## Distinctive Characteristics

Sealed construction prevents contact contamination and allows automated soldering and cleaning.
$.244^{\prime \prime}(6.2 \mathrm{~mm})$ square body allows compact mounting.

Actuator and base meet UL flammability rating of $94 \mathrm{~V}-0$.

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.

# General Specifications 

Electrical Capacity (Resistive Load)
Low Level: $\quad 50 \mathrm{~mA}$ @ 24 V DC maximum

## Other Ratings

Contact Resistance: 100 milliohms maximum
Insulation Resistance: 100 megohms minimum @ 250V DC
Dielectric Strength: $\quad 250 \mathrm{~V}$ 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: 1.57 N
Total Travel: $\quad .010^{\prime \prime}(.250 \mathrm{~mm})$

## 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:
$-25^{\circ} \mathrm{C}$ through $+70^{\circ} \mathrm{C}\left(-13^{\circ} \mathrm{F}\right.$ through $\left.+158^{\circ} \mathrm{F}\right)$
Humidity: $\quad 90 \sim 95 \%$ humidity for 96 hours @ $40^{\circ} \mathrm{C}\left(104^{\circ} \mathrm{F}\right)$
Vibration: $\quad 10 \sim 55 \mathrm{~Hz}$ with peak-to-peak amplitude of 1.5 mm traversing the frequency range \& returning in 1 minute; 3 right angled directions for 2 hours
Shock: $50 G\left(490 \mathrm{~m} / \mathrm{s}^{2}\right)$ 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:
UL Recognition
or CSA Certification:

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.

## TYPICAL SWITCH ORDERING EXAMPLE



## DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

CB15FP


| POLE \& CIRCUIT |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Actuator Position ( ) = Momentary |  | Switch Throw \& Schematic |  |
| Pole | Model | Normal | Down |  | Note: Terminal numbers are not |
| SP | CB15 | OFF | (ON) |  |  |

## TYPICAL SWITCH DIMENSIONS

## Single Pole • Single Throw



CB15FP

## PACKAGING

## Stick-Tube

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

\section*{| 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



Blue $=$ PCB Trace, Black $=$ Switch Circuit

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



| PC Terminations |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | 3 | 4 | 5 | 67 |
|  | 1 | $\bigcirc$ |  |  |  | $\bigcirc$ |  |
|  | 2 |  |  |  | $\bigcirc$ |  |  |
| 心 | 3 | $\bigcirc$ |  | $\bigcirc$ |  |  |  |
| $\stackrel{\perp}{¢}$ | 4 |  | $\bigcirc$ |  |  | $\bigcirc$ |  |
| $\pm$ | 5 |  | $\bigcirc$ |  | $\bigcirc$ |  |  |
| 3 | 6 |  | $\bigcirc$ | $\bigcirc$ |  |  |  |
| $\sim$ | 7 |  |  |  |  | $\bigcirc$ | $\bigcirc$ |
|  | 8 |  |  |  | $\bigcirc$ |  | $\bigcirc$ |
| $\bigcirc$ | 9 |  |  | $\bigcirc$ |  |  | $\bigcirc$ |
| $\stackrel{\square}{\square}$ | 0 |  |  |  | O |  | $\bigcirc$ |
|  | A |  |  |  |  | $\bigcirc$ | - |
|  | B |  |  | $\bigcirc$ |  |  | $\bigcirc$ |
| $\bigcirc=O N$ |  |  |  |  |  |  |  |

Blue $=$ PCB Trace, Black $=$ Switch Circuit

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.

