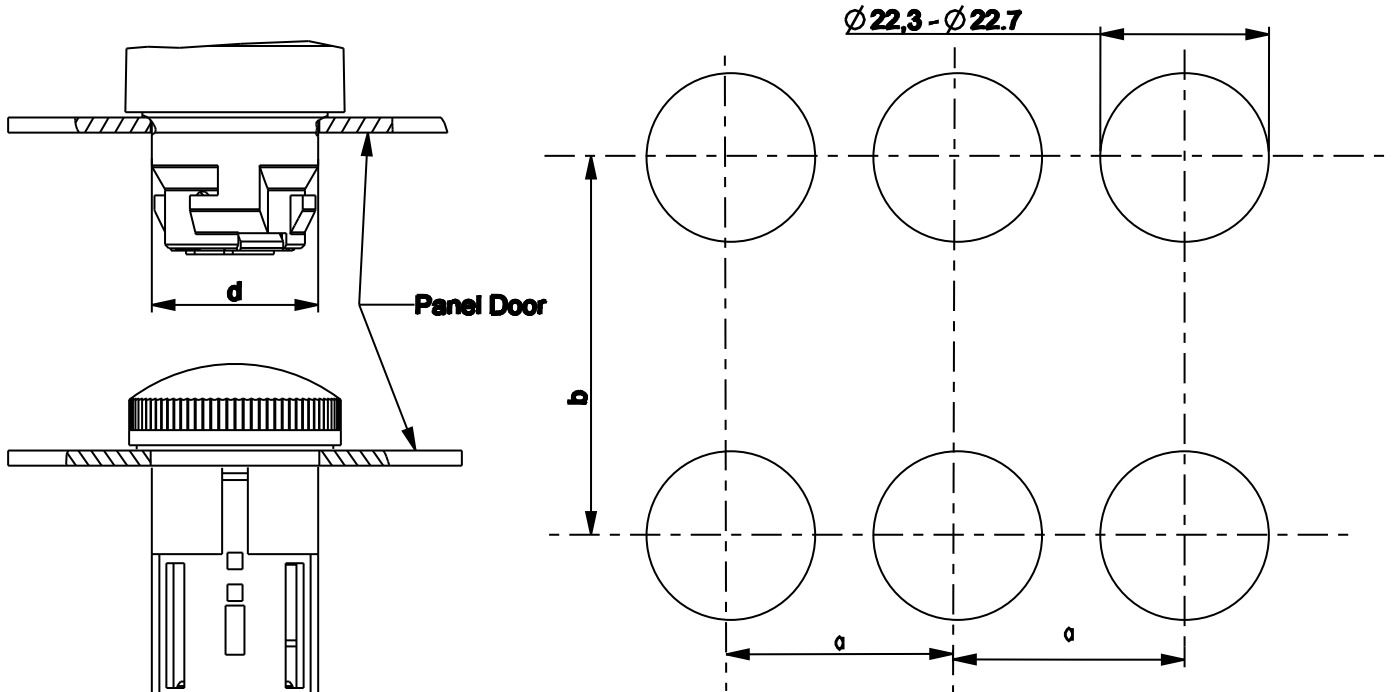


3SB5 Operating Instruction Manual



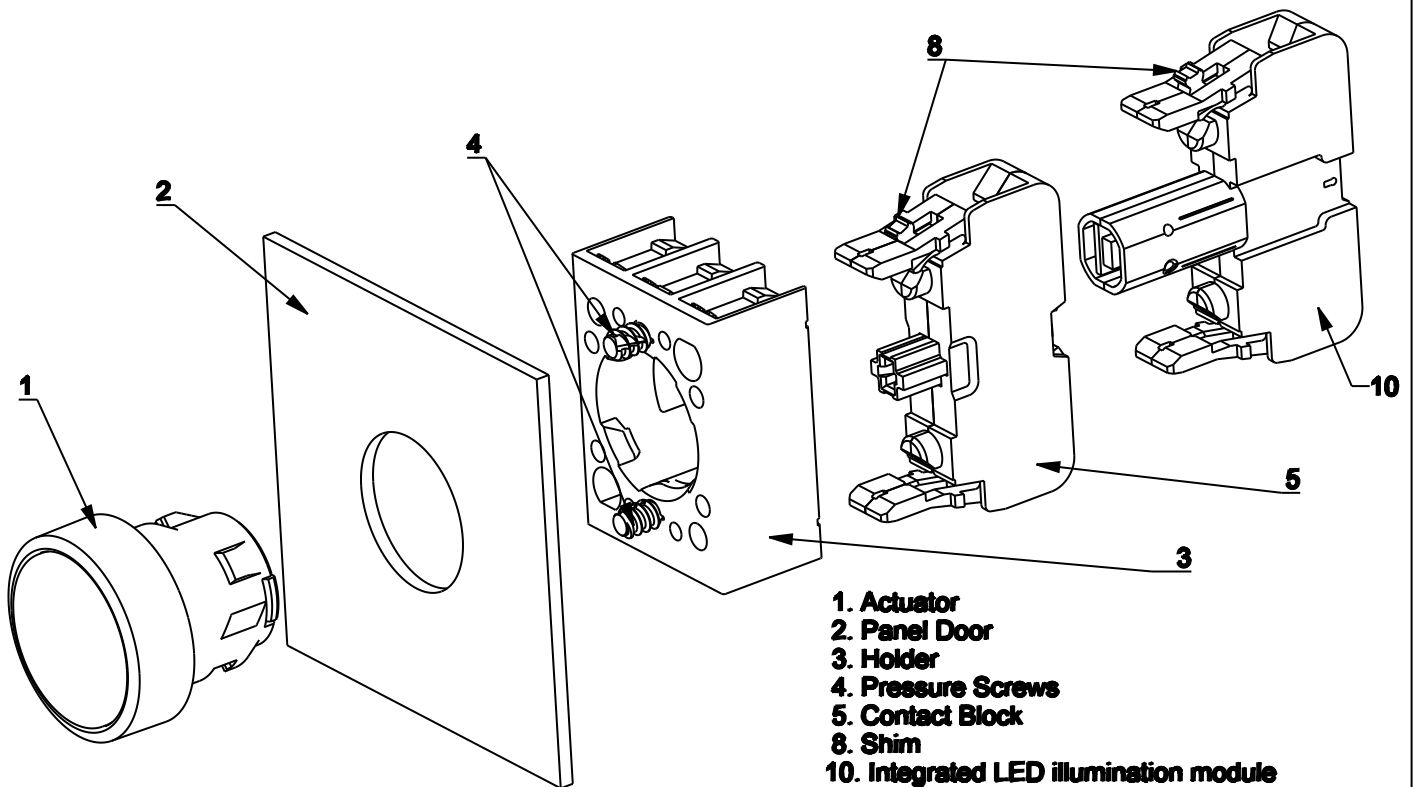
Warning :
 Hazardous Voltage can cause Electric Shock and burns.
 Disconnect Power before proceeding with any work on this equipment

3SB5 Mounting details for cylinder $\phi 22$ mm



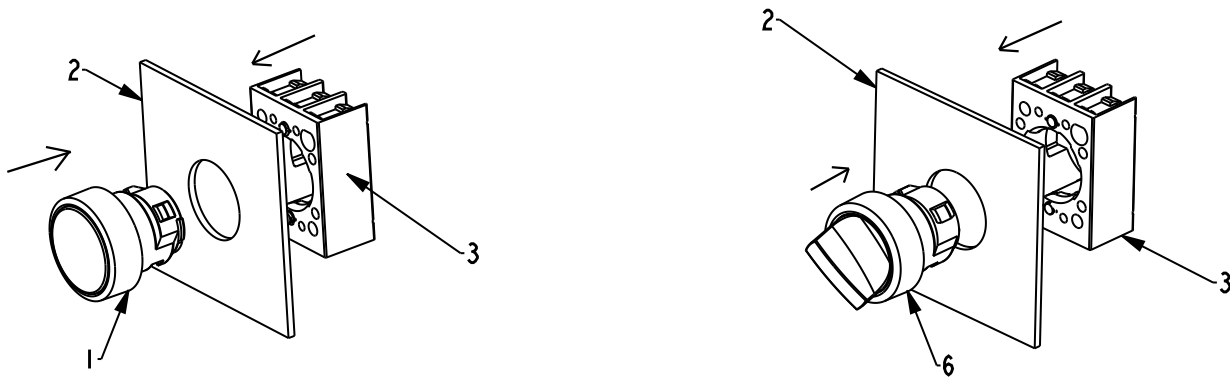
d = Cylinder diameter ($\phi 22$ mm)

- a = 30 mm (exceptions below)**
- a = 50 mm for Mushroom Actuators**
- a = 40 mm for Twin Push Button Actuators**
- b = 40 mm for Contact Blocks with 1 contact (exceptions below)**
- b = 50 mm for Mushroom Actuators and for Contact Blocks with 2 contacts**
- b = 60 mm for Twin Push Button Actuators**



1. Actuator
2. Panel Door
3. Holder
4. Pressure Screws
5. Contact Block
8. Shim
10. Integrated LED illumination module

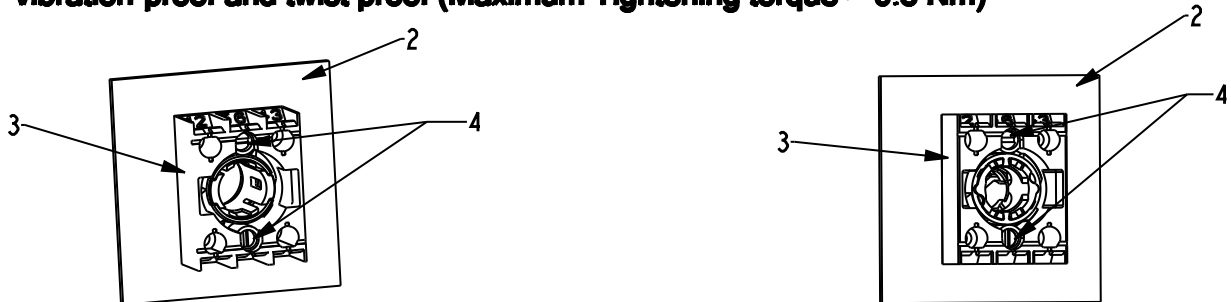
Step 1: Pass the Actuator (1/6) through the Cutout from the front into the Holder (3)



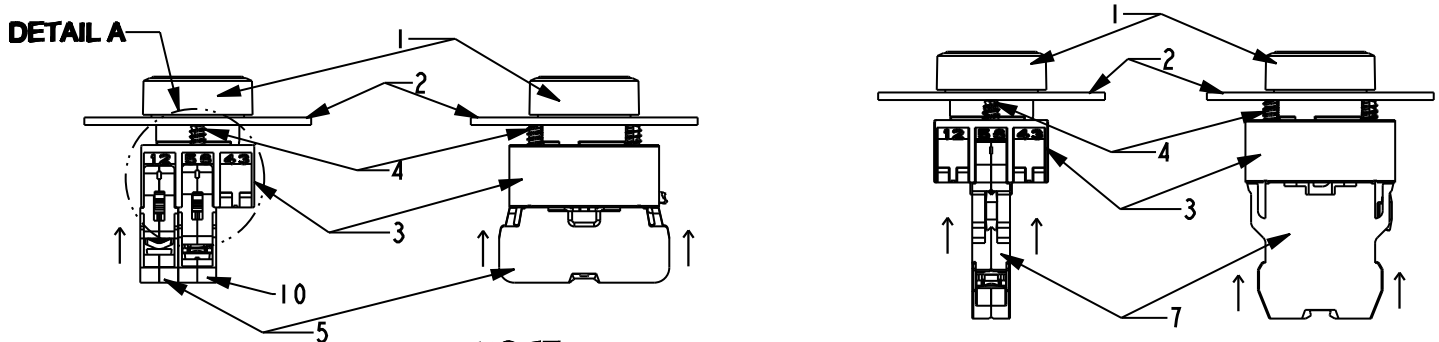
Step 2: Lock the Actuator (1/6) with Holder (3) by turning it Clockwise



Step 3: Fix Holder (3) by tightening two pressure screws (4) of the holder (3) to make it both vibration-proof and twist proof (Maximum Tightening torque = 0.8 Nm)



Step 4: Fit the Contact Block (5) or Lamp holder (7) by snapping into the Slots of Holder (3)

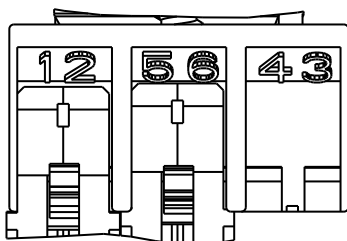


NOTE:

1NC/2NC Contact Block (5) should be assembled only in slot "12" (See DETAIL A) of Holder (3).

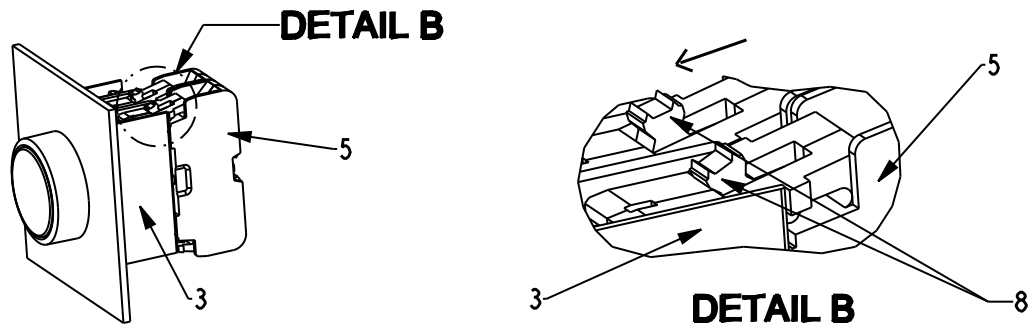
1NO/2NO Contact Block (5) should be assembled only in slot "43" (See DETAIL A) of Holder (3).

Lamp Holder (7) / Integrated LED (10) illumination modules should be assembled only in slot "56" (See DETAIL A) of the Holder (3).

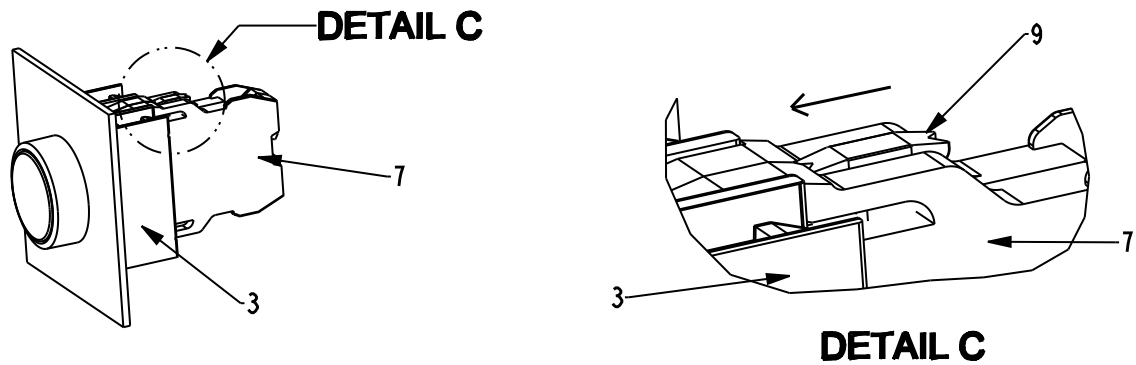


DETAIL A

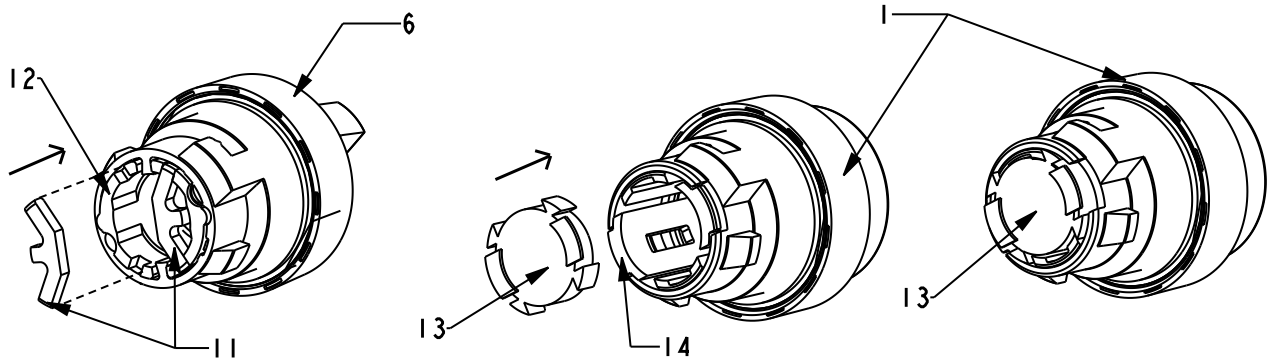
To remove Contact Block (5) from Holder (3), unlatch the snap-on feature by pressing the Shim (8) in the direction as shown in DETAIL B



To remove Lamp Holder (7) from Holder (3), unlatch the snap-on feature by pressing the Shim (9) in the direction as shown in DETAIL C



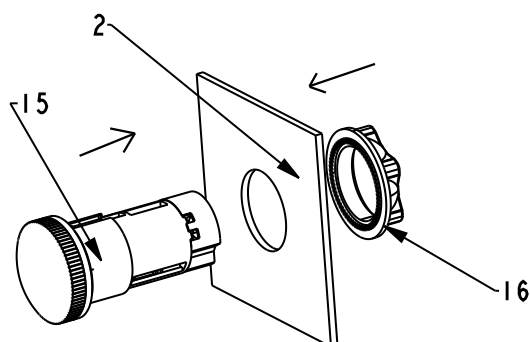
For Actuating Contact Blocks in the Middle pole of the holder:
 11 Accessory Thrust Pad (3SB5912-0AN) for Selector Actuators
 13 Accessory Thrust Cap (3SB5902-0AA) for PushButton Actuators



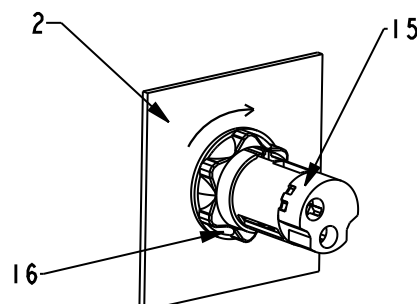
To mount and actuate the Contact Block (5) in the middle pole (Slot "56"; Refer DETAIL A) of the Holder (3):
 - Two numbers of Thrust Pads (11) should be press fitted into the slots of Sliders (12) of Selector Actuator (6).
 - One number of Thrust Cap (13) should be press fitted into the pusher (14) of PushButton Actuator (1).
CAUTION: Mounting the Contact Block in the middle pole is not possible for Luminous version.

Mounting of 3SB5 Compact Pilot light / 3SB5 Compact LED

Step 1: Pass the Compact Pilot Light / Compact LED (15) through the Cutout from the front into the Ring Holder (16)

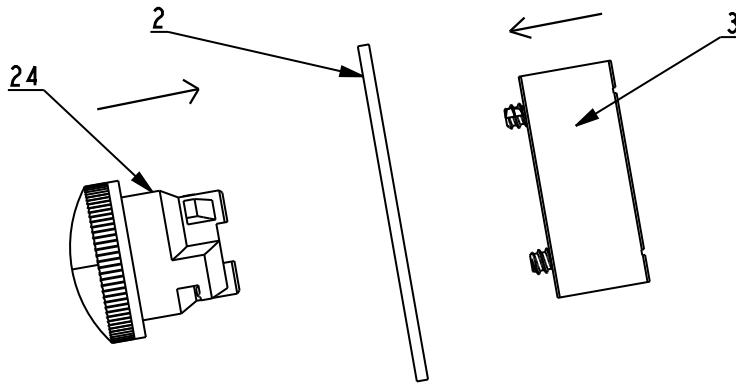


Step 2: Tighten the Compact Pilot Light / Compact LED (15) with Ring Holder (16) by turning Ring Holder (16) Clockwise

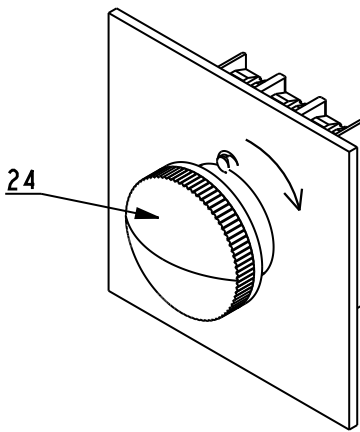


Mounting of 3SB5 Lens Assembly

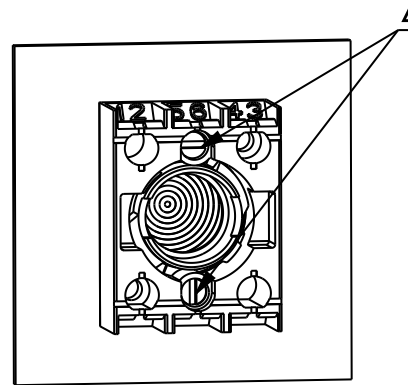
Step 1: Pass the Lens assembly (24) through the Cutout from the front into the Holder (3).



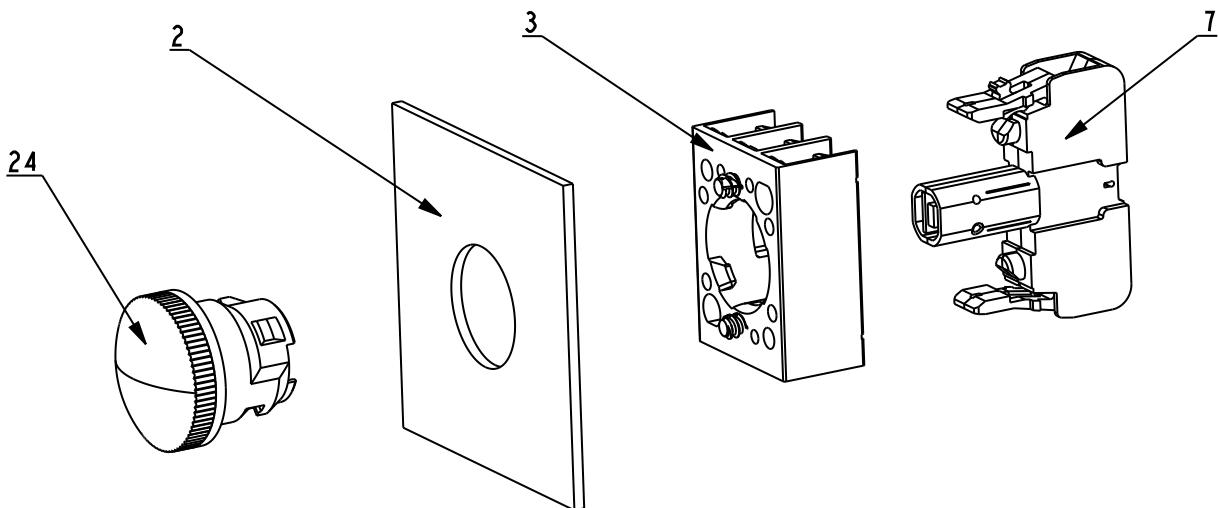
Step 2: Lock the Lens assembly (24) with Holder (3) by turning it Clockwise.



Step 3: Fix Holder (3) by tightening two pressure screws (4) of the Holder (3) to make it both vibration proof and twist proof (Maximum Tightning torque = 0.8Nm)

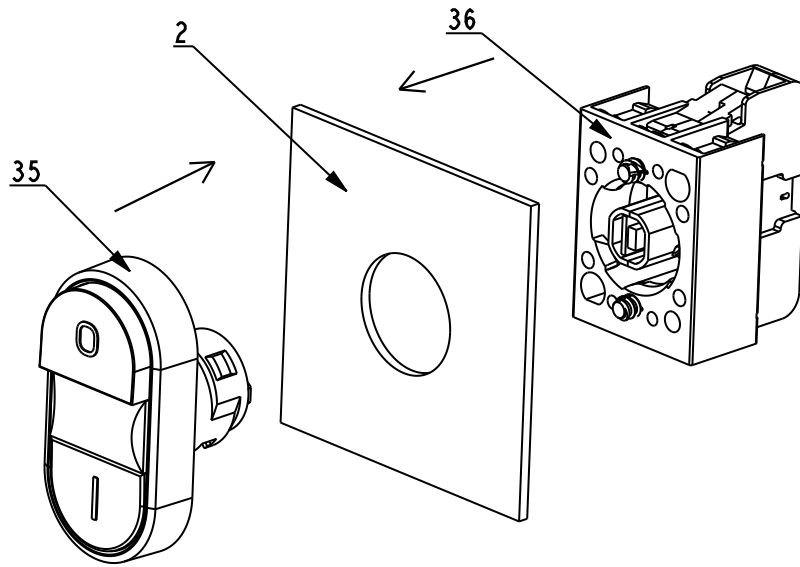


Step 4: Fit the Lamp Holder (7) by snapping into the slots (5-6) of the Holder (3).

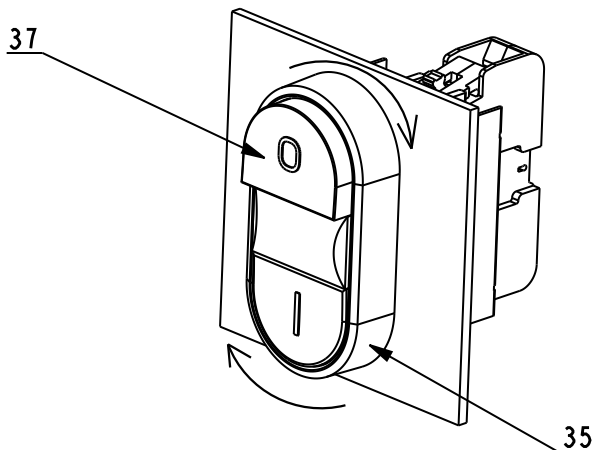


Mounting of 3SB5 Twin Push Button Actuator

Step 1: Pass Twin Push Button Actuator (35) through the cut out of the Panel (2) from front, into the Holder with Contact Blocks (36)



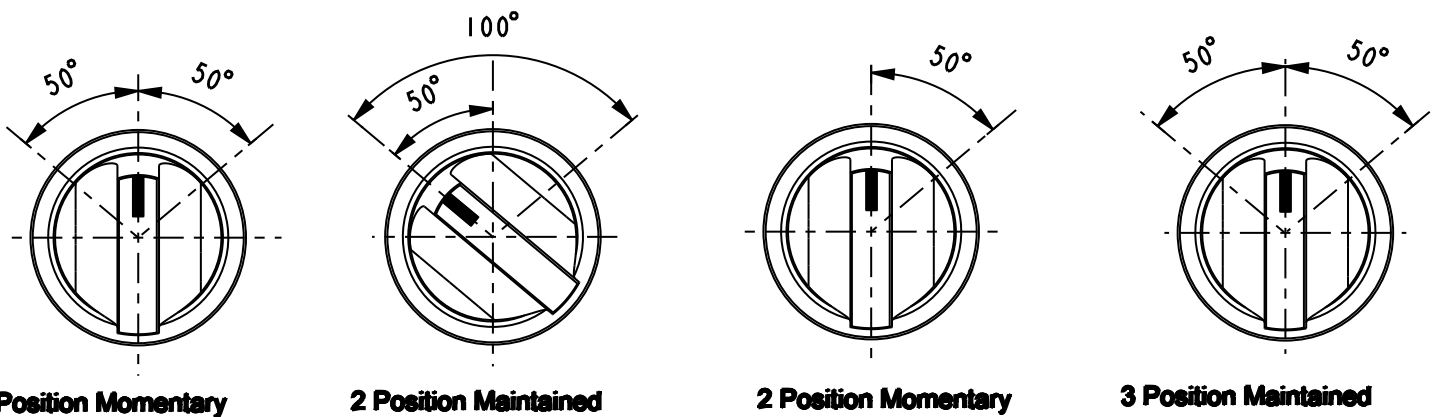
Step 2: Lock the Twin Push Button Actuator (35) into the Holder with Contact Blocks (36) by turning it clockwise.



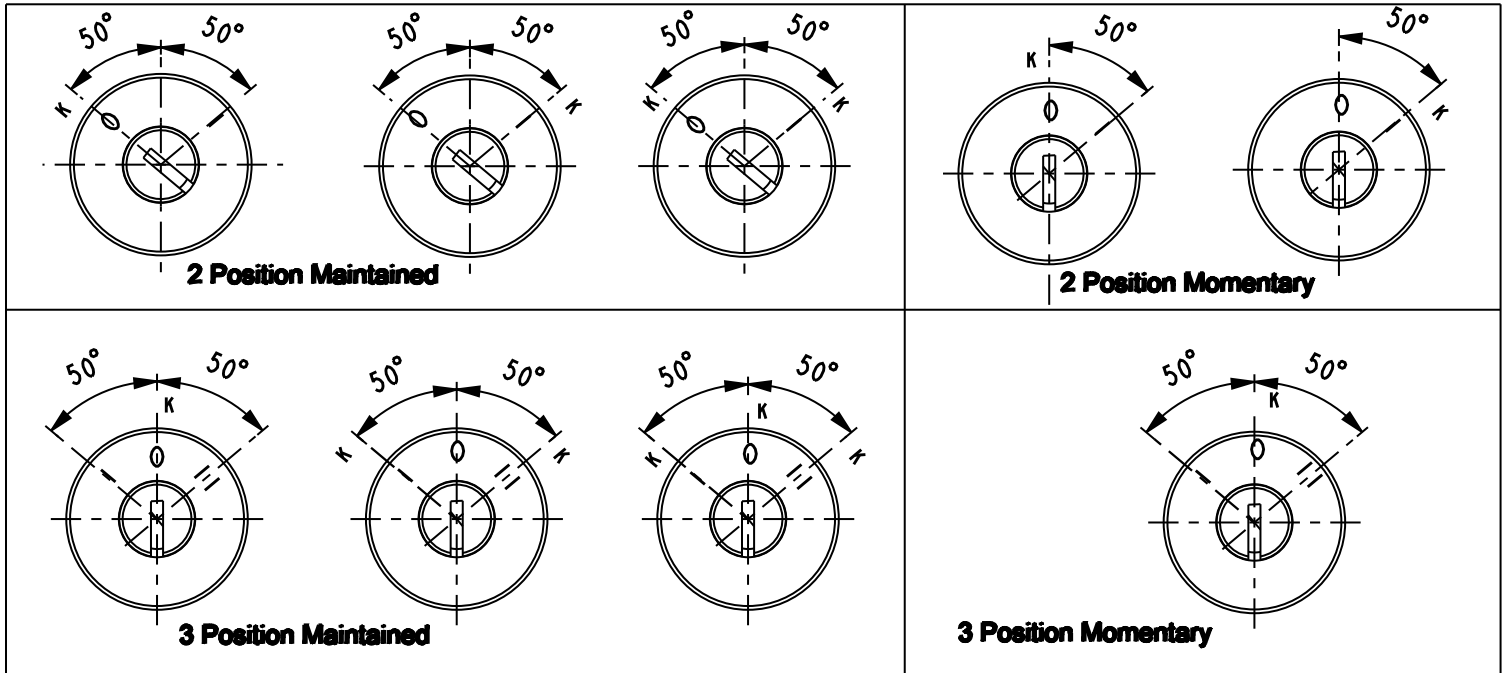
Caution:

1. The Twin Push button actuator (35) should be assembled in such a way that the Pusher with symbol '0' (37) of Twin Push button actuator (35) should be on the Top, & should actuate the NC Contact Block only.
2. For illuminated Twin Push Button Actuator, only the "Integrated LED illumination module" to be used for illumination.

3SB5 Selector Switch short knob positions



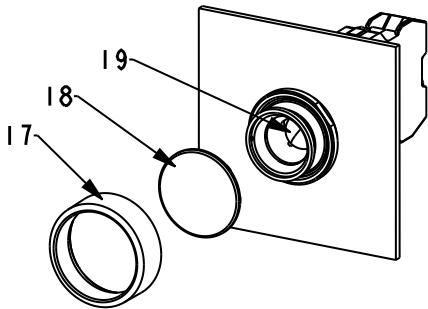
3SB5 Key Actuator's Key positions



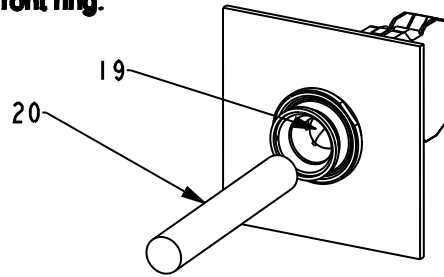
K- Key removal position.

Replacement of 3SB5 BA9s Lamp/LED in Illuminated Push Button Actuators

Step 1: Unscrew the Push Button Front ring (17) and then unscrew the Disc (18)

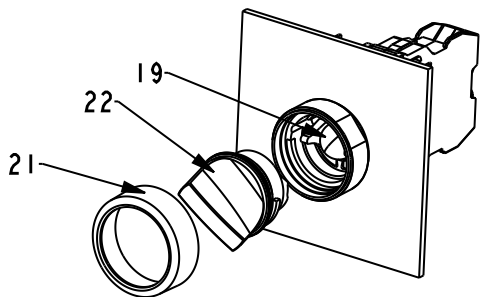


Step 2: Replace the Lamp (19) by holding and gripping with Accessory "Lamp grip (20)" (3SB5902-2AD). After replacing tighten back the Disc & PushButton Front ring.

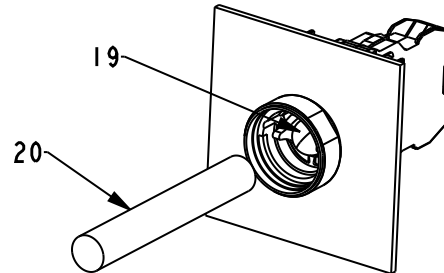


Replacement of 3SB5 BA9s Lamp/LED in Illuminated Selector Actuators

Step 1: Unscrew the Selector Front ring (21) and detach the Knob (22)

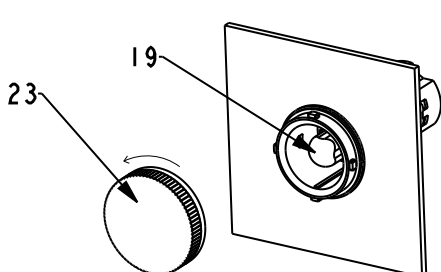


Step 2: Replace the Lamp (19) by holding and gripping with Accessory "Lamp grip (20)" (3SB5902-2AD). After replacing fit the knob (22) and tighten with screwing of Selector Front ring (21)

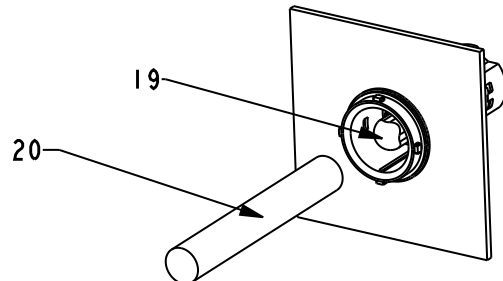


Replacement of 3SB5 BA9s Lamp/LED in Compact Illuminated modules

Step 1: Delatch the Lens (23) by turning it anticlockwise and detach.

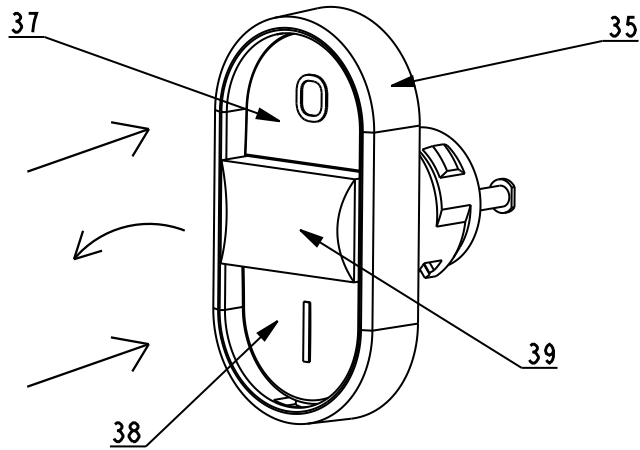


Step 2: Replace the Lamp (19) by holding and gripping with Accessory "Lamp grip (20)" (3SB5902-2AD). After replacing, fit the Lens (23) by turning it clockwise on the housing of Compact Illuminated module.

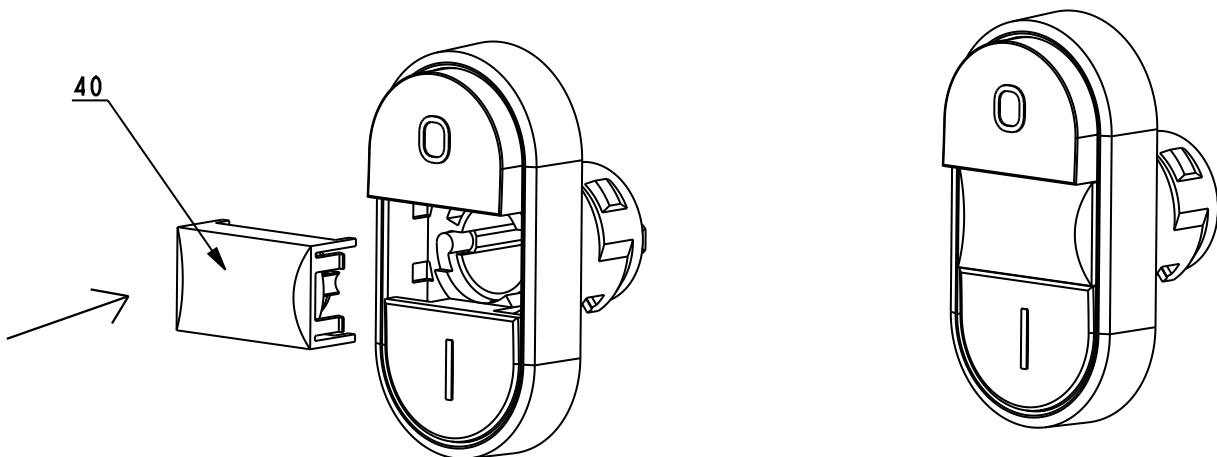


Replacement of "Indicator Cap" of Twin Push button with "Indicator lens (3SB5912-0BB)"

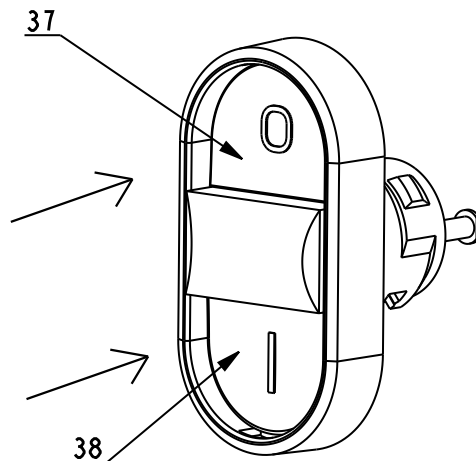
Step 1: Press both the pushers (37 & 38) simultaneously to their maximum travel with the fingers & then hold & pull the indicator cap (39) to remove it from the Twin Push button actuator (35).



Step 2: Press fit the "Indicator Lens", 40 (3SB5912-0BB) in between the Pushers (37 & 38), till the click sound is heard.



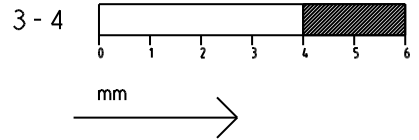
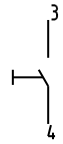
Step 3: Press both the Pushers (37 & 38) to their maximum travel to check their proper functioning.



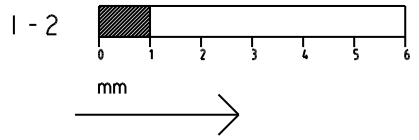
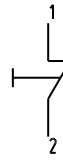
CIRCUIT DIAGRAM

CONTACT TRAVEL

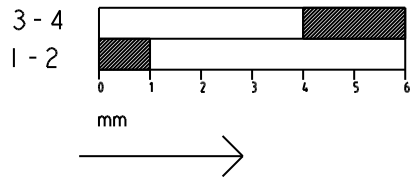
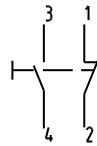
1NO



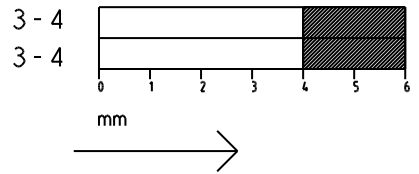
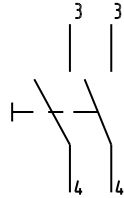
1NC



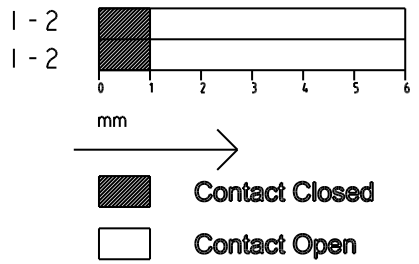
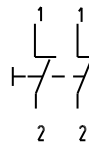
1NO+1NC



2NO



2NC

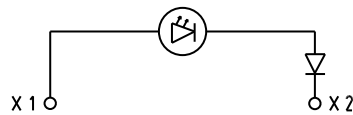


Contact Closed
Contact Open

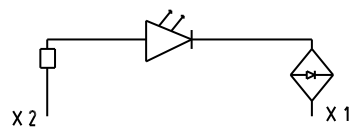
BA9s Lamp Holder



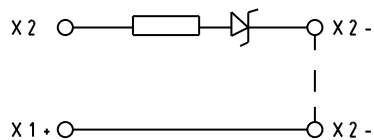
**BA9s LED Lamp Holder
24V AC/DC**



Integrated LED



**Voltage Reducer with
BA9s LED Lamp Holder
110V AC/DC, 240V AC**



General Guidelines:

For ease of viewing & operating, the mounting of the Holder (3) inside the panel door, should be in such a way that, the numbers on the Holder (3) and the Shim (8 or 9) are on the top side

While mounting the actuators (Push Button, Selector or Mushroom actuators) into the Holder (3), always hold the "Front ring" (17 or 21) only

Conductor Cross-sections (Screw terminals):

- i) Finely Stranded Cable with end Sleeves: 2 X 0.5 to 1.5 sqmm
- ii) Solid Conductor: 2 X 1 to 2.5 sqmm.
- iii) Solid Conductor with end sleeves: 2 X 0.5 to 0.75 sqmm.
- iv) Finely Stranded cable with end sleeves: 2 X 1 to 1.5 sqmm (for compact variants)

Terminal Screw:

- i) M3.5 for all variants except compact variants. Tightening torque: 0.8 to 1.2 Nm

- ii) M3 for Compact variants (Compact LED and Compact BA9s) Tightening torque: 0.8 Nm

Screwdriver blade width: 5.5 mm

Permissible ambient temperature range:

In Operation: -25 °C to +60 °C

Storage and transport conditions: -40 °C to +80 °C

Degree of Protection:

IP65 : in general (exceptions below)

IP67 : Push Buttons, illuminated push buttons, and Pilot lights with protective caps.

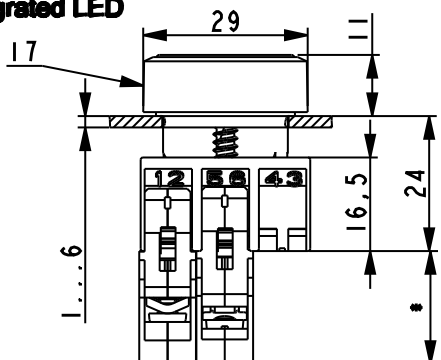
IP54 : Key switches (Safety Locks with key mounting)

IP20 : Terminals of contact modules and illumination modules (Contact blocks and lamp holder).

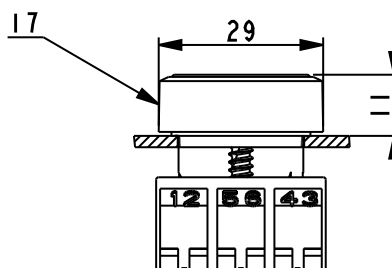
Supply input condition for the DC versions of 3SB5 Integrated LED and Compact LED illumination modules :

Input DC voltage: Filtered, Full wave, Bridge rectified.

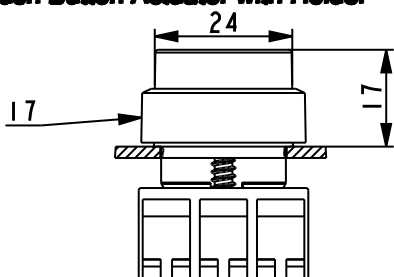
Normal Push Button Actuator with Holder, 1NC Contact Block and Integrated LED



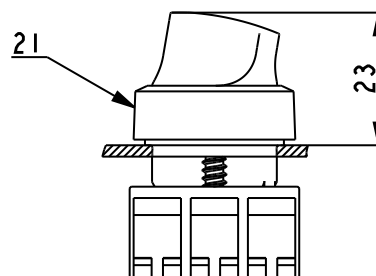
Normal Push Button Actuator with Holder



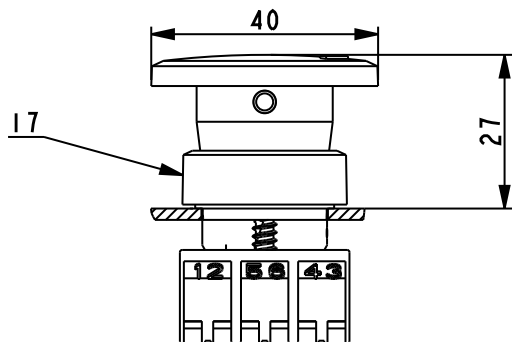
Raised Push Button Actuator with Holder



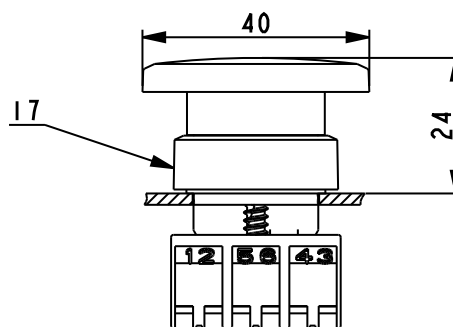
Selector Actuator with Holder



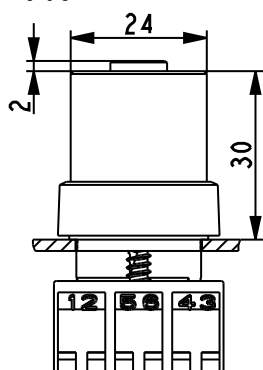
Mushroom Twist to release Actuator with Holder



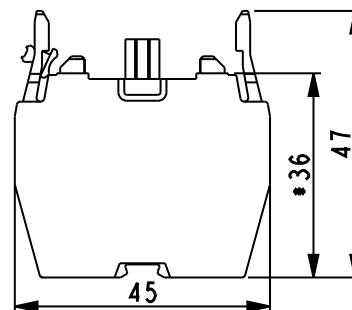
Mushroom Momentary Actuator with Holder



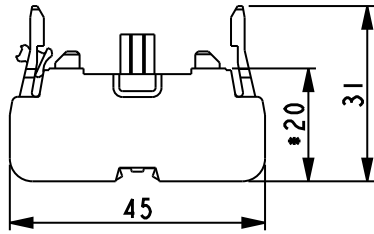
Key Actuator with Holder



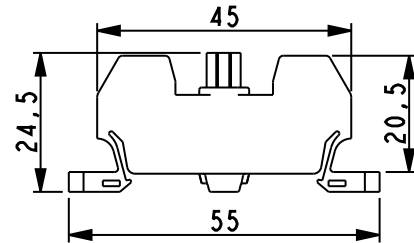
2NO/2NC/1NO+1NC Contact Block (Front Mounting)



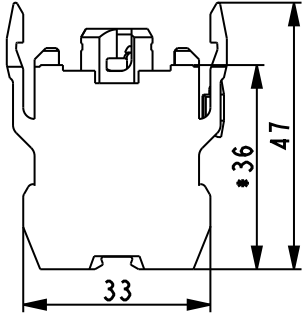
1NO/1NC Contact Block (Front Mounting)



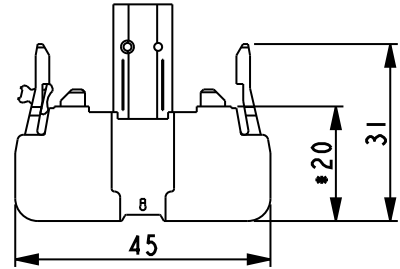
1NC/1NO Contact Block (Base Mounting)



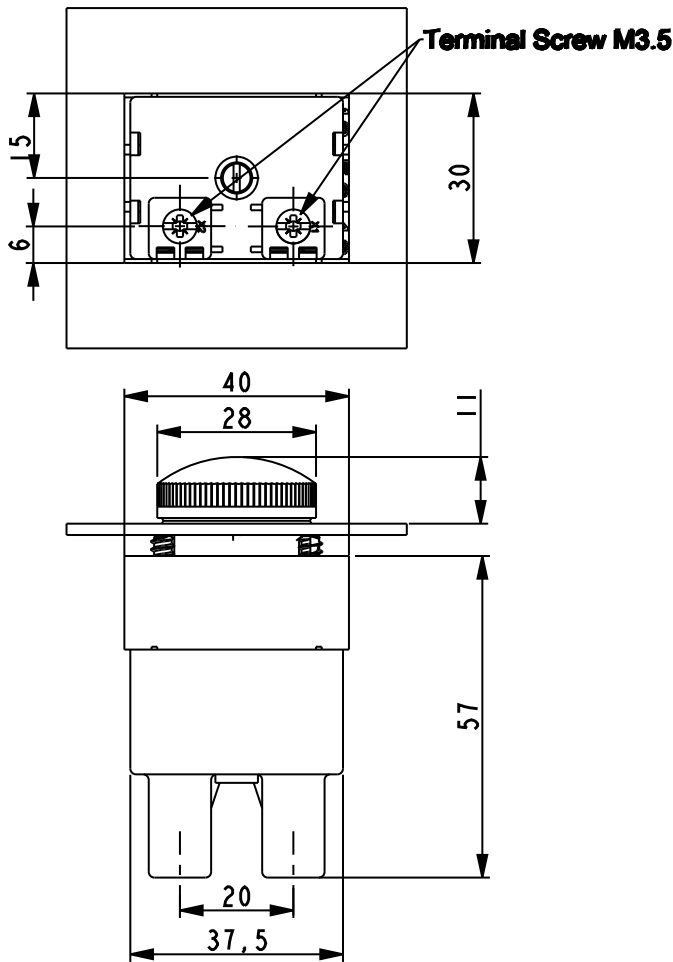
BA9s Lamp Holder



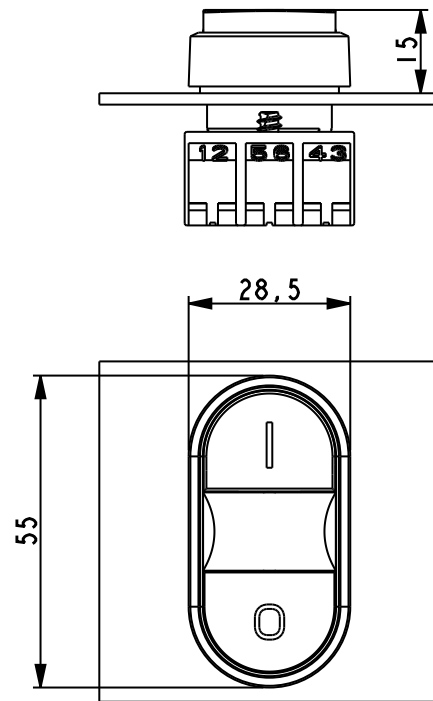
Integrated LED



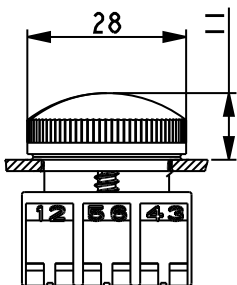
Wide Band LED with Holder and Lens Assembly



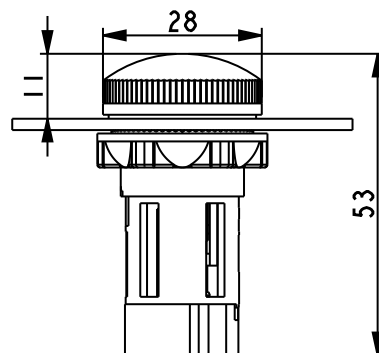
Twin Push Button Actuator with Holder



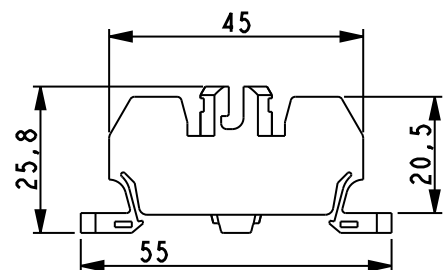
Lens assembly with Holder



Compact LED/BA9s Pilot Light illumination module

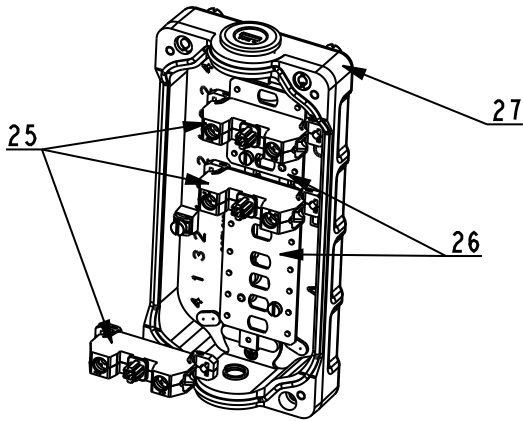


Lamp holder front connection

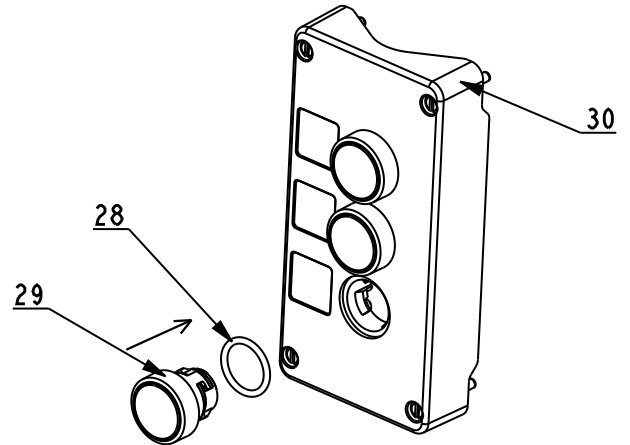


Assembly of 3SB5 Enclosures

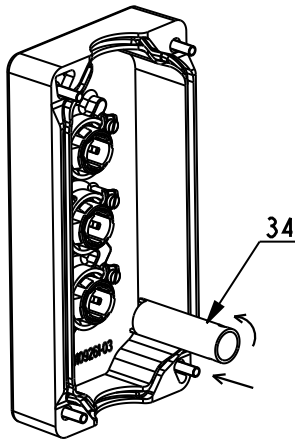
Step 1: Press fit the 'Front connection contact Blocks (25)' or 'Lamp Holders' (not shown) in the 'mounting plate (26)' slots of 'Lower housing assembly (27)'



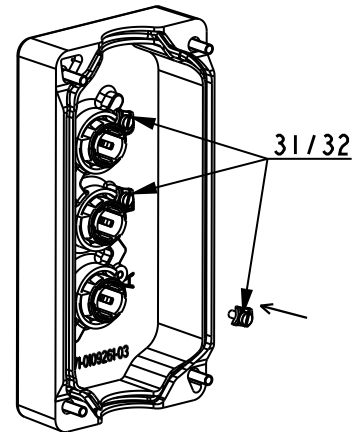
Step 2: Insert the 'O ring (28)' on the 'Actuator (29)'. And then insert that actuator inside the hole of 'Upper housing assembly (30)'.



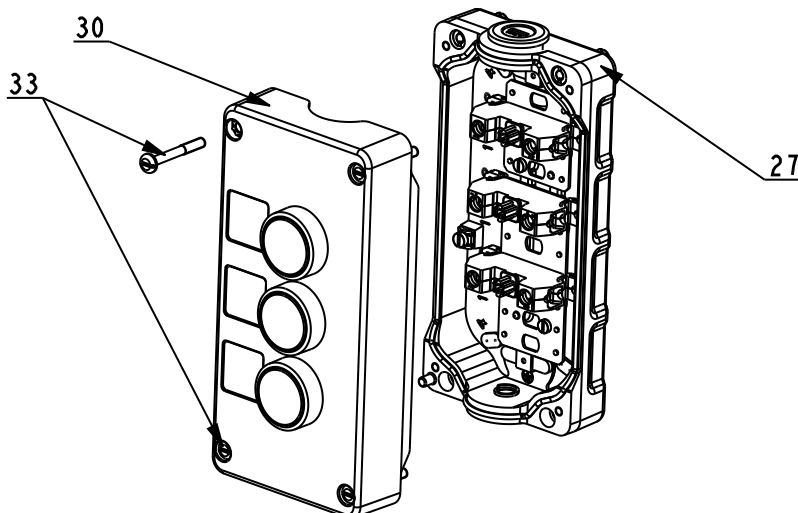
Step 3: By Pressing the actuator firmly from front, turn it anticlockwise from back, using the 'Mounting tool (3SB5902-2BX), 34'.



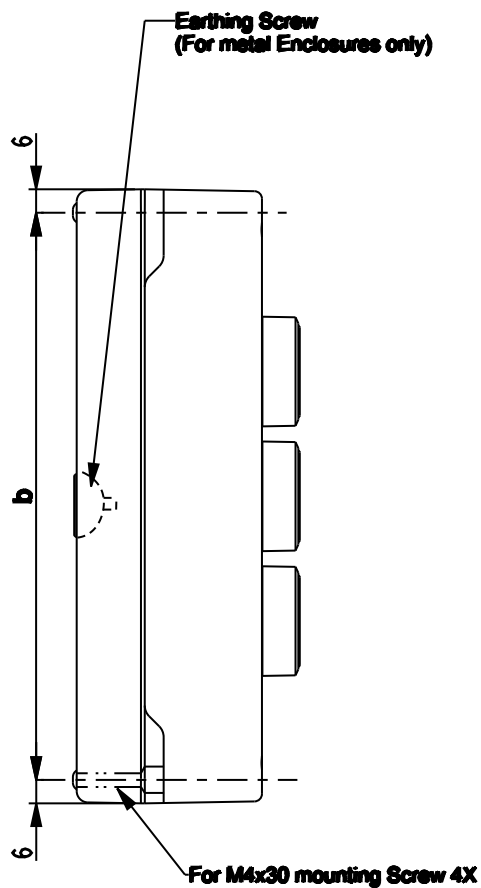
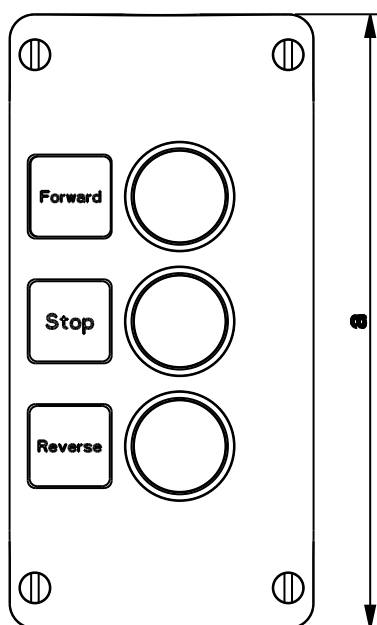
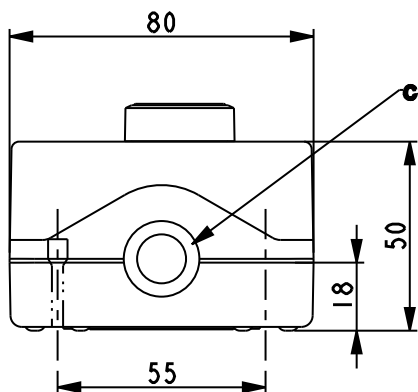
Step 4: Lock the actuator movement using Screw (31) in Plastic Push button enclosures or screw-washer assembly (32) in Metal Push button enclosures.



Step 5: Assemble the Lower housing assembly (27) and Upper housing assembly (30) and tighten the 4 screws (33) provided in Upper housing assembly (30) (Tightening torque = 1.5 Nm \pm 10%Nm)

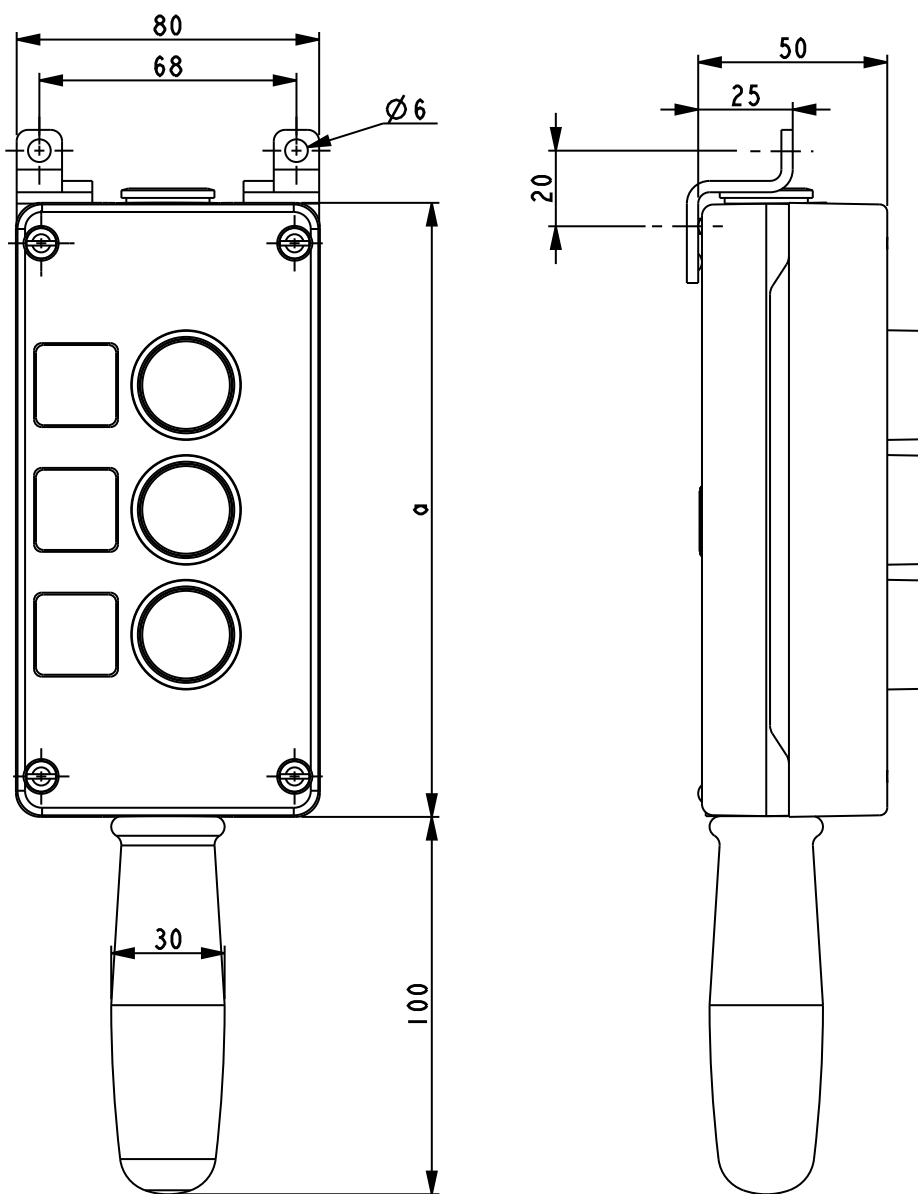


Push Button Enclosures (Plastic & Metal)



Numbers of command points	a	b	c
1	88	76	M20
2	124	112	M20
3	162	150	M20
4	200	188	M25
6	276	264	M25

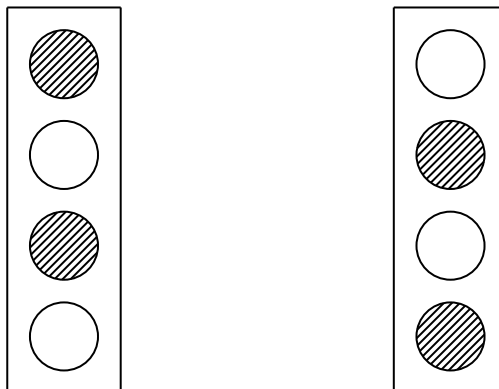
Pendant Push button Enclosures (Metal only)



Numbers of command points	a
2	124
3	162

Control Point configuration in Push Button stations using Front Connection Lamp Holder 230 V AC

Representation shown for 4 WAY



 = Control point / ON

Similar alternate control points to be used for 230 V AC in 2 way, 3 way & 6 way Push Button stations. (Metal / Plastic)

Disposal

Siemens Products are environment friendly, which predominantly consist of recyclable materials. For disposal we recommend disassembling and separation into following materials:
METALS : Segregate into Ferrous & Non Ferrous types for recycling through authorised dealer.

PLASTICS : Segregate as per material type for recycling through authorised dealer. Because of the long lifetime of Siemens products the disposal guidelines may be replaced by other national regulations when taking the product out of service. The local customer care service is available at any time to answer disposal-related questions

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Product development is a continuous process. Consequently the data indicated in this booklet is subject to change without prior notice.