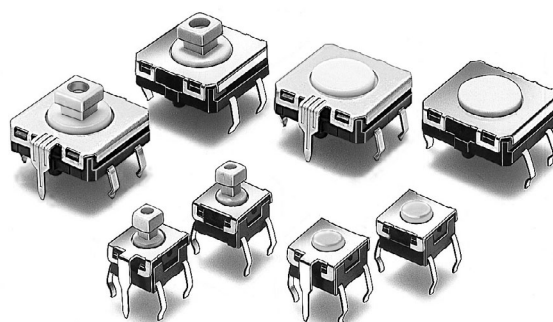


Sealed Tactile Switch

B3W





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

- Sealed construction conforming to IP67 (IEC-60529) provides high reliability in locations exposed to dust or water. (* Excluding the terminal section.)
- 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.



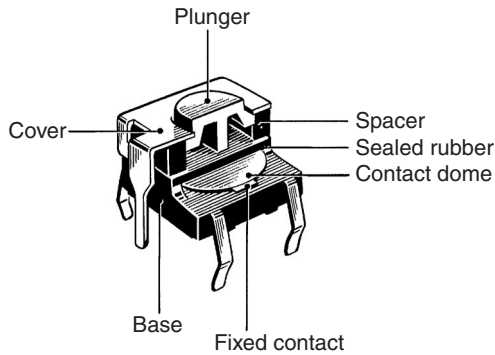
RoHS Compliant (Refer to page 8 for details.)

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

Switching capacity	1 to 50 mA, 5 to 24 VDC (resistive load)
Ambient operating temperature	-25°C to 70°C at 60% max. humidity (with no icing or condensation)
Ambient operating humidity	35% to 85% (at 5 to 35°C)
Contact configuration	SPST-NO
Contact resistance	100 mΩ max. (initial value) (rated: 1 mA, 5 VDC)
Insulation resistance	100 MΩ min. (at 250 VDC)
Dielectric strength	500 VAC, 50/60 Hz for 1 min
Bounce time	5 ms max.
Vibration resistance	Malfunction: 10 to 55 Hz, 1.5 mm double amplitude
Shock resistance	Destruction: 1,000 m/s ² {approx. 100 G} max. Malfunction: 100 m/s ² {approx. 10 G} max.
Life expectancy	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.
Weight	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 ^{+0.2} / _{-0.1} mm		0.3 ^{+0.2} / _{-0.1} mm	

Dimensions

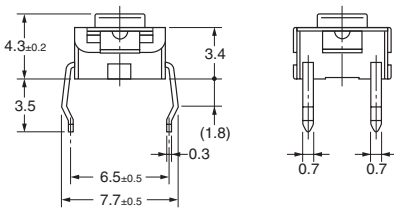
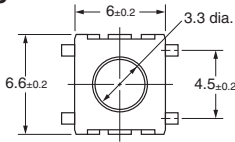
- Note:** 1. All units are in millimeters unless otherwise indicated. Unless otherwise specified, a tolerance of ± 0.4 mm applies to all dimensions.
 2. No terminal numbers are indicated on the Switches. The numbers used for terminals in the following graphics are indicated in the "Bottom View" diagram 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

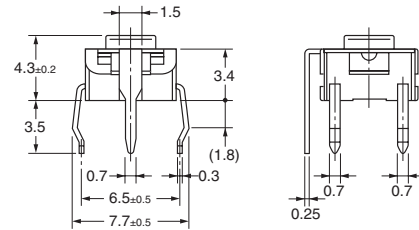
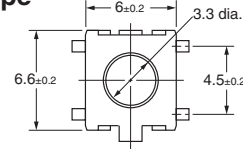
Flat Plunger Type (without Ground Terminal)

B3W-1000
B3W-1002

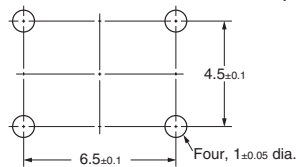


Flat Plunger Type (with Ground Terminal)

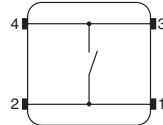
B3W-1100
B3W-1102



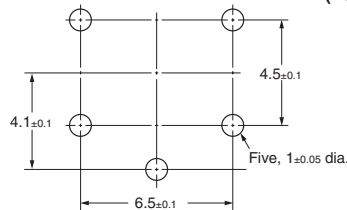
PCB Mounting (Top View)
(Single-sided PCB, t=1.6)



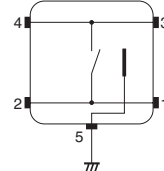
Terminal Arrangement
/Internal Connections
(Top View)



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

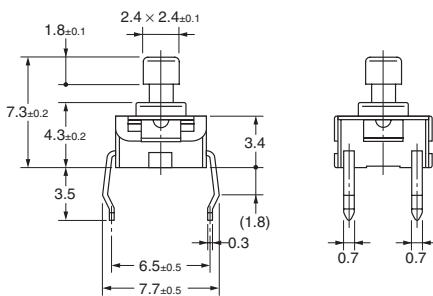
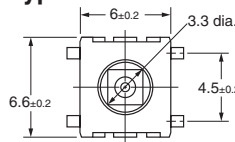


Terminal Arrangement
/Internal Connections
(Top View)



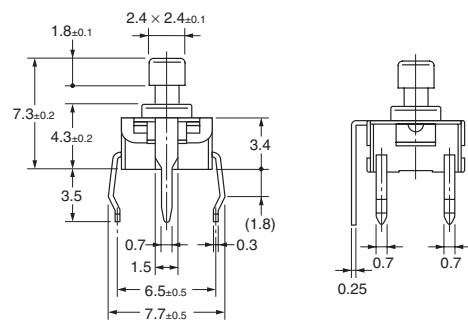
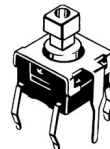
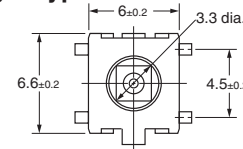
Projected Plunger Type (without Ground Terminal)

B3W-1050
B3W-1052

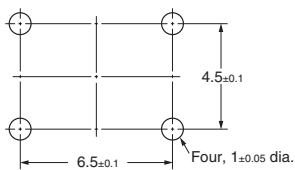


Projected Plunger Type (with Ground Terminal)

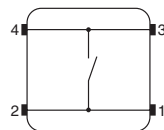
B3W-1150
B3W-1152



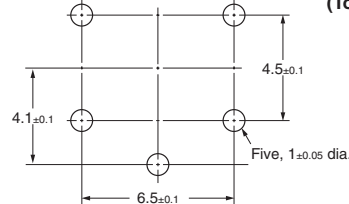
PCB Mounting (Top View)
(Single-sided PCB, t=1.6)



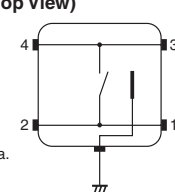
Terminal Arrangement
/Internal Connections
(Top View)



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



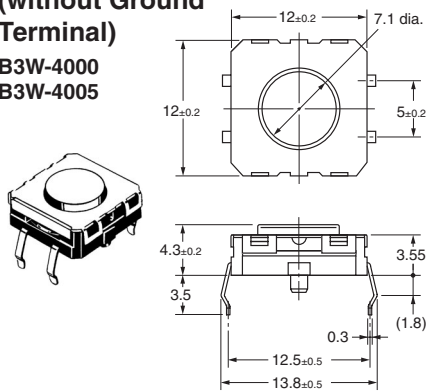
Terminal Arrangement
/Internal Connections
(Top View)



■ 12 × 12 mm Models

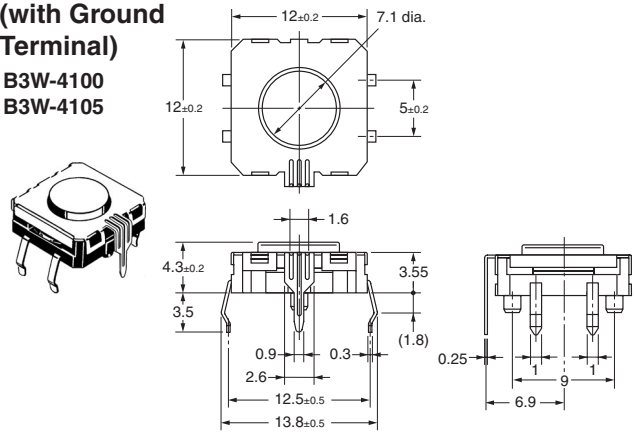
Flat Plunger Type
(without Ground Terminal)

B3W-4000
B3W-4005

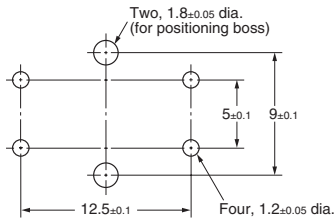


Flat Plunger Type
(with Ground Terminal)

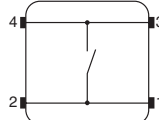
B3W-4100
B3W-4105



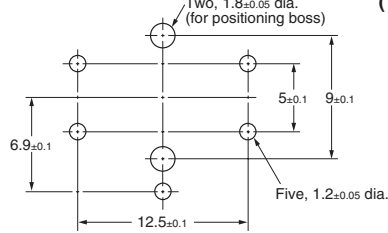
PCB Mounting (Top View)
(Single-sided PCB, $t=1.6$)



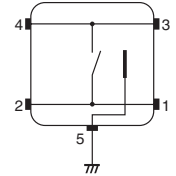
Terminal Arrangement
/Internal Connections
(Top View)



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

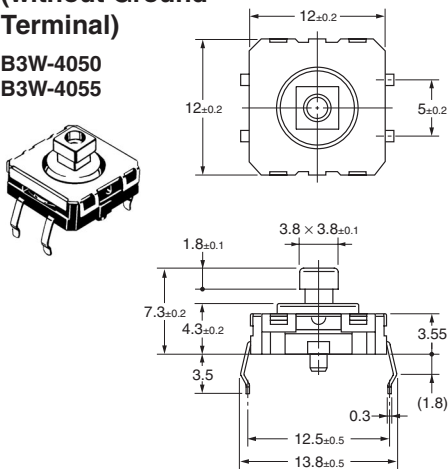


Terminal Arrangement
/Internal Connections
(Top View)



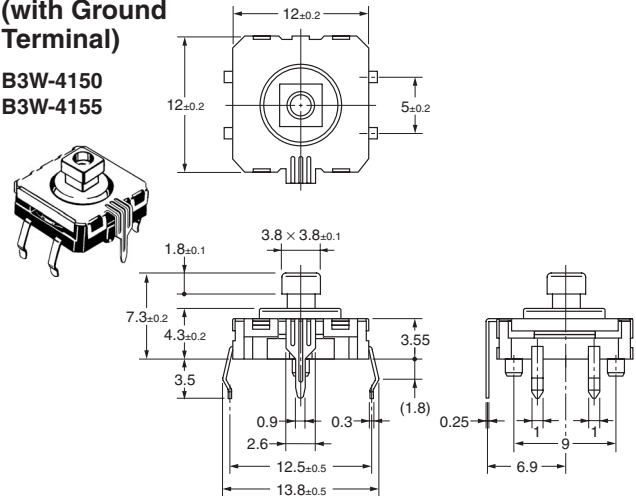
Projected Plunger Type
(without Ground Terminal)

B3W-4050
B3W-4055

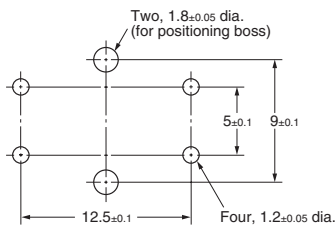


Projected Plunger Type
(with Ground Terminal)

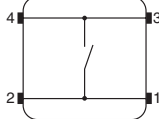
B3W-4150
B3W-4155



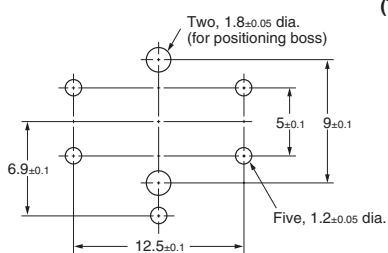
PCB Mounting (Top View)
(Single-sided PCB, $t=1.6$)



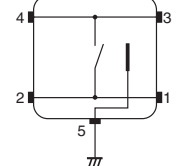
Terminal Arrangement
/Internal Connections
(Top View)



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



Terminal Arrangement
/Internal Connections
(Top View)



Key Tops

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

Precautions

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.