



***CAPS***

**TUNGSRAM**

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Though our data and figures have been compiled with utmost care, they are only informative ones and do not indicate our actual conditions of delivery. We reserve the right to introduce alterations in technical details without special notification.

## GENERAL

### Lamp cap designation system

(Exact from IEC Publication 61-1)

General speaking, a lamp cap and the corresponding holder are designated by one or more letters, followed by a number. This designation gives a concise indication of the part which is essential to ensure interchangeability of the cap in the holder. Capital letters are used, sometimes followed by a small letter.

The letter or letters indicate the cap construction in accordance with the following code:

B – means bayonet

BA – means bayonet automobile

To distinguish whether a cap is a B or BA cap, the following directives must be taken into account:

–the standard pin length to B15 caps is 0.9–1.1 mm, whereas for BA15 caps the standard pin length is 0.64 mm minimum;

–for BA caps, requirements, if any, for creepage distances are usually small in view of their operation at extra low voltage.

E – means screw thread

F – means single contact pin (post, tab, etc.); a shell made of conducting material must be insulated from the contact-making part of the pin.

Different forms of pin are indicated by small letters after the letter F, for example: “a” indicates a cylindrical pin.

G – means two or more contact pins

P – means prefocus

S – means shell

The number following the letter(s) indicates the approximate value in millimetres of the principal dimension of the cap or base, viz.:

For B – the diameter of the shell

For BA – the diameter of the shell

For E – the crest diameter of the screw thread

For F – the diameter or other similar important dimension of the pin

For G – the pin spacing: for two pins the distance between centres of the pins, for more pins of which the centres are situated on a circle, the diameter of the circle.

If the centres of the pins are not all situated on a circle, the distance

between the centres of the contact-making pins for the main circuit or the diameter of the circle through the centres of the contact-making pins

For P – the diameter or other important dimension of the part by which the lamp is located laterally

For S – the diameter of the shell or the dimension of that part which is essential for the fit in the holder

Examples: E27

BA15

The above designations may be too general, and it is therefore often necessary to give an additional indication to distinguish characteristics such as the following, given in the order in which they appear below:

– a small letter indicating the number of contacts (plates, pins, plungers, springs or tubes) of flexible connections:

“s” for one

“d” for two

“t” for three

Example:

B15d Bayonet cap with a diameter of 15 mm approximately and two contact plates, the pins having an objective length of 1 mm approx.

– a number, a letter or possibly a combination of symbols preceded by a hyphen, indicating the number of locating elements such as pins, lugs, slots, etc. or other indication essential for the fit.

B22d–3 (90°/135°) A bayonet cap with a shell diameter of 22 mm approximately, having two contacts and three locating pins with an angular distribution of 90° and two times 135°.

– a number preceded by an oblique stroke, giving in millimetres the approximate over-all length of the cap, including protruding insulation, but excluding the height of protruding contact plates, the length of any pins or flexible connections and the height or protruding conductor bushes.

– a number preceded by the multiplication sign X, giving in millimetres the approximate outside diameter either of the skirt or of the open end of the shell. In the case of a spun-in cap or of the cap with a fixed liner having a reduced opening, the approximate inside diameter of the open end of the shell is referred to.

In certain cases a cap may belong to one construction group, yet nevertheless show in addition properties of one or more different groups. The symbols for each of these groups are then given, the more important ones being placed first.

Example:  
FG 124/6  
EP 10/14

Caps which have the same designation according to the above rules, but which nevertheless, because of some particular feature(s), would not be interchangeable, are differentiated by adding an X, Y or Z after the letter(s) for the more current (or already classified) type. For example: BA15 caps, for which the pins have different lengths or are offset so as to prevent them from engaging with a normal BA15 lampholder, are designated, by BAX15 and BAY15 respectively. It is stressed that the part of the designation which gives the character of the cap and determines in the first instance the fit in the holder, is placed before the oblique stroke where this is used.

Examples:  
E14/25 × 17 Screw cap with a crest diameter of the thread of 14 mm approximately, an over-all length of 25 mm approx., and a skirt diameter of 17 mm approx.

G13/10 × 24 Bi-pin cap with a distance between centres of the pins of 13 mm approximately, a shell height of 10 mm approx., and a shell diameter of 24 mm approx.

In general, a lampholder has the same designation as the relevant cap (base). The functions of holding and contact-making are then combined in the holder.

In some cases, the use of the holder is restricted to holding only, the contact-making being achieved by a separate connector e.g.: the scat in a reflector for a lamp with a P45t cap is designated P45; the connector is designated G16t.

## NOTES

Which ring for cap fitting for which cap?

Ring for cap fitting	Cap fitted with that ring
FGY187/9	BA20s, BA20d
FGY252/16	P28s

In certain lamps, caps are assembled in the production process of the lamps themselves. In the following table, the main part of the cap and the flange designations according to IEC are listed along with those of the ready-made cap.

IEC-designation of the ready-made lamp cap	IEC-designation of the main cap part	IEC-designation of the flange
P26s	S15s/20	P26
P30d	S15d/20	P30
P30s	S15s/20	P30
P36d	S22d/21	P36
P36s	S22s/21	P36
P36t	G16tL	P36
P43t-38	G16tL	P43t-38
P45t-41	G16t	P45t-41

## How to order

Dimension data are given without obligation of the producer who reserves the right to introduce some modifications. It is recommended to check the dimensions of the sample before placing an order.

Please specify TUNGSRAM's caps by their

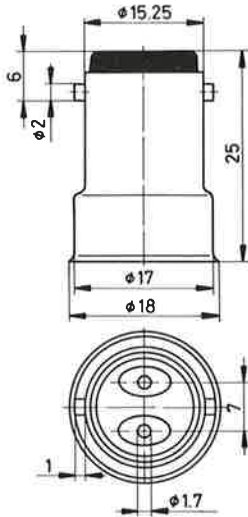
- designation
- material
- code number.

We suggest you to place an order on the basis of approved samples.

## BAYONET CAPS

### B15d/25 × 17

conforms to IEC 7004-11

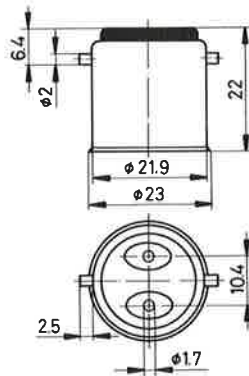


**Type**

B15d/25 × 17 Brass  
Code: 9-8-812-15010

### B22/22

conforms to IEC 7004-10

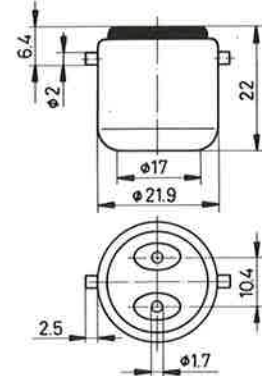


**Type**

B22/22 Brass, nickel-plated  
Code: 9-8-812-22020

### B22/22 × 17

conforms to IEC 7004-10

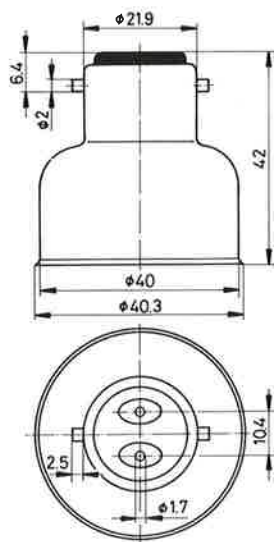


**Type**

B22/22 × 17 Brass  
Code: 9-8-812-22030

### B22/42 × 40

conforms to IEC 7004-10

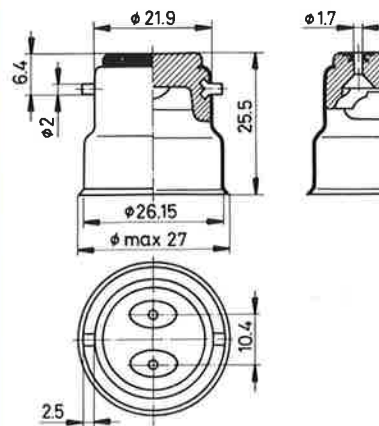


**Type**

B22/42 × 40 Brass  
Code: 9-8-812-22051

### B22d/25 × 26

conforms to IEC 7004-10

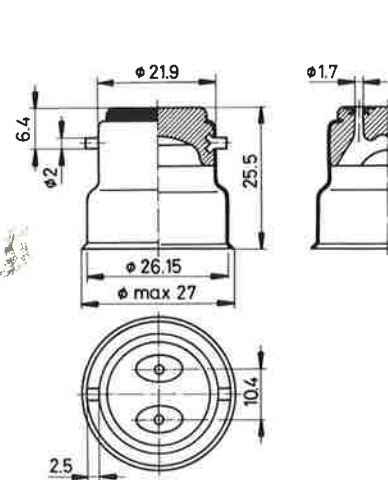


**Type**

B22d/25 × 26 Aluminium  
Code: 9-8-812-22080  
B22d/25 × 26 Brass  
Code: 9-8-812-22010  
B22d/25 × 26 Brass, nickel-plated  
Code: 9-8-812-22071

### B22d/25 × 26

conforms to IEC 7004-10

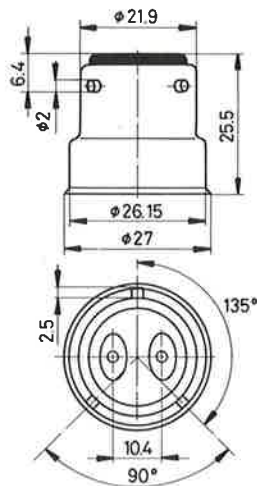


**Type:**

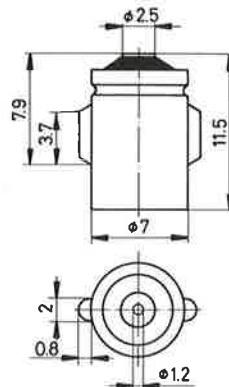
B22d/25 × 26 Aluminium  
Code: 9-8-812-22090

**B22d-3 (90°/135°)/25 × 26**

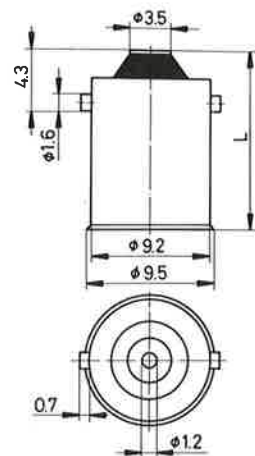
conforms to IEC 7004-10A

**Type**B22d-3 (90°/135°)/25 × 26 Brass  
Code: 9-8-812-22060**BA7s**

conforms to IEC 7004-15

**Type:**BA7s/11 Brass, nickel-plated, slotted  
Code: 9-8-812-07010**BA9s**

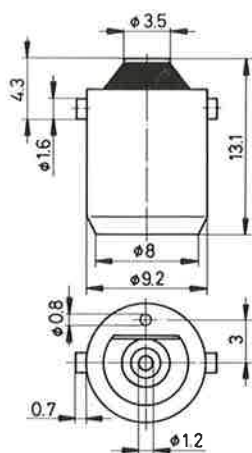
conforms to IEC 7004-14

**Type**

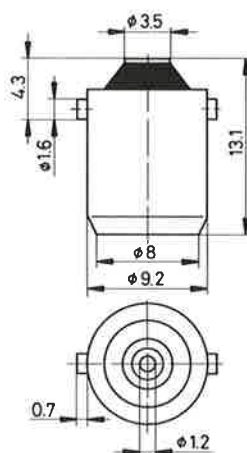
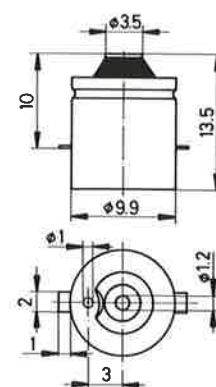
BA9s/13 Brass, nickel-plated	L (mm)
Code: 9-8-812-09010	13.1
BA9s/14 Brass, nickel-plated	14
Code: 9-8-812-09050	

**BA9s/13 × 8**

conforms to IEC 7004-14

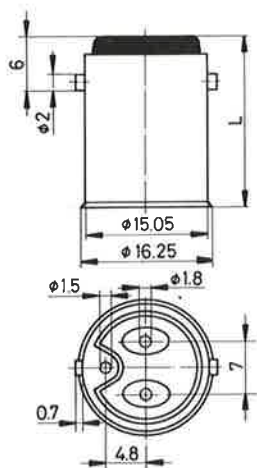
**Type**BA9s/13 Brass, nickel-plated  
Code: 9-8-812-09020**BA9s/13 × 8  
for Lateral Soldering**

conforms to IEC 7004-14

**Type**BA9s/13 × 8 Brass, nickel-plated  
Code: 9-8-812-09060**BA10s****Type**BA10s/13.5 Brass  
Code: 9-8-812-10010

### BA15d

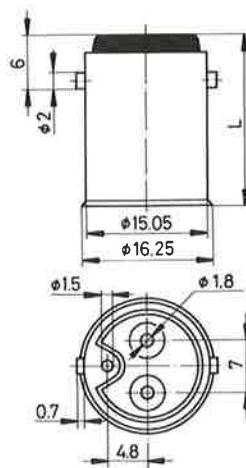
conforms to IEC 7004-11A



Type		L (mm)	Code
BA15d/21	Brass, nickel-plated	21	9-8-812-15080
BA15d/20.5	Brass, nickel-plated	20.5	9-8-812-15070
BA15d/20	Brass, nickel-plated	20	9-8-812-15060
BA15d/19.5	Brass, nickel-plated	19.5	9-8-812-15050
BA15d/19	Brass, nickel-plated	19	9-8-812-15040

### BA15d

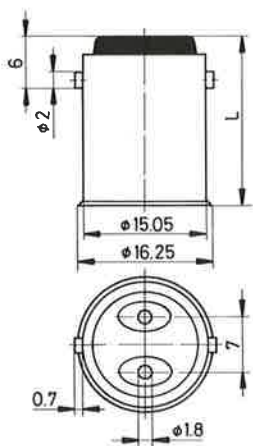
conforms to IEC 7004-11A



Type		L (mm)	Code
BA15d/21	Brass, nickel-plated	21	9-8-812-15491
BA15d/20.5	Brass, nickel-plated	20.5	9-8-812-15481
BA15d/20	Brass, nickel-plated	20	9-8-812-15471
BA15d/19.5	Brass, nickel-plated	19.5	9-8-812-15461
BA15d/19	Brass, nickel-plated	19	9-8-812-15451

### BA15d for Lateral Soldering

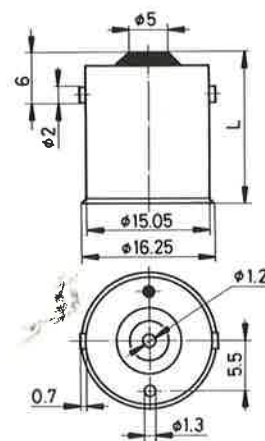
conforms to IEC 7004-11A



Type		L (mm)	Code
BA15d/20	Brass, nickel-plated	20	9-8-812-15100
BA15d/19	Brass, nickel-plated	19	9-8-812-15090

### BA15s

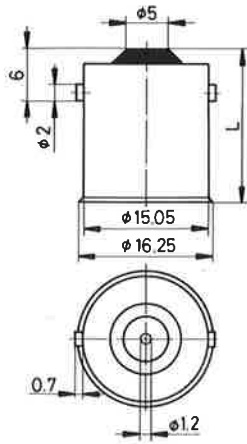
conforms to IEC 7004-11A



Type		L (mm)	Code
BA15s/21	Brass, nickel-plated	21	9-8-812-15160
BA15s/20.5	Brass, nickel-plated	20.5	9-8-812-15150
BA15s/20	Brass, nickel-plated	20	9-8-812-15140
BA15s/19.5	Brass, nickel-plated	19.5	9-8-812-15130
BA15s/19	Brass, nickel-plated	19	9-8-812-15120

### BA15s for Lateral Soldering

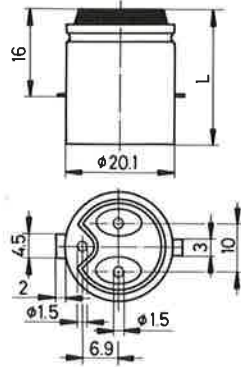
conforms to IEC 7004-11A



Type	L (mm)
BA15s/20 Brass, slotted Code: 9-8-812-15180	20
BA15s/19 Brass, slotted Code: 9-8-812-15170	19

### BA20d

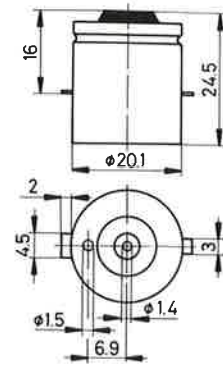
conforms to IEC 7004-12



Type	L (mm)
BA20d/26 Brass, nickel-plated Code: 9-8-812-20061	26
BA20d/25 Brass, nickel-plated Code: 9-8-812-20050	25

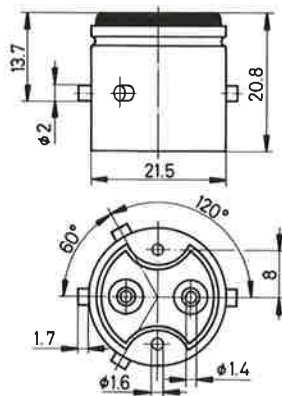
### BA20s/25

conforms to IEC 7004-12



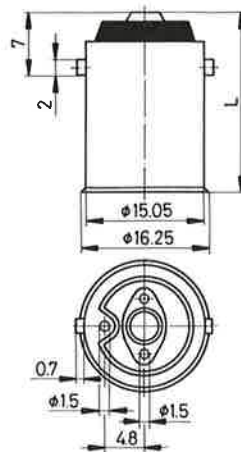
Type	L (mm)
BA20s/25 Brass, nickel-plated Code: 9-8-812-20091	

### BA21d-4/60°/120°



Type
BA21d-4/60°/120° Brass, nickel-plated Code: 9-8-812-21020

### BA(D)15s

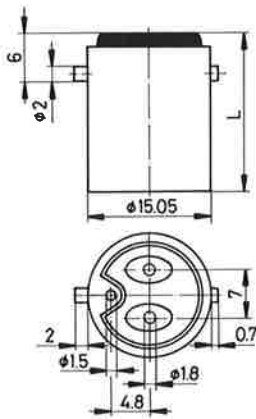


Type	L (mm)	Code
BA(D)15s/21 Brass, nickel-plated	21	9-8-812-15250
BA(D)15s/20.5 Brass, nickel-plated	20.5	9-8-812-15240
BA(D)15s/20 Brass, nickel-plated	20	9-8-812-15230
BA(D)15s/19.5 Brass, nickel-plated	19.5	9-8-812-15220
BA(D)15s/19 Brass, nickel-plated	19	9-8-812-15210



### BAX15d

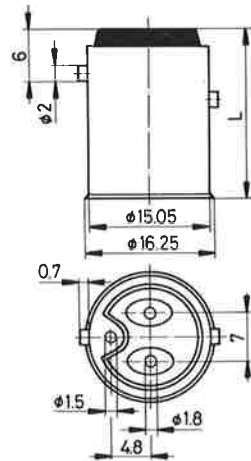
conforms to DIN 49 720



Type	L (mm)
BAX15d/19 Brass, nickel-plated	19
Code: 9-8-812-15381	
BAX15d/18.5 Brass, nickel-plated	18.5
Code: 9-8-812-15351	

### BAY15d

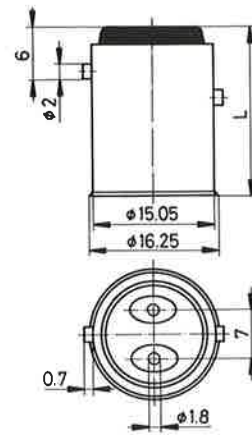
conforms to IEC 7004-11B



Type	L (mm)
BAY15d/20 Brass, nickel-plated	20
Code: 9-8-812-15270	
BAY15d/19 Brass, nickel-plated	19
Code: 9-8-812-15260	

### BAY15d for Lateral Soldering

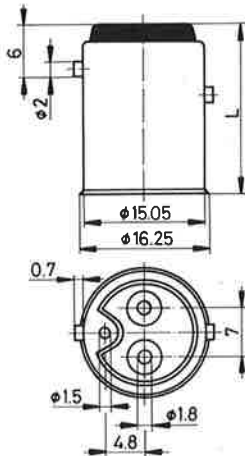
conforms to IEC 7004-11B



Type	L (mm)
BAY15d/20 Brass, slotted	20
Code: 9-8-812-15290	
BAY15d/19 Brass, slotted	19
Code: 9-8-812-15280	

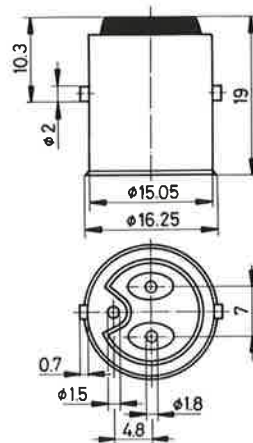
### BAY15d

conforms to IEC 7004-11B



Type	L (mm)
BAY15d/20 Brass, nickel-plated	20
Code: 9-8-812-15441	
BAY15d/19 Brass, nickel-plated	19
Code: 9-8-812-15431	

### BM15d

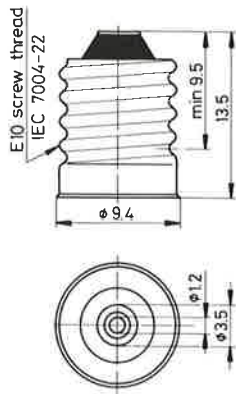


Type	L (mm)
BM15d/19 Brass, nickel-plated	19
Code: 9-8-812-15350	

# SCREW CAPS

## E10/13

conforms to IEC 7004-22

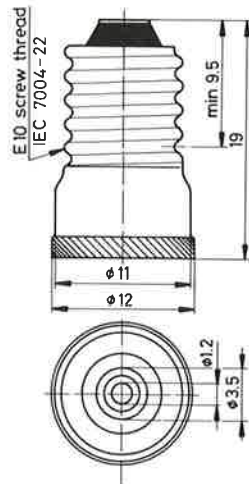


### Type

E10/13 Brass  
Code: 9-8-811-10020  
E10/13 Brass, nickel-plated  
Code: 9-8-811-10111

## E10/19 × 12

conforms to IEC 7004-22

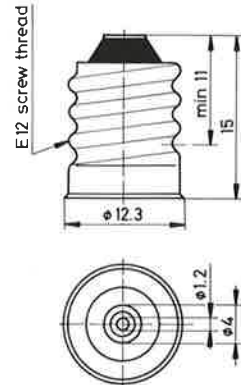


### Type

E10/19 × 12 Brass, with knurled flare  
Code: 9-8-811-10030

## E12/15

conforms to ASA C 81 107

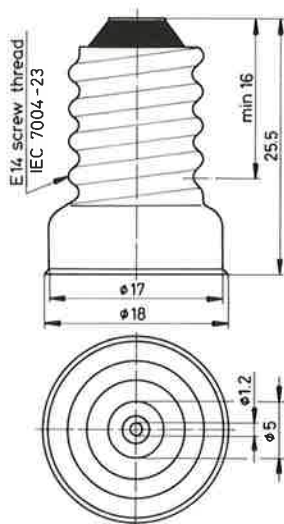


### Type

E12/15 Brass  
Code: 9-8-811-12010

## E14/25 × 17

conforms to IEC 7004-23

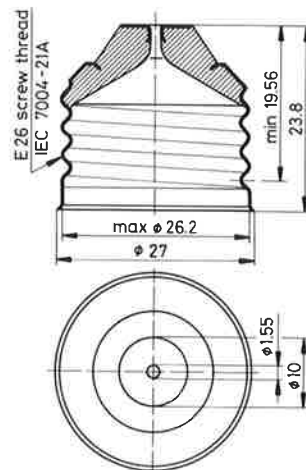


### Type

E14/25 × 17 Brass  
Code: 9-8-811-14030

## E26/24

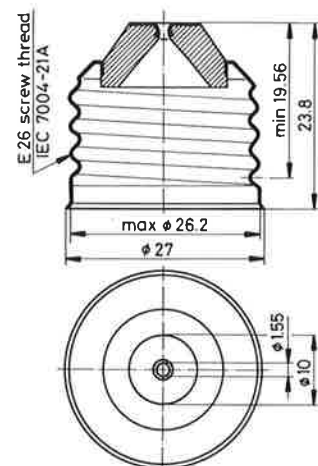
conforms to IEC 7004-21A



### Type

E26/24 Brass  
Code: 9-8-811-26040  
E26/24 Brass, slotted  
Code: 9-8-811-26041

## E26/24 Low Vitrit

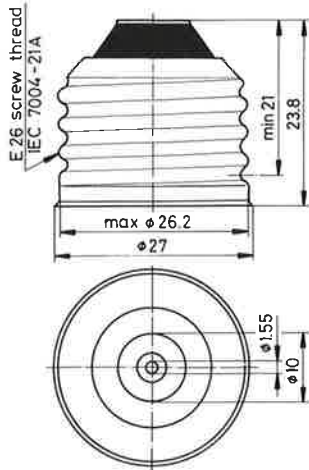


### Type

E26/24 Aluminium  
Code: 9-8-811-26061  
E26/24 Brass  
Code: 9-8-811-26071

### E26/24 All-threaded

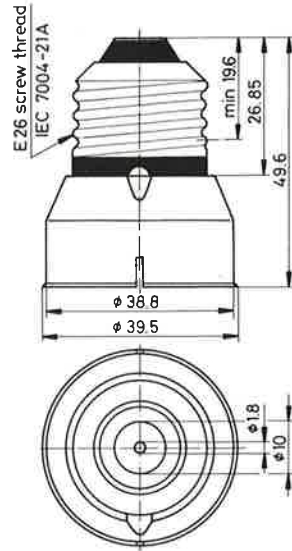
conforms to IEC 7004-21A



#### Type

E26/24 Brass, nickel-plated  
Code: 9-8-811-26051

### E26/50 × 39

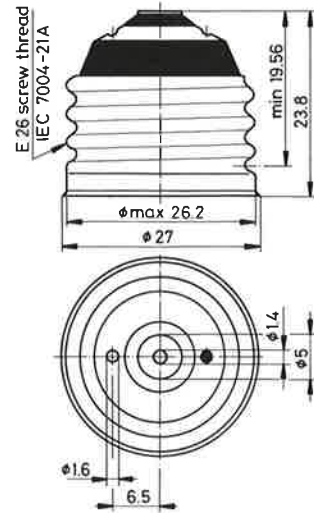


#### Type

E26/50 × 39 Brass, slotted  
Code: 9-8-811-26030

### E26d/24

conforms to IEC 7004-29

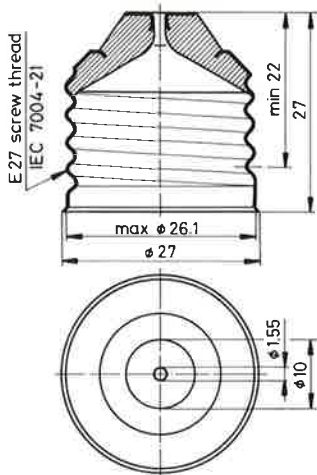


#### Type

E26d/24 Brass  
Code: 9-8-811-26020

### E27/27

conforms to IEC 7004-21

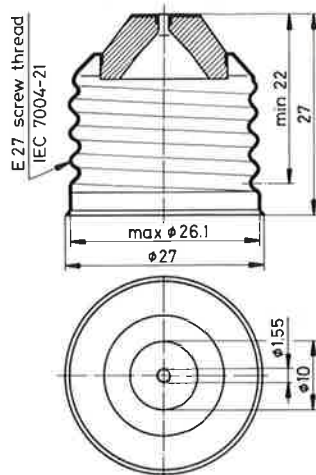


#### Type

E27/27 Brass  
Code: 9-8-811-27091

### E27/27 Low Vitrit

conforms to IEC 7004-21

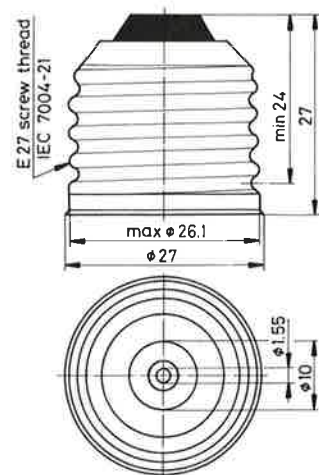


#### Type

E27/27 Brass  
Code: 9-8-811-27170  
E27/27 Aluminium  
Code: 9-8-811-27180

### E27/27 All-threaded

conforms to IEC 7004-21

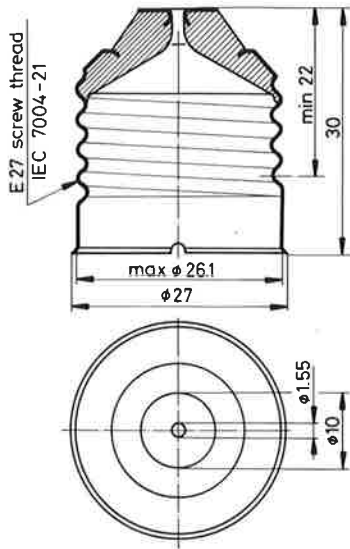


#### Type

E27/27 Brass, nickel-plated  
Code: 9-8-811-27161

### E27/30

conforms to IEC 7004-21

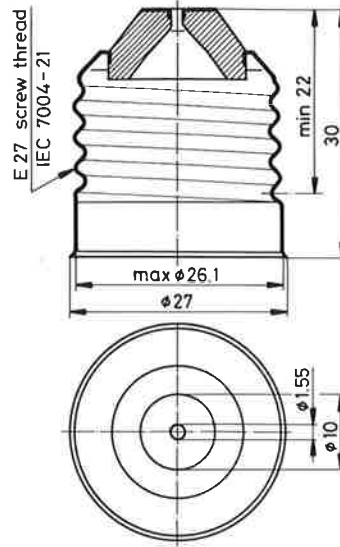


#### Type

E27/30 Brass, no slot  
Code: 9-8-811-27121  
E27/30 Brass, slotted  
Code: 9-8-811-27110  
E27/30 Brass, nickel-plated, slotted  
Code: 9-8-811-27141

### E27/30 Low Vitrit

conforms to IEC 7004-21

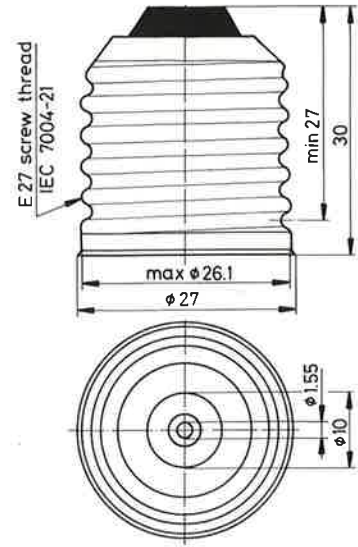


#### Type

E27/30 Brass  
Code: 9-8-811-27221

### E27/30 All-threaded

conforms to IEC 7004-21

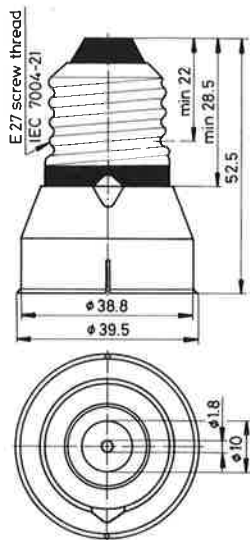


#### Type

E27/30 Brass  
Code: 9-8-811-27231

### E27/51 x 39

conforms to IEC 7004-27

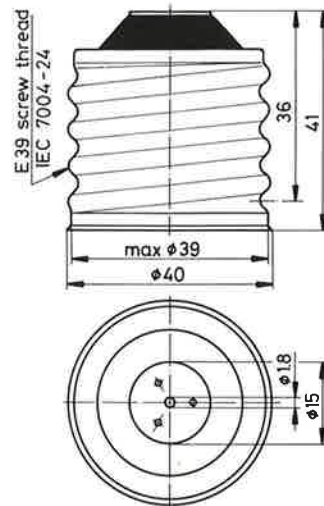


#### Type

E27/51 x 39 Brass, slotted  
Code: 9-8-811-27100

### E39/41 All-threaded

conforms to IEC 7004-24

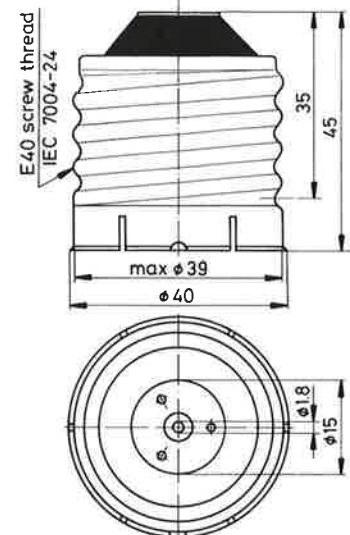


#### Type

E39/41 Brass, nickel-plated  
Code: 9-8-811-40061

### E40/45

conforms to IEC 7004-24

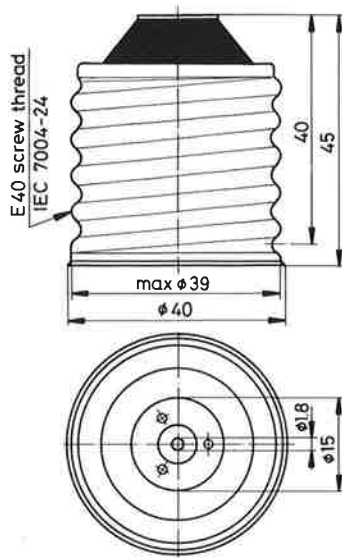


#### Type

E40/45 Brass, nickel-plated, slotted  
with space for solder  
Code: 9-8-811-40020

### E40/45 All-threaded

conforms to IEC 7004-24

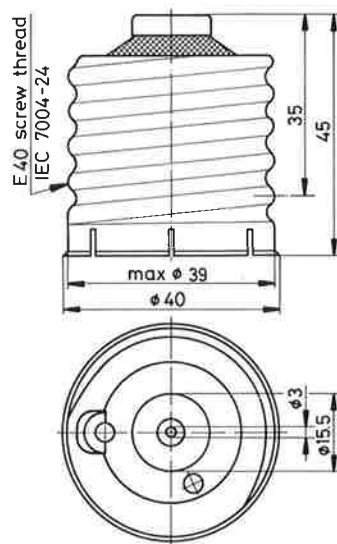


#### Type

E40/45 Brass, nickel-plated  
Code: 9-8-811-40071

### E40/45 with Ceramic Isolation

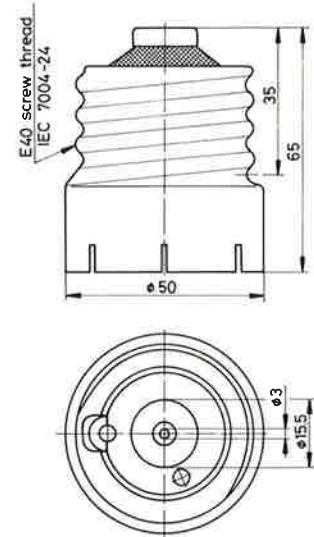
conforms to IEC 7004-24



#### Type

E40/45 Brass, nickel-plated, slotted  
Code: 9-8-811-40010

### E40/65 × 50 with Ceramic Isolation

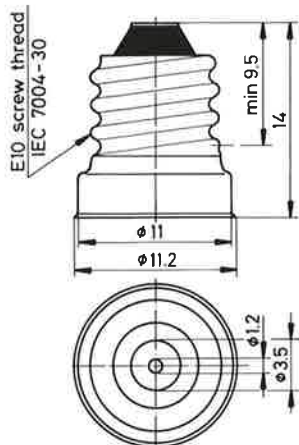


#### Type

E40/65 × 50 Brass, nickel-plated  
Code: 9-8-811-40080

### EP10/14 × 11

conforms to IEC 7004-30



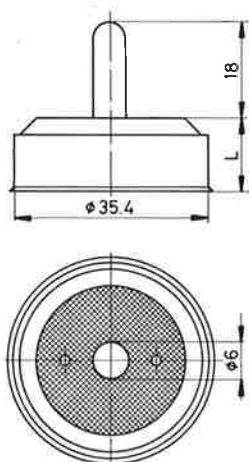
#### Type

EP10/14 × 11 Brass  
Code: 9-8-811-10050

## OTHER CAPS

### Fa6

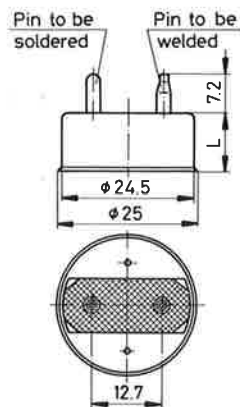
conforms to IEC 7004-55



Type	L (mm)
Fa6/13 × 35 Aluminium Code: 9-8-813-10030	13
Fa6/12 × 35 Aluminium Code: 9-8-813-10020	12
Fa6/11 × 35 Aluminium Code: 9-8-813-10010	11

### G13/L × 24

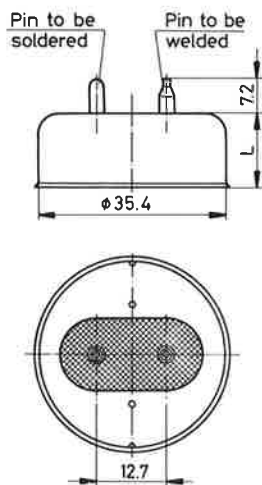
conforms to IEC 7004-51



Pin to be soldered			Pin to be welded		
Type	L (mm)	Code	Type	L (mm)	Code
G13/11 × 24F Aluminium	11	9-8-813-10680	G13/11 × 24H Aluminium	11	9-8-813-11270
G13/10 × 24F Aluminium	10	9-8-813-10690	G13/10 × 24H Aluminium	10	9-8-813-11260
G13/ 9 × 24F Aluminium	9	9-8-813-10670	G13/ 9 × 24H Aluminium	9	9-8-813-11250

### G13/L × 35

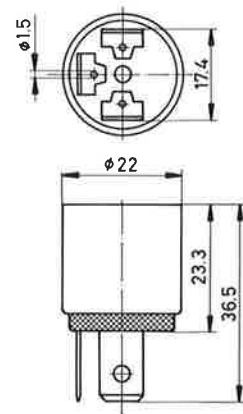
conforms to IEC 7004-51



Pin to be soldered		Pin to be welded	
Type	L (mm)	Type	Code
G13/13 × 24F Aluminium	13	G13/11 × 35H Aluminium	11 9-8-813-11190
G13/12 × 35F Aluminium	12		
G13/11 × 35F Aluminium	11		
G13/9.2 × 35F Aluminium	9.2		

### G16t

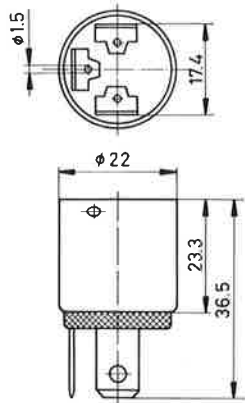
conforms to IEC 7004-95A



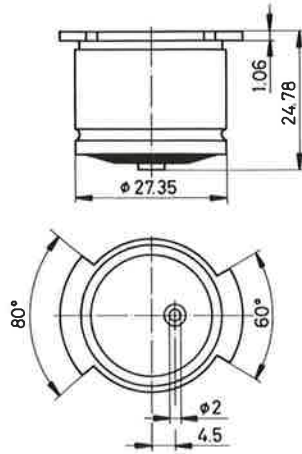
**Type**  
G16t Brass, nickel-plated  
Code: 9-8-813-10060

**G16tL**

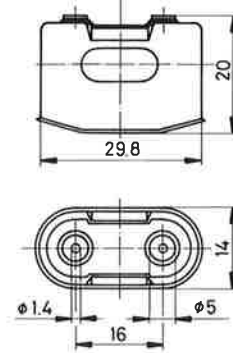
conforms to IEC 7004-95A

**Type**G16tL Brass  
Code: 9-8-813-10080**P28s/25**

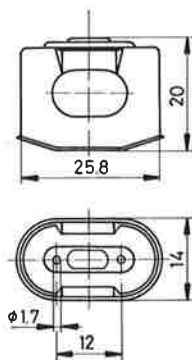
conforms to IEC 7004-42

**Type**P28s/25 Brass, nickel-plated  
Code: 9-8-813-10170**S14d**

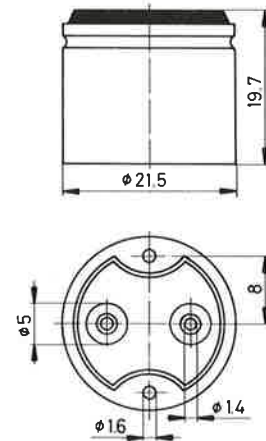
conforms to DIN 49635

**Type**S14d Brass  
Code: 9-8-813-11170**S14s**

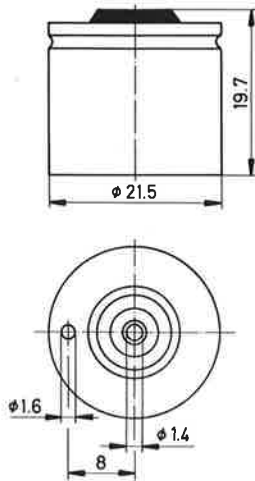
conforms to DIN 49635

**Type**S14s Brass  
Code: 9-8-813-11180**S15d**

conforms to IEC 7004-44

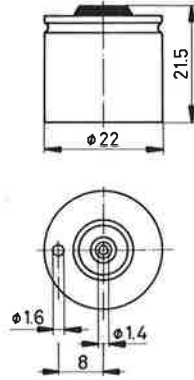
**Type**S15d/20 Brass, nickel-plated  
Code: 9-8-813-10150**S21d/19.5****Type**S21d/19.5 Brass, nickel-plated  
Code: 9-8-813-10350

**S21s/19.5**



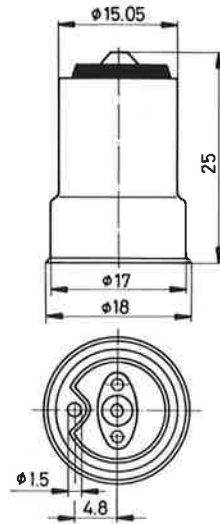
**Type**  
S21s/19.5 Brass, nickel-plated  
Code: 9-8-813-10110

**S22s/21**



**Type**  
S22s/21 Brass, nickel-plated  
Code: 9-8-813-10360

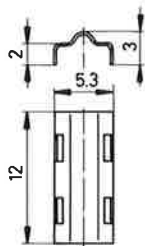
**S(D)15s/25 × 17**



**Type**  
S(D)15s/25 × 17 Brass, nickel-plated  
Code: 9-8-813-10340

**CAP HOUSING**

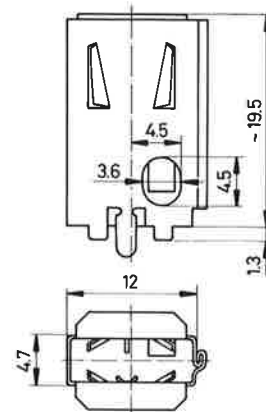
**PK22s**



**Type**  
PK22s Nickel  
Code: 9-9-123-6450

**BAND FOR ELECTRIC CORD**

**PK22s**

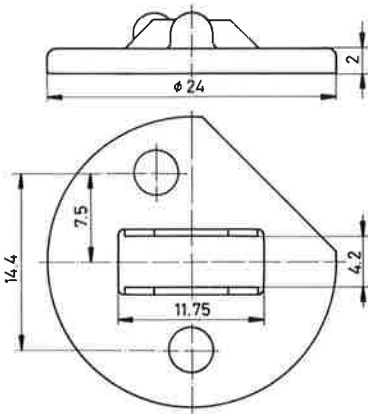


**Type**  
PK22s Nickel  
Code: 9-9-122-70380



## FLANGES

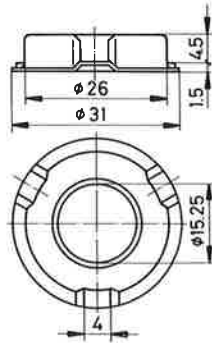
### P14.5



**Type**  
P14.5 Brass, nickel-plated  
Code: 9-9-123-60430

### P26

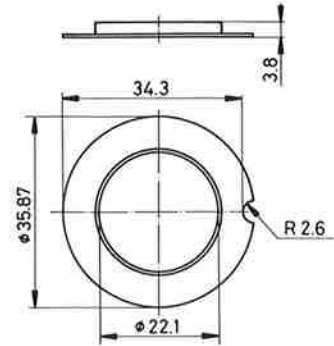
for cap S15s



**Type**  
P26/15 Brass, nickel-plated  
Code: 9-9-131-60590

### P36

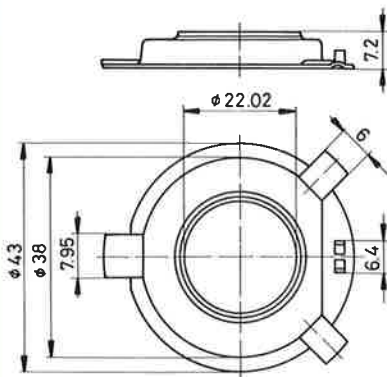
conforms to IEC 7004-49



**Type**  
P36 Brass, nickel-plated  
Code: 9-9-123-60620

### P43t-38

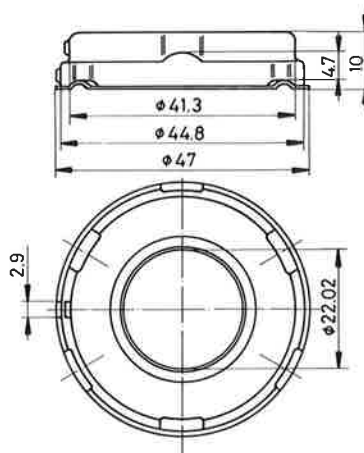
for cap G16tL



**Type**  
P43-38 Brass, nickel-plated  
Code: 9-9-123-60240

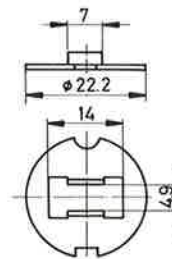
### P45t-41

conforms to IEC 7004-95 B  
for cap G16T and G16tL



**Type**  
P45-41 Brass, nickel-plated  
Code: 9-9-123-60600

### PK22s

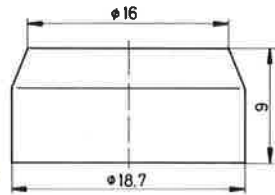


**Type**  
PK22s Brass, nickel-plated  
Code: 9-9-123-60460

## RINGS

### FGY187/9

for cap BA20d and BA20s

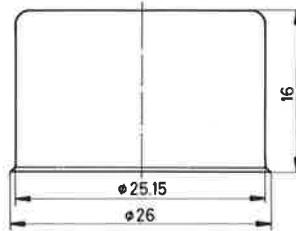


**Type**

FGY187/9 Brass, nickel-plated  
Code: 9-9-131-60570

### FGY252/16

for cap P28s

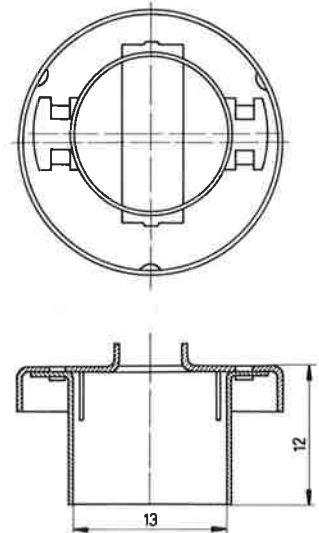


**Type**

FGY262/16 Brass, nickel-plated  
Code: 9-9-131-60550

### Ring

for cap G16tL

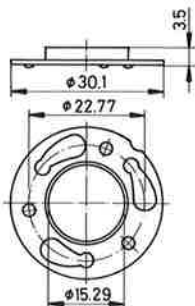


**Type**

Brass, nickel-plated  
Code: 9-8-823-10020

### P30

conforms to IEC 7004-44  
for cap S15s and S15d

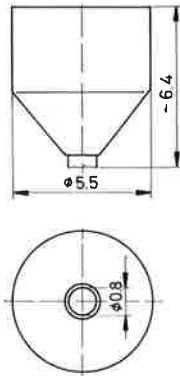


**Type**

P30 Brass, nickel-plated  
Code: 9-9-123-60500

## SHALLS

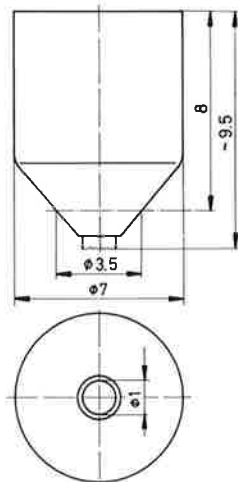
### SV5.5-6



**Type**  
SV5.5-6 Brass, nickel-plated  
Code: 9-8-813-10380

### SV7-8

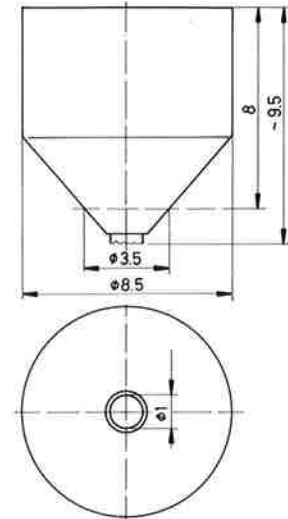
conforms to IEC 7004-80



**Type**  
SV7-8 Brass, nickel-plated  
Code: 9-8-813-10390

### SV8.5-8

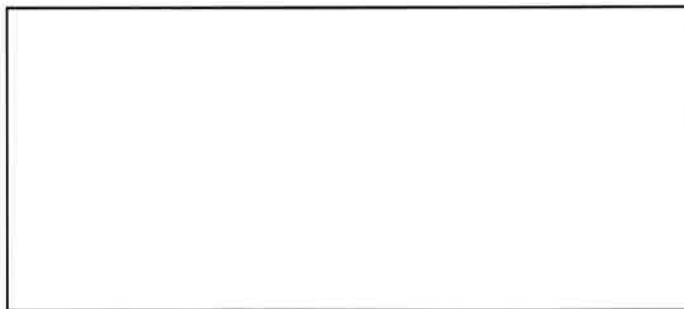
conforms to IEC 7004-81



**Type**  
SV8.5-8 Brass, nickel-plated  
Code: 9-8-813-10400

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