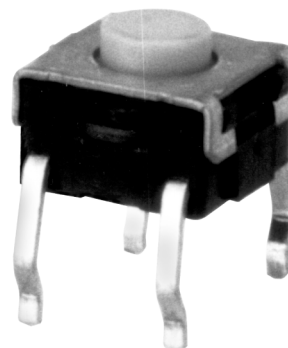






# Tactile Switch B3W

## Tactile Switch with Sealed Construction for Automatic Soldering

- Available in two sizes:  
6 mm square and 12 mm square
- Dome-shaped contact mechanism assures short key stroke and a sharp click to confirm actuation
- 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
- Stick packaging style available
- Sealed for CFC (Freon) cleaning
- RoHS Compliant



## Ordering Information

Type	Plunger	Switch height x pitch	Operating force	Part number			
				Without ground terminal		With ground terminal	
				Bags	Sticks*	Bags	Sticks*
Standard 6x6 mm		4.3 x 6.5 mm	General-purpose: 160 g	<b>B3W-1000</b>	<b>B3W-1000S</b>	<b>B3W-1100</b>	<b>B3W-1100S</b>
			High-force: 230 g	<b>B3W-1002</b>	<b>B3W-1002S</b>	<b>B3W-1102</b>	<b>B3W-1102S</b>
		7.3 x 6.5 mm	General-purpose: 160 g	<b>B3W-1050</b>	<b>B3W-1050S</b>	<b>B3W-1150</b>	<b>B3W-1150S</b>
			High-force: 230 g	<b>B3W-1052</b>	<b>B3W-1052S</b>	<b>B3W-1152</b>	<b>B3W-1152S</b>
Standard 12x12mm		4.3 x 6.5 mm	General-purpose: 200 g	<b>B3W-4000</b>	<b>B3W-4000S</b>	<b>B3W-4100</b>	<b>B3W-4100S</b>
			High-force: 350 g	<b>B3W-4005</b>	<b>B3W-4005S</b>	<b>B3W-4105</b>	<b>B3W-4105S</b>
		7.3 x 6.5 mm	General-purpose: 200 g	<b>B3W-4050</b>	<b>B3W-4050S</b>	<b>B3W-4150</b>	<b>B3W-4150S</b>
			High-force: 350 g	<b>B3W-4055</b>	<b>B3W-4055S</b>	<b>B3W-4155</b>	<b>B3W-4155S</b>

* Number of switches per stick:	<b>6 x 6 mm</b>	Without ground terminal....80/stick
		With ground terminal.....75/stick
	<b>12 x 12 mm</b>	Without ground terminal....45/stick
		With ground terminal.....40/stick

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

## ■ Accessories

See "B32" Tactile Switch Key Top data sheet for keycaps that fit projected plunger B3W models.

### Plunger Identification Table

Use this table to determine keyswitch type by plunger color.

Plunger color	Operating force	Type
White	160 g	<b>B3W-1000, 1050, 1100, 1150</b>
White	200 g	<b>B3W-4000, 4050, 4100, 4150</b>
Yellow	230 g	<b>B3W-1002, 1052, 1102, 1152</b>
Yellow	350 g	<b>B3W-4005, 4055, 4105, 4155</b>

## Specifications

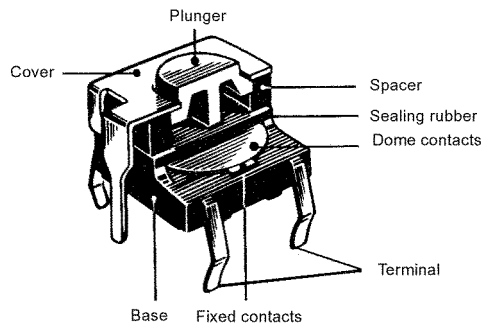
### ■ Characteristics

Switching capacity		50 mA 24 VDC (resistive load)	
Contact form		SPST-NO	
Permissible load		1 mA 5 VDC min. (resistive load)	
Contact resistance		100 MΩ max.	
Insulation resistance		100 MΩ 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	Destruction 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	
Humidity		35% to 85% RH	
Service life [mechanical/electrical]	General-purpose type	B3W-1□□□ : 1,000,000 operations min.	B3W-4□□□ : 3,000,000 operations min.
	High-load type	300,000 operations min.	1,000,000 operations min.
Weight		B3W-1□□□ : Approx. 0.30 g	B3W-4□□□ : Approx. 1.00 g

■ Operating Characteristics

Characteristics	Part number			
	B3W-1□□□		B3W-4□□□	
	General-purpose	High-force	General-purpose	High-force
Operating force (OF) max.	160 g	230 g	200 g	350 g
Release force (RF) min.	20 g	50 g	30 g	50 g
Pretravel (PT)	0.25 <sup>+0.2</sup> / <sub>-0.1</sub> mm	0.25 <sup>+0.2</sup> / <sub>-0.1</sub> mm	0.3 <sup>+0.2</sup> / <sub>-0.1</sub> mm	0.3 <sup>+0.2</sup> / <sub>-0.1</sub> mm

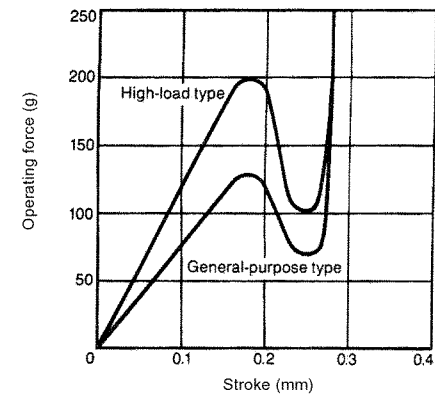
■ Construction



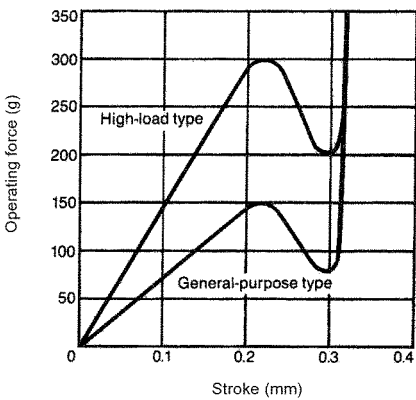
Engineering Data

■ Operating Force vs. Stroke (Typical Example)

B3W-1□□□ series



B3W-4□□□ series

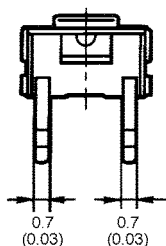
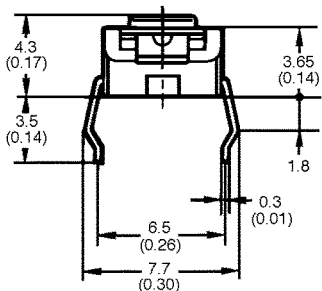
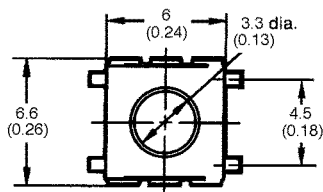


# Dimensions

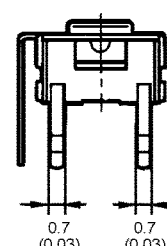
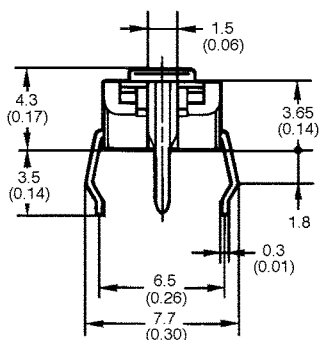
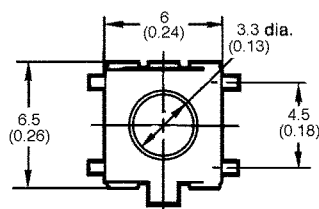
Unit: mm (inch)

## ■ 6 mm Square Types

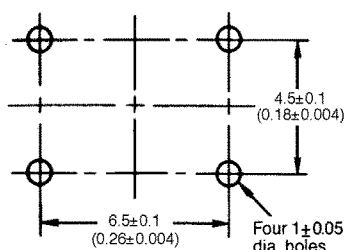
**B3W-1000, B3W-1002**



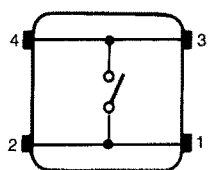
**B3W-1100, B3W-1102**



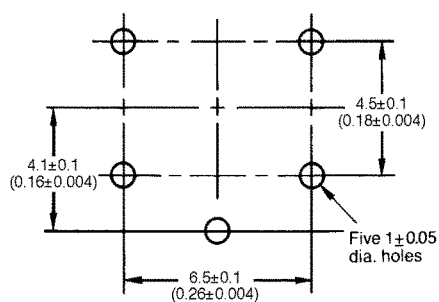
**Mounting holes  
in PCB (top view)**



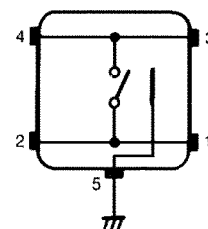
**Terminal arrangement/  
Internal connection  
(top view)**



**Mounting holes  
in PCB (top view)**



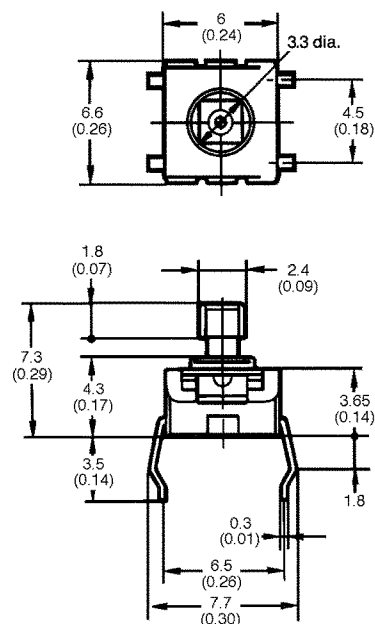
**Terminal arrangement/  
Internal connection  
(top view)**



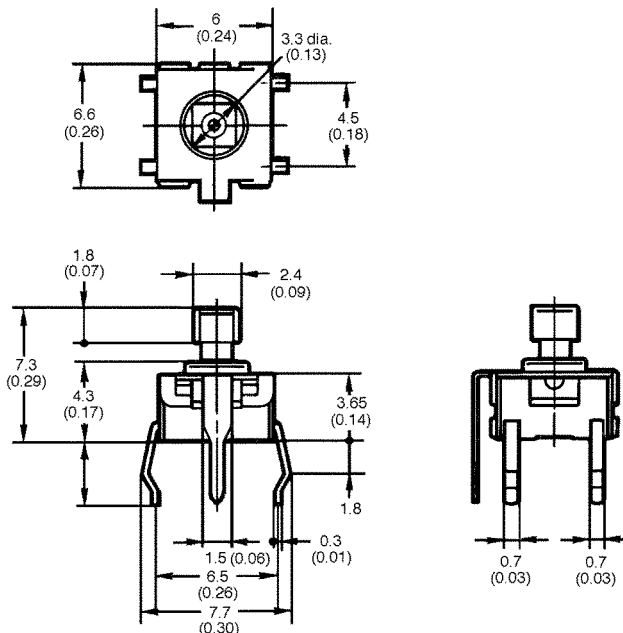
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# 6 mm Square Types

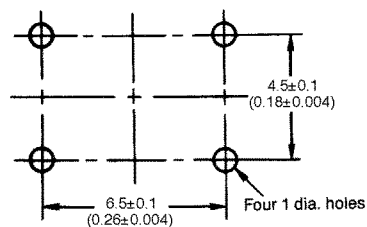
B3W-1050, B3W-1052



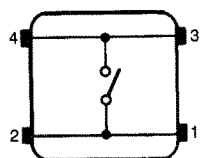
B3W-1150, B3W-1152



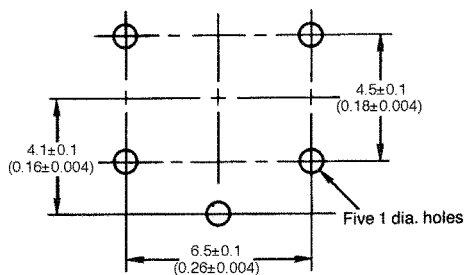
Mounting holes  
in PCB (top view)



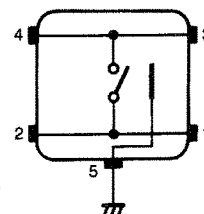
Terminal arrangement/  
Internal connection  
(top view)



Mounting holes  
in PCB (top view)



Terminal arrangement/  
Internal connection  
(top view)

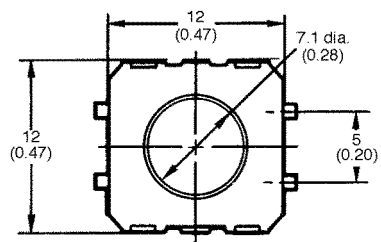


**Note:** Unless otherwise specified, a tolerance of ± 0.2 mm applies to all dimensions.

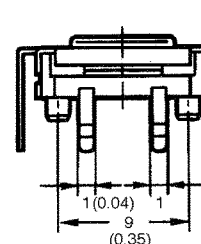
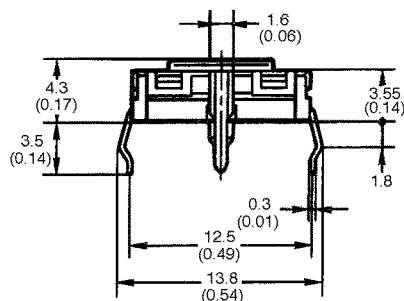
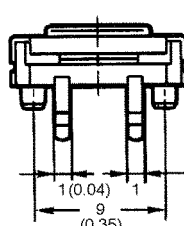
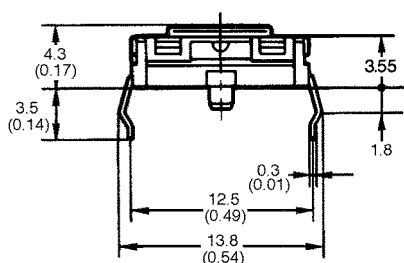
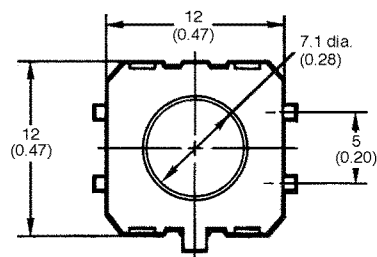
Unit: mm (inch)

# ■ 12 mm Square Types

B3W-4000, B3W-4005

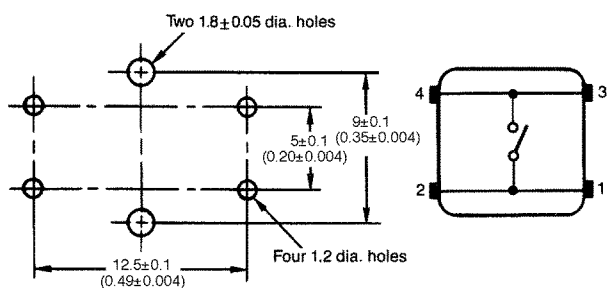


B3W-4100, B3W-4105



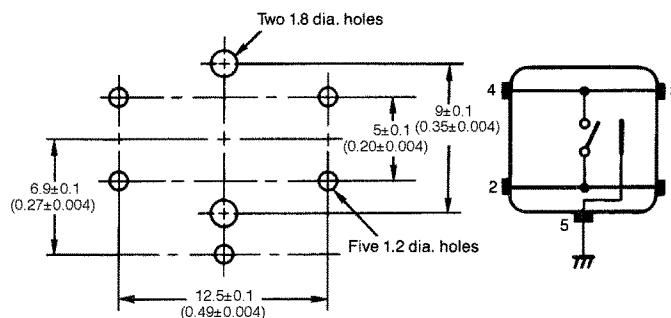
Mounting holes  
in PCB (top view)

Terminal arrangement/  
Internal connection  
(top view)



Mounting holes  
in PCB (top view)

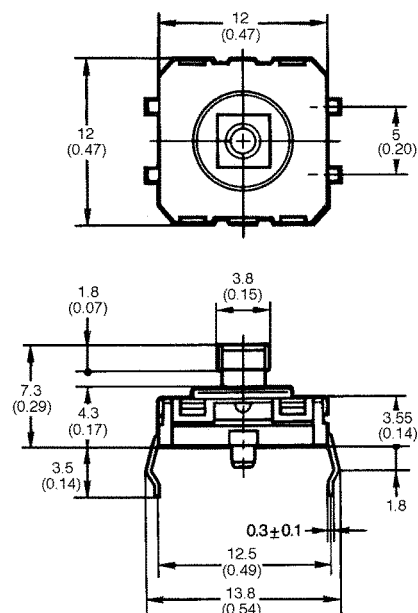
Terminal arrangement/  
Internal connection  
(top view)



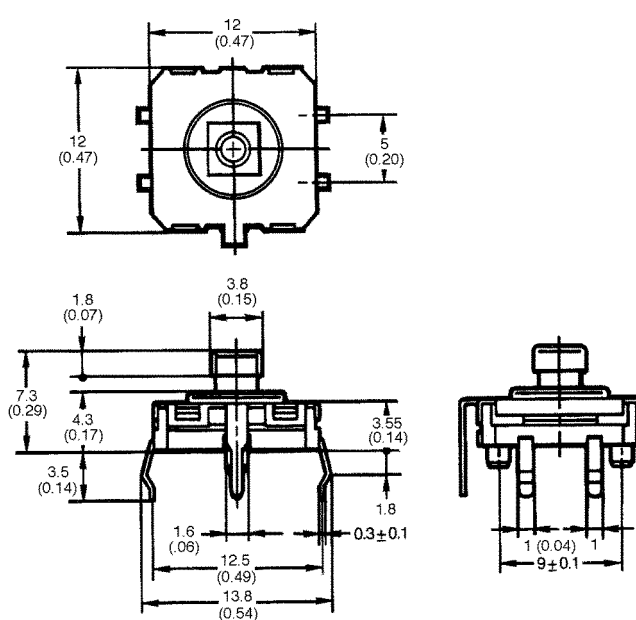
**Note:** Unless otherwise specified, a tolerance of  $\pm 0.2$  mm applies to all dimensions.

# ■ 12 mm Square Types

B3W-4050, B3W-4055

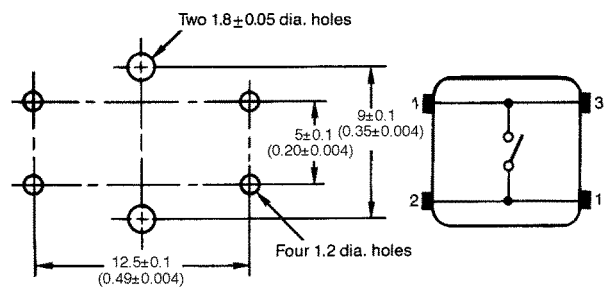


B3W-4150, B3W-4155



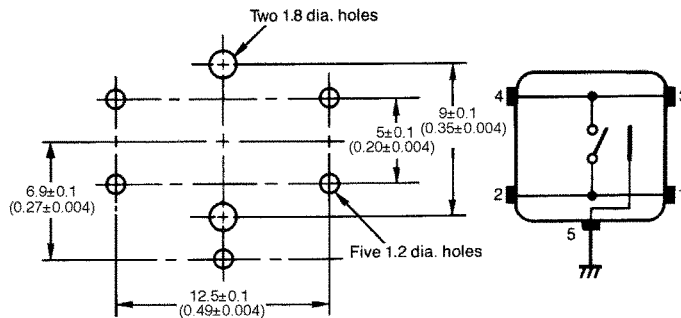
Mounting holes  
in PCB (top view)

Terminal arrangement/  
Internal connection  
(top view)



Mounting holes  
in PCB (top view)

Terminal arrangement/  
Internal connection  
(top view)



**Note:** Unless otherwise specified, a tolerance of ± 0.2 mm applies to all dimensions.

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