## Tactile Switch (Sealed SMD Type) - B3S

## 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

## $6 \times 6$ 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 | $1.57 \mathrm{~N}\{160 \mathrm{gf}\}$ |  | 4.3 mm | B3S-1000 | B3S-1000P | B3S-1100 | B3S-1100P |
| High-force | $2.26 \mathrm{~N}\{230 \mathrm{gf}\}$ |  | 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 1,000 Switchs.

## Specifications

■ Ratings/Characteristics

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

## Operating Characteristics

| Item | B3S-1 $\square \mathbf{0 0}$ | B3S-1 $\square \mathbf{0 2}$ |
| :--- | :--- | :--- |
| Operating force (OF) | $1.57 \mathrm{~N}\{160 \mathrm{gf}\}$ max. | $2.26 \mathrm{~N}\{230 \mathrm{gf}\}$ max. |
| Releasing force (RF) | $0.2 \mathrm{~N}\{20 \mathrm{gf}\} \mathrm{min}$. | $0.49 \mathrm{~N}\{50 \mathrm{gf}\} \mathrm{min}$. |
| Pretravel (PT) | $0.25^{+0.2} /-0.1 \mathrm{~mm}$ |  |

Nomenclature


## Engineering Data

Operating Force vs. Stroke (Typical)


## Dimensions

Note: All units are in millimetres unless otherwise indicated. Unless otherwise specified, a tolerance of $\pm 0.4$ mm applies to all dimensions.

## Without Ground Terminal

B3S-1000
B3S-1002



With Ground Terminal
B3S-1100
B3S-1102


PCB Mounting (Top View)

PCB Mounting (Top View)

Terminal Arrangement /Internal Connections (Top View)


Terminal Arrangement /Internal Connections (Top View)


