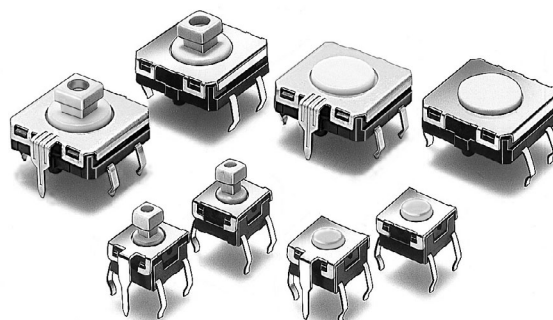


## Sealed Tactile Switch

## B3W





**Interchangeable with B3F-series  
Switches, with Sealed Construction to  
Ensure Highly Reliable Operation**

- Sealed construction conforming to IP64 (IEC-60529) provides high reliability in locations exposed to dust or water.
- Thin, compact in both 6 × 6 mm and 12 × 12 mm sizes.
- Available with ground terminals for protection against static electricity.
- Projected plunger types that allow the installation of B32-series Special Key Tops are available.



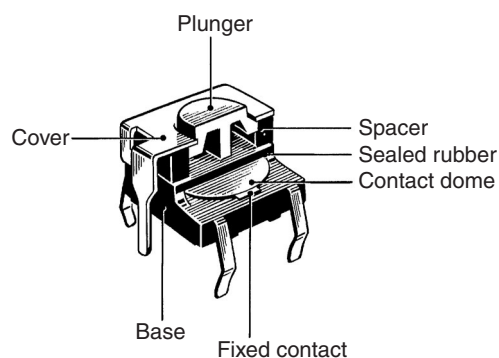
**RoHS Compliant** (Refer to page 8 for details.)

## Ordering Information

Type	Plunger	Height	Operating force (OF)		Bags (in units of 100 Switches)	
					Without ground terminal	With ground terminal
6 × 6 mm B3W-1000	Flat type 	4.3 mm	Standard force	1.57 N {160 gf}	B3W-1000	B3W-1100
			High-force	2.26 N {230 gf}	B3W-1002	B3W-1102
	Projected type 	7.3 mm	Standard force	1.57 N {160 gf}	B3W-1050	B3W-1150
			High-force	2.26 N {230 gf}	B3W-1052	B3W-1152
12 × 12 mm B3W-4000	Flat type 	4.3 mm	Standard force	1.96 N {200 gf}	B3W-4000	B3W-4100
			High-force	3.43 N {350 gf}	B3W-4005	B3W-4105
	Projected type 	7.3 mm	Standard force	1.96 N {200 gf}	B3W-4050	B3W-4150
			High-force	3.43 N {350 gf}	B3W-4055	B3W-4155

**Note:** Orders must be made in units of 100 pieces (quantity per bag).

## Nomenclature



## Specifications

### ■ Ratings/Characteristics

<b>Switching capacity</b>	1 to 50 mA, 5 to 24 VDC (resistive load)
<b>Ambient operating temperature</b>	–25°C to 70°C at 60% max. humidity (with no icing or condensation)
<b>Ambient operating humidity</b>	35% to 85% (at 5 to 35°C)
<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. 100 G} max. Malfunction: 100 m/s <sup>2</sup> {approx. 10 G} max.
<b>Life expectancy</b>	B3W-1000: 1.57 N (standard force):1,000,000 operations min. 2.26 N (high-force):300,000 operations min. B3W-4000: 1.96 N (standard force):3,000,000 operations min. 3.43 N (high-force):1,000,000 operations min.
<b>Weight</b>	6 × 6 mm: approx. 0.3 g, 12 × 12: approx. 1 g

### ■ Operating Characteristics

Item	B3W-1000		B3W-4000	
	1.57 N	2.26 N	1.96 N	3.43 N
Operating force (OF)	1.57 N {160 gf} max.	2.26 N {230 gf} max.	1.96 N {200 gf} max.	3.43 N {350 gf} max.
Releasing force (RF)	0.2 N {20 gf} min.	0.49 N {50 gf} min.	0.29 N {30 gf} min.	0.49 N {50 gf} min.
Pretravel (PT)	0.25 <sup>+0.2</sup> / <sub>–0.1</sub> mm		0.3 <sup>+0.2</sup> / <sub>–0.1</sub> mm	

## Dimensions

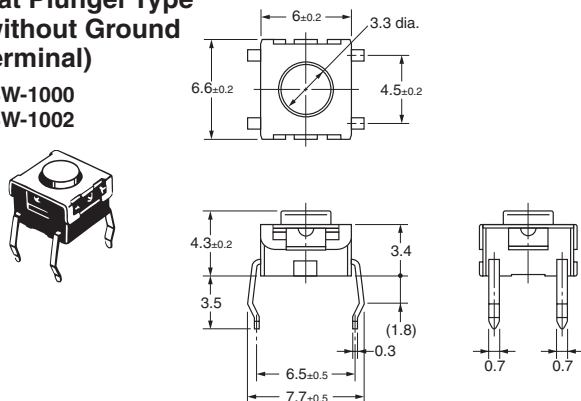
- Note:** 1. All units are in millimeters unless otherwise indicated. Unless otherwise specified, a tolerance of  $\pm 0.4$  mm applies to all dimensions.
2. No terminal numbers are indicated on the Switches. The numbers used for terminals in the following graphics are indicated in the "Bottom View" diagram below. In this diagram, the Switch is rotated so that the terminals are on the right and left sides, and the OMRON logo appears the right way up.



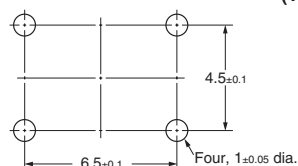
### ■ 6 × 6 mm Models

#### Flat Plunger Type (without Ground Terminal)

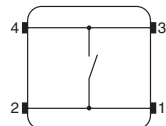
B3W-1000  
B3W-1002



PCB Mounting (Top View)  
(Single-sided PCB,  $t=1.6$ )

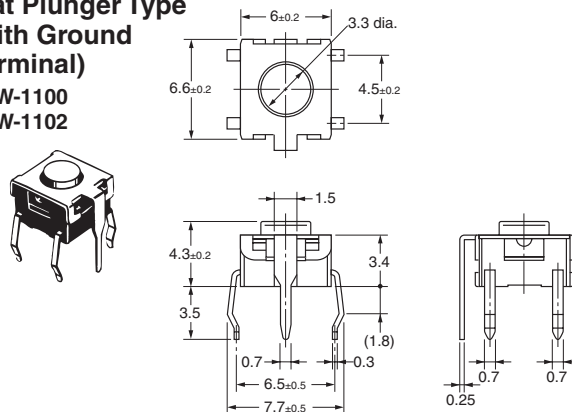


Terminal Arrangement  
/Internal Connections  
(Top View)

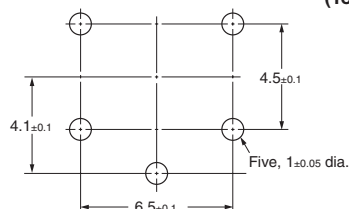


#### Flat Plunger Type (with Ground Terminal)

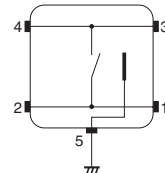
B3W-1100  
B3W-1102



PCB Mounting (Top View)  
(Single-sided PCB,  $t=1.6$ )

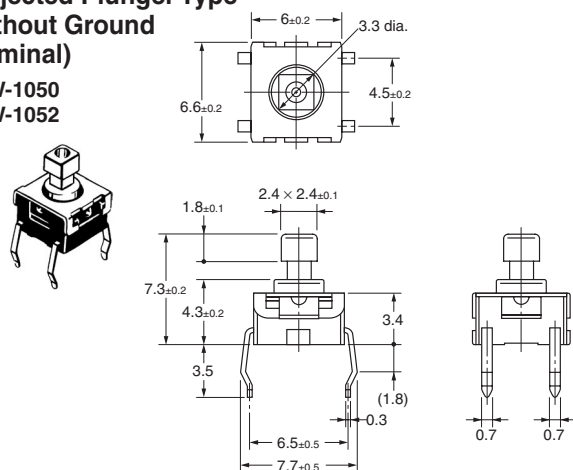


Terminal Arrangement  
/Internal Connections  
(Top View)

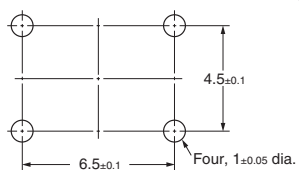


#### Projected Plunger Type (without Ground Terminal)

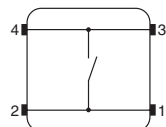
B3W-1050  
B3W-1052



PCB Mounting (Top View)  
(Single-sided PCB,  $t=1.6$ )

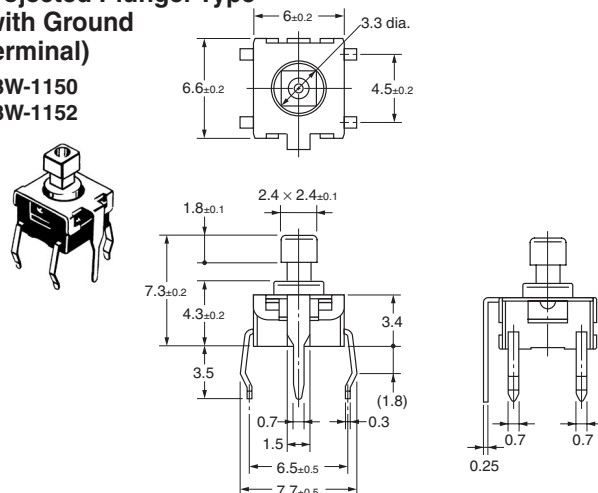


Terminal Arrangement  
/Internal Connections  
(Top View)

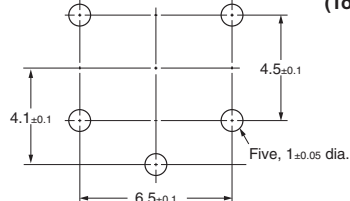


#### Projected Plunger Type (with Ground Terminal)

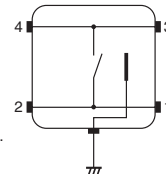
B3W-1150  
B3W-1152



PCB Mounting (Top View)  
(Single-sided PCB,  $t=1.6$ )



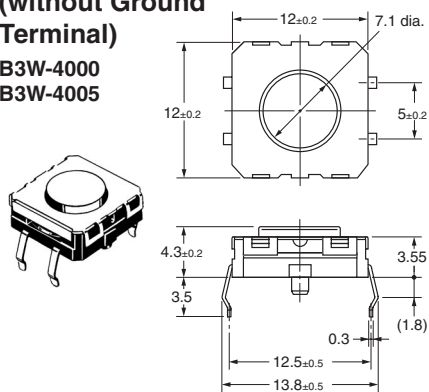
Terminal Arrangement  
/Internal Connections  
(Top View)



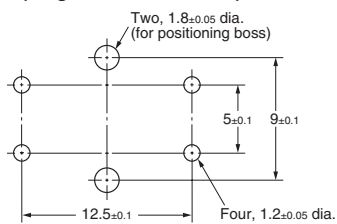
## ■ 12 × 12 mm Models

### Flat Plunger Type (without Ground Terminal)

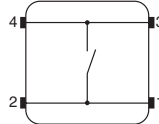
B3W-4000  
B3W-4005



#### PCB Mounting (Top View) (Single-sided PCB, t=1.6)

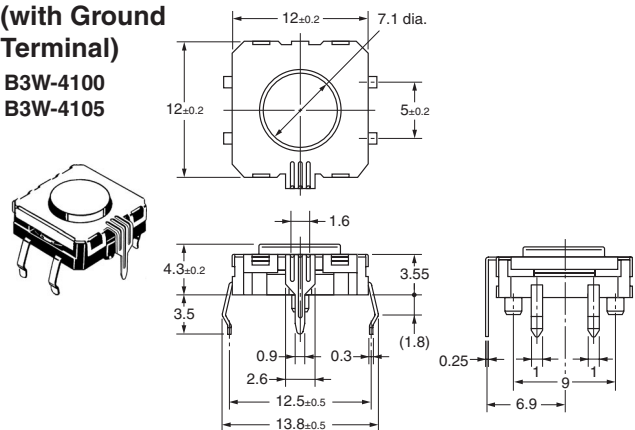


#### Terminal Arrangement /Internal Connections (Top View)

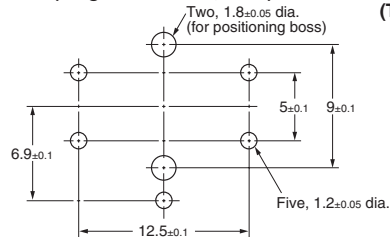


### Flat Plunger Type (with Ground Terminal)

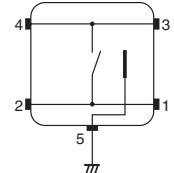
B3W-4100  
B3W-4105



#### PCB Mounting (Top View) (Single-sided PCB, t=1.6)

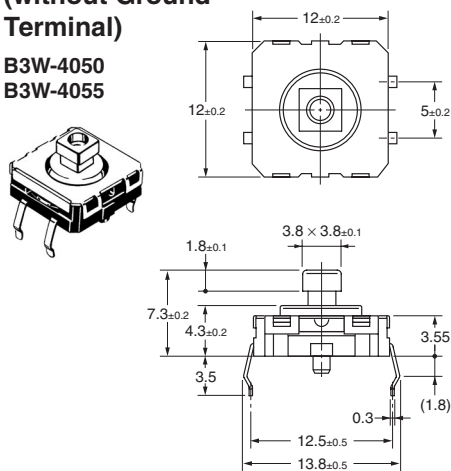


#### Terminal Arrangement /Internal Connections (Top View)

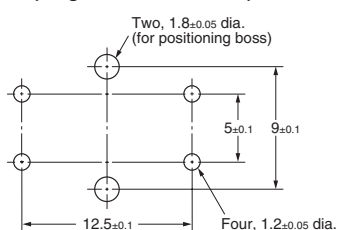


### Projected Plunger Type (without Ground Terminal)

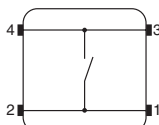
B3W-4050  
B3W-4055



#### PCB Mounting (Top View) (Single-sided PCB, t=1.6)

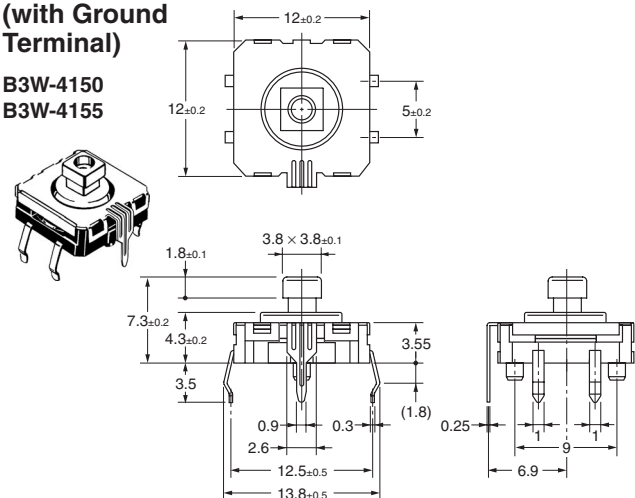


#### Terminal Arrangement /Internal Connections (Top View)

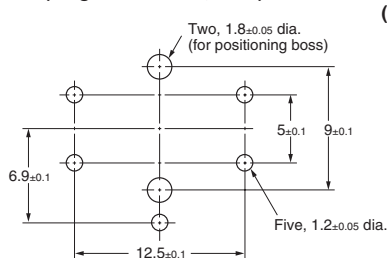


### Projected Plunger Type (with Ground Terminal)

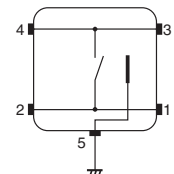
B3W-4150  
B3W-4155



#### PCB Mounting (Top View) (Single-sided PCB, t=1.6)



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



## Key Tops

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B32-series Special Key Tops are available for projected plunger models. Refer to page 42 for details.

## Precautions

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Be sure to read the precautions common to all Tactile Switches on pages 5 to 7 for correct use.

**ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.**

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