

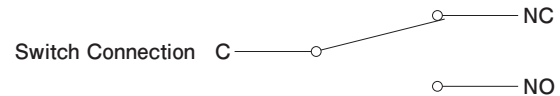
AH Illuminated Pushbutton Switch

It's slim and characteristic size.

Button size 7.8×23.1mm

Achieved reliable touch feeling and uniform illumination

- Depth behind panel 16 mm
- Precision-snap action switch movement with coil spring assures long life and outstanding tactile feedback.
Silver Contact (Gold-Plated) and W/E Alloy #1
Cross-bar Contact provided.
- LED illumination for Full-Face, Dual-Color.
Built-in resistor for 5V, 12V, 24V
For Dual-color, can select the Anode(+) or the Cathode(-) according to the circuit.
- Button size 7.8×23.1mm rectangular type.
Easy to use as an indicator, also prepared a flat type with a low button.



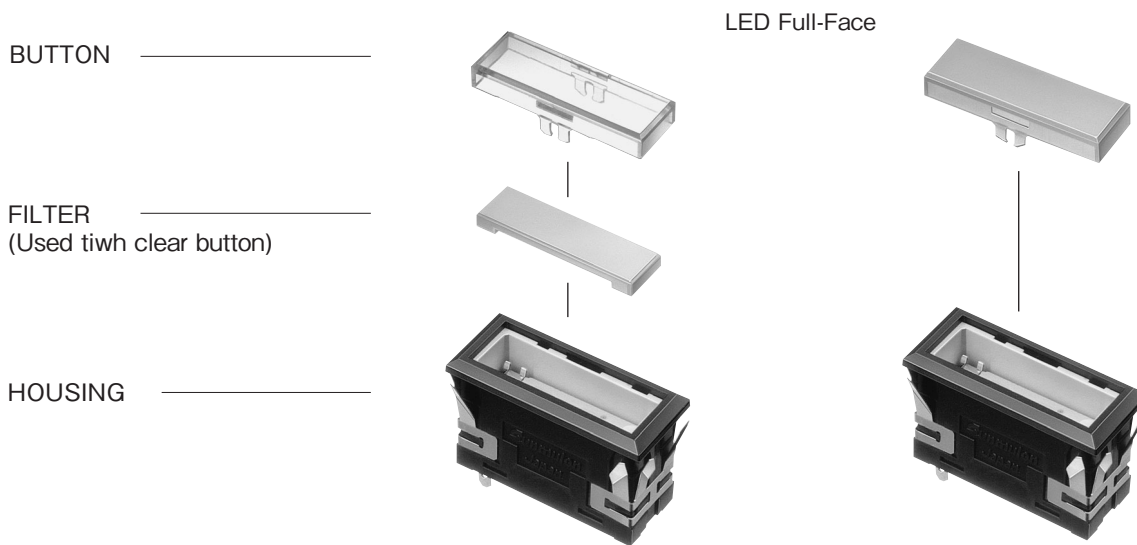
SPECIFICATIONS

| Contact | Silver Contact (Gold-Plated) | W/E Alloy #1 Cross-bar Contact |
|-----------------------|--|--|
| Electrical Rating | AC125V、250V 3A (Resistive) | AC125V 0.1A、DC30V 0.1A (Resistive) |
| Insulation Resistance | More than 100MΩ at 500V DC | |
| Dielectric Strength | 600V AC RMS between NC and NO terminal 1500V AC RMS between terminals and ground 50/60Hz for 60sec. at normal temperature and humidity | |
| Contact Resistance | Less than 50mΩ (Initial) at DC6V 1A | Less than 50mΩ (Initial) at DC6V 0.1A |
| Mechanical Life | Momentary Action : more than 1,000,000 operations | |
| Electrical Life | More than 30,000 operations at max. rated load | |
| Ambient Temperature | -15°C to +50°C | |
| Ambient Humidity | 80%RH (max.) | |

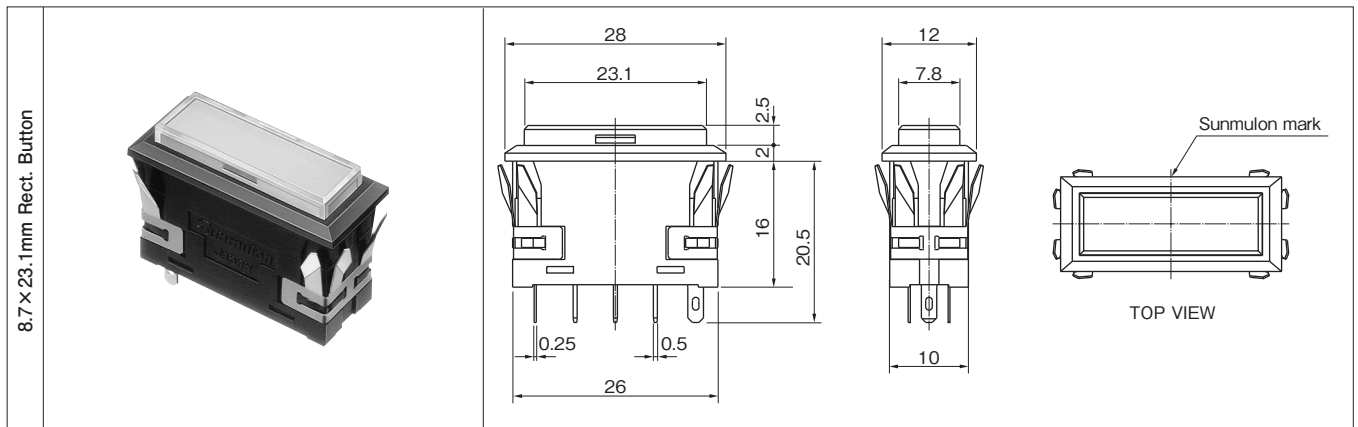
OPERATING CHARACTERISTICS

| | | | |
|------------------------|-------|---------------------|-------|
| Operating Force (max.) | 1.96N | Total Travel (max.) | 2.5mm |
|------------------------|-------|---------------------|-------|

STRUCTURE



DIMENSIONS



INTERNAL CONNECTION ARRANGEMENTS

● LED

| | Full-Face | Dual-Color | |
|-----------------|--------------------------------------|----------------------|----------------------|
| | | Anode common | Cathode common |
| 5V | <p>TOP VIEW</p> <p>Sunmulon mark</p> | <p>Sunmulon mark</p> | <p>Sunmulon mark</p> |
| 12V • 24V | <p>TOP VIEW</p> <p>Sunmulon mark</p> | <p>Sunmulon mark</p> | <p>Sunmulon mark</p> |

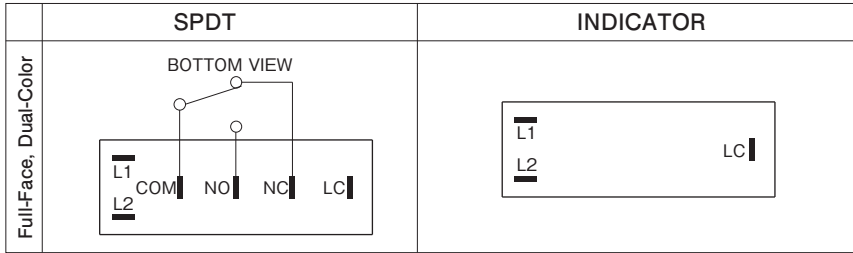
● Dual-Color Combination

| | | | |
|----------|-------|--------|--------|
| LC(+)-L1 | Red | Green | Yellow |
| LC(+)-L2 | Green | Yellow | Red |

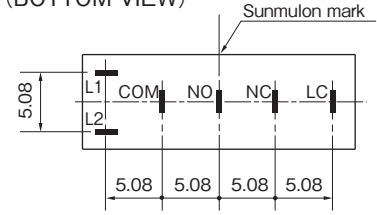
Tolerance : ±0.4mm

TERMINALS

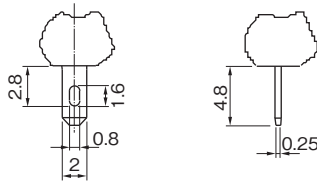
●TERMINALS LAYOUT



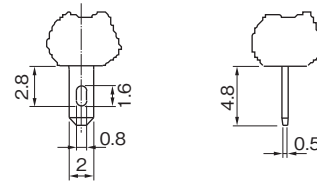
●TERMINALS DIMENSIONS (BOTTOM VIEW)



TERMINAL SHAPE



SOLDERING TERMINAL (LED : LC, L1, L2)



SOLDERING TERMINAL (Switch : NC, NO, COM)

LED DATA

●LED RATINGS

| DC Supply Voltage (V) | Full-Face | | | Dual-Color | | |
|-----------------------|---------------------|-------|--------|------------|-------|--------|
| | Current Rating (mA) | | | | | |
| | Red | Green | Yellow | Red | Green | Yellow |
| 5 (±5%) | 30 | | | 30 | | |
| 12 (±5%) | 15 | | | 15 | | |
| 24 (±5%) | 10 | | | 10 | | |

In case of simultaneous illumination for Dual-Color with 24V type, please use non-resistor 24V type and apply external resistor accordingly.

Refer to the following formula to calculate external resistance values.

$$R = \frac{V_{CC} - V_F}{I_F}$$

V_{CC} : Supply Voltage
V_F : Forward Voltage
I_F : Forward Current

●EXTERNAL RESISTOR

| ITEM | Full-Face, Dual-Color | | | | | |
|---|---------------------------------------|-------|--------|-----------|-------|--------|
| | 5V | | | 12V · 24V | | |
| | Red | Green | Yellow | Red | Green | Yellow |
| Max. operating current I _F (mA) | 40 | 40 | 40 | 20 | 20 | 20 |
| DC reverse voltage V _R (V) | 10 | 10 | 10 | 20 | 20 | 20 |
| Forward voltage V _F (V) | 4 | 4.2 | 4 | 8 | 8.4 | 8 |
| Recommend operating current I _F (mA) | 30 | 30 | 30 | 15 | 15 | 15 |
| Wiring diagram | Full-Face : Fig.1, Dual-Color : Fig.2 | | | | | |

Current Reduced Factor (over 25°C working Temperature) : 0.36mA/°C(DC)

Fig. 1

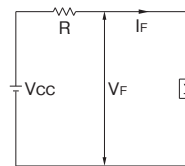
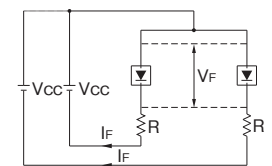


Fig. 2



※Fig.2 (Anode common type)

Tolerance : ±0.4mm

PANEL LAYOUT / PANEL CUT DIMENTIONS

●7.8×23.1mm Rectangular

Panel thickness:1mm~3.2mm

| | | Panel Layout | Panel Cut Dimentions |
|------------|-------------|--------------|----------------------|
| Horizontal | Independent | | |
| | Serial | | |
| Vertical | Independent | | |
| | Serial | | |

Panel cut dimension should be after panel paintings.

n : number of switches

ACCESSORIES / REPLACEMENT PARTS

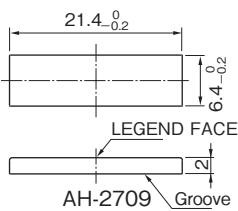
REMOVING TOOL

PART NO. SJ-0001



The button can be easily removed and replaced.

FILTER DIMENTION



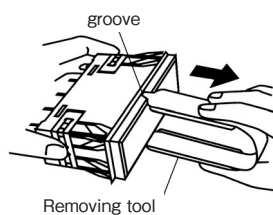
●Button / Filter

| Color | Red | Green | Yellow | Lemon Yellow | Milk-White | Clear |
|--------|-------------|-------------|-------------|--------------|-------------|-------------|
| BUTTON | AH-2708-1LR | AH-2708-1LG | AH-2708-1LO | AH-2708-1LY | AH-2708-1LM | AH-2708-2CC |
| FILTER | AH-2709-LR | AH-2709-LG | AH-2709-LO | AH-2709-LY | AH-2709-LM | |

ASSEMBLY & DISASSEMBLY

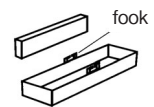
1. Remiving Button

Be sure to remove with the removing tool (SJ-0001). Hang the button with the removing tool in the groove, and put it out straight.



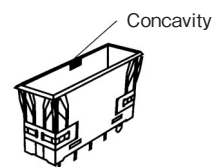
2. Fitting Filter

Put the filter in the button with the horizontal level down.



3. Fitting Button

Fit the fooks on both sides of the button until it snaps snugly, matching the concavity of the HOUSING.



Tolerance : ±0.4mm

ORDERING CODE

LED Illumination



● OPERATION

| | |
|---|----------------|
| M | Momentary |
| L | Indicator |
| F | Flat Indicator |

※3)

● CONTACT

| | |
|---|---------------------------|
| 0 | Indicator |
| 3 | SPDT Silver(Gold-Plated) |
| 5 | SPDT W/E Alloy #1Crossbar |

● BUTTON SHAPE ILLUMINATION TYPE

| | |
|----|------------------|
| W0 | Rect. Full-Face |
| W3 | Rect. Dual-Color |

※1

● LED COLOR

| | | |
|----|--------|---|
| 70 | Red | Full-Face : Put color no. into the frame 1 |
| 80 | Green | Dual-Color : Put color no. into the frame 1,2 |
| 90 | Yellow | (Combination : 7080, 8090, 9070) |
| X | | Without LED |

● BUTTON COLOR

| | | | | |
|---|--------|---|---|--------------|
| R | Red | ◇ | Y | Lemon Yellow |
| G | Green | | M | Milk White |
| O | Yellow | | C | Clear |

● LED CIRCUIT

| | |
|---|------------------------|
| D | Full-Face |
| A | Dual-Color Anode (+) |
| K | Dual-Color Cathode (-) |
| X | Without LED |

● Supply Voltage to LED

| | |
|---|-----------------------|
| 1 | 5V Built-in Resistor |
| 2 | 12V Built-in Resistor |
| 3 | 24V Built-in Resistor |
| 4 | 5V Non-Resistor |
| 5 | 12V Non-Resistor |
| 6 | 24V Non-Resistor |
| X | Without LED |

● TERMINAL ※2)

| | |
|---|-----------|
| S | Soldering |
|---|-----------|

● FILTER COLOR

| | |
|-----|----------------|
| 1 | Red |
| 2 | Green |
| 3 | Yellow |
| 4 | Milk White |
| 8 | Lemon Yellow |
| ★ X | Without Filter |

● HOUSING

| | |
|---|-------|
| K | Black |
| H | Gray |

★Generally, in case of using color button, filters are not necessary.

◇When using Lemon Yellow filter (8), specify LED color Green (80).

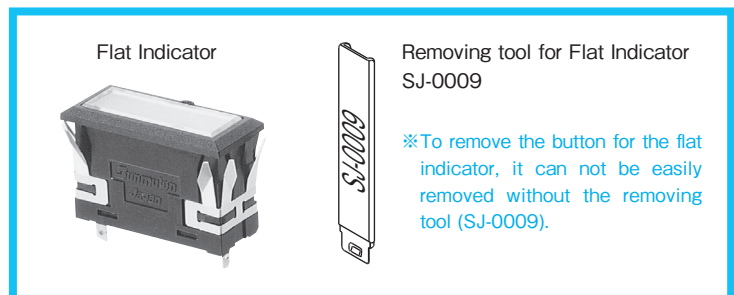
◆Please be noted that the color of "Yellow" for LED, Button, Filter is actually "Orange Yellow".

● NOTES

※1) In case of Dual-Color, button should be C(Clear) with Milk White filter or Milk White button.

※2) In case of simultaneous illumination for Dual-Color with 24V type, please use non-resistor 24V type and apply external resistor accordingly.

※3) Flat Indicator button level is Flat.(locked position)



Removing tool for Flat Indicator SJ-0009

※To remove the button for the flat indicator, it can not be easily removed without the removing tool (SJ-0009).