

## Surface-mounting Tactile Switch for High-density Packaging

- ROHS compliant.
- Dust-sealed construction provides high reliability in locations exposed to dust.
- SMD Tactile Switch ideal for high-density mounting.
- Sealed construction conforming to IP64 (IEC-529). Can be washed after soldering.
- Ground terminal available to protect against static electricity.



## Ordering Information

### 6 x 6 mm Type B3S-1000

| Operating force (OF) |                 | Height | Without ground terminal |                                | With ground terminal |                                |
|----------------------|-----------------|--------|-------------------------|--------------------------------|----------------------|--------------------------------|
|                      |                 |        | Bags (100 Switches)     | Embossed tape (1,000 Switches) | Bags (100 Switches)  | Embossed tape (1,000 Switches) |
| Standard-force       | 1.57 N {160 gf} | 4.3 mm | B3S-1000                | B3S-1000P                      | B3S-1100             | B3S-1100P                      |
| High-force           | 2.25 N {230 gf} |        | B3S-1002                | B3S-1002P                      | B3S-1102             | B3S-1102P                      |

**Note:** Switches in bags must be ordered in units of 100 Switches, and Switches on embossed tape must be ordered in units of 3,000 Switches.

## Specifications

### ■ Ratings/Characteristics

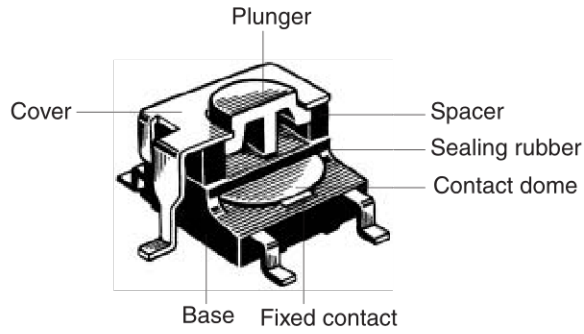
|                              |   |
|------------------------------|---|
| <b>Switching capacity</b>    | 5 to 24 VDC, 1 to 50 mA (resistive load)  |
| <b>Insulation voltage</b>    | 30 VDC  |
| <b>Ambient temperature</b>   | Operating: -25°C to 70°C (with no icing)  |
| <b>Ambient humidity</b>      | Operating: 35% to 85%   |
| <b>Contact configuration</b> | SPST-NO   |
| <b>Contact resistance</b>    | 100 mΩ max. (initial value) (rated: 1 mA, 5 VDC)  |
| <b>Insulation resistance</b> | 100 MΩ min. (at 250 VDC)  |
| <b>Dielectric strength</b>   | 500 VAC, 50/60 Hz for 1 min   |
| <b>Bounce time</b>           | 5 ms max.   |
| <b>Vibration resistance</b>  | Malfunction: 10 to 55 Hz, 1.5-mm double amplitude   |
| <b>Shock resistance</b>      | Destruction: 1,000 m/s <sup>2</sup> {approx. 100G} max.<br>Malfunction: 100 m/s <sup>2</sup> {approx. 10G} max. |
| <b>Life expectancy</b>       | Standard force models (1.57 N): 500,000 operations min.<br>High-force models (2.25 N): 300,000 operations min.  |
| <b>Weight</b>                | Approx. 0.3 g   |

### ■ Operating Characteristics

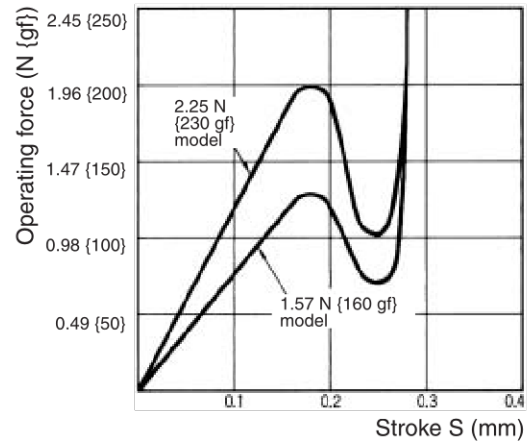
| Item                        | B3S-1□00                                  | B3S-1□02             |
|-----------------------------|---|----------------------|
| <b>Operating force (OF)</b> | 1.57 N {160 gf} max.                      | 2.25 N {230 gf} max. |
| <b>Releasing force (RF)</b> | 0.2 N {20 gf} min.                        | 0.49 N {50 gf} min.  |
| <b>Pretravel (PT)</b>       | 0.25 <sup>+0.2</sup> / <sub>-0.1</sub> mm |                      |

Nomenclature

Engineering Data



Operating Force vs. Stroke (Typical)

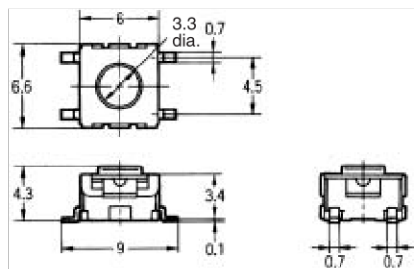
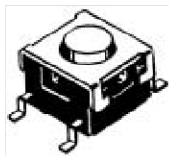


Dimensions

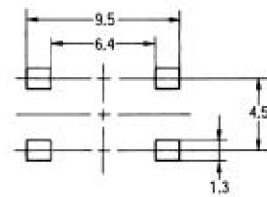
Note: All units are in millimeters unless otherwise indicated. Unless otherwise specified, a tolerance of ±0.4 mm applies to all dimensions.

Without Ground Terminal

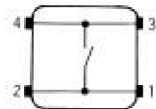
B3S-1000  
B3S-1002



PCB Mounting (Top View)

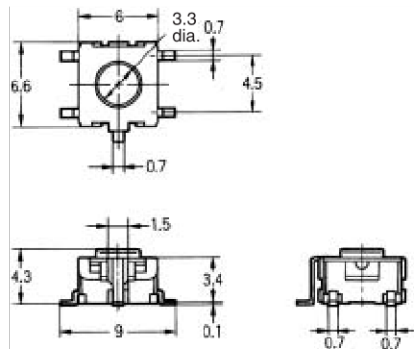
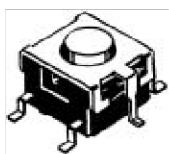


Terminal Arrangement / Internal Connections (Top View)

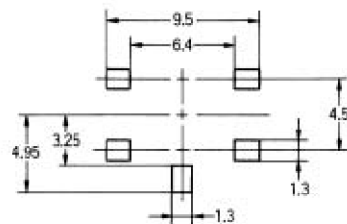


With Ground Terminal

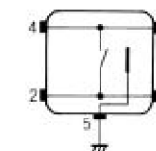
B3S-1100  
B3S-1102



PCB Mounting (Top View)



Terminal Arrangement / Internal Connections (Top View)



ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.