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# Tactile Switch B3S

## Surface Mount Tactile Switch for High-Density Packaging

- Sealed construction allows immersion-cleaning IP64 (IEC529) of the PC board with the tactile switches mounted and soldered
- Ground terminal available to protect against static electricity
- Ideal for applications such as audio, office, and communications equipment, measuring instruments, industrial robots, VCRs, TVs, and vending machines
- Tape packaging style also available: contact OMRON for details
- RoHS Compliant



## Ordering Information

| Switch height x pitch | Operating force        | Part number             |               |                      |               |
|-----------------------|------------------------|-------------------------|---------------|----------------------|---------------|
|                       |                        | Without ground terminal |               | With ground terminal |               |
|                       |                        | Bags                    | Embossed Tape | Bags                 | Embossed Tape |
| 4.3 x 9.0 mm          | General-purpose: 160 g | B3S-1000                | B3S-1000P     | B3S-1100             | B3S-1100P     |
|                       | High-force: 230 g      | B3S-1002                | B3S-1002P     | B3S-1102             | B3S-1102P     |

**Important Note:** Switches cannot be water-washed.

## Specifications

### ■ Characteristics

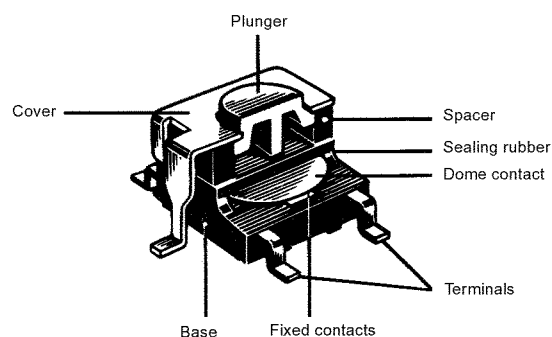
|                                         |                        |                                        |
|-----------------------------------------|------------------------|----------------------------------------|
| Switching capacity                      |                        | 50 mA 24 VDC (resistive load)          |
| Contact form                            |                        | SPST-NO                                |
| Permissible load                        |                        | 1 mA 5 VDC min. (resistive load)       |
| Contact resistance                      |                        | 100 M $\Omega$ max.                    |
| Insulation resistance                   |                        | 100 M $\Omega$ min. (at 250 VDC)       |
| Dielectric strength                     |                        | 500 VAC, 50/60 Hz for 1 minute         |
| Bounce time                             |                        | 5 ms max.                              |
| Vibration                               | Malfunction durability | 10 to 55 Hz, 1.5-mm double amplitude   |
| Shock                                   | Mechanical durability  | 1,000 m/s <sup>2</sup> (approx. 100 G) |
|                                         | Malfunction durability | 100 m/s <sup>2</sup> (approx. 10 G)    |
| Ambient temperature                     |                        | -25° to 70°C (with no icing)           |
| Humidity                                |                        | 35% to 85% RH                          |
| Service life<br>[Mechanical/electrical] | General-purpose type   | 500,000 operations min.                |
|                                         | High-force type        | 300,000 operations min.                |
| Weight                                  |                        | Approx. 0.30 g                         |

**Note:** Data shown are of initial value.

## ■ Operating Characteristics — B3S-1□□□ Series

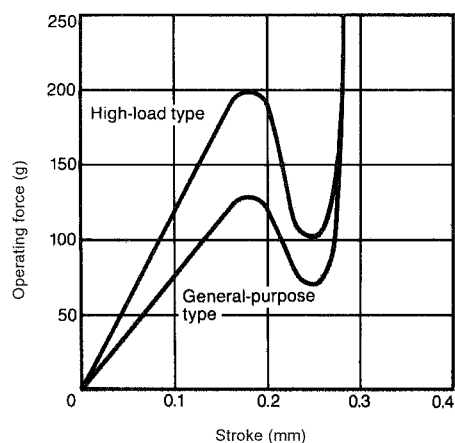
| Characteristics           | General-purpose              | High-force                   |
|---------------------------|------------------------------|------------------------------|
| Operating force (OF) max. | 160 g                        | 230 g                        |
| Release force (RF) min.   | 20 g                         | 50 g                         |
| Pretravel (PT)            | $0.25 + {}^{0.2}/_{-0.1}$ mm | $0.25 + {}^{0.2}/_{-0.1}$ mm |

## ■ Construction



## Engineering Data

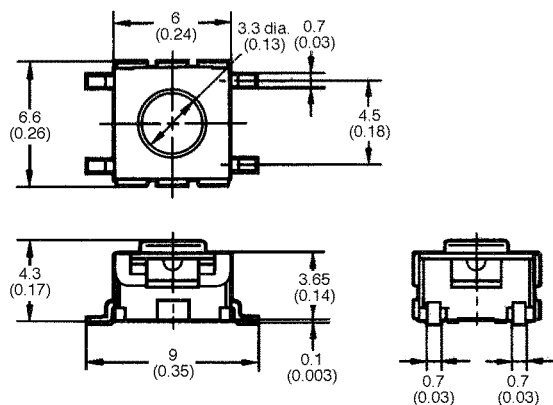
### ■ Operating Force vs. Stroke (Typical Example)



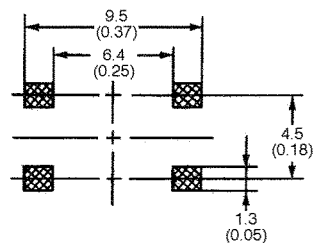
# Dimensions

Unit: mm (inch)

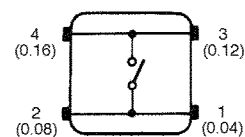
## ■ B3S-1000, B3S-1002



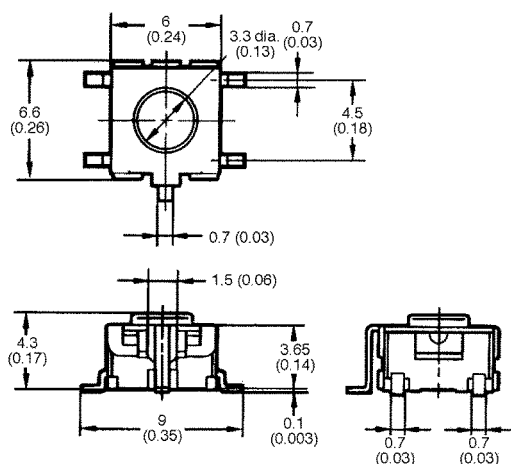
Footprint (top view)



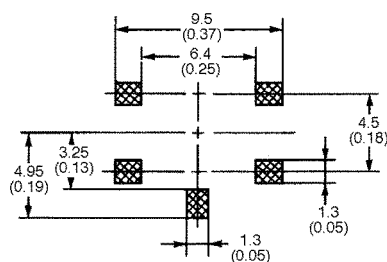
Terminal arrangement/Internal connection (top view)



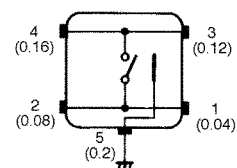
## ■ B3S-1100, B3S-1102



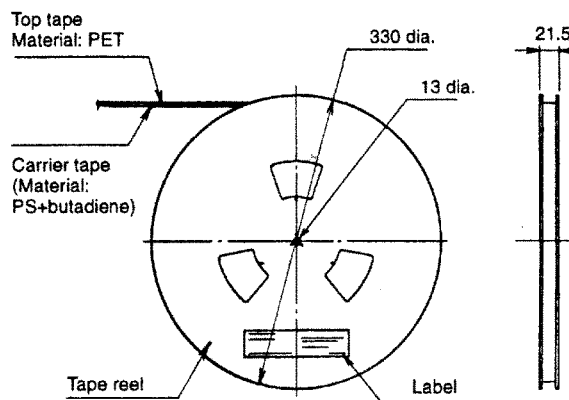
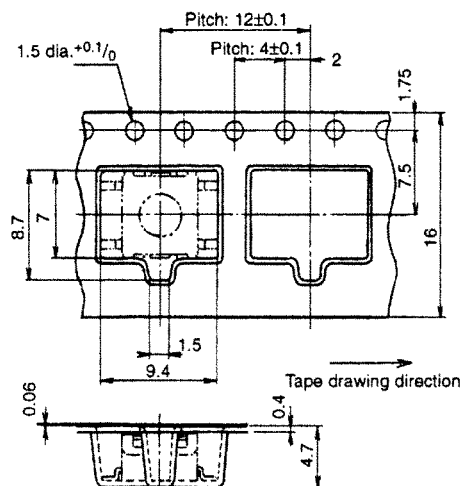
Footprint (top view)



Terminal arrangement/Internal connection (top view)



## ■ Tape Packaging Dimensions



## Hints on Correct Use

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See the Tactile Switch User's Guide, "Tactile Switches - Technical Information" for information regarding processing and handling.

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