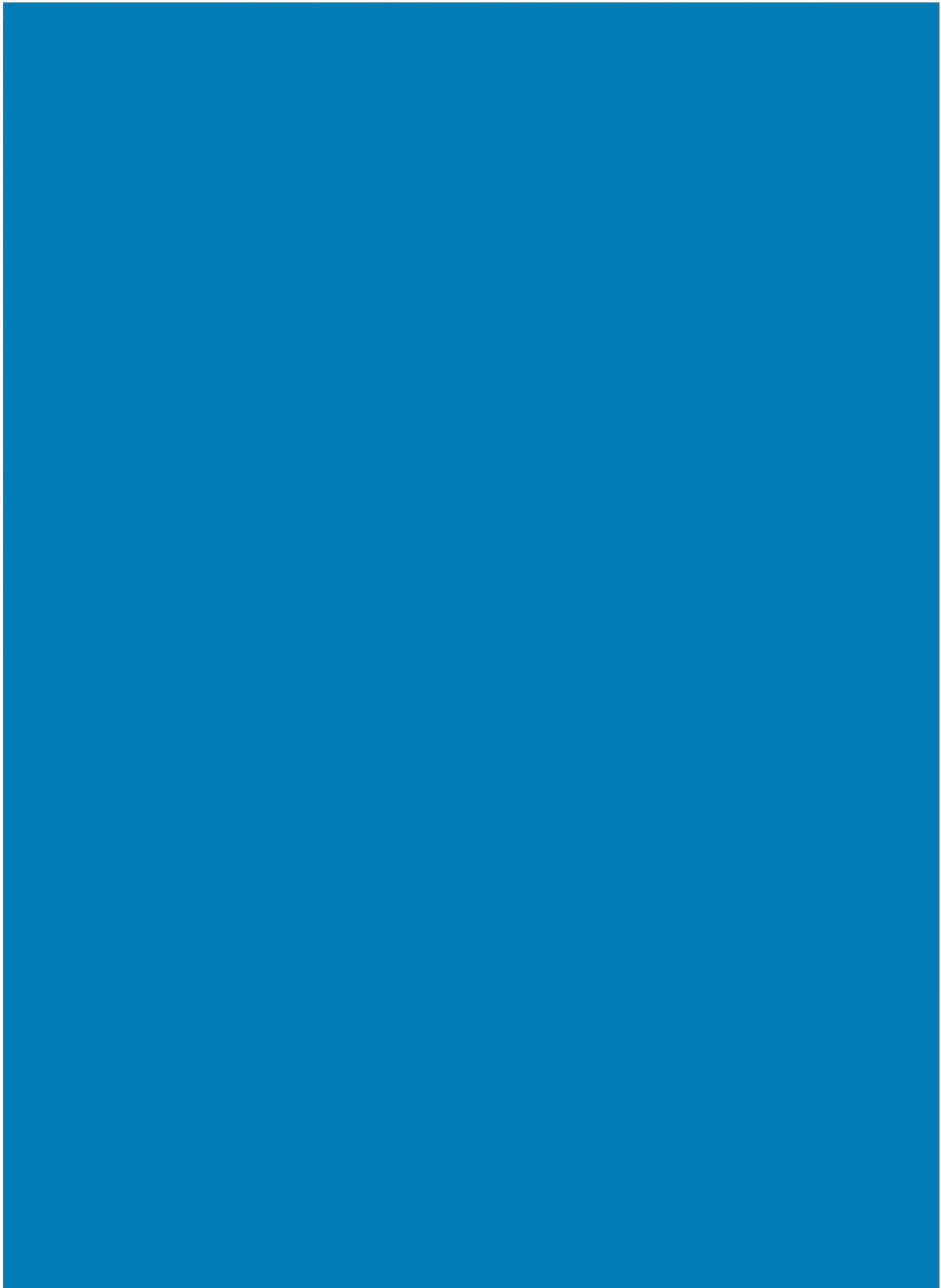




General information



i



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Properties of materials used for BJB products



Warning:

Certain chemicals may exist in end-user locations which may release airborne contaminants that can directly impact the integrity and safety of essential fixture components. Exposure of thermoplastics to different chemical combinations may result in significant damage such as crazing, cracking, arcing and mechanical failure. Products with visually noticeable deterioration have diminished integrity and must be replaced immediately with a more suitable product for the specific location.

The table below represents an overview of common chemical properties and varying thermoplastic resistances. This table is not intended to be all-inclusive, for additional information consult an authorized factory representative.

Insulating materials for lampholders

Thermal properties	Thermoplastic						
	PC	PBT	PET	PA	POM	PPS	LCP
Permissible continuous thermal stress in °C to the IEC standards for lampolders	up to 110°C	up to 180°C	up to 210°C	120°C*	approx. 85°C	up to 250°C	up to 270°C

*Limited temperature according to IEC 60598

Chemical properties							
Weak acids	+	+/0	0	-	+	+	+
Strong acids	0/-	-	0/-	-	0/-	-	0
Weak alkalies	-	0	0	+	+	+	+
Strong alkalies	-	-	0/-	-	+/0	-	0/-
Alcohol	0/-	+	+/0	+/0	+	+/0	+/0
Ketones	-	-	0/-	+	0	0	+
Esters	-	0	0/-	+	+/0	0	0
Ether	-	+	0	+	+	+/0	
Hydrocarbon chloride	-	+/-	0/-	+/0	+	0	
Benzol	-	0/-	+	+	0	0	
Cleaning benzin (aroma free)	+	+	+	+	+	+	+
Fuel mixes	0/-	+	+/0	+	+	+	+/0
Mineral oils	+/0	+	+	+	+	+	+
Animal and vegetable oils	+	+	+	+	+	+	

+ = resistant 0 = limited resistance - = not resistant

In applications the chemical resistance is dependent on many parameters, therefore this data can only be considered as recommended value.

Note:

Users should undertake sufficient verification and testing to determine the suitability for their own particular purposes of any information or products referred to herein.

Information on material for gaskets of waterproof lampholders for fluorescent lamps

Type	Oil resistance	Resistance to ozone- and weather	Continuous operating temperature	Resistance to chemicals
CR (Chloropren- /Chlorbutadien Rubber) "Neoprene", "Perbunan"	good	good	100°C	good
EPDM (Ethylen-Propylen-Dien-Copolymerisat Rubber)	moderate	good	130°C	good
Silicon (Methyl-Vinyl-Polysiloxan) "Silicone", "Silopren", "Silastic"	fairly good	good	220°C	moderate
SBR (Styrol-Butadien-Rubber) "Buna-Hüls", "Solprene"	moderate	fairly good	80°C	good-fairly good

Cable information



Technical properties

Insulation material					
	PVC	Silicone	FEP	PTFE, PFA	Glass silk
Conductor material					
	Cu/Cu tin plated	Cu tin plated	Cu tin plated	Cu nickel plated	Nickel or Cu with 27% nickel plated
Temperature resistance					
Properties	-30°C - +105°C	-60°C - +180°C	-100°C - +180°C	-190°C - +250°C	-60°C - +450°C
Thermal resistance	-	+	+	++	+++
Electrical strength	+	++	+++	+++	++
Mechanical strength	0	-	++	++	++
Chemical resistance	-	+	++	++	++
Notched charpy impact strength	-	-	+	+	++
Fracture strength, abrasion resistance	-	0	+	+	++
Abrasion	-	0	+	+	+
Flexibility	+	++	0	0	-
Weather-, ozone- and ageing resistance	-	+	+	+	+
Not inflammable	-	-	+	+	++
Halogen free	-	+	-	-	+
Light resistant (also UV)	-	0	+	+	+
Pyrolysis	-	-	-	-	+
Price	++	+	0	-	--
Applicability for ignition voltage	0	++	+	+	++
Usual characteristics (examples)					
Nominal cross section	0.5 mm ²	0.75 mm ²		1.0 mm ²	0.5 mm ²
Outer diameter	2 mm	2.4 mm	1.6-1.8 mm	1.8-2.0 mm	2.5 mm
Nominal voltage	300 V			300 / 600 V	

0 = adequate + = good ++ = better +++ = very good - = bad -- = very bad

In applications these properties are dependent on many parameters, therefore this data can only be considered as recommended value.

Comparison of AWG cross sections to metric cross sections for multi stranded, fine stranded and finest stranded wires

AWG	approx. mm ²
23	0.34
22	0.35
20	0.5
19	0.75
18	1
16	1.5
14	2.5
12	4
10	6

Types of protection against dust and water in accordance with VDE and IEC regulations (extract)



The types of protection for electrical products e.g. protection against foreign bodies, dust and water, are stated in the VDE standards and relevant publications issued by the IEC. For full details see IEC 60529 from which the following is an extract.

Symbol for luminaires according to IEC 60598	Type of protection according to IEC	Abbreviation according to IEC	Brief details of the degrees of protection	
			1st digit: protection against foreign bodies	2nd digit: protection against water
No symbol	Ordinary	IP 20	Fingers or similar objects not exceeding 80 mm in length. Solid objects exceeding 12 mm in diameter.	No special protection.
	Drip proof	IP 21	Fingers or similar objects not exceeding 80 mm in length. Solid objects exceeding 12 mm in diameter.	Dripping water (vertically falling drops) shall have no harmful effect.
	Rain proof	IP 23	Fingers or similar objects not exceeding 80 mm in length. Solid objects exceeding 12 mm in diameter.	Water falling as a spray at an angle up to 60° from the vertical shall have no harmful effect.
No symbol	Protected against solid objects greater than 1.0 mm	IP 40	Wires or strips of thickness greater than 1.0 mm. Solid objects exceeding 1.0 mm in diameter.	No special protection.
	Splash proof	IP 44	Wires or strips of thickness greater than 1.0 mm. Solid objects exceeding 1.0 mm in diameter.	Water splashed against the enclosure from any direction shall have no harmful effect.
	Dust proof	IP 50	Ingress of dust is not totally prevented but does not enter in sufficient quantity to interfere with satisfactory operation of the equipment.	No special protection.
	Dust and rain proof	IP 53	Ingress of dust is not totally prevented but does not enter in sufficient quantity to interfere with satisfactory operation of the equipment.	Water falling as a spray at an angle up to 60° from the vertical shall have no harmful effect.
	Dust and splash proof	IP 54	Ingress of dust is not totally prevented but does not enter in sufficient quantity to interfere with satisfactory operation of the equipment.	Water splashed against the enclosure from any direction shall have no harmful effect.
	Dust tight and jet proof	IP 65	No ingress of dust.	Water projected by a nozzle against the enclosure from any direction shall have no harmful effect.
	Dust tight and water tight (immersible)	IP 67	No ingress of dust.	Ingress of water in a harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time.

Technical information for embodiment of our products



BJB lampholders are in accordance with IEC regulations and are designed to IEC 60061-2 publication.

Where no electrical data is stated then:

- according to IEC 60238 / VDE 0616 part 1, Edison lampholders E14 rated 250 V / 2 A conform to overload capacity category II, E27 rated 250 V / 4 A voltage and E40 conform to voltage overload capacity category III,
- according to IEC 60400 / VDE 0616 part 3 fluorescent lampholders and starter holders rated 250 V / 2 A conform to voltage overload capacity category II,
- Halogen lampholders designed according to IEC 60838 / VDE 0616 part 5, conform to voltage overload capacity category II,
- Bayonet lampholders according to the requirements IEC 61184 / VDE 0616 part 2 conform to voltage overload capacity category II,
- Lampholder outer threads conform to IEC 60399.

When regulations deviate from IEC, e.g. UL, other ratings may be possible.
Please consult us before use.

Through our work with the relevant standardisation committees, we ensure our lampholders are developed and tested to the latest specifications.

All technical product drawings shown in this catalogue indicate only the main important dimensions and tolerance values. As a rule only where this is of importance for the intended application.

All measurements stated without tolerances are nominal.

Limit values are:

- DIN 16901, size 130 for moulded parts
- DIN ISO 2768-m for metal parts
- DIN 40680, medium for ceramic parts

Weights of single items stated in this catalogue are rounded up or rounded down to the nearest gram, therefore the final weight of a pack quantity may differ. The weights shown are only a guide and should not be used for order or shipping specification purposes.

The choice of product and correct technical embodiment in accordance with the corresponding regulations (e.g. IEC 60598 / VDE 0711, IEC 60335 / VDE 0700) is the sole responsibility of the user.

Specific attention must be given to:

- Temperature limits which must be observed in accordance with the corresponding regulations (e.g. T-markings);
- The necessary creepage and clearance distances as well as distances through insulation;
- The connecting cable and wires, which must have the correct heat and UV resistance, mechanical strength, voltage rating and a current carrying capacity corresponding to the conditions of the intended application;
- Protection against contact with live parts; Connectors, e.g. tab terminals, which must be selected in accordance with the requirements of their intended use (e.g. temperature, current carrying capacity, corrosion resistance);
- The influence of control gear, transformers, starters / ignitors and other circuit components, must always be taken into consideration.

The catalogue also contains technical information, to which attention must be paid during project development, construction and electrical installation or when operating lighting installations.

This information must be passed on, e.g. in an installation instruction.

To ensure snap fix products locate correctly and securely, consideration must also be given to the cut-out and where applicable, attention must be paid to special requirements (e.g. degree of burr, direction of punching, radii, etc.).

Consideration must also be given to the area required around the cut-out, to allow correct insertion. Different components may require to be inserted at different angles.

During fixing, it must be ensured that the fixing surface is correctly sized.

Information regarding light fitting wall thickness, should always be interpreted as inclusive of a coating, unless stated otherwise.

If there is a requirement for one of our products to be embodied in a way other than shown in our catalogue, please contact us.

Attention must also be given to the IEC lamp standards, as well as the technical instructions of the lamp manufacturers in respect of the embodiment and correct operation of lamp.

In accordance with our policy of continual product development and improvement, we reserve the right to make design modifications.

New technologies have been introduced into the market by so called retrofit lamps; their masses exceed the weights of the original lamps in some cases by a multiple.

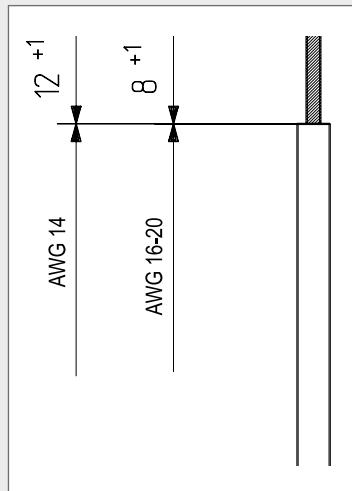
For their use in already installed luminaires and lamp holders as well as for newly designed luminaires an increased risk of mechanical damage or a release of the connection can be expected.

Examples of particularly vulnerable systems are those that do not provide separation between the mechanical retention forces and the electrical contact-making. With these the retention forces are provided solely via the contact forces.

Due to the amount of information involved in compiling this catalogue, it is not always possible to avoid printer's errors or minor mistakes.

Although every care is taken, BJB accepts no responsibility for the accuracy of the contents. If in doubt, or if you require confirmation of specific information, please contact us.

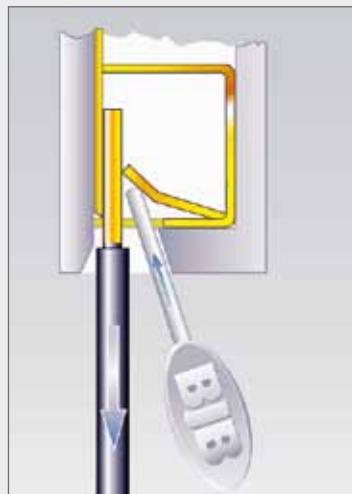
Edition 2016



Stripping of conductors

Pushwire contacts for solid core and tinned wires:
0.5 - 1.5 mm² = 8 + 1.0 mm
2.5 mm² = 12 + 1.0 mm

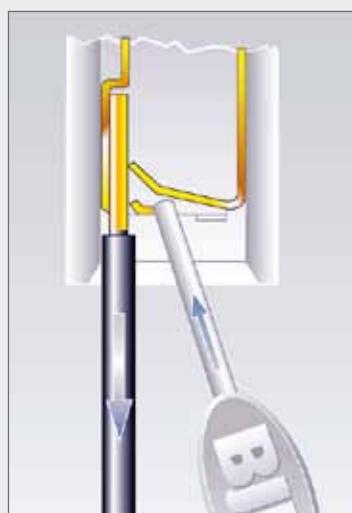
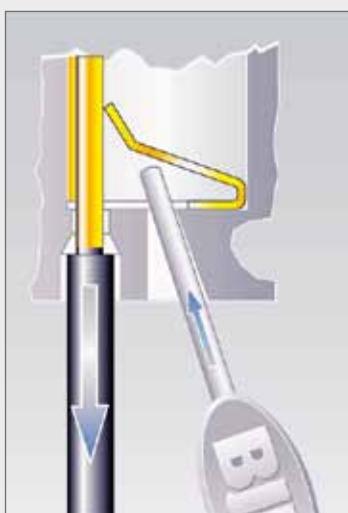
Should other terminations need to be used e.g. ferrules, you will find the relevant information in the product description.



Methods of releasing wires

Pushwire contacts with a key or oval hole in the housing:
The release probe, which we can gladly provide upon request, is placed behind the conducting wire, thereby opening the leaf spring. The wire can be pulled out.
(when pressing the leaf spring down, extreme care must be taken in order that the contact does not become distorted)*.

Simplest way:
Pull out the release probe and the wire at the same time.



Pushwire contacts with a round hole or release slot in the housing:
A release probe or screwdriver is inserted into the release slot and a slight pressure applied to the leaf spring (when pressing the leaf spring down, extreme care must be taken in order that the contact does not become distorted)*.
The wire is easily removed.

* Under light fitting production conditions, we recommend not to use unassembled lampholders again.

BJB numbering system



Product category	Product type	Running development number	Version	Colour/Finish
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Example

26.290.4012.50

Position	1 + 2	3	4 + 5	6 - 9	10 + 11
	Fluorescent lampholders for indoor use	Push in and push through lampholders	Development of product type	without locating pin/without starter holder	white

Position	Product category	Switches / Terminal blocks / LED	Oven lamps*
1 + 2	Lampholders		
	22 Moulded lampholders	43 Switches	77 Complete assemblies
	24 Moulded bayonet type lampholders	46 Terminal blocks	
	25 Halogen lampholders and lampholders for discharge lamps	47 Connecting pieces	* see catalogue for domestic appliances
		LED - Lighting and connection technology	
		48 Terminal blocks without fuse	
		49 Terminal blocks with fuse	
Position	Product type		
3			
	22.2 E12, E14, E17	27.2 Water and dustproof lampholders	49.1 Fused terminal blocks
	22.3 E26, E27	27.5 Water and dustproof starter holders	49.2 Fused terminal blocks
	22.5 Shade rings E14	27.6 Water and dustproof lampholders	49.3 Fused terminal blocks
	22.7 Shade rings E27	29.3 E26, E27	49.5 Connectors
	22.9 Insulating caps	29.4 E40	77.2 Oven lamps with lamp E14
	24.3 B22d	29.9 Insulating caps	77.7 Oven lamps with lamp E14,
	24.6 B22d	43.4 Rocker switches	Oven lamps with lamp G4,
	24.9 B22d	46.2 Capacitor connectors	Oven lamps with lamp G9,
	25.1 Low voltage halogen	46.4 Terminal blocks	Accessories for oven lamps
	25.2 Low voltage halogen	Accessories for terminal blocks	77.9 Oven lamps with lamp E14,
	25.4 Low voltage halogen	46.9 Accessories for terminal blocks	Oven lamps with lamp G4,
	25.7 Lampholders for discharge lamps	47.3 LED-Connecting pieces	Oven lamps with lamp G9,
	25.8 Lampholders for mains voltage halogen and for discharge lamps	48.1 Terminal blocks	Oven lamps with lamp E26
	25.9 Low voltage halogen	48.2 Terminal blocks	78.7 Accessories for oven lamps
	25.9 Accessories for low voltage	48.3 Connectors	
	Accessories for mains voltage	48.5 Connectors	
	Accessories for discharge lamps	48.9 Accessories for connectors	
	26.1 Compact fluorescent lampholders		
	26.2 G13 Fluorescent lampholders		
Position	Colours/Finishes		
10+11			
	10 Raw steel/ iron	23 Aluminium plated	88 Gold
	12 Nickel plated	50 white	90 Anthracite
	14 Zinc plated	51 Natural colour	
	18 Copper plated, nickel plated	55 Painted gold	
	21 Brass plated, nickel plated	76 Silvergrey	
		80 Black	
		81 Grey	
		83 Brown	
		84 Red	
		85 Uncoloured	