

CA CA Cross Action Switch

Remarkable Cross Action Switch for versatile use

4-select button and 1-center button combination makes easy to mutiple control. It is also suitable for 4-way control switch such as Up/Down/Left/Right control.

■ FEATURES

- Depth behind panel : Only 22.5mm
- LED Spot display for 4-select button (not illuminate for center button)
- Precision-snap action switch movement with coil spring assures long life and outstanding tactile feedback.
- Terminal : Connector Type(Applied connector be appended), PCB Terminal



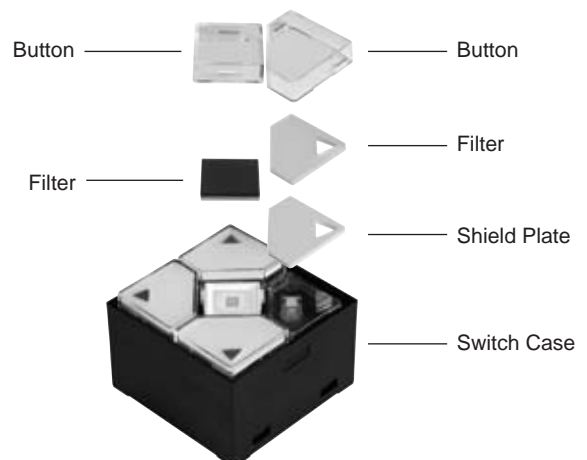
SPECIFICATIONS

Contact	Silver Contact (Gold Plated)	W/E Alloy #1 Cross-bar Contact
Electrical Rating	AC100V 1A, DC30V 1A (Resistive)	AC100V 0.1A, DC30V 0.1A(Resistive)
Insulation Resistance	More than 100M at 500V DC	
Dielectric Strength	800V AC (connector) (1000V AC RMS between NC and NO terminal(switch)) (1500V AC RMS between terminals and ground(switch)) 50/60Hz for 60sec. At normal ambient temperature and humidity	800V AC (connector) (600V AC RMS between NC and NO terminal(switch)) (1500V AC RMS between terminals and ground(switch)) 50/60Hz for 60sec. At normal ambient temperature and humidity
Contact Resistance	Less than 60m (Initial) at DC6V 1A	Less than 60m (Initial) at DC6V 0.1A
Mechanical Life	More than 1,000,000 operations	
Electrical Life	More than 100,000 operations at max. rated load	
Ambient Temperature	15 C to 50 C	
Ambient Humidity	80% RH (max.)	

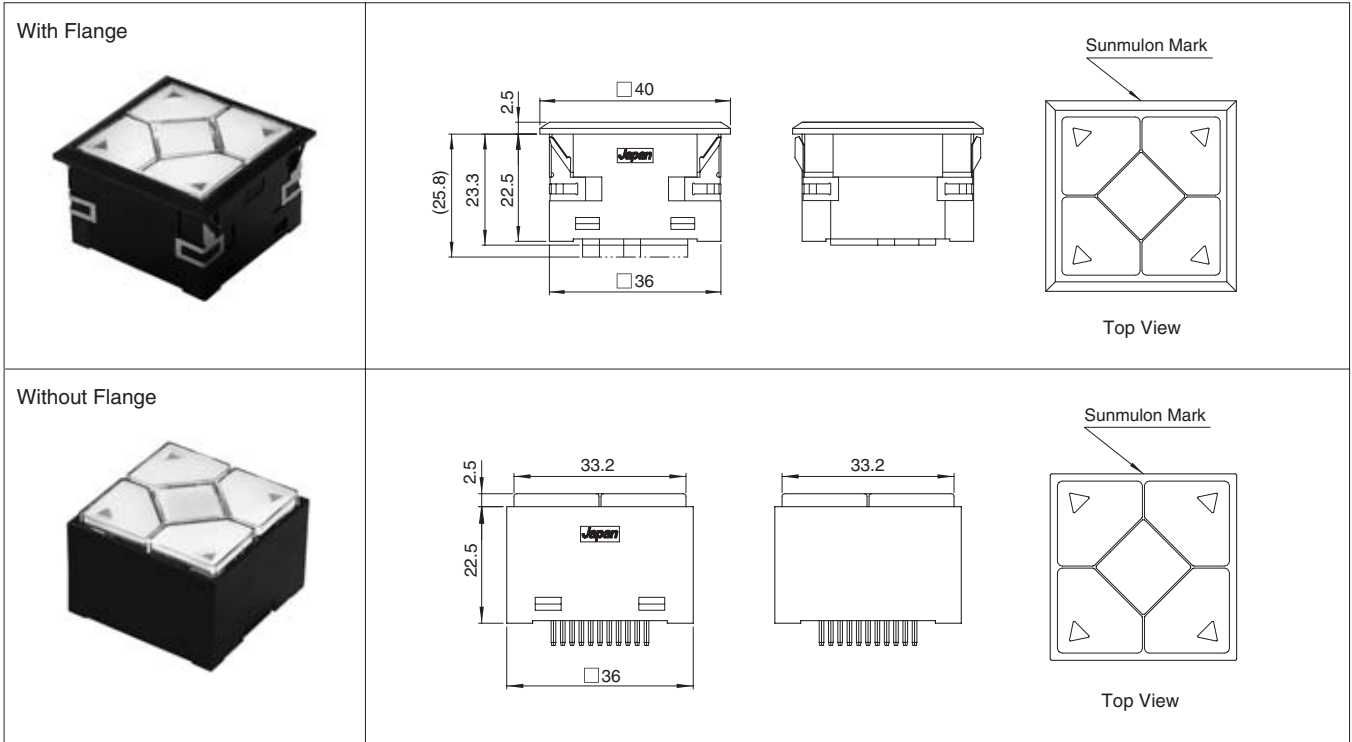
OPERATING CHARACTERISTICS

Operating Force (MAX.)	2.94N	Total Travel (mmMAX.)	1
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STRUCTURE

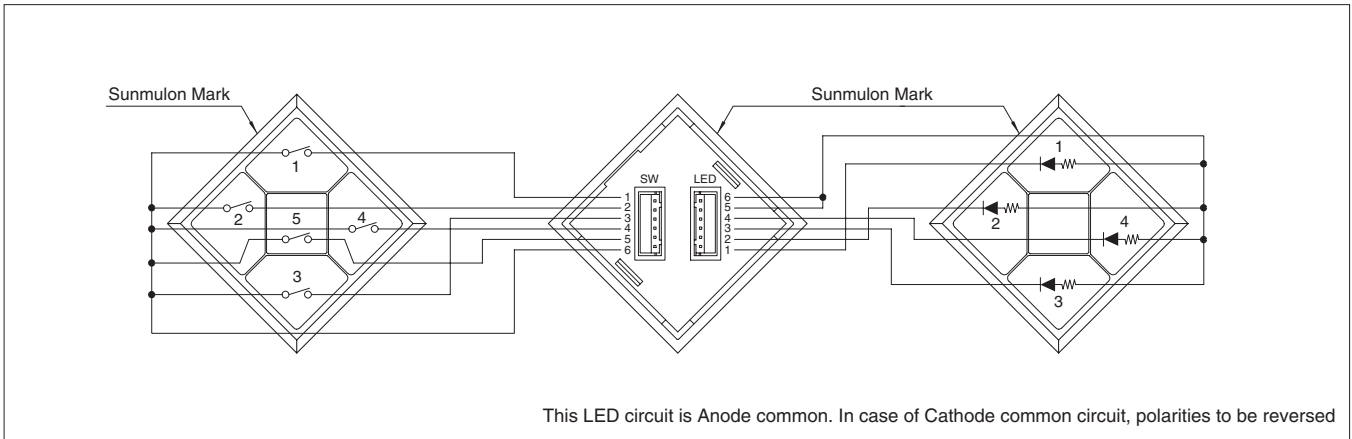


DIMENSIONS

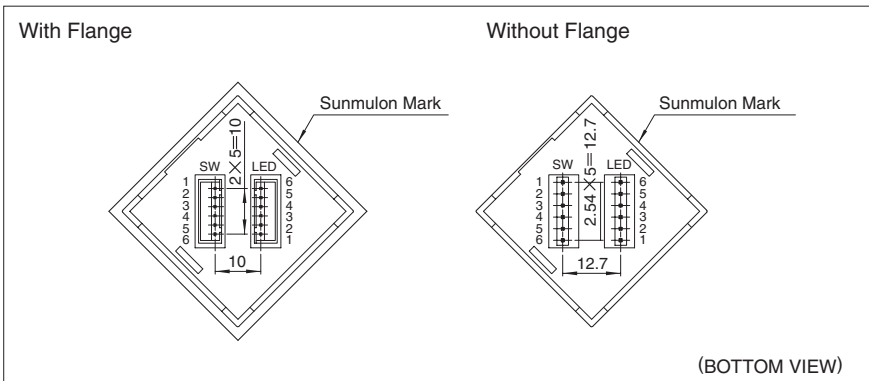


Tolerance : ±0.4mm

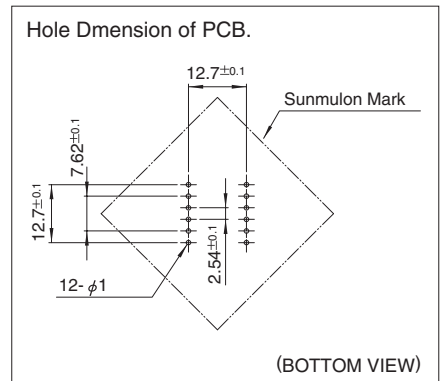
INTERNAL CONNECTION ARRANGEMENTS



TERMINALS LAYOUT



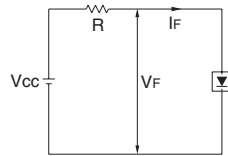
TERMINAL SHAPE/HOLE DIMENSION



LED RATINGS

LED RATINGS

Supply Voltage(V) ±5%	Current Rating (mA)			
	Red	Green	Yellow	Blue
5	10	10	10	2
12	8	8	8	2
24	8	8	8	2



EXTERNAL RESISTOR

Switches are normally fitted with internal resistors to operate on 5,12,24V DC supply. In case of non-resistor type, suitable external current limiting resistors must be installed as shown by the table and formula.

Item	Color	Any voltage			
	Red	Green	Yellow	Blue	
Max. operating current IFM (mA)	30	30	30	30	
DC reverse voltage VR (V)	4.0	4.0	4.0	4.0	
Forward voltage VF (V)	2.0	2.0	2.1	3.7	
Recommended operating current IF (mA)	20	20	20	20	
Current Reduced Factor (Over 25°C working temperature)	0.4	0.4	0.4	0.4	

The value of the series resistor for other voltage use can be determined by the formula (Switch should be non resistor type):

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

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

Panel Layout/Panel Cut Dimensions

Panel Thickness 1mm~3.2mm

	Panel Layout	Panel Cut Dimensions
Individual mounting		
Serial mounting		

n : number of switches

REPLACEMENT PARTS

BUTTON/FILTER

	Clear	Red	Green	Yellow	Milk White
Square Button (Center)	CH-2325-CC	—	—	—	—
Pentagon Button (Select)	CA-3453-CC	—	—	—	—
Square Filter (Center)	—	CH-2326-LR	CH-2326-LG	CH-2326-LY	CH-2326-LM
Pentagon Filter (Select)	—	CA-3454-LR	CA-3454-LG	CA-3454-LO	CA-3454-LM

APPLIED CONNECTOR

Connector Part No. : ST-3121

(1 pc. of Housing & 6 pcs. of Contact Pin)

※ Contact Pin press Tool DF3-TA2428HC

Housing DF3-6S-2C

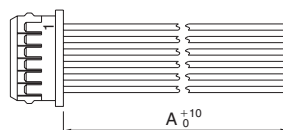
Contact Pin DF3-2428SC

(Hirose Electric Made)

Please select "Connector Appended" or not at "Ordering Code". In case of "Not appended", please select "N".

Wire Harness

Wire : UL1007 AWG26, equivalent



A length	Part No.
250mm	ST-3120-1
500mm	ST-3120-2

Pin No.	1	2	3	4	5	6
Wire Color	Black	Blue	Green	Yellow	White	Red

Tolerance : ±0.4mm

ORDERING CODE

CAM — [] [] [] C [] 1 2 3 4 5 [] [] []

● OPERATION

M	Momentary
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● SWITCH CIRCUIT

4	4-Circuit ※1)
5	5-Circuit

● CONTACT

S3	Silver (Gold Plated)
S5	W/E Alloy #1Crossbar

● LED COLOR ※2)

4	Red
5	Green
6	Yellow
14	Blue
×	Without LED

◆ Please be noted that the color of "Yellow" for LED • Filter is actually "Orange Yellow" not Lemon Yellow.

● BUTTON COLOR

C	Clear
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● Housing Color

K	Black	With Flange
H	Grey	(Panel Mounting)
KN	Black	Without Flange
HN	Grey	(PCB Mounting)

● CONNECTOR ※4)

K	Appended
N	Not Appended

● SUPPLY VOLTAGE TO LED

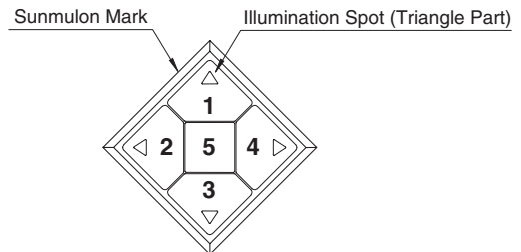
1	5V Built-in Resistor
2	12V Built-in Resistor
3	24V Built-in Resistor
4	Non Resistor
×	Without LED

● LED CIRCUIT

A	Anode Common
K	Cathode Common
×	Without LED

● Filter Color ※3)

1	Red
2	Green
3	Yellow
4	Milk White
×	Without Filter



- ※ 1) In case of 4-circuit type, center button has no switch mechanism.
- ※ 2) LED Illumination is Spot Display type only.(Triangle Part of right figure)
LED Colors to be indicated as same color. Center button part is not illuminated.
- ※ 3) Please fill number of Filter Colors according to order of indicated number in right figure.
Code number is coincident with number of figure.
Example: 44441 = Milk White for 4-select button, Red for center button.
- ※ 4) In case of Without Flange (PCB Mounting) type, please indicate "N" (Not appended) accordingly.