## omron.

## Lighted Pushbutton Switch

## Control Units

## Assembled Lighted Pushbutton Switches and Separate-Unit Type 16-mm Cylindrical Series

- Lighted and non-lighted/convex versions
- Pushbutton/Indicator Types available
- Oil-resistant: complies with IP65 seal requirements


■ Accommodates panel thicknesses of .5 to 5 mm

- Available with screw/\#110 tab solder terminals

■ Snap-in, snap-out switch units simplify wiring and maintenance


## Ordering Information

$\qquad$
■ ASSEMBLEDTYPES
Lighted

| Operator | Circuit | Color | Part Number |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Round | Rectangular | Square |
| Pushbutton | Momentary | Red | A3GT-99C1-H1ND | A3GJ-99C1-H1ND | A3GA-99C1-H1ND |
|  |  | Green | A3GT-99C1-H1NG | A3GJ-99C1-H1NG | A3GA-99C1-H1NG |
|  |  | White | A3GT-99C1-H1NW | A3GJ-99C1-H1NW | A3GA-99C1-H1NW |
|  | Maintained | Red | A3GT-99D1-H1ND | A3GJ-99D1-H1ND | A3GA-99D1-H1ND |
|  |  | Green | A3GT-99D1-H1NG | A3GJ-99D1-H1NG | A3GA-99D1-H1NG |
|  |  | White | A3GT-99D1-H1NW | A3GJ-99D1-H1NW | A3GA-99D1-H1NW |
| Indicator |  | Red | M2GT-99A1-H1ND | M2GJ-99A1-H1ND | M2GA-99A1-H1ND |
|  |  | Green | M2GT-99A1-H1NG | M2GJ-99A1-H1NG | M2GA-99A1-H1NG |
|  |  | White | M2GT-99A1-H1NW | M2GJ-99A1-H1NW | M2GA-99A1-H1NW |

[^0]
## - ASSEMBLED TYPES continued

## Non-lighted/Convex

| Operator | Circuit | Color | Part Number |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Round | Rectangular | Square |
| Pushbutton | Momentary | Red | A3GT-99C0-R | A3GJ-99C0-R | A3GA-99C0-R |
|  |  | Yellow | A3GT-99C0-Y | A3GJ-99C0-Y | A3GA-99C0-Y |
|  |  | Green | A3GT-99C0-G | A3GJ-99C0-G | A3GA-99C0-G |
|  |  | Black | A3GT-99C0-B | A3GJ-99C0-B | A3GA-99C0-B |
|  | Maintained | Red | A3GT-99D0-R | A3GJ-99D0-R | A3GA-99D0-R |
|  |  | Yellow | A3GT-99D0-Y | A3GJ-99D0-Y | A3GA-99D0-Y |
|  |  | Green | A3GT-99D0-G | A3GJ-99D0-G | A3GA-99D0-G |
|  |  | Black | A3GT-99D0-B | A3GJ-99D0-B | A3GA-99D0-B |
| Mushroom Cap | Momentary | Red | A3GT-99C2-R | A3GJ-99C2-R | A3GA-99C2-R |
|  | Maintained | Red | A3GT-99D2-R | A3GJ-99D2-R | A3GA-99D2-R |

Note: Above switches offer double pole, double throw NO/NC contacts with screw terminals; lighted type pushbuttons offer neon lamps at 110 VAC; and all are fully assembled.

## SEPARATE TYPE PUSHBUTTON UNITS

## Lighted Switches

Round
Rectangular


Structure of pushbutton


Note: The legend plate and reflective plunger are bonded together on the IP65 Oil-resistant type only.


Snap-in switch unit greatly improves wiring efficiency. Simply insert the switch unit for complete connection. Press the part indicated PUSH on the switch unit and pull to remove.
Align white marks to insert.

| Switch Type | Degree of Sealing | Color | Part Number |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Round | Rectangular | Square |
| LED | Dust Proof IP40 | Red | A3BT-500R | A3BJ-500R | A3BA-500R |
|  |  | Yellow | A3BT-500Y | A3BJ-500Y | A3BA-500Y |
|  |  | Green* | A3BT-500GY | A3BJ-500GY | A3BA-500GY |
|  |  | White | A3BT-500W | A3BJ-500W | A3BA-500W |
|  | Oil-resistant IP65 | Red | A3BT-510R | A3BJ-510R | A3BA-510R |
|  |  | Yellow | A3BT-510Y | A3BJ-510Y | A3BA-510Y |
|  |  | Green* | A3BT-510GY | A3BJ-510GY | A3BA-510GY |
|  |  | White | A3BT-510W | A3BJ-510W | A3BA-510W |
| Incandescent Lamps | IP40 | Green* | A3BT-500G | A3BJ-500G | A3BA-500G |
|  |  | Blue | A3BT-500A | A3BJ-500A | A3BA-500A |
|  | Oil-tight IP65 | Green* | A3BT-510G | A3BJ-510G | A3BA-510G |
|  |  | Blue | A3BT-510A | A3BJ-510A | A3BA-510A |
| Neon Lamps | Dust Proof IP40 | Orange | A3GT-500D | A3GJ-500D | A3GA-500D |
|  |  | Green | A3GT-500GN | A3GJ-500GN | A3GA-500GN |
|  |  | White | A3GT-500WN | A3GJ-500WN | A3GA-500WN |
|  | Oil-resistant IP65 | Orange | A3GT-510D | A3GJ-510D | A3GA-510D |
|  |  | Green | A3GT-510GN | A3GJ-510GN | A3GA-510GN |
|  |  | White | A3GT-510WN | A3GJ-510WN | A3GA-510WN |

Note: 1. Pushbutton units, lamps (lighted type only), case, and socket must be ordered separately.
Example: Pushbutton unit A3BJ-500R, Case A3GJ-6011-1, Socket A3G-4011.
2. Illumination: red, yellow, and white use either LED or incandescent lamps.
3. With the exception of green, all pushbutton units can be used with either LED or incandescent lamps. To avoid an undesirable hue change with green pushbutton units, use a green LED lamp with a green LED pushbutton and an incandescent lamp with a green incandescent pushbutton.

## Non-lighted/Convex Switches



| Switch Type | Degree of Sealing | Color | Part Number |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Round | Rectangular | Square |  |
| Convex | Dust Proof IP40 | Red | A3BT-502R | A3BJ-502R | A3BA-502R |  |
|  |  | Yellow | A3BT-502Y | A3BJ-502Y | A3BA-502Y |  |
|  |  | Green | A3BT-502G | A3BJ-502G | A3BA-502G |  |
|  |  | White | A3BT-502W | A3BJ-502W | A3BA-502W |  |
|  |  | Blue | A3BT-502A | A3BJ-502A | A3BA-502A |  |
|  |  | Black | A3BT-502B | A3BJ-502B | A3BA-502B |  |
|  | Oil-resistant IP65 | Red | A3BT-512R | A3BJ-512R | A3BA-512R |  |
|  |  | Yellow | A3BT-512Y | A3BJ-512Y | A3BA-512Y |  |
|  |  | Green | A3BT-512G | A3BJ-512G | A3BA-512G |  |
|  |  | White | A3BT-512W | A3BJ-512W | A3BA-512W |  |
|  |  | Blue | A3BT-512A | A3BJ-512A | A3BA-512A |  |
|  |  | Black | A3BT-512B | A3BJ-512B | A3BA-512B |  |
| Lamps |  |  |  |  |  | Neon |


| Type |  | Color | Part Number |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 5 VDC | 12 VDC | 24 VDC |
| LED Light |  |  | Red | A3B-005R | A3B-012R | A3B-024R |
|  |  | Yellow | A3B-005Y | A3B-012Y | A3B-024Y |
|  |  | Green | A3B-005G | A3B-012G | A3B-024G |
|  |  | White | A3B-005W | A3B-012W | A3B-024W |
| Incandescent Lamp |  |  | 14 V | 28 V |  |
|  |  |  | A3B-014 | A3B-028 |  |
| Neon Lamp | Pushbutton Color | Lamp Color | 110 V | 220 V |  |
|  | White or Orange | Orange | A3B-H1ND | A3B-H2ND |  |
|  | Green | Green | A3B-H1NG | A3B-H2NG |  |

## Cases



## Sockets

|  | Contact Ratings |  | Terminal Type | Part Number |
| :---: | :---: | :---: | :---: | :---: |
|  | General Purpose Loads | SPDT | Solder | A3G-4011 |
|  |  | DPDT | Solder | A3G-4021 |
|  |  |  | Screw | A3G-4024 |
|  | Microloads | SPDT | Solder | A3G-4111 |
|  |  | DPDT | Solder | A3G-4121 |
|  |  |  | Screw | A3G-4124 |
|  | Indicator | - | Solder | M2G-4901 |
|  |  | - | Screw | M2G-4904 |

Note: 1. Pushbutton units, lamps (lighted type only), case, and socket must be ordered separately.
Example: Pushbutton unit A3BJ-500R, Case A3GJ-6011-1, Socket A3G-4011.
2. Illumination: red, yellow, and white use either LED or incandescent lamps.


Accessories

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  | Remarks | Part Number |  |  |
| Description | Round | Rectangular | Square |  |
| Switch Guard | Cannot be used with dust cover. | A3BT-5050 | A3BJ-5050 | A3BA-5050 |
| Dust Cover | Cannot be used with switch cover. | A3BT-5060 | A3BJ-5060 | A3BA-5060 |
| Spring Mounting Clip <br> for snap-in mounting | Cannot be used with mounting nut. <br> Recommended panel thickness is 0.5 to 3.5 mm | A3B-3001 |  |  |
| Panel Plug | Can be plugged into pre-cut panel holes for <br> future expansion. | A3BT-3003 | A3BJ-3003 | A3BA-3003 |
| Screw Fitting | Convenient for ganged installation. Do not overtighten. | A3B-3004 |  |  |
| Extractor | Convenient for extracting pushbutton switches. | A3PJ-5080 |  |  |


| Description | Remarks | Type | Opacity | Part Number |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Round | Rectangular | Square |
| Legend Panel | A single legend panel (transparent) is included with standard products. | Dust Proof | Milky | A3BT-5201 | A3BJ-5201 | A3BA-5201 |
|  |  | IP40 | Transparent | A3BT-5202 | A3BJ-5202 | A3BA-5202 |
|  |  | Oil-resistant IP65 | - | A3BT-5203 | A3BJ-5203 | A3BA-5203 |


| Description | Remarks | Classification | Terminal Type | Part Number |
| :--- | :--- | :--- | :--- | :--- |
| Switch Unit | Replacement part. | General purpose loads | Solder | A3G-3011 |
|  |  | Microloads | Solder | A3G-3111 |
|  |  | Dummy | - | A3G-3000 |

## Specifications

$\qquad$
SEPARATE TYPE

## Contact Ratings

| Type | AC Resistant Load | DC Resistant Load |
| :--- | :--- | :--- |
| eneral purpose load | 250 VAC 3 A | 30 VDC 3 A |
|  | 125 VAC 5 A | - |
| Microload $^{*}$ | 125 VAC 0.1 A | 30 VDC 0.1 A |

* Minimum applicable load is 1 mA at 5 VDC.


## LED Ratings

| Rated Voltage | Rated Current | Operating Voltage |
| :--- | :--- | :--- |
| 5 VDC | 30 mA | 5 VDC $\pm 5 \%$ |
| 12 VDC | 15 mA | $12 \mathrm{VDC} \pm 5 \%$ |
| 24 VDC | 10 mA | $24 \mathrm{VDC} \pm 5 \%$ |

## Incandescent Lamp Ratings

| Rated Voltage | Rated Current | Operating Voltage |
| :--- | :--- | :--- |
| 14 V | 40 mA | 12 V |
| 28 V | 24 mA | 24 V |

## Neon Lamp Ratings

| Rated Voltage | Rated Current | Operating Voltage |
| :--- | :--- | :--- |
| 110 VAC | 1.5 mA | 100 VAC $\pm 10 \%$ |
| 220 VAC | 1.5 mA | 200 VAC $\pm 10 \%$ |


| Operating Temperature | Operating Humidity | Storage Temperature |
| :--- | :--- | :--- |
| $-10^{\circ}$ to $55^{\circ} \mathrm{C}$ (with no icing) | 35 to $85 \%$ RH | $-25^{\circ}$ to $65^{\circ} \mathrm{C}$ |

Note: All switch models have a built-in current-limiting resistor (for use with LED).

## ASSEMBLED SWITCHES

## Construction Data

| Termination | PC board terminals |
| :--- | :--- |
| Mounting style | Nut mounting; snap-in panel mounting (Pushbutton) |
| Packaging method | Carton |

## Characteristic Data

## ■ ASSEMBLED SWITCHES

| Pushbutton unit color | LED - Lighted |  | Red, Yellow, Green, White |
| :---: | :---: | :---: | :---: |
|  | Incandescent lamp - Lighted |  | Red, Yellow, Green, White, Blue |
|  | Neon lamp - Lighted |  | Red, Green, White |
|  | Non-lighted/Convex |  | Red, Yellow, Green, White, Blue, Black |
| Switch unit color |  |  | Black |
| Contact form | Pushbutton, Key, Selector |  | SPDT or DPDT |
| Resistive load | Pushbutton, Key, Selector |  | $3 \mathrm{~A}, 250 \mathrm{VAC} / 5 \mathrm{~A}, 125 \mathrm{VAC}$; 3 A, 30 VDC |
| Service life - Pushbutton | Mechanical | Momentary action | $1,000 \times 10^{3}$ operations min. |
|  |  | Alternating action | $200 \times 10^{3}$ operations min. |
|  | Electrical |  | $100 \times 10^{3}$ operations min. |
| Service life - Key | Mechanical |  | $200 \times 10^{3}$ operations min. <br> Key insertion/removal: $10 \times 10^{3}$ times min |
|  | Electrical |  | $100 \times 10^{3}$ operations min. |
| Service life - Selector | Mechanical |  | $200 \times 10^{3}$ operations min. |
|  | Electrical |  | $100 \times 10^{3}$ operations min. |
| Accessories - Pushbutton |  |  | Switch guard, dust cover, spring mounting clip, panel plug, screw fitting, legend plate, extractor |
| Accessories - Key |  |  | Panel plug, screw fitting |
| Accessories - Selector |  |  | Panel plug, screw fitting |
| Series product |  |  | Microload version, socket terminal |

Note: Data shown are of initial value.

## NON-LIGHTED/CONVEX PUSHBUTTON SWITCHES

| Allowable operating frequency | Mechanical | Momentary action | 120 operations / min. max. |
| :---: | :---: | :---: | :---: |
|  |  | Alternating action | 60 operations / min. max. |
|  | Electrical |  | 20 operations / min. max. |
| Insulation resistance |  |  | $100 \mathrm{M} \Omega \mathrm{min}$. (at 500 VDC ) |
| Dielectric strength |  |  | $1,000 \mathrm{VAC}, 50 / 60 \mathrm{~Hz}$ for 1 minute between terminals of same polarity <br> 2,000 VAC, $50 / 60 \mathrm{~Hz}$ for 1 minute between terminals of different polarity and also between each terminal and ground* |
| Vibration | Malfunction |  | 10 to $55 \mathrm{~Hz}, 1.5 \mathrm{~mm}$ double amplitude |
| Shock | Durability |  | Approx. $500 \mathrm{~m} / \mathrm{s}^{2}$ ( 50 G ) |
|  | Malfunction |  | Approx. $150 \mathrm{~m} / \mathrm{s}^{2}(15 \mathrm{G})$ |
| Service life | Mechanical | Momentary operation | 2,000,000 operations min. |
|  |  | Alternating operation | 200,000 operations min. |
|  | Electrical |  | 100,000 operations min. |
| Degree of protection (IEC) |  |  | IP40/IP65 (Oil-resistant) |
| Weight |  |  | Approx. 13 g (for lighted type 2-contact switches with solder terminals) |

* With LED and incandescent lamp not mounted.

OPERATING CHARACTERISTICS

|  | Non-lighted/Convex Pushbutton Switches |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  | Dust Proof IP40 |  | Oil-resistant IP65 |  |
| Features | SPDT | DPDT | SPDT | DPDT |
| Operating force (OF) max. | 250 G | 450 G | 300 G | 500 G |
| Releasing force (RF) min. | 30 G | - | - | - |
| Total Travel (TT) | Approx. 3 mm | - | - | - |
| Pretravel (PT) max. | 2.5 mm | - | - | - |
| Lock stroke (LTA) min. ${ }^{*}$ | 0.5 mm | - | - | - |
| Set position (SP) | - | - | - | - |

* Lock stroke is only for alternating operation.


## Dimensions

Unit: mm (inch)

## ASSEMBLED SWITCH

## Square with screw terminals



Panel cutout
(top view)


Note: The above panel cutout diagram applies when the X dimension (the space between terminals of different polarity) is maintained at 3.5 mm . When the X dimension is not required, switches may be mounted at 24.5 mm for the general-purpose pushbutton type, or at 26 mm for the rectangular concave type.

## LIGHTED TYPE PUSHBUTTON SWITCHES

## Rectangular (A3GJ)

 with solder terminals

Panel cutout
(top view)


Note: 1. Recommended panel thickness is 0.5 to 5 mm .
2. When using the spring mounting clip for snap-in mounting, the panel cutout becomes $16.2{ }_{0}^{+0.3} \mathrm{~mm}$ in diameter.

## LIGHTED TYPE PUSHBUTTON SWITCHES continued

Rectangular (A3GJ) with screw terminals


Panel cutout (top view)


Note: The above panel cutout diagram applies when the X dimension (the space between terminals of different polarity) is maintained at 3.5 mm . When the $X$ dimension is not required, switches may be mounted at 24.5 mm for the general-purpose pushbutton type, or at 26 mm for the rectangular concave type.

Square (A3GA) with solder terminals


Dimensions for models with screw terminals have been omitted. Refer to the dimensions for the rectangular type.

Panel cutout
(top view)


Note: 1. Recommended panel thickness is 0.5 to 5 mm .
2. When using the spring mounting clip for snap-in mounting, the panel cutout becomes $16.2{ }_{0}^{+0.3} \mathrm{~mm}$ in diameter, and recommended panel thickness is 0.5 to 3.5 mm .

Round (A3GT) with solder terminals


Panel cutout
(top view)


Note: 1. Recommended panel thickness is 0.5 to 5 mm .
2. When using the spring mounting clip for snap-in mounting, the panel cutout becomes $16.2{ }_{0}^{+0.3} \mathrm{~mm}$ in diameter, and recommended panel thickness is 0.5 to 3.5 mm .

## CONVEX TYPE PUSHBUTTON SWITCH



Panel cutout (top view)


Note: 1. Recommended panel thickness is 0.5 to 5 mm .
2. When using the spring mounting clip for snap-in mounting, the panel cutout becomes $16.2+{ }_{0}^{+0.3} \mathrm{~mm}$ in diameter, and recommended panel thickness is 0.5 to 3.5 mm .

Rectangular (A3GJ) with screw terminals


Panel cutout


Note: The above panel cutout diagram applies when the $X$ dimension (the space between terminals of different polarity) is maintained at 3.5 mm . When the X dimension is not required, switches may be mounted at 24.5 mm for the general-purpose pushbutton type, or at 26 mm for the rectangular concave type. The pitch should be as large as possible to maintain space to extend the lead wire and make it easier to wire.

Square (A3GA) with solder terminals



Dimensions for models with screw terminals have been omitted. Refer to the dimensions for the rectangular type.

## Panel cutout <br> (top view)



Note: 1. Recommended panel thickness is 0.5 to 5 mm .
2. When using the spring mounting clip for snap-in mounting, the panel cutout becomes $16.2+{ }_{0}^{+0.3} \mathrm{~mm}$ in diameter, and recommended panel thickness is 0.5 to 3.5 mm .

## CONVEX TYPE PUSHBUTTON SWITCHES continued



Dimensions for models with screw terminals have been omitted. Refer to the dimensions for the rectangular type.

Panel cutout
(top view)


Note: 1. Recommended panel thickness is 0.5 to 5 mm .
2. When using the spring mounting clip for snap-in mounting, the panel cutout becomes $16.2{ }_{0}^{+0.3} \mathrm{~mm}$ in diameter, and recommended panel thickness is 0.5 to 3.5 mm .

INDICATORS

Rectangular indicator (M2GJ) with solder terminals


Panel cutout
(top view)


Note: 1. Recommended panel thickness is 0.5 to 5 mm .
2. When using the spring mounting clip for snap-in mounting, the panel cutout becomes $16.2{ }_{0}^{+0.3} \mathrm{~mm}$ in diameter, and recommended panel thickness is 0.5 to 3.5 mm .

Square indicator (M2GA) with solder terminals


Panel cutout
(top view)


Note: 1. Recommended panel thickness is 0.5 to 5 mm .
2. When using the spring mounting clip for snap-in mounting, the panel cutout becomes $16.2{ }_{0}^{+0.3} \mathrm{~mm}$ in diameter, and recommended panel thickness is 0.5 to 3.5 mm .


Round indicator (M2GT)
Panel cutout
with solder terminals
(top view)


Note: 1. Recommended panel thickness is 0.5 to 5 mm .
2. When using the spring mounting clip for snap-in mounting, the panel cutout becomes $16.2+{ }_{0}^{0.3} \mathrm{~mm}$ in diameter, and recommended panel thickness is 0.5 to 3.5 mm .

## CASES

Rectangular
A3GJ-6011-1 A3GJ-6011-3
A3GJ-6021-1 A3GJ-6021-3


## Square

A3GA-6011-1 A3GA-6011-3
A3GA-6021-1 A3GA-6021-3


## Round

A3GT-6011-1 A3GT-6011-3
A3GT-6021-1 A3GT-6021-3


## LAMPS

LED


Incandescent Lamp


Neon Lamp


SOLDER TERMINALS

## SPDT switch

Lighted type


Dimensions of terminal holes


Terminal arrangement (bottom view)


DPDT switch
Lighted type


Dimensions of terminal holes


Terminal arrangement (bottom view)


Indicator
Display lamp


Dimensions of terminal holes


Terminal arrangement (bottom view)


## SCREW TERMINALS

SPDT switch


Five, M3 x 6 Phillips screws with washers

DPDT switch


Eight, M3 x 6 Phillips screws with washers

Terminal arrangement (bottom view)


Indicator


Two, M3 x 6 Phillips screws with washers

Terminal arrangement (bottom view)


## WITH INSTALLED SWITCH GUARD

## Rectangular types



Square and Round types


## WITH MOUNTED DUST COVER

## Rectangular types


Panel cutout (top view)


## Unit: mm (inch)

## WITH MOUNTED DUST COVER continued

Square type


Round type


## SWITCH UNIT



A3G-3 $\square \square$


## MOUNTING CLIP

Spring mounting clip for snap-in mounting A3B-3001


Panel cutout
(top view)


Panel cutout
(top view)


Extractor


## ■ LEGEND PLATES



Note: The plate is 0.6 mm thick and made of polycarbonate resin (IP40) or polyacrylate (IP65).

## SCREW FITTING

A3G-3004


## PANEL PLUG

Select the plug that fits the panel design and mount from the front of the panel. Panel cutouts are the same as those for switches.


## Assembly/Disassembly

## MOUNTING AND REPLACING THE OPERATING SECTION

Mounting directions of the LED/lamp for the pushbutton unit
(1) For the lighted type switch:

Fit the LED/lamp so that its guide projection is inserted into the wider opening in the receptacle of the pushbutton unit.


Insert the LED/lamp guide into the narrower opening in the indicator's receptacle.


Note: Push the LED/lamp projections into the base groove. The LED/lamp is flexibly mounted when used for illumination and is rigidly mounted when used for indicators.

## Removing lamp from the pushbutton unit

Position the functional unit as shown in (1). Press down on the LED/lamp angling it in the direction indicated by A. Side B of the LED/lamp disconnects and side C angles away from the pushbutton unit so that it looks like (2). Turn the LED/lamp in the direction indicated by D . The LED/lamp projections (2 locations) will disconnect from the LED/lamp groove so that it looks like (3). Pull in the E direction and remove the LED/lamp.


## Mounting directions for the pushbutton unit and the switch unit

Insert the LED/lamp unit into the aperature of the switch unit with the LED/lamp unit's guide facing the side of the aperature mouth that does not have the two projections. The pressure applied during insertion should be 2.5 kg min.

Note: Since the mounting directions of the pushbutton unit are the opposite for the lighted type switch and the indicator application, pay special attention to the direction of the legend plate.


Face the guide of the LED/lamp unit toward the side without the projections

## Removing the pushbutton unit

Pull the cap of the functional unit while holding the recessed guide on both sides.


Note: Do not use radio pliers to remove the cap as they may cause damage.

## Mounting

After installing the main unit, mount the socket unit on the panel surface.

## NUT MOUNTING

Insert the switch unit from the front of the panel. Place the lock fitting and mounting nut on the terminal side and tighten the mounting nut. For the IP65 type, use the rubber seal. Align the anti-turn piece with the grooves and insert it so that the edge section faces the panel. Tighten the mounting to a torque of $10 \mathrm{~kg}-\mathrm{cm}$ or less.


## SNAP-IN MOUNTING

Fit the spring mounting clip for snap-in mounting to the switch unit. Insert the tab of the spring mounting clip into the two grooves on the threaded part of the switch unit.

Note: Be sure to use two spring mounting clips and see that each is firmly inserted into the grooves. Do not use for IP65-type switches.
Insert the switch unit from the front of the panel and secure it.


## SOCKET MOUNTING

Mount the socket to the switch unit. As the socket mounts to the switch unit in only one direction, the white mark on the switch unit and that on the socket must be aligned for mounting.


## REMOVING SOCKET

Press the Lock button on the socket and pull to remove. Pull straight off when removing the socket.



[^0]:    Note: Above switches offer double pole, double throw NO/NC contacts with screw terminals; lighted type pushbuttons offer neon lamps at 110 VAC; and all are fully assembled.

