

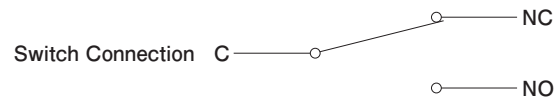
AH Illuminated Pushbutton Switch

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 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.



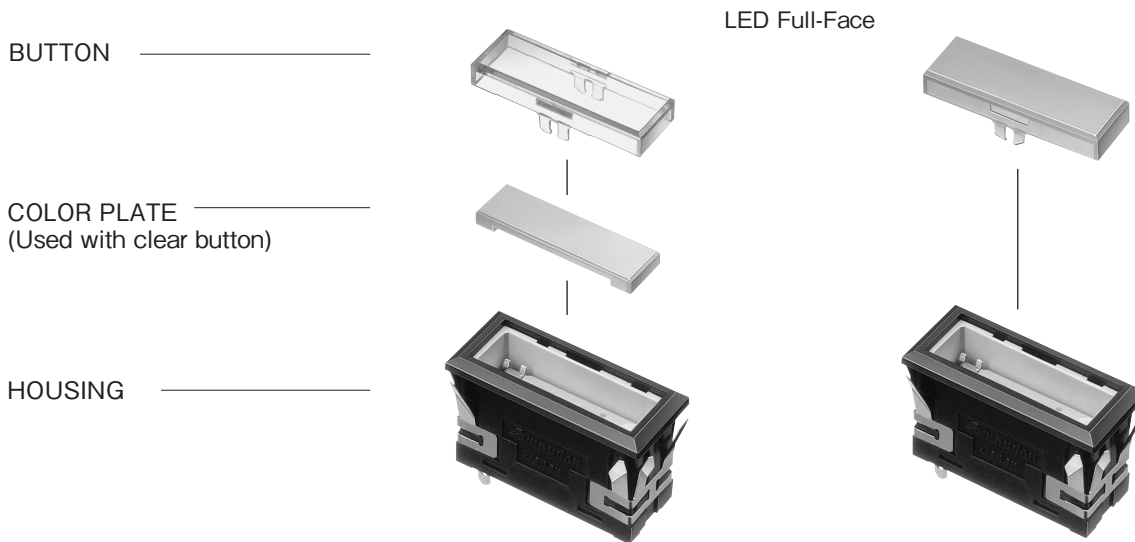
SPECIFICATIONS

Contact	Silver Contact (Gold-Plated)	Cross-bar Contact
Electrical Rating	AC35V 1A (Resistive)	AC35V 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.)	

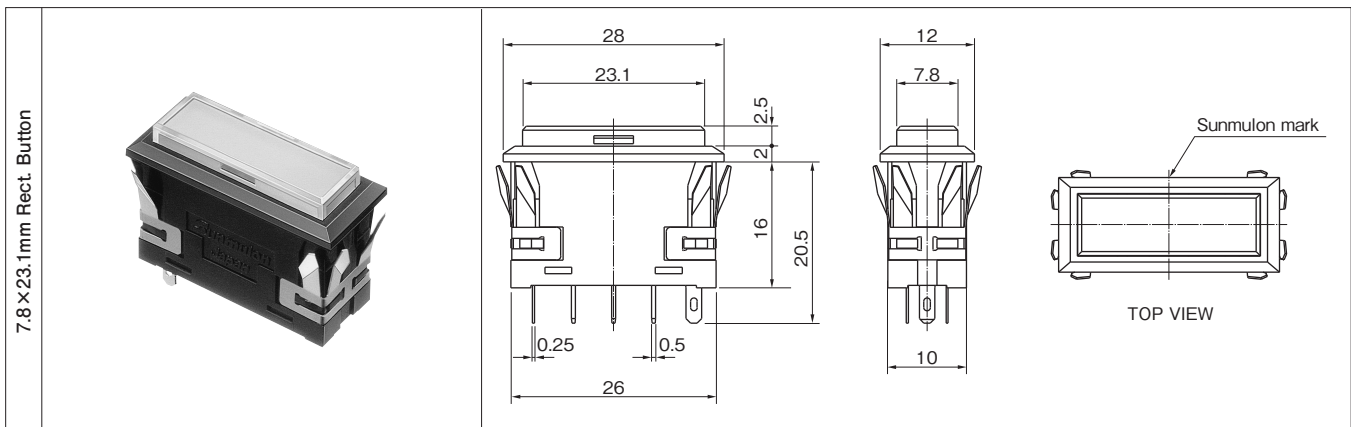
OPERATING CHARACTERISTICS

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



DIMENSIONS



INTERNAL CONNECTION ARRANGEMENTS

●LED

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

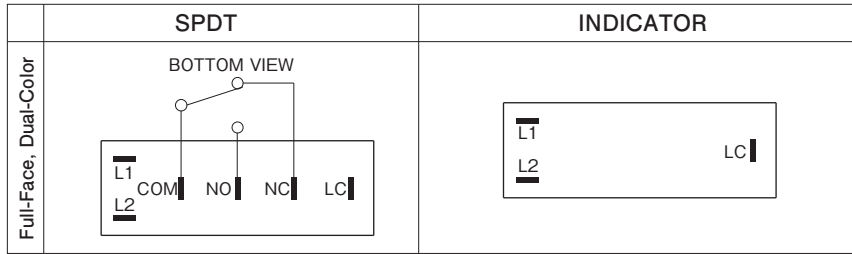
●Dual-Color Combination

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

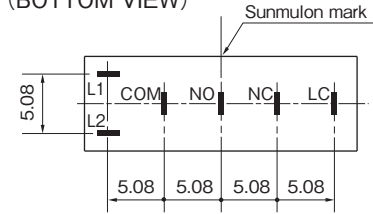
Tolerance : ±0.4mm

TERMINALS

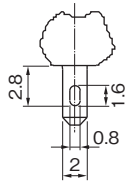
●TERMINALS LAYOUT



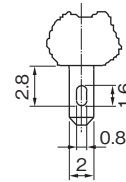
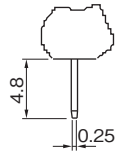
●TERMINALS DIMENSIONS (BOTTOM VIEW)



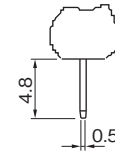
TERMINAL SHAPE



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

※ In case of pulse lighting, please note following conditions.
 $I_{FM} = 100\text{mA}$ (DC current for one LED, all colors)
 Where : Pulse width (PW) = 100μsec.
 Duty Ratio (DR) = 10^{-1}

●EXTERNAL RESISTOR

ITEM	Full-Face, Dual-Color					
	5V			12V · 24V		
	Red	Green	Yellow	Red	Green	Yellow
Max. operating current I_{FM} (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) : $0.36\text{mA}/^\circ\text{C}$ (DC)
 : $0.86\text{mA}/^\circ\text{C}$ (Pulse)

Fig. 1

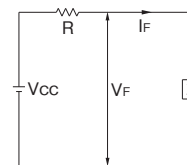
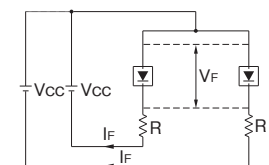


Fig. 2



※Fig.2 (Anode common type)

Tolerance : $\pm 0.4\text{mm}$

PANEL LAYOUT / PANEL CUT DIMENSIONS

●7.8×23.1mm Rectangular

Panel thickness:1mm~3.2mm

		Panel Layout	Panel Cut Dimensions
Horizontal	Independent		
	Serial		
Vertical	Independent		
	Serial		

Panel cut dimension should be after panel paintings.

n : number of switches

ACCESSORIES / REPLACEMENT PARTS

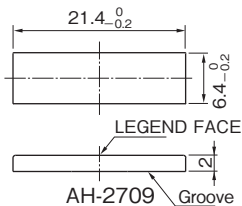
REMOVING TOOL

PART NO. SJ-0001



The button can be easily removed and replaced.

COLOR PLATE DIMENTION



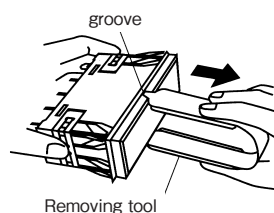
●Button / Color Plate

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
COLOR PLATE	AH-2709-LR	AH-2709-LG	AH-2709-LO	AH-2709-LY	AH-2709-LM	

ASSEMBLY & DISASSEMBLY

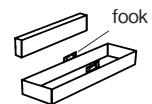
1. Removing Button

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.



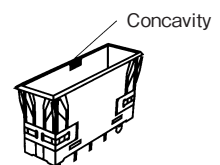
2. Fitting Color Plate

Put the Color Plate 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

AH [] - [] [] 1 2 [] [] [] S [] [] +Z

●OPERATION

M	Momentary
L	Indicator
F	Flat Indicator

※3)

●CONTACT

0	Indicator
3	SPDT Silver (Gold-Plated)
5	SPDT Crossbar

●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

●HOUSING

K	Black
H	Gray

●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
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●COLOR PLATE

1	Red
2	Green
3	Yellow
4	Milk White
8	Lemon Yellow
X	Without Color Plate

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

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

●NOTES

- ※1) In case of Dual-Color, button should be C(Clear) with Milk White color plate 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)

