Note 3:** Recommended dimension for opening in PCB

**Note 4:** Recommended dimension for solder mask

**Note 5:** For metal core PCBs the minimum creepage distance has to be guaranteed

**General note:** It is recommended to make an electrical connection between both poles of each polarity on the solder mask

46.111.1001.50

Zuführung direction of feeding

A-A

A

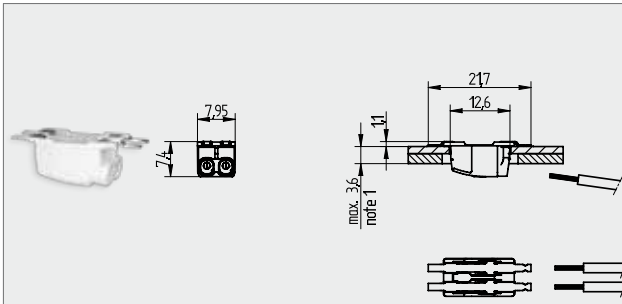
**Notes to the Pick and Place Area:**  
 Note 1: Recommended Pick and Place area #1.  
 Note 2: Recommended Pick and Place area #2  
 Note 3: Distance from center of mass to pick and place area #1 und #2



# LED - Lighting and connection technology

SMD Push through terminal block - 2 poles

46.112

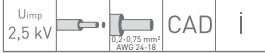


pkg. wt. part no.  
500 0,5 g 46.112.1001.50

### SMD Push through terminal block - 2 poles For wiring below the PCB / metal work

Solder fixing  
Housing: PPA  
Contacts: Cu alloy  
cUR Rating: 3A / 300V  
ENEC Rating: 9A / 320V  
URus: 9A / 300V

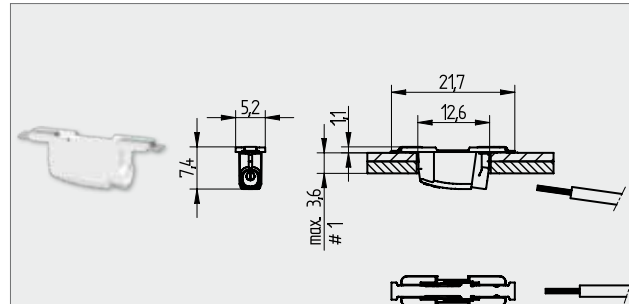
- No tools required! Wires can be released by twisting and pulling the wire simultaneously.
  - Terminal block and ballast on same working level
- Note 1: Maximum thickness of PCB and heatsink should not exceed 3.6 mm



# LED - Lighting and connection technology

SMD Push through terminal block - 1 pole

46.121

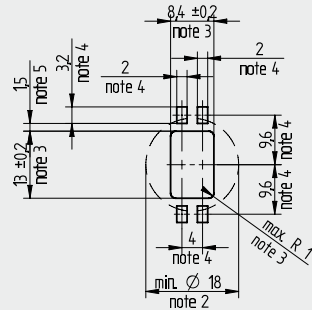
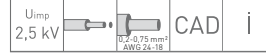


pkg. wt. part no.  
700 0,5 g 46.121.1001.50

### SMD Push through terminal block - 1 pole For wiring below the PCB / metal work

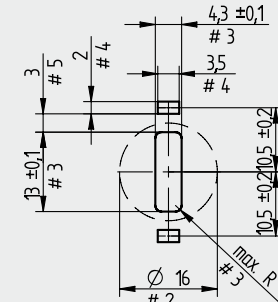
Solder fixing  
Housing: PPA  
Contacts: Cu alloy  
ENEC Rating: 9A / 320V [EN 60947-7-4]  
ENEC Rating: 9A / 500V [EN 60598-1]  
URus: 9A / 600V [UL 1977]

- No tools required! Wires can be released by twisting and pulling the wire simultaneously.
  - Terminal block and ballast on same working level
  - Suitable for metal core PCBs
- Note 1: Maximum thickness of PCB and heatsink should not exceed 3.6 mm



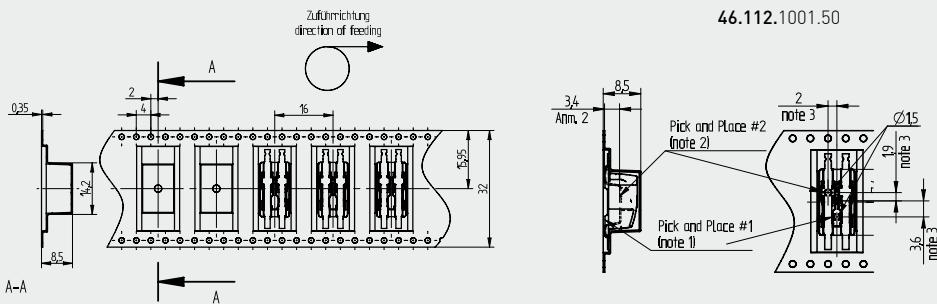
Note 2: Recommendation for opening in heatsink is shown with minimum diameter. For other shaped pockets in heatsink the minimum creepage and clearance distances and manufacturing tolerances have to be considered.  
Note 3: Recommended dimension for opening in PCB  
Note 4: Recommended dimension for solder mask  
Note 5: For metal core PCBs the minimum creepage distance has to be guaranteed

General note: It is recommended to make an electrical connection between both poles of each polarity on the solder mask



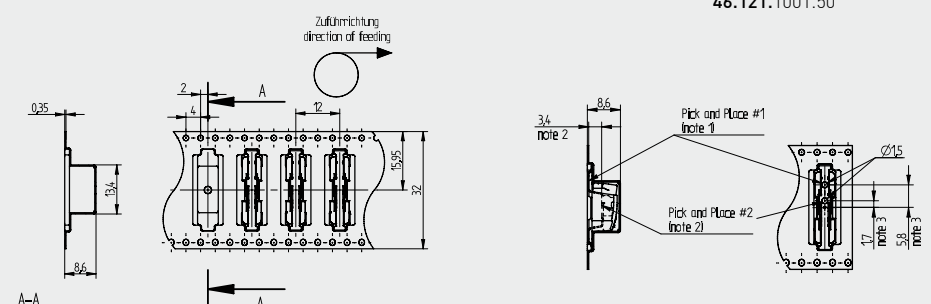
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Note 3: Recommended dimension for opening in PCB  
Note 4: Recommended dimension for solder mask  
Note 5: For metal core PCBs the minimum creepage distance has to be guaranteed

General note: It is recommended to make an electrical connection between both poles of each polarity on the solder mask



### Notes to the Pick and Place Area:

- Note 1: Recommended Pick and Place area #1.
- Note 2: Recommended Pick and Place area #2
- Note 3: Distance from center of mass to pick and place area #1 und #2



### Notes to the Pick and Place Area:

- Note 1: Recommended Pick and Place area #1.
- Note 2: Recommended Pick and Place area #2
- Note 3: Distance from center of mass to pick and place area #1 und #2

## LED - Lighting and connection technology

Additional information on material and manufacture



### Material details

Temperature stability	-40 °C to +105 °C
Flammability category, based on UL 94	V0
Insulating material group	I
Insulating material	PPA-GF

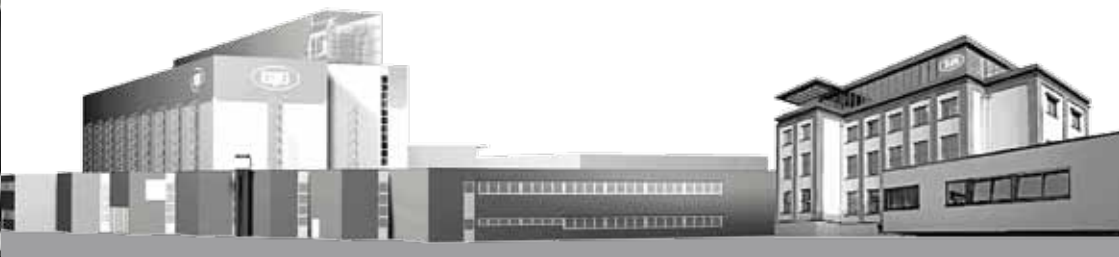
### Important processing notes

Soldering temperature higher 220°C < 60s  
Soldering temperature max. 260°C < 10s

Depending on the SMD soldering process and associated parameters a minor discoloration might occur. However, this will not influence the functionality.



## About BJB



### DATA & FACTS

BJB was founded in 1867 by Friedrich Wilhelm Brökelmann, Franz Jäger and Gustav Busse. The business began as a factory for petroleum lamps and developed into a company which manufactured components for establishing the connection between power supply and light source. Today, BJB is a lighting technology brand which supplies innovative solutions to the lighting and domestic appliance industries worldwide.

### BUSINESS SECTORS

- BJB Lighting: Lighting solutions and components for luminaires
- BJB Appliance: Lighting solutions for domestic appliances
- BJB Automation: Machines and equipment for automating luminaire and domestic appliance manufacturing processes

### EMPLOYEES

700 worldwide

### BJB International

Headquarters: Arnsberg (Westphalia, Germany) Subsidiaries in China, Spain, England, Japan, Italy, Hong Kong, Taiwan and the USA. Representatives in 50 other countries. Products supplied to 70 countries.

### RESEARCH & DEVELOPMENT

Every year, there are numerous new developments and improvements to the 3000 different products that we sell. In an effort to achieve continuous progress, our engineers carry out detailed studies of products, markets and customer expectations. They work with the latest technical materials, devices and processes, including:

#### Rapid Prototyping

Laser sintering processes and 3D printers enable us to produce finished models based on design data very quickly without manual intervention.

#### Computer Aided Technologies

Computer-aided design enables precise results to be obtained more quickly. Models are designed, simulated and optimised on the computer. The analysis functions, which examine components at an early stage to determine their robustness, performance and other characteristics, are particularly useful:

- Computer Aided Inspection
- Computer Aided Engineering
- Computer Aided Design

### Light laboratory

For the measurement of luminous flux, light spectrum, luminous intensity, colour temperature, colour rendering, chromaticity coordinate, luminous flux curves and colour shift. The integrating sphere enables particularly precise measurements to be carried out. It has almost ideal diffuse radiation. This makes it perfect for measuring the total luminous flux of various light sources and laser and light radiation. It even creates a reference source which can be used to compare detectors.

### Equipment used in the design process

In order to be able to ensure 100 percent quality at all times, we test our materials and products with machines from Zwick, the leading manufacturer of test equipment worldwide.

### PRODUCTION

From the idea to the finished product, we cover the entire value-creation chain in-house. Production, as the main process, includes:

- Plastic injection moulding incl. toolmaking
- Metalworking
- Assembly
- Circuit board production with automatic placement machine, screen printing system, reflow oven and testing technology

### QUALITY MANAGEMENT

International certification organisations confirm the quality of our processes and products.

Quality management: ISO 9001

LED standardization: Zhaga

Safety & quality:

- VDE
- ENEC certificate of the VDE
- CQC (China Quality Certification)
- cULus (Underwriter Laboratories)
- JET (Japan Electrical Safety & Environment Technology Laboratories)
- X-ray computed tomography (CT) for layer, defect and wall-thickness analysis, etc.



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Technology for Light