

# Tactile Switch B3S

## Surface Mount Tactile Switch for High-Density Packaging

- Sealed construction conforming to IP67 (IEC-60529) provides high contact reliability in locations exposed to dust or water (\*Excluding the terminal section)
- Surface-mounting terminals for high-density mounting
- Ground terminal available to protect against static electricity
- Available in embossed taping packages for automatic insertion
- RoHS Compliant



## Ordering Information

Switch height	Operating force	Model			
		Without ground terminal		With ground terminal	
		Bags (100 per bag)	Embossed Tape (1,000 per reel)	Bags (100 per bag)	Embossed Tape (1,000 per reel)
4.3	General-purpose: 160 g	<b>B3S-1000</b>	<b>B3S-1000P</b>	<b>B3S-1100</b>	<b>B3S-1100P</b>
	High-force: 230 g	<b>B3S-1002</b>	<b>B3S-1002P</b>	<b>B3S-1102</b>	<b>B3S-1102P</b>

**Note:** Order in multiples of the quantities given for each package

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

## Specifications

### ■ Characteristics

<b>Contact form</b>	SPST-NO	
<b>Switching capacity</b>	1 to 50 mA, 5 to 24 VDC (resistive load)	
<b>Contact resistance</b>	100 mΩ max. (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 minute	
<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. 100 G) max. Malfunction: 100 m/s <sup>2</sup> (approx. 10 G) max.	
<b>Ambient operating temperature</b>	-25° to 70°C (at 60% RH max.) with no icing or condensation	
<b>Ambient operating humidity</b>	35% to 85% (at 5 to 30°C)	
<b>Service life</b>	<b>General-purpose type</b>	500,000 operations min.
	<b>High-force type</b>	300,000 operations min.
<b>Weight</b>	Approx. 0.30 g	

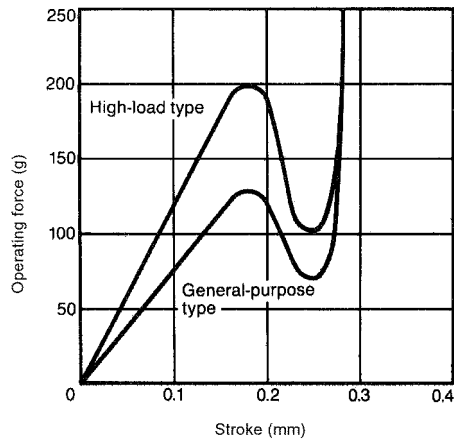
**Note:** Data shown are of initial value.

### ■ Operating Characteristics

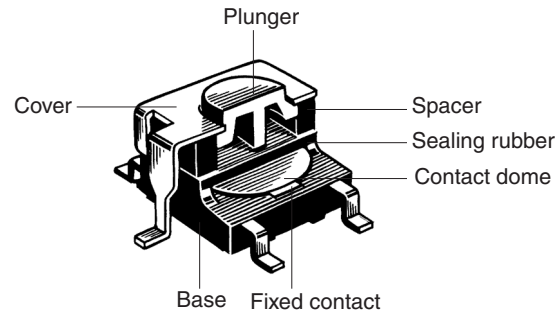
Characteristics	General-purpose	High-force
Operating force (OF) max.	160 g	230 g
Release force (RF) min.	20 g	50 g
Pretravel (PT)	0.25 <sup>+0.2</sup> / <sub>-0.1</sub> mm	

# Engineering Data

## Operating Force vs. Stroke (Typical Example)



## Construction



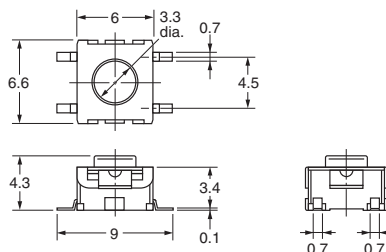
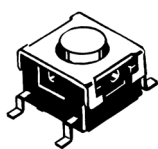
## Dimensions

Note: 1. Unless otherwise specified, all units are in millimeters and a tolerance of  $\pm 0.4$  mm applies to all dimensions.

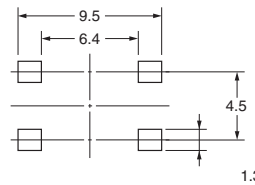
2. Terminal numbers are not indicated on this switch. With the switch turned over so that the logo mark "OMRON" is visible on the upper part of the rear side of the switch base, the terminal on the right of the logo mark is numbered "1" and that on the bottom right is "3." Accordingly, two terminals on the left side are numbered "2" and "4" respectively.

### Without Ground Terminal

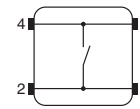
B3S-1000  
B3S-1002



### PCB Pad (Top View)

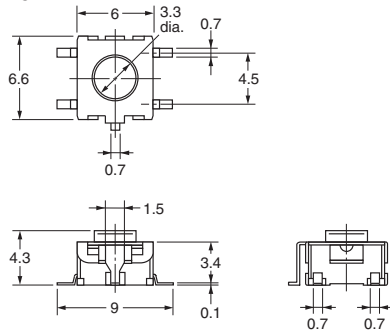
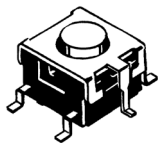


### Terminal Arrangement /Internal Connections (Top View)

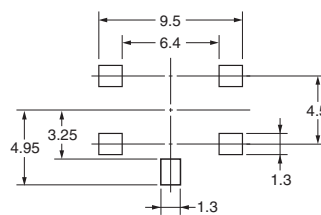


### With Ground Terminal

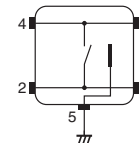
B3S-1100  
B3S-1102



### PCB Pad (Top View)



### Terminal Arrangement /Internal Connections (Top View)



## Precautions

Be sure to read the precautions common to all Tactile Switches, contained in the Technical User's Guide, "Tactile Switches, Technical Information" for correct use.



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**ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.**

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

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