

Toggles

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

**Tactiles**

Tilt

Touch

Indicators

Accessories

Supplement



## CB Series .....J4

6mm Process Sealed  
50mA Low/Logic Level  
Straight PC  
PCB Mount  
Flat Button



## CB3 Series .....J8

6mm SMT  
Process Sealed  
50mA Low/Logic Level  
Gull Wing Terminals  
Upright Mount  
Flat Button



## HP02 Series .....J12

6mm  
3VA DC Power Level or 0.4VA Logic Level  
Straight PC  
PCB Mount



## HP03 Series .....J16

6mm SMT  
3VA DC Power Level & 0.4VA Logic Level  
Gull Wing Terminals  
Upright Mount



**JB Series .....J20**

10mm Process Sealed  
 50mA or 125mA Low/Logic Level  
 Straight or Right Angle PC  
 PCB Mount



**JB Illuminated Series .....J28**

Low Profile  
 50mA or 125mA Low/Logic Level  
 Process Sealed  
 Straight PC



**JF Series .....J34**

Ultra-Thin  
 50mA Low/Logic Level  
 Straight PC  
 PCB Mount



**JF Illuminated Series .....J40**

Ultra-thin  
 50mA Low/Logic Level  
 Process Sealed  
 Straight PC



**JL Illuminated Series .....J46**

Ultra-thin  
 19mm Full Face  
 50mA Low/Logic Level  
 Straight PC



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# General Specifications

## Electrical Capacity (Resistive Load)

**Low/Logic Level:** 50mA @ 24V DC maximum

## Other Ratings

**Contact Resistance:** 100 milliohms maximum

**Insulation Resistance:** 100 megohms minimum @ 250V DC

**Dielectric Strength:** 250V AC minimum between contacts & between contacts & case for 1 minute minimum

**Mechanical Life:** 100,000 operations minimum

**Electrical Life:** 100,000 operations minimum

**Nominal Operating Force:** 1.57N

**Total Travel:** .010" (.250mm)

## Materials & Finishes

**Actuator:** Glass fiber reinforced polyamide (UL94V-0)

**Case:** Stainless steel

**Seal:** Polytetrafluoroethylene

**Base:** Polyphthalamide (UL94V-0)

**Movable Contacts:** Beryllium copper with silver plating

**Stationary Contacts:** Brass with silver plating

**Terminals:** Brass with silver plating

## Environmental Data

**Operating Temperature Range:** -25°C through +70°C (-13°F through +158°F)

**Humidity:** 90 ~ 95% humidity for 96 hours @ 40°C (104°F)

**Vibration:** 10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 1 minute; 3 right angled directions for 2 hours

**Shock:** 50G (490m/s<sup>2</sup>) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

## PCB Processing

**Soldering:** Wave Soldering Recommended. See Profile A in Supplement section.

Manual Soldering: See Profile A in Supplement section.

**Cleaning:** Automated cleaning. See Cleaning specifications in Supplement section.

## Standards & Certifications

**Flammability Standards:** UL94V-0 actuator & base

The CB Series tactiles have not been tested for UL recognition or CSA certification.

These switches are designed for use in a low-voltage, low-current, logic-level circuit.

When used as intended in a logic-level circuit, the results do not produce hazardous energy.

# Distinctive Characteristics

Sealed construction prevents contact contamination and allows automated soldering and cleaning.

.244" (6.2mm) square body allows compact mounting.

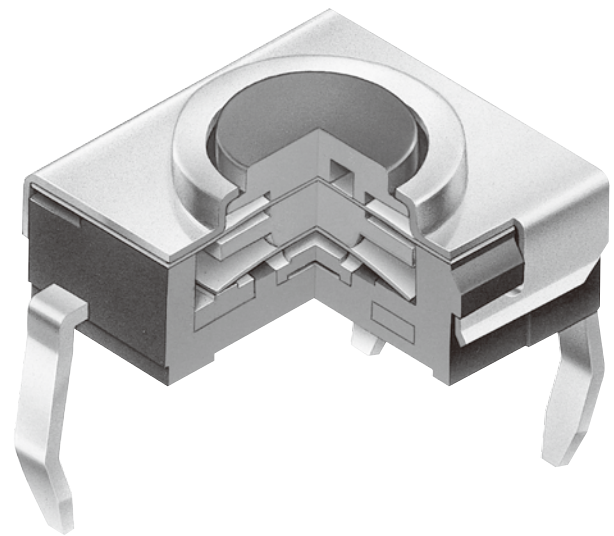
Actuator and base meet UL flammability rating of 94V-0.

Dome contact gives crisp tactile feedback to positively indicate circuit transfer and assures high reliability and long life – more than 100,000 operations.

Crimped terminals ensure secure mounting and prevent dislodging during wave soldering.

Insert molded terminals lock out flux, solvents, and other contaminants.

Packaged in stick tube or partitioned tray.

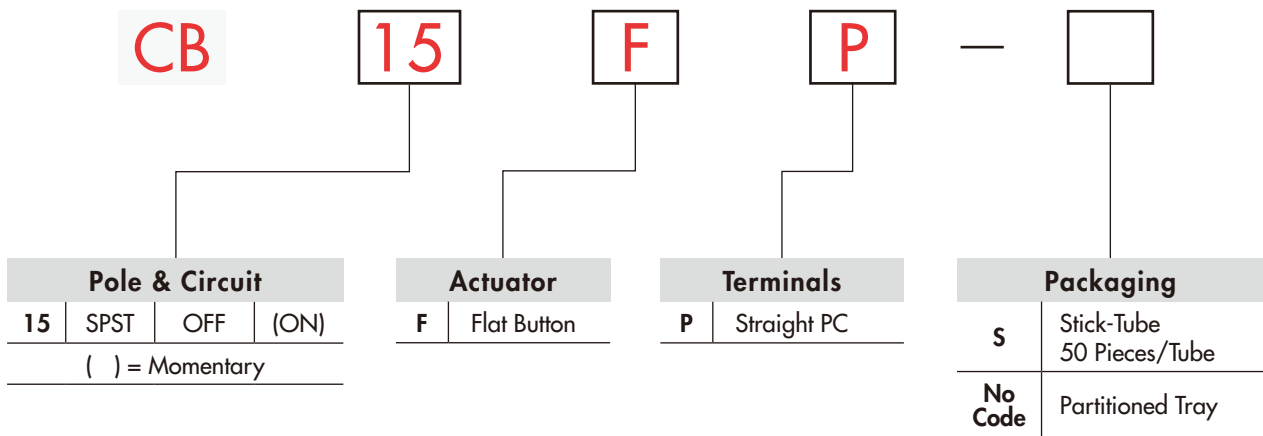


Actual Size



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### TYPICAL SWITCH ORDERING EXAMPLE



### DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

**CB15FP**

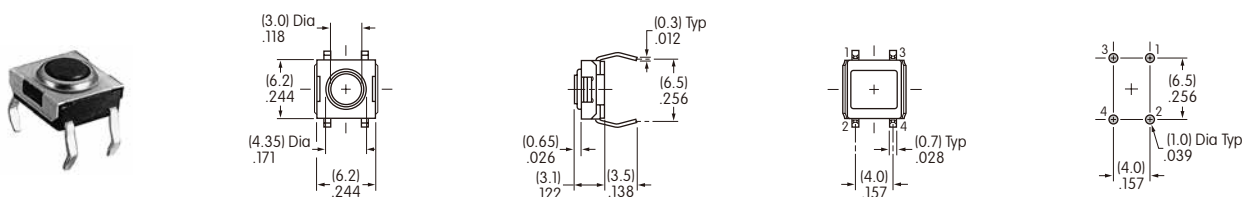


### POLE & CIRCUIT

		Actuator Position ( ) = Momentary		Switch Throw & Schematic		
Pole	Model	Normal	Down	SPST		Note: Terminal numbers are not actually on the switch.
SP	CB15	OFF	(ON)			

### TYPICAL SWITCH DIMENSIONS

#### Single Pole • Single Throw



**CB15FP**

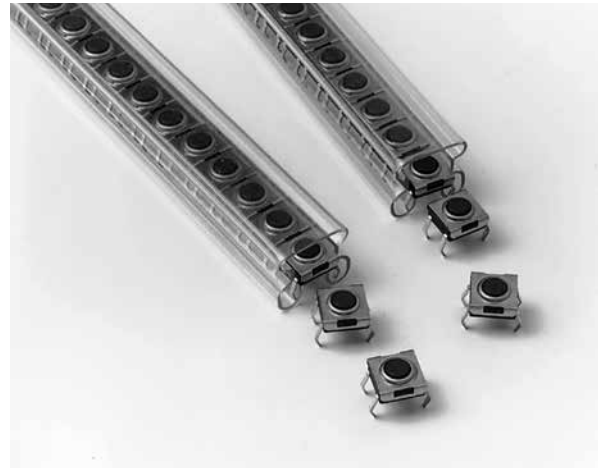
PACKAGING

**S** Stick-Tube

Switches must be ordered in 50-piece increments when stick-tube packaging is selected.

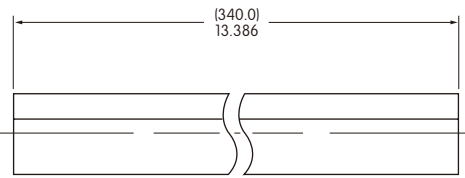
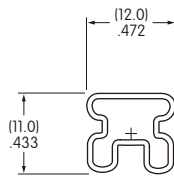
**No Code** Partitioned Tray

If ordered in less than 50-piece increments, the switches are packaged in a partitioned tray.



Stick-Tube Dimensions

Each stick-tube contains 50 switches



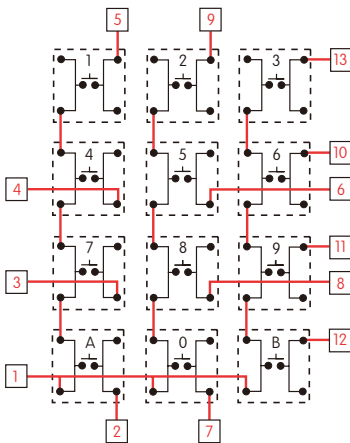
KEYBOARD MATRIX

Common Bus Matrix

These single pole, single throw switches can be used in a keyboard matrix and, using strapped terminals, achieve a common bus electrical configuration on a single-sided PC board.

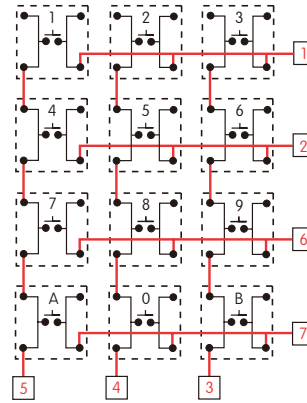
X-Y Matrix

These single pole, single throw switches can be arranged on a single-sided PC board matrix with strapped terminals to achieve an X-Y type electrical interconnection.



		PC Terminations												
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	○				○									
2	○													
3	○													○
4	○				○									
5	○													
6	○					○								
7	○													
8	○													
9	○													
0	○													
A	○													
B	○													

○ = ON



		PC Terminations						
		1	2	3	4	5	6	7
1	○					○		
2	○				○			
3	○							○
4	○				○			
5	○							
6	○					○		
7	○							
8	○							
9	○							
0	○							
A	○							
B	○							

○ = ON

Red = PCB Trace Black = Switch Circuit