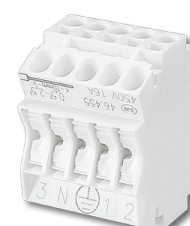




Technology for Light
Components · Optics · Automation

TERMINAL BLOCKS AND
CONNECTORS FOR
LINE VOLTAGE
CONNECTION





Content

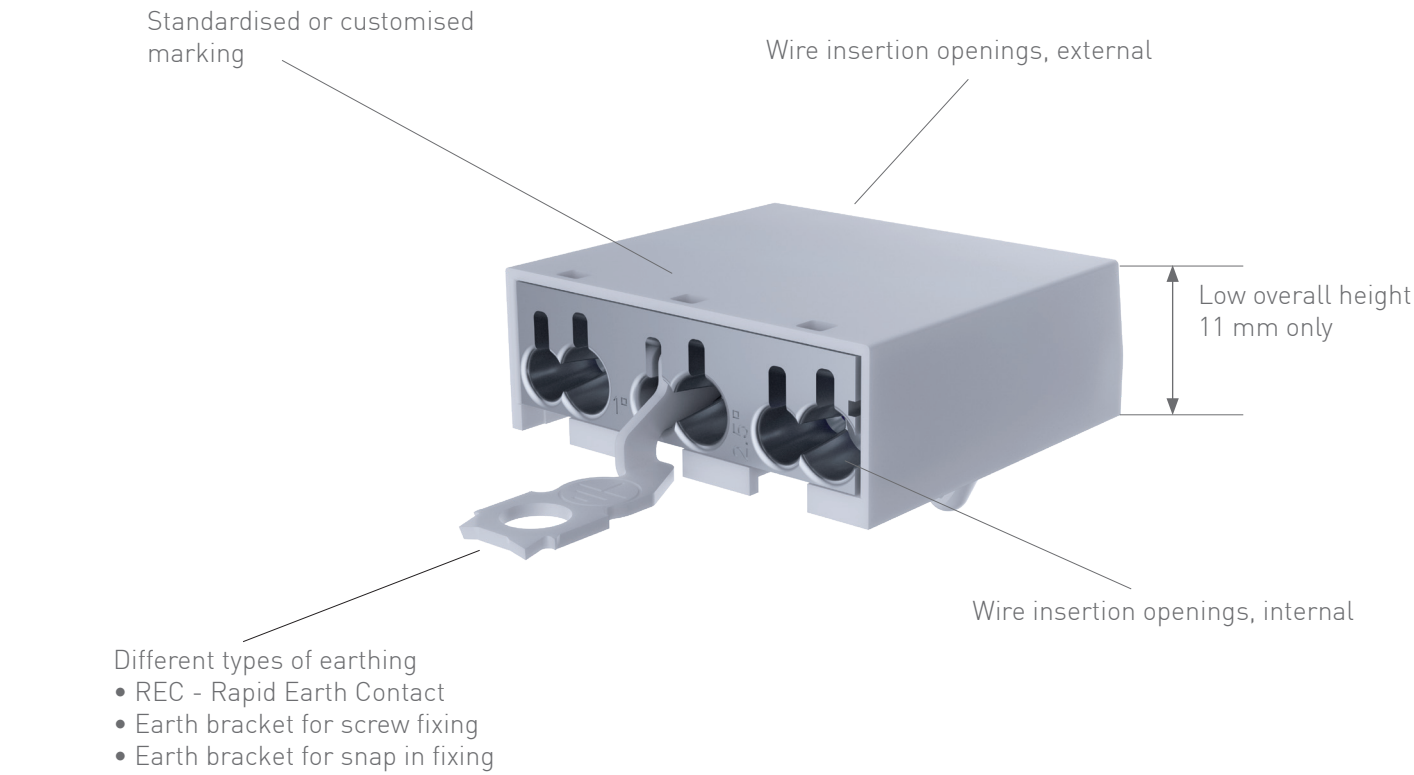
04	Technical information for terminal blocks - Flat Connect 46.433 and 46.435
05	Overview - Terminal blocks Flat Connect 46.433 and 46.435 Push wire / Releasable contacts
06	Technical information for flat terminal blocks 46.485 - Push wire / Releasable contacts
07	Overview flat terminal blocks 46.485
08 / 09	Technical information for terminal blocks Push wire / Releasable contacts 46.411 - 46.415
10 / 11	Overview - Terminal blocks Push wire / Releasable contacts 46.411 - 46.415
12	Technical information for terminal blocks - Rast5 46.455
13	Overview terminal blocks - Rast5 - 46.455
14	Technical information for terminal blocks - Screw-/ Push wire contacts
15	Overview terminal blocks Screw-/ Push wire contacts 3 and 4 pole
16	Technical information for connectors 2, 3, 4 and 5 pole
17	Overview connectors 2 to 5 pole and accessories
18	Technical information and overview for fused terminal blocks 1 and 3 pole
19	Technical information for terminal blocks with REC
20	About BJB and BJB World wide

Issue: 01.2020

Technical Features

- Easy and secure assembly
- High performance plastics
- Proven push wire technology
- Wire release function
- Industry leading contact design

Terminal blocks for line voltage connection -
Flat Connect - Push wire / Releaseable contacts



Wire diameters,external	2 x 0.5 - 2.5 mm ²
Wire diameters,internal	1 x 0,5 - 1,0 mm ² 1 x 0,5 - 2,5 mm ²

Strip length	0.5 1.0 mm ² : 8+1 mm 1.5 - 2.5 mm ² : 12+1 mm
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T 85
-35°C

max. ø 1.8 mm

max. ø 1.8 mm

16 A
450 V

CAD

For more and detailed information visit: www.bjb.com

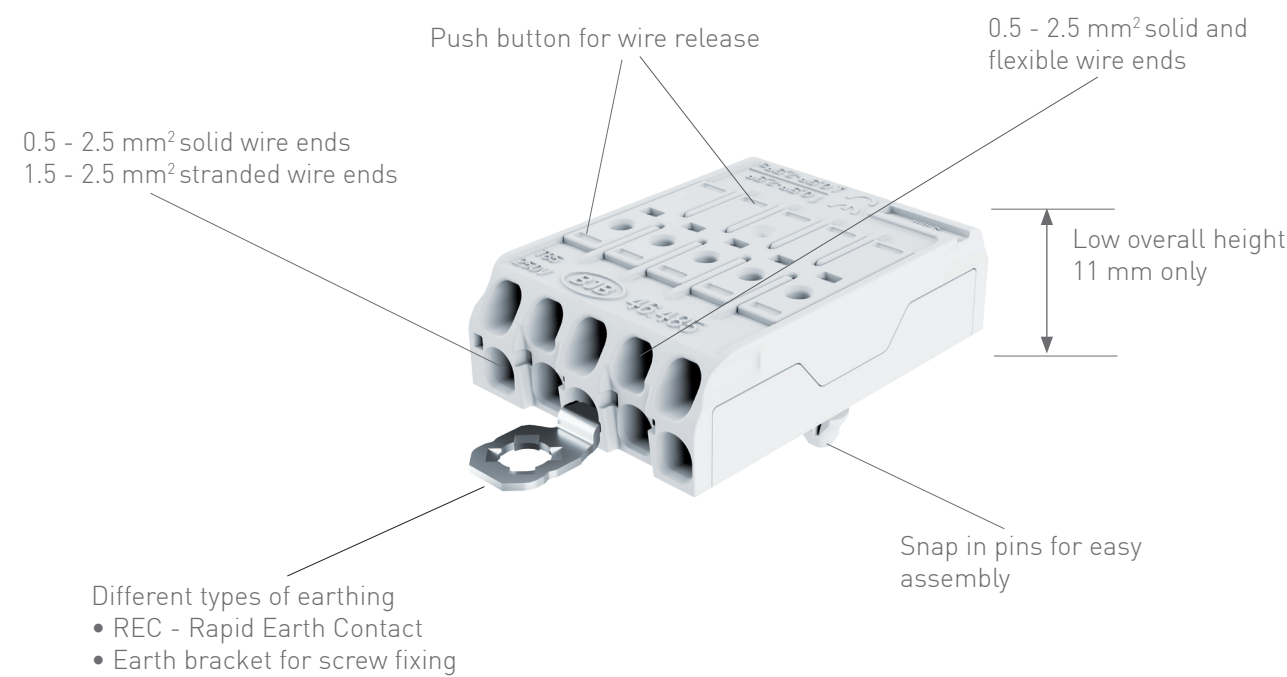
Terminal blocks for line voltage connection - Flat Connect
Push wire / Releaseable contacts

				Fixing		Type of earthing			
part no.		number of poles	height	Snap in pins	Screw fixing	Rapid-Earth-Contaxt	Earth bracket Screw fixing	Earth bracket snap in	Accessories
46.433.1100.50 without marking		3	11 mm	x					
46.433.1111.50		3	11 mm	x					
46.433.1115.50		3	11 mm	x		x			
46.433.1114.50		3	11 mm	x			x		
46.433.1125.50		3	11 mm	x				x	
46.435.1100.50 without marking		5	11 mm	x					
46.435.1111.50		5	11 mm	x					
46.435.1115.50		5	11 mm	x		x			
46.435.1114.50		5	11 mm				x		
46.435.1117.50		5	11 mm					x	
46.435.1215.50		5	11 mm		x	x			
46.435.1200.50 without marking		5	11 mm		x				
46.435.1211.50		5	11 mm		x				

- Technical Features
- Very flat, space-saving size
 - Ideal for luminaires with very low height
 - Push button for quick release of wires for upper terminal connection
 - Lower terminals can be released by Twist and Pull
 - Different types of earthing

Flat terminal blocks for line voltage connection

Push wire / Releaseable contacts



Wire diameters,external	2 x 0.5 - 2.5 mm ²	Strip length	0.5 - 1.0 mm ² : 8+1 mm
Wire diameters,internal	1 x 0,5 - 1,0 mm ² 1 x 0,5 - 2,5 mm ²		1.5 - 2.5 mm ² : 12+1 mm

Approvals: ÖVE Reg. Compliance with creepage distances and clearances (eg according to EN 60598) has to be ensured by the structural design of the luminaire.

T 85
-40°C

max. ø 1.8 mm

max. ø 1.8 mm

0.5 - 1.0 mm

250V
400V

24A

CAD

For more and detailed information visit: www.bjb.com

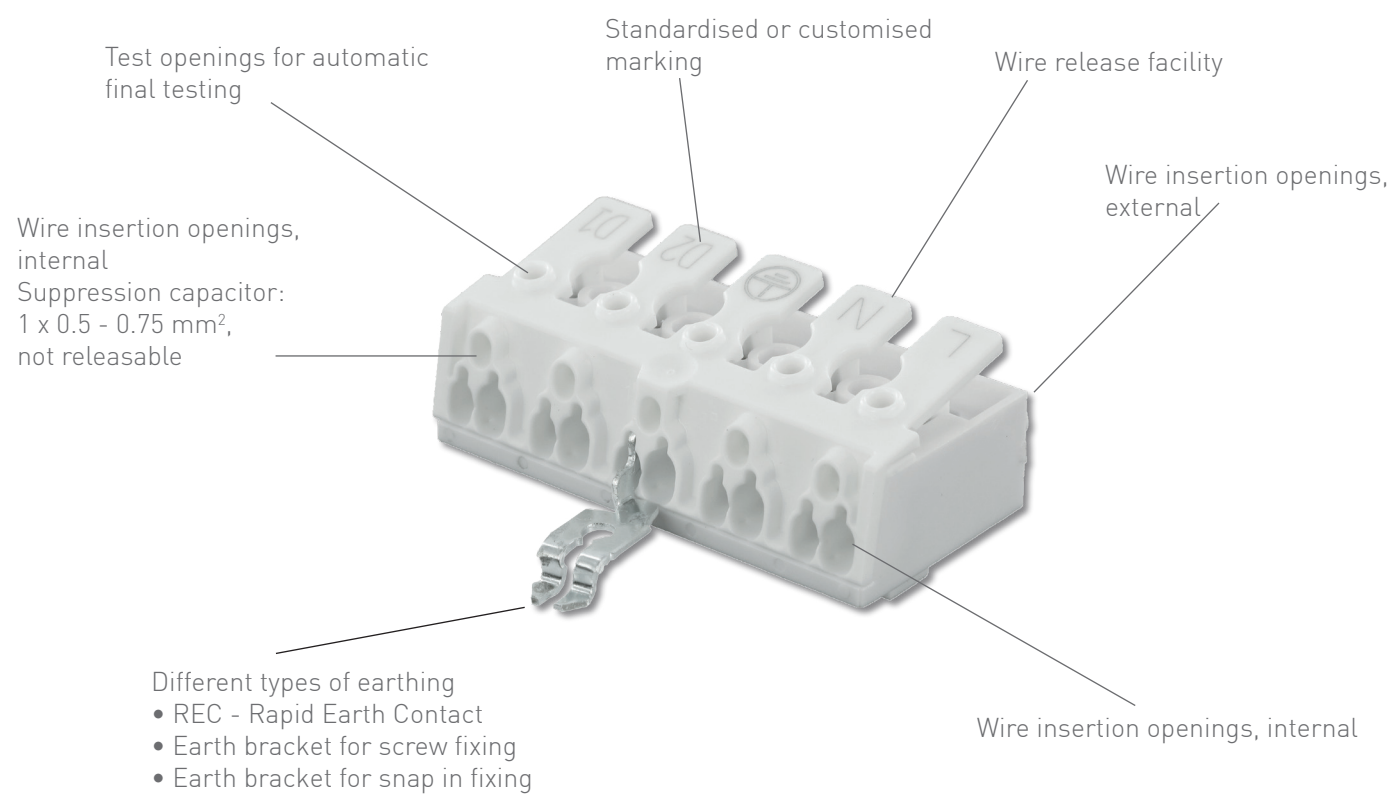
Flat terminal blocks for line voltage connection

Push wire / Releaseable contacts

part no.		Number of poles	Height	Fixing	Type of earthing	
				Snap in pins	Rapid-Earth-Contact	Earth bracket Screw fixing
46.485.1115.50		5	11 mm	x	x	
46.485.1114.50		5	11 mm	x		x

- Technical Features**
- Easy and secure assembly
 - High performance plastics
 - Wire release function
 - Huge range of standard markings are available
 - Customised marking on request
 - Industry leading contact design

Terminal blocks for line voltage connection - Push wire / Releaseable contacts



Wire diameters,external	2 x 0.5 - 2.5 mm ² , with release facility
Wire diameters,internal	1 x 0,5 - 1,0 mm ² , releaseable 1 x 0,5 - 2,5 mm ² , releaseable

Strip length	0.5 1.0 mm ² : 8+1 mm 1.5 - 2.5 mm ² : 12+1 mm Suppresion capacitor: 8±1 mm
--------------	---

T 85
-35°C

max. ø 1.8 mm

max. ø 1.8 mm

0.5 - 1.0 mm

16 A
450 V

CAD

For more and detailed information visit: www.bjb.com



The REC provides an electrical connection between the earth pole of the terminal block and the mounting plate also a mechanical connection is made in addition to the electrical connection.

Terminal blocks - Fixing / Type of earthing

Snap in pins 	Panel cut-out 2 pole 3, 4 and 5 pole
Rapid Earth Contact 	Panel cut-out 3, 4 and 5 pole
Screw-/ Snap in fixing 	Panel cut-out 2 pole 3, 4 and 5 pole
Snap in pins and Earth bracket 	Panel cut-out Earth bracket - Screw fixing 3, 4 and 5 pole Earth bracket - snap in 3, 4 and 5 pole
Screw-/ Sna in fixing and Earth bracket 	Panel cut-out Earth bracket - Screw fixing 3, 4 and 5 pole Earth bracket - snap in 3, 4 and 5 pole

Terminal blocks for line voltage connection
Push wire / Releaseable contacts



Snap in pins



Screw-/ Snap in
fixing



Rapid Earth
Contact



Earth bracket
Screw fixing



Earth bracket
snap in fixing

<div>Fixing</div> <div>Type of earthing</div>										<div>Fixing</div> <div>Type of earthing</div>									
part no.		number of poles	height	Snap in pins	Screw-/ Snap in fixing	Rapid Earth Contact	Earth bracket Screw fix	Earth bracket snap in	Accessories	part no.		number of poles	height	Snap in pins	Screw-/ Snap in fixing	Rapid Earth Contact	Earth bracket Screw fix	Earth bracket snap in	Accessories
46.411.7000.50		1	17 mm							46.414.1100.50		4	17 mm	x					Cable clamps see below
										46.414.1119.50		4	17 mm	x				x	Cable clamps see below
46.412.1100.50		2	17 mm	x					Cable clamps see below	46.414.1125.50		4	17 mm	x		x			Cable clamps see below
46.412.1200.50		2	17 mm		x				Cable clamps see below	46.414.1124.50		4	17 mm	x			x		Cable clamps see below
										46.414.1200.50		4	17 mm		x				Cable clamps see below
46.413.1100.50		3	17 mm	x					Cable clamps see below	46.414.1214.50		4	17 mm		x		x		Cable clamps see below
46.413.1115.50		3	17 mm	x		x			Cable clamps see below	46.415.1100.50		5	17 mm	x					Cable clamps see below
46.413.1114.50		3	17 mm	x			x		Cable clamps see below	46.415.1115.50		5	17 mm	x		x			Cable clamps see below
46.413.1125.50		3	17 mm		x			x	Cable clamps see below	46.415.1114.50		5	17 mm	x			x		Cable clamps see below
46.413.1200.50		3	17 mm		x				Cable clamps see below	46.415.1117.50		5	17 mm	x				x	Cable clamps see below
46.413.1302.50		3	17 mm	for Wieland gesis® Adaptor			x		Cable clamps see below	46.415.1200.50		5	17 mm		x				Cable clamps see below
										46.415.1214.50		5	17 mm		x		x		Cable clamps see below

Accessories for terminal blocks		
46.412.-350.50		For use with terminal blocks 46.412. with positioning aid
46.412.-371.50		For use with terminal blocks 46.412.
46.413.-352.50		For use with terminal blocks 46.413. with positioning aid

Accessories for terminal blocks		
46.413.-371.50		For use with terminal blocks 46.413.
46.903.-371.50		For use with all terminal blocks without positioning aid
46.411.-371.50		For use with all terminal blocks without positioning aid

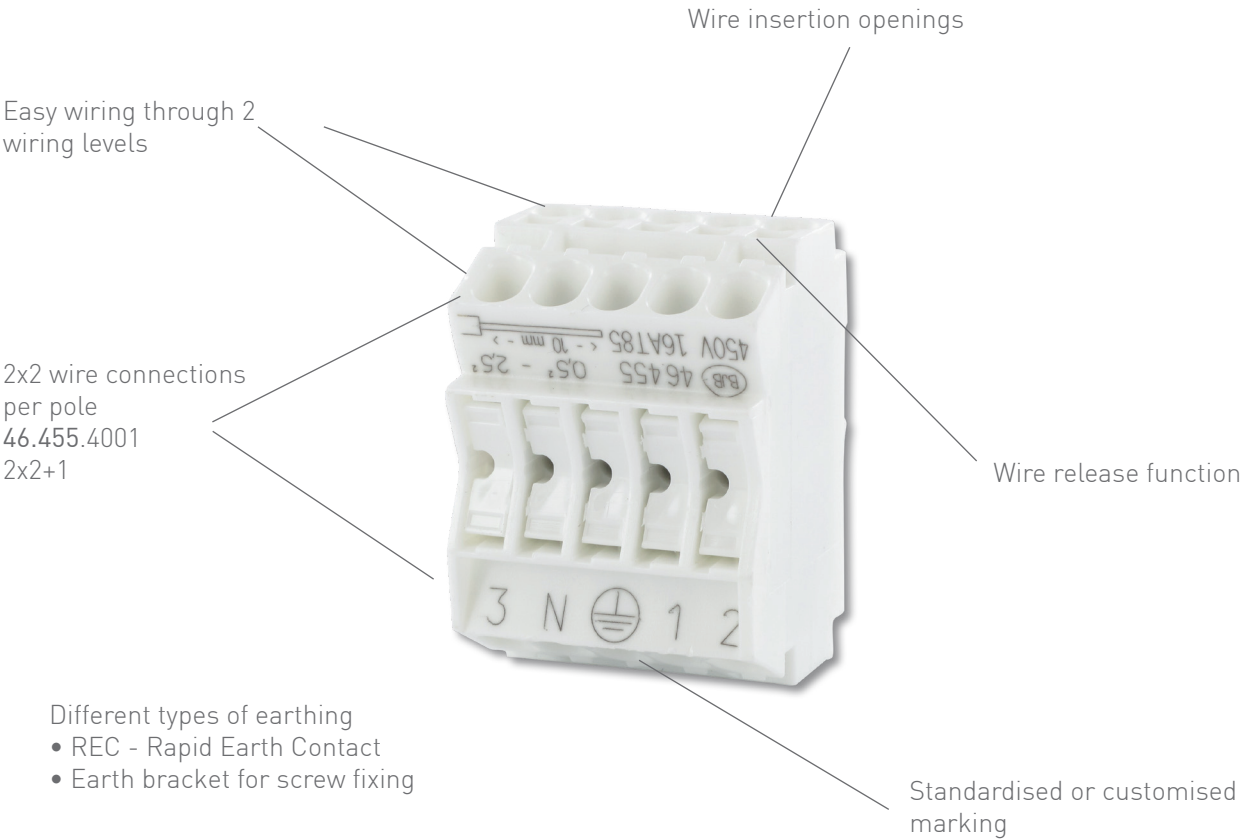
Accessories for terminal blocks		
46.413.-352.50		For use with terminal blocks 46.414 - 46.415 without positioning aid
46.413.-371.50		For use with terminal blocks 46.414 - 46.415

This overview shows only a small part of our program for terminals and connectors.
More details and versions at: www.bjb.com

Accessories for terminal blocks		
46.903.-371.50		For use with all terminal blocks without positioning aid
46.411.-371.50		For use with all terminal blocks without positioning aid

- Technical Features**
- High performance plastics
 - Wire release function
 - Slim form - width only 26 mm
 - Also for the luminaire connection from outside
 - Industry leading contact design

Rast5 - Terminal blocks for line voltage connection - Push wire / Releaseable contacts



Rast5 - Terminal blocks for line voltage connection
Push wire / Releaseable contacts

				Fixing		Type of earthing		
part no.		number of poles	height	Snap in pins	for recessed embodiment	Rapid Earth Contact	Earth bracket Screw fixing	Accessories
46.455.3111.50		5	24 mm	x				
46.455.3114.50		5	24 mm	x			x	
46.455.3115.50		5	24 mm	x		x		
46.455.4001.50		5	24 mm		x			Adaptor, cover

Accessories for terminal blocks 46.455.4001.50		
46.455.-303.50		Adaptor for recessed embodiment
46.455.-801.50		Cover

T 85
-35°C

max. ø 1.8 mm

max. ø 1.8 mm

0.5 - 2.5mm²

max. ø 1.8 mm

0.5 - 1.0 mm

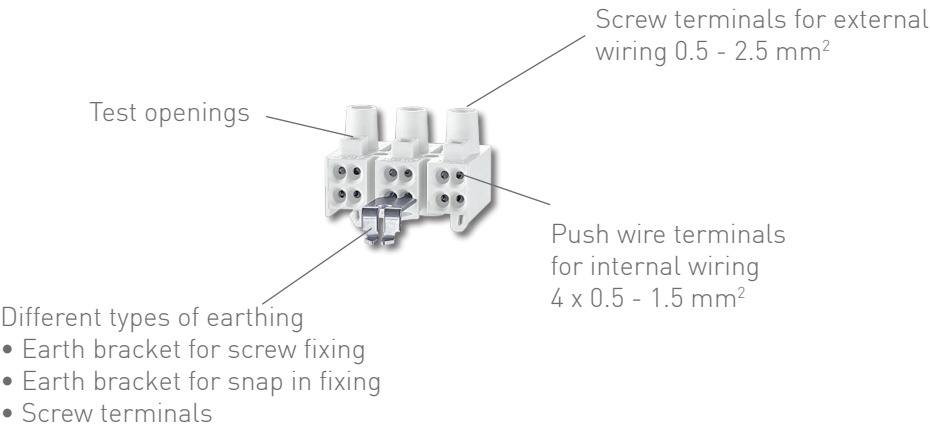
16 A
450 V

CAD

For more and detailed information visit: www.bjb.com

- Technical Features
- Wide screw terminals
 - Push wire terminals
 - High performance plastics
 - Industry leading contact design

Terminal blocks for line voltage connection - Screw-/ Push wire terminals




Terminal blocks - Screw-/ Push wire terminals


				Fixing			
part no.		number of poles	height	Snap in pins	Screw-/ Snap in fixing	Earth bracket	Accessories
48.511.0311.51		3	19.7 mm	x			Cable clamps
48.112.0300.51		3	19.7 mm	x			Cable clamps
48.112.0313.51		3	19.7 mm	x		x	Cable clamps
48.112.0314.51		3	19.7 mm	x		x	Cable clamps
48.212.0300.51		3	19.7 mm		x		Cable clamps
48.212.0313.51		3	19.7 mm		x	x	Cable clamps
48.141.0311.51		3	21.2 mm		x		Cable clamps
48.221.0311.51		3	21.2 mm		x		Cable clamps
48.511.0411.51		4	19.7 mm	x			Cable clamps
48.121.0411.51		4	21.2 mm	x			Cable clamps
48.221.0411.51		4	21.2 mm		x		Cable clamps


Accessories for terminal blocks

46.903.-371.50		For use with above shown terminal blocks without positioning aid
46.411.-371.50		For use with above shown terminal blocks without positioning aid

T 85


max. ø 3.4 mm





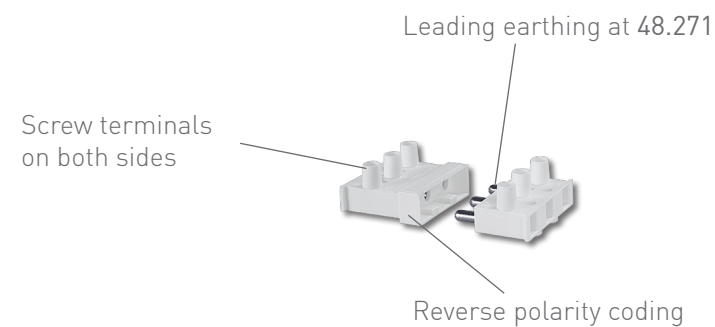
16 A
450 V

CAD

For more and detailed information visit: www.bjb.com

- Technical Features**
- Variety of x-pole versions (x=1 pole to 5 pole)
 - Some versions are with leading earth
 - Also versions with integrated fuse holder
 - High performance plastics
 - Industry leading contact design

Connectors for line voltage connection

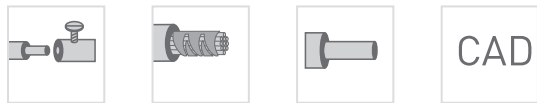


Connectors

part no.		number of poles	height	Fixing		Accessories
				Snap in pins	Screw fixing	
48.281.7200.80		2	18.2 mm		x	
48.281.8200.80		2	18.2 mm		x	
48.581.7200.80		2	18.2 mm		x	Cover for contacts, cable clamps
48.581.8200.80		2	18.2 mm		x	Cover for contacts, cable clamps
48.281.7300.80		3	18.2 mm		x	
48.281.8300.80		3	18.2 mm		x	
49.571.0313.81 integrated fuse holder		3	31.4 mm	x		Cable clamps, cover
48.271.0311.51 leading earth		3	16.8 mm		x	Cable clamps, cover
48.281.7400.80		4	18.2 mm		x	
48.281.8400.80		4	18.2 mm		x	
48.281.7500.80		5	18.2 mm		x	
48.281.8500.80		5	18.2 mm		x	

Accessories		
48.900.-501		Cover for contacts for 48.581.7200/8200
48.900.U503		Cable clamp for 48.581.7200/8200
49.571.U501		Cable clamp for 49.571.0313

Accessories		
49.571.-502		Cover for cable clamp 49.571.U501
48.271.U501		Cable clamp for 48.271.0311
48.271.-502		Cover for cable clamp 48.271.U501

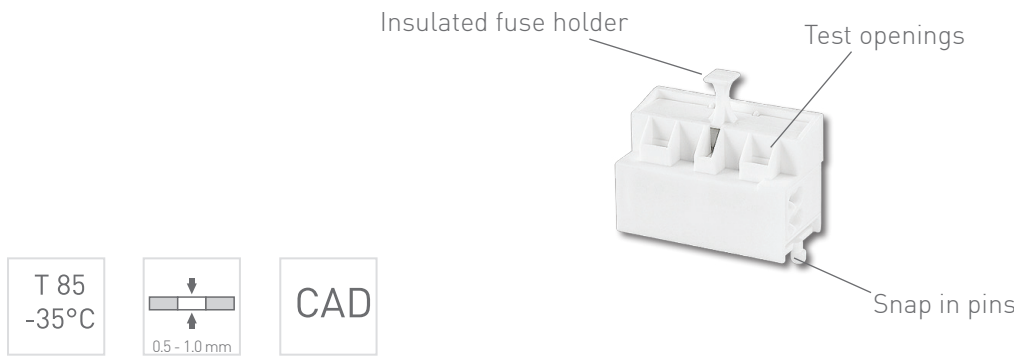


For more and detailed information visit: www.bjb.com

Technical Features

- Variety of x-pole versions (x=1 pole or 3 pole)
- For fine fuses: 5 x 20
- For fine fuses: 6 x 25
- High performance plastics
- Industry leading contact design

Terminal blocks for line voltage connection -
Fused terminal blocks



				Fixing		
part no.		number of poles	Fuse dimension	Snap in pins	Screw-/ Snap in fixing	Accessories
49.112.1001.50 Housing: PA 6.6		1	6 x 25 mm	x		
49.116.1000.50 Housing: PBT		1	5 x 20 mm	x		
49.132.3001.51 Housing: PA 6.6		3	6 x 25 mm	x		
49.152.3001.51 Housing: PBT		3	5 x 20 mm	x		
49.152.3003.80 Housing: PBT		3	5 x 20 mm	x		
49.152.3004.51 Housing: PBT		3	5 x 20 mm	x		

For more and detailed information visit: www.bjb.com

Technical information -

Terminal blocks with earth contact (Rapid-Earth-Contact (REC))

The REC provides an electrical connection between the earth pole of the terminal block and the mounting plate also a mechanical connection is made in addition to the electrical connection.

Metalwork specification

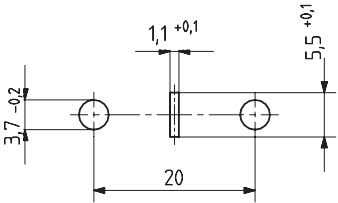
Acceptable materials: All types of steel plate in common usage (Aluminium plate is not suitable, because the earth contacts are made of a copper alloy).

Permissible thickness: 0.5 - 1.0 mm

Surface: Must be protected against corrosion (e. g. steel plates may be plated, painted or plastic coated).

Cut-outs

The cut-outs must correspond with the following drawing. Rapid-Earth-Contact:



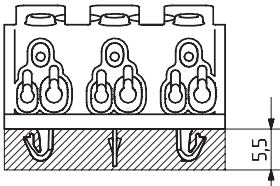
The diameter of the fixing holes allows for a finish to be applied.

The dimensions of the cut-out for the earth contact must correspond to those stated. A maximum punching tolerance of 0.1 mm is permissible in the direction of insertion.

Approvals

The terminal blocks are approved to EN 60998.

Embodiment



The risk of damage to the Rapid Earth Contact (see shaded area of drawing above) during production, packing, transport, assembly, as well as distribution of the light fittings must be eliminated by the method of construction.

For example:

- Assembly onto a separate component carrier inside the light fitting (e.g. bus)
- Increased construction
- Depressions or spacers in suitable positions and of a suitable size.

The design detail is therefore dependent on embodiment, metalwork stability and the specific production methods of the user.

We recommend an agreement is made with the relevant test house.

Assembly

The terminal block must be inserted into the cut-out at right angles to the metalwork.

Pressure to snap in the terminal block should only be applied when correctly positioned above the cut-out.

Depending upon the construction of the fitting and the material used, it may be necessary to support the metalwork in the area of the cut-out during installation to eliminate the possibility of distortion, thus ensuring correct location and contact of REC.

Distortion of the snap in pins must be avoided.

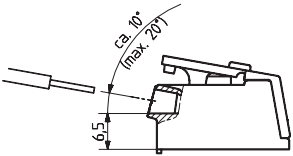
It must be ensured that the snap in pins as well as the REC have located correctly.

Testing

Once fully assembled, the light fitting must undergo a full electrical final test for earth continuity according to IEC IEC 60598.

Wire connection and wire release options:

- Incoming mains supply cables can be released by depressing the lever above the contact.
- Wiring may be inserted at an angle between 0° and 20° (optimal 10°)



- When embodying the terminal blocks, ensure sufficient space is allowed for connections to be made.
- The surrounding rim must lie flat.
- The cables must not exert any bending forces onto the terminal block contacts during connection.

To avoid exceeding the nominal currents steps must be taken during the design and installation of lighting systems to avoid operating conditions that require the terminal block to perform outside its design parameters.

Examples:

- Long lasting ignition procedures with resulting increase in current
- Non-symmetrical load distribution in three-phase lighting systems (compensation currents) e. g. through

- Uneven number of light fittings per phase
- Lamp failures
- On and off switching of individual strands
- Failure of phases
- Upper waves of the operating currents can add up in the neutral wire.

Especially during installation of light strips or lighting groups, large current carrying capacity is achieved through sliding through of the wires.

About BJB

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. Today, BJB is a lighting technology brand which supplies innovative solutions to the lighting and domestic appliance industries worldwide.

BJB worldwide

Headquarter BJB Germany

BJB China

BJB Electric Dongguan Ltd.
Guancheng High-Tech Park Five Road (North),
Eastern Industrial Zone,
JiangNanDaDao, Qishi Town,
Dongguan
China PC: 523512
Telephone +86 769 22766 891
Telefax +86 769 22766 895
bjbchina@bjb.com . www.bjb.com

BJB Hong Kong

BJB Hong Kong Ltd.
Suite 2508, Tower 1, Lippo Centre
89 Queensway
Hong Kong
Telephone +86 769 22766 891
Telefax +86 769 22766 896
bjbchina@bjb.com . www.bjb.com

BJB Japan

BJB Co.,Ltd.
4F-B El Dorado Yokohama
36-5, Chigasaki-chuo
Tsuzuki-ku
Yokohama 224-00032, Japan
Telephone +81 45 479 1110
Telefax +81 45 479 1115
sales-japan@bjb.com . www.bjb.com

BJB Procesa S.A.

C-155 De Sabadell a Granollers, km 14,2
Apartado de Correos, 8
E-08185 Lliça de Vall (Barcelona)
Telephone +34 93/8445170
Telefax +34 93/8445184
procesa@bjb.com . www.bjb.com

BJB USA

BJB Electric L.P.
6375 Alabama Highway
Ringgold, GA 30736
USA
Telephone (706) 965-2526
Telefax (706) 965-2528
sales@bjb.com . www.bjb.com

BJB Sales Office Brazil

Mr. Alexandre Lozano
Av. Miro Vetorazzo, 115 C. 80
09820-135 São B. do Campo - SP - Brasil
Telefon +55 1143961582
Mobile +55 11983475204
Telefax +49 2932 982 8384
alexandre.lozano@bjb.com . www.bjb.com

BJB Sales Office Itlay

Franz Steinkeller
Viale Famagosta, 61
I-20142 Milano
Telephone +39 02 /89 15 02 76
Telefax +39 02 /89 15 90 29
bjbitalia@bjb.com . www.bjb.com

BJB Sales Office Ningbo

Ryan Hu
Room 1516
Liansheng Building (North Part)
Cultural and commercial District Cixi
315300 Ningbo - China
Mobile: +86 139 58286600
Ryan.Hu@bjb.com



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