## OmROn

## Ultra-small Tactile Switch (SMT) <br> B3U

## Ultra-small-sized Tactile Switch with

## High Contact Reliability:

$1.2 \times \mathbf{3} \times \mathbf{2 . 5} \mathbf{~ m m}(\mathbf{H} \times \mathbf{W} \times \mathrm{D})$

- Compact switch allows high-density mounting on PCBs for mobile equipment.
- Dust-proof construction provides high reliability in dusty environments.
- Surface mounted: Ideal for high-density mounting.
- Models with ground terminals are available for protection against static electricity.



## RoHS Compliant

## - List of Models

| Operation type | Locating pin | Plunger color | Embossed taping (standard quantity) |  |  | Embossed taping (small quantity) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Without ground terminal | With ground terminal | Quantity per reel | Without ground terminal | With ground terminal | Quantity |
| Top-actuated | Without boss | Black | B3U-1000P | B3U-1100P | 3,500 | B3U-1000PM | B3U-1100PM | 1,000 |
|  | With boss |  | B3U-1000P-B | B3U-1100P-B |  | B3U-1000PM-B | B3U-1100PM-B |  |
| Sideactuated | Without boss |  | B3U-3000P | B3U-3100P | 4,000 | B3U-3000PM | B3U-3100PM | 1,000 |
|  | With boss |  | B3U-3000P-B | B3U-3100P-B |  | B3U-3000PM-B | B3U-3100PM-B |  |

Note: Orders must be made in multiples of the order unit specified above.

## ■ Ratings/Characteristics

| ItemOperation <br> type | Top-actuated <br> (B3U-1000 Series) | Side-actuated <br> (B3U-3000 Series) |
| :--- | :--- | :--- |
| Ratings | 1 to $50 \mathrm{~mA}, 5$ to 12 VDC (resistive load) |  |
| Ambient operating <br> temperature | $-25^{\circ} \mathrm{C}$ to $+70^{\circ} \mathrm{C}$ at $60 \% \mathrm{RH}$ max. (with no icing or <br> condensation) |  |
| Ambient operating <br> humidity | $35 \%$ to $85 \%$ (at +5 to $+35^{\circ} \mathrm{C}$ ) |  |
| Contact form | SPST-NO |  |
| Contact <br> resistance | $100 \mathrm{~m} \Omega$ max. (initial value) (rated: $1 \mathrm{~mA}, 5 \mathrm{VDC}$ ) |  |
| Insulation <br> resistance | $100 \mathrm{M} \Omega$ min. (at 100 VDC ) |  |
| Dielectric strength | $250 \mathrm{VAC}, 50 / 60 \mathrm{~Hz}$ for 1 min |  |
| Bounce time | $5 \mathrm{~ms} \mathrm{max}$. |  |
| Vibration <br> resistance | 10 to $55 \mathrm{~Hz}, 1.5 \mathrm{~mm}$ double amplitude |  |
| Shock resistance | $1,000 \mathrm{~m} / \mathrm{s}^{2} \mathrm{max}$. |  |
| Durability | 200,000 operations min. | 100,000 operations min. |
| Maximum <br> operating force | $30 \mathrm{~N} \mathrm{max}$. |  |
| Weight | Approx. 0.022 g |  |

## - Operating Characteristics

| Item Operation type | Top-actuated <br> (B3U-1000 Series) | Side-actuated <br> (B3U-3000 Series) |
| :--- | :--- | :--- |
| Operating force (OF) | $1.50 \pm 0.49 \mathrm{~N}$ | $1.59 \pm 0.49 \mathrm{~N}$ |
|  | $\{153 \pm 50 \mathrm{gf}\}$ | $\{162 \pm 50 \mathrm{gf}\}$ |
| Releasing force (RF) | $0.2 \mathrm{~N} \mathrm{min}.\{20 \mathrm{gf}\}$ |  |
| Pretravel (PT) | $0.15_{-0.1}^{+0.2} \mathrm{~mm}$ | $0.2_{-0.1}^{+0.2} \mathrm{~mm}$ |

## - Dimensions (Unit: mm)

## Top-actuated Models



Note: Unless otherwise specified, a tolerance of $\pm 0.2 \mathrm{~mm}$ applies to all dimensions. No terminal numbers are indicated on the Switches.


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## - Precautions

Be sure to read the precautions common to all Tactile Switches on pages for correct use.

[^0]Note: Do not use this document to operate the Unit.


[^0]:    - Application examples provided in this document are for reference only. In actual applications, confirm equipment functions and safety before using the product.
    - Consult your OMRON representative before using the product under conditions which are not described in the manual or applying the product to nuclear control systems, railroad systems, aviation systems, vehicles, combustion systems, medical equipment, amusement machines, safety equipment, and other systems or equipment that may have a serious influence on lives and property if used improperly. Make sure that the ratings and performance characteristics of the product provide a margin of safety for the system or equipment, and be sure to provide the system or equipment with double safety mechanisms.

