

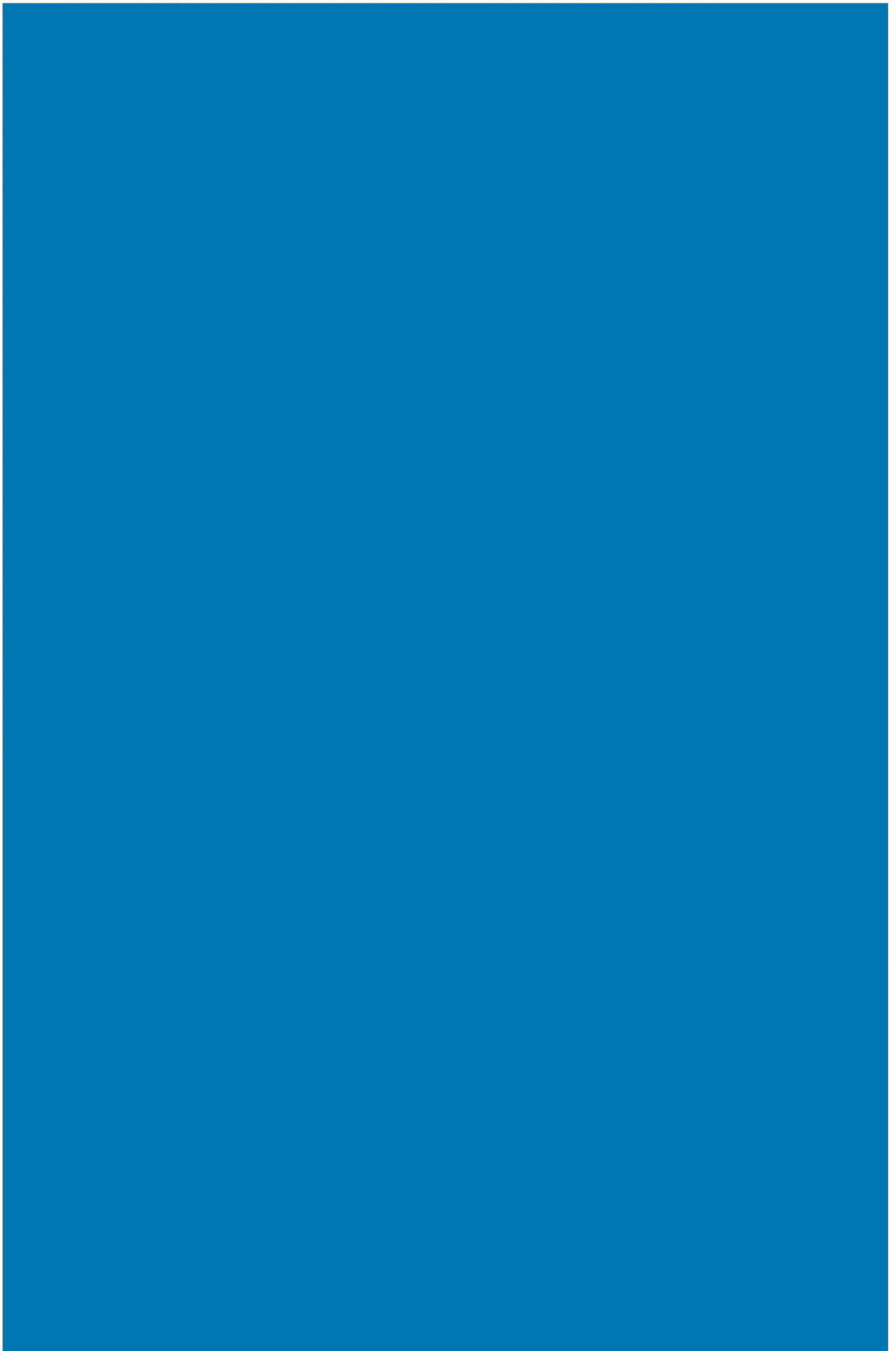


General information



Your Connection to Light





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# Properties of materials used for BJB products



## Note:

Chemical resistance depends on many different application parameters. Consequently, the data given can only serve as guideline values. Assessment of the suitability of BJB products for a specific application is the responsibility of the customer and, where appropriate, should be verified by means of tests under operating conditions. The selection and correct technical application of BJB products is the responsibility of the customer.

## 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 lampholders	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.

## 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
<b>CR</b> (Chloropren- /Chlorbutadien Rubber) "Neoprene", "Perbunan"	good	good	100°C	good
<b>EPDM</b> (Ethylen-Propylen-Dien-Copolymerisat Rubber)	moderate	good	130°C	good
<b>Silicon</b> (Methyl-Vinyl-Polysiloxan) "Silicone", "Silopren", "Silastic"	fairly good	good	220°C	moderate
<b>SBR</b> (Styrol-Butadien-Rubber) "Buna-Hüls", "Solprene"	moderate	fairly good	80°C	good-fairly good

# Cable Information



## Technical properties

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					
	-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	++	+	+	++
<b>Usual characteristics (examples)</b>					
Nominal cross section	0.5 mm <sup>2</sup>	0.75 mm <sup>2</sup>		1.0 mm <sup>2</sup>	0.5 mm <sup>2</sup>
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 <sup>2</sup>
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 (immersion)	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.

Our oven lamps are exclusively designed for embodiment within domestic appliances. They are not suitable to be used for general ambient lighting.

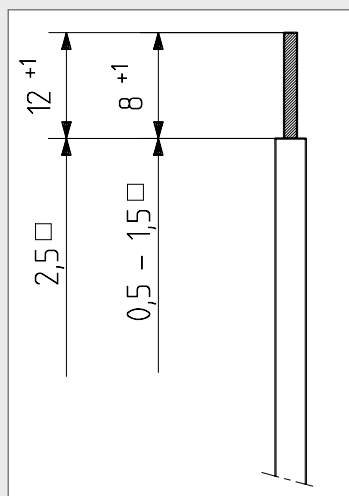
In accordance with our policy of continual product development and improvement, we reserve the right to make design modifications.

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.

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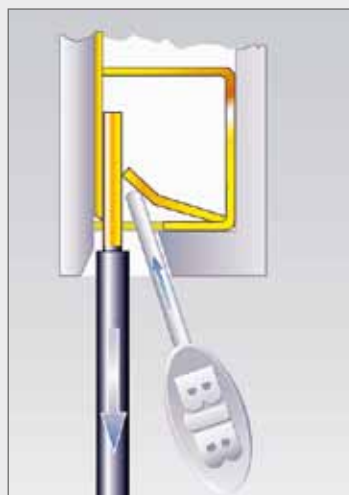
## Stripping of conductors

Pushwire contacts for solid core and tinned wires:

0.5 - 1.5 mm<sup>2</sup> = 8 + 1.0 mm

2.5 mm<sup>2</sup> = 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

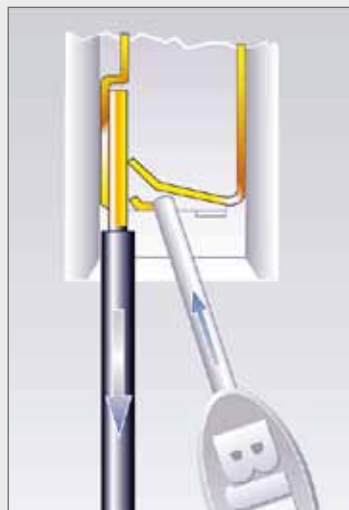
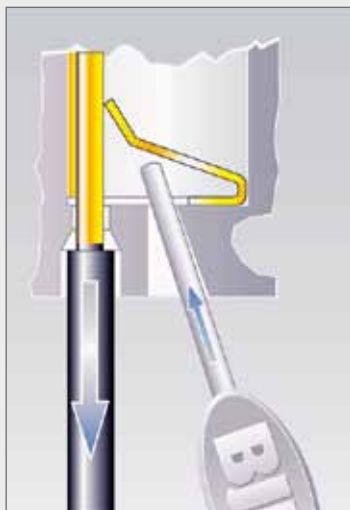
Pushwire contacts with a key or oval hole in the housing:

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
Example	<b>26.290.4012.50</b>				
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
<b>Position 1 + 2</b>	<b>Product category</b> <b>Lampholders</b>			<b>Switches / Terminal blocks / LED</b>	<b>Oven lamps*</b>
	22 Moulded lampholders 24 Moulded bayonet type lampholders 25 Halogen lampholders and lampholders for discharge lamps	26 Fluorescent lampholders - indoor use 27 Fluorescent lampholders - water and dustproof 29 Porcelain lampholders		43 Switches 46 Terminal blocks 47 Connecting pieces LED - Lighting and connection technology 48 Terminal blocks without fuse 49 Terminal blocks with fuse	77 Complete assemblies  * see catalogue for domestic appliances
<b>Position 3</b>	<b>Product type</b>				
	22.2 E12, E14, E17 22.3 E26, E27 22.5 Shade rings E14 22.7 Shade rings E27 22.9 Insulating caps 24.3 B22d 24.6 B22d 24.9 B22d 25.1 Low voltage halogen 25.2 Low voltage halogen 25.4 Low voltage halogen 25.7 Lampholders for discharge lamps 25.8 Lampholders for mains voltage halogen and for discharge lamps 25.9 Low voltage halogen 25.9 Accessories for low voltage Accessories for mains voltage Accessories for discharge lamps 26.1 Compact fluorescent lampholders 26.2 G13 Fluorescent lampholders	26.3 G13 Fluorescent lampholders 26.4 G13 Fluorescent lampholders 26.4 Accessories for fluorescent lampholders 26.5 Starter holders 26.6 G5 Fluorescent lampholders 26.7 Compact fluorescent lampholders 26.7 Circular fluorescent lampholders 26.7 Accessories for compact fluorescent lampholders 26.8 Fluorescent lampholders 26.9 Accessories for fluorescent lampholders Accessories for compact fluorescent lampholders		27.2 Water and dustproof lampholders 27.5 Water and dustproof starter holders 27.6 Water and dustproof lampholders 29.3 E26, E27 29.4 E40 29.9 Insulating caps 43.4 Rocker switches 46.2 Capacitor connectors 46.4 Terminal blocks Accessories for terminal blocks 46.9 Accessories for terminal blocks 47.3 LED-Connecting pieces 48.1 Terminal blocks 48.2 Terminal blocks 48.2 Connectors 48.3 Terminal blocks 48.5 Connectors 48.9 Accessories for connectors	49.1 Fused terminal blocks 49.2 Fused terminal blocks 49.3 Fused terminal blocks 49.5 Connectors 77.2 Oven lamps with lamp E14 77.7 Oven lamps with lamp E14, Oven lamps with lamp G4, Oven lamps with lamp G9, Accessories for oven lamps 77.9 Oven lamps with lamp E14, Oven lamps with lamp G4, Oven lamps with lamp G9, Oven lamps with lamp E26 78.7 Accessories for oven lamps
<b>Position 10+11</b>	<b>Colours/Finishes</b>				
	10 Raw steel/ iron 12 Nickel plated 14 Zinc plated 18 Copper plated, nickel plated 21 Brass plated, nickel plated	23 Aluminium plated 50 white 51 Natural colour 55 Painted gold 76 Silvergrey		80 Black 81 Grey 83 Brown 84 Red 85 Uncoloured	88 Gold 90 Anthracite