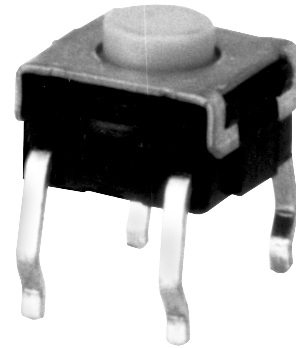






Tactile Switch with Sealed Construction for Automatic Soldering

- 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



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	Flat 	4.3 x 6.5 mm	General-purpose: 160 g	B3W-1000	B3W-1000S	B3W-1100	B3W-1100S
			High-force: 230 g	B3W-1002	B3W-1002S	B3W-1102	B3W-1102S
	Projected 	7.3 x 6.5 mm	General-purpose: 160 g	B3W-1050	B3W-1050S	B3W-1150	B3W-1150S
			High-force: 230 g	B3W-1052	B3W-1052S	B3W-1152	B3W-1152S
Standard 12x12 mm	Flat 	4.3 x 6.5 mm	General-purpose: 200 g	B3W-4000	B3W-4000S	B3W-4100	B3W-4100S
			High-force: 350 g	B3W-4005	B3W-4005S	B3W-4105	B3W-4105S
	Projected 	7.3 x 6.5 mm	General-purpose: 200 g	B3W-4050	B3W-4050S	B3W-4150	B3W-4150S
			High-force: 350 g	B3W-4055	B3W-4055S	B3W-4155	B3W-4155S

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

Important note: Switches cannot be water-washed.

■ ACCESSORIES

Keycaps

Keycap color	Applicable type	Part number		
		6 x 6 mm	12 x 12 mm	
	Size	4 x 4 mm	9 x 9 mm	12 x 12 mm
Light gray		B32-1000	B32-1200	B32-1300
Black		B32-1010	B32-1210	B32-1310
Orange		B32-1020	B32-1220	B32-1320
Yellow		B32-1030	B32-1230	B32-1330
Blue		B32-1040	B32-1240	B32-1340
Green		B32-1050	B32-1250	B32-1350
White		B32-1060	B32-1260	B32-1360
Light green		B32-1070	B32-1270	B32-1370
Red		B32-1080	B32-1280	B32-1380

Note: Keycaps are available in different sizes and colors for exclusive use with the 6 x 6 mm and 12 x 12 mm projected plunger version of Model B3W.

Plunger Identification Table

Use this table to determine keyswitch type by plunger color.

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

Specifications

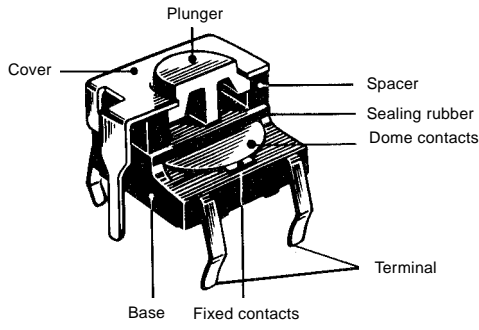
■ CHARACTERISTICS

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 ² (approx. 100 G)	
	Malfunction durability	100 m/s ² (approx. 10 G)	
Ambient temperature	Operating	-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 ^{+0.2} / _{-0.1} mm	0.25 ^{+0.2} / _{-0.1} mm	0.3 ^{+0.2} / _{-0.1} mm	0.3 ^{+0.2} / _{-0.1} mm

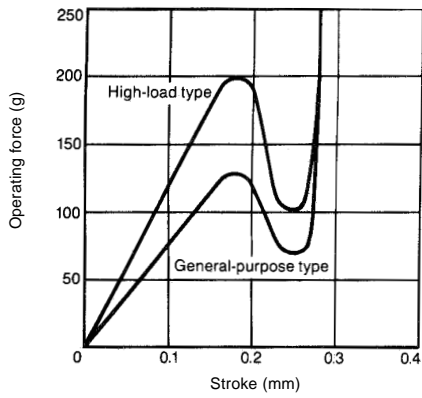
■ CONSTRUCTION



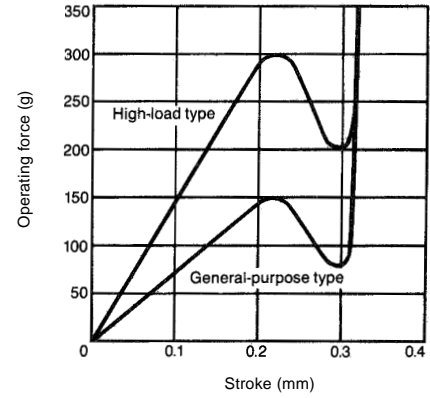
Engineering Data

■ OPERATING FORCE VS. STROKE (TYPICAL EXAMPLE)

B3W-1□□□ series



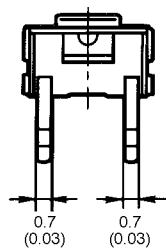
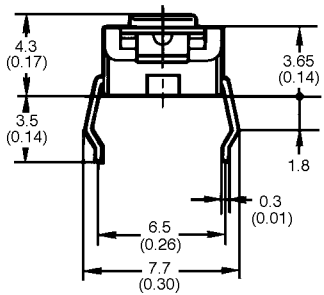
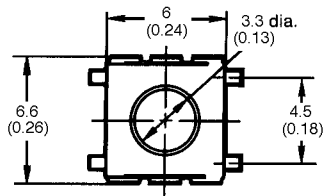
B3W-4□□□ series



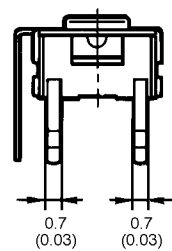
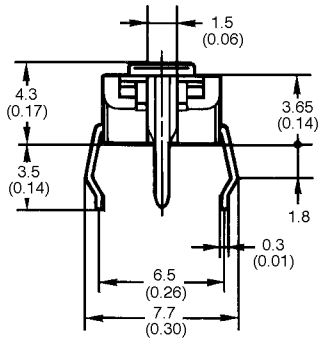
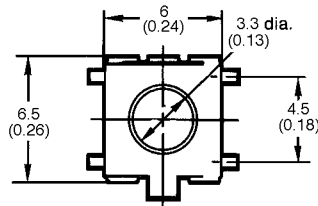
Dimensions

Unit: mm (inch)

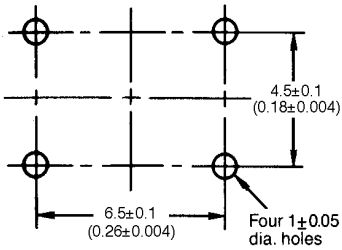
■ 6 MM SQUARE TYPES B3W-1000, B3W-1002



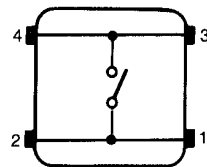
B3W-1100, B3W-1102



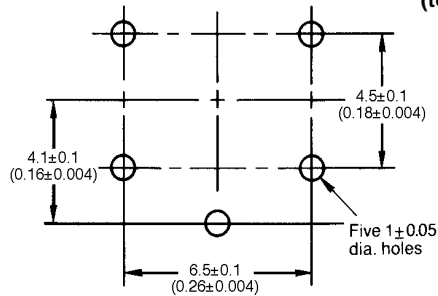
Mounting holes in PCB (top view)



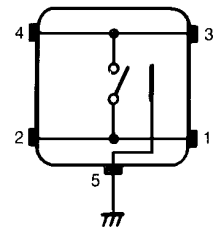
Terminal arrangement/Internal connection (top view)



Mounting holes in PCB (top view)

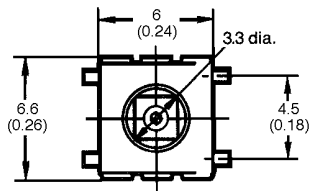


Terminal arrangement/Internal connection (top view)

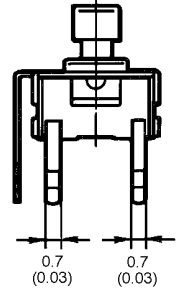
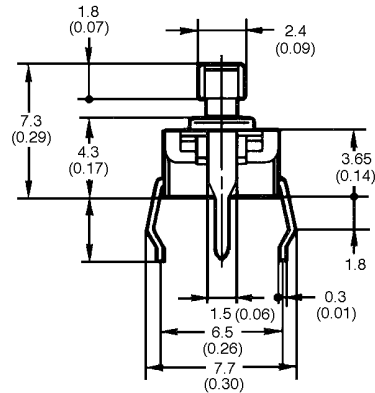
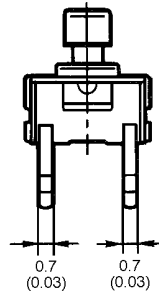
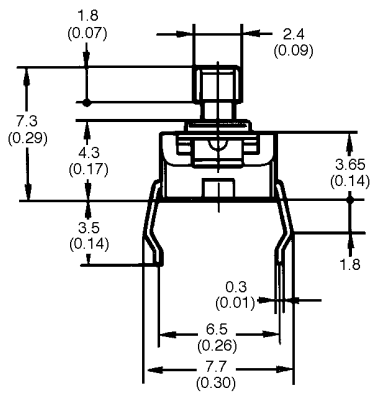
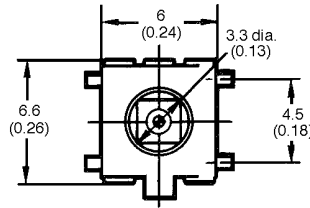


Note: Unless otherwise specified, a tolerance of ± 0.2 mm applies to all dimensions.

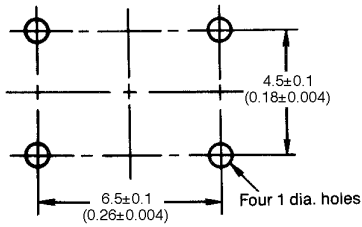
■ 6 MM SQUARE TYPES
B3W-1050, B3W-1052



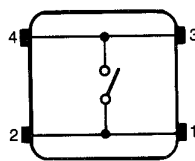
B3W-1150, B3W-1152



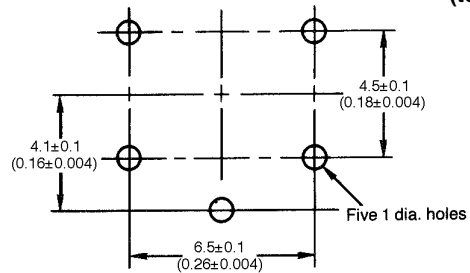
Mounting holes in PCB (top view)



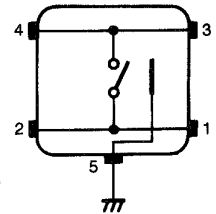
Terminal arrangement/Internal connection (top view)



Mounting holes in PCB (top view)



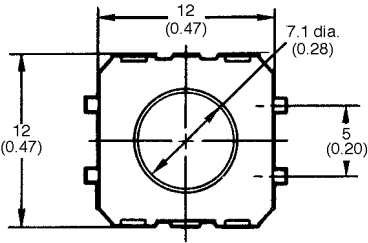
Terminal arrangement/Internal connection (top view)



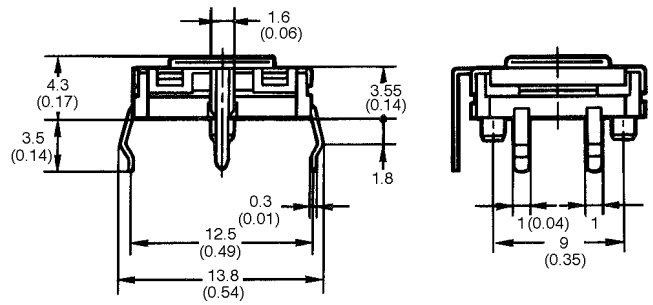
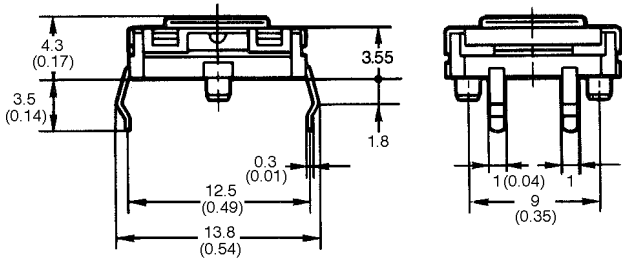
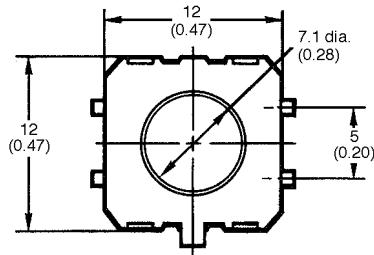
Note: Unless otherwise specified, a tolerance of ± 0.2 mm applies to all dimensions.

Unit: mm (inch)

12 MM SQUARE TYPES
B3W-4000, B3W-4005

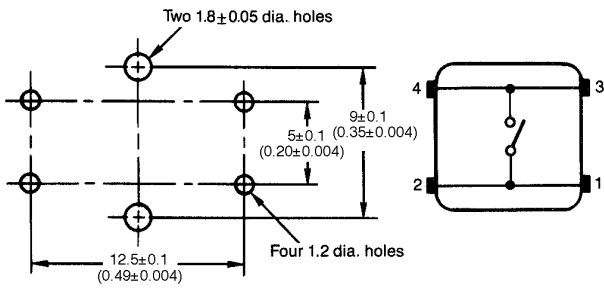


B3W-4100, B3W-4105



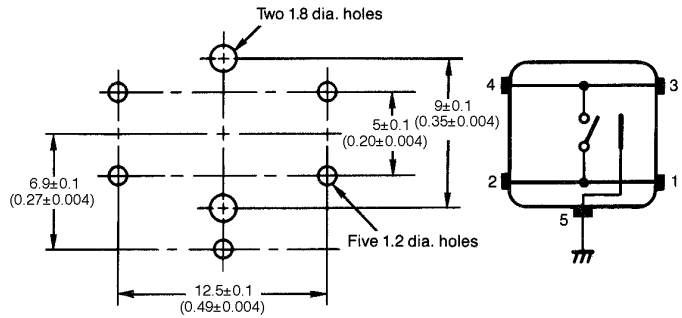
Mounting holes in PCB (top view)

Terminal arrangement/ Internal connection (top view)



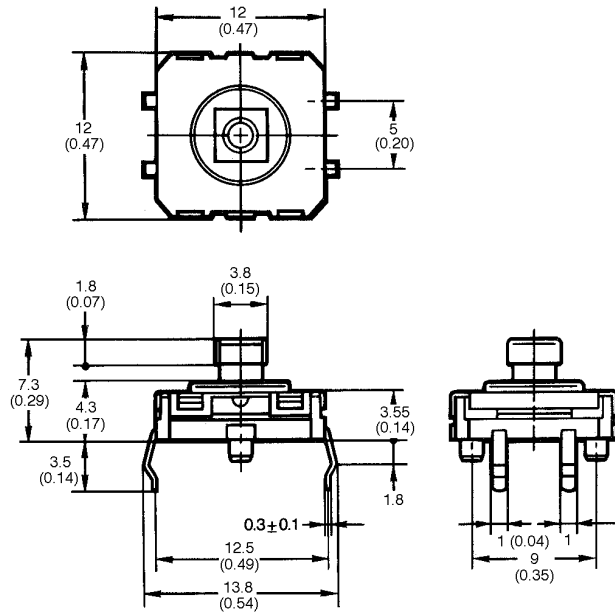
Mounting holes in PCB (top view)

Terminal arrangement/ Internal connection (top view)

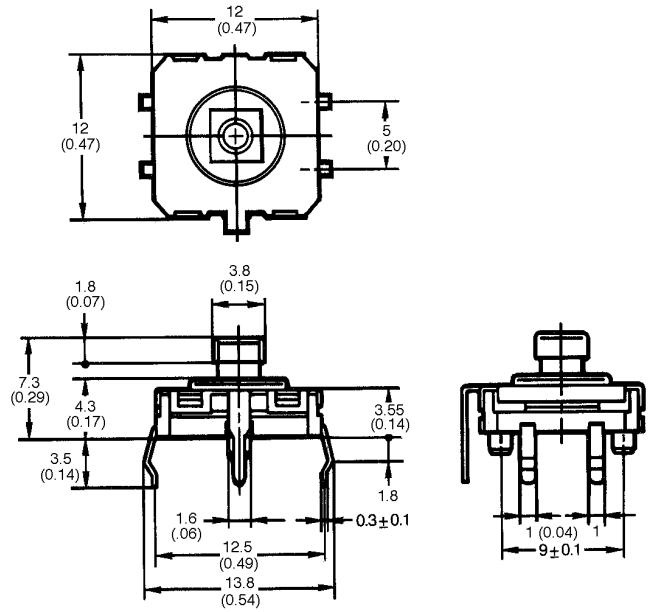


Note: Unless otherwise specified, a tolerance of ± 0.2 mm applies to all dimensions.

■ 12 MM SQUARE TYPES
B3W-4050, B3W-4055

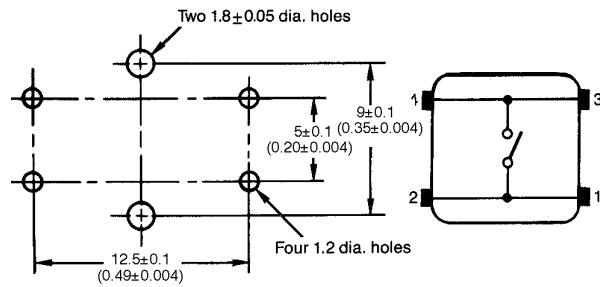


B3W-4150, B3W-4155



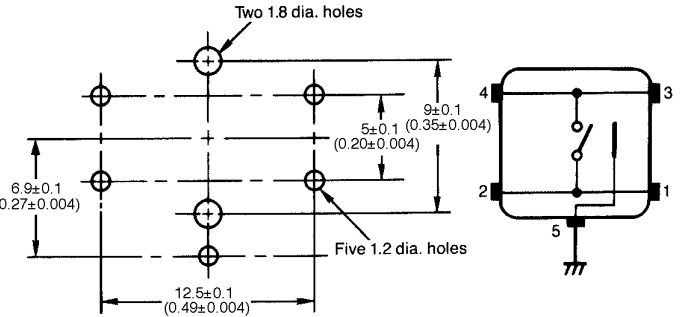
Mounting holes
in PCB (top view)

Terminal arrangement/
Internal connection
(top view)



Mounting holes
in PCB (top view)

Terminal arrangement/
Internal connection
(top view)

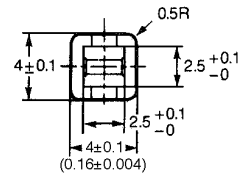
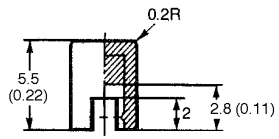


Note: Unless otherwise specified, a tolerance of ± 0.2 mm applies to all dimensions.

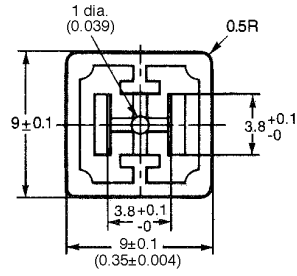
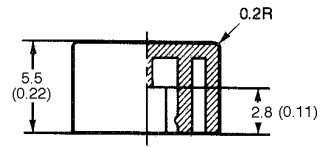
Unit: mm (inch)

■ KEYCAPS

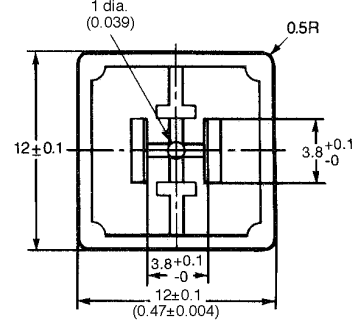
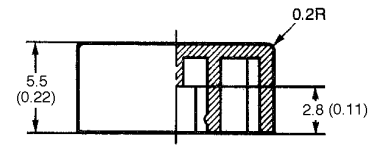
B32-10□0



B32-12□0



B32-13□0



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

NOTE: DIMENSIONS ARE SHOWN IN MILLIMETERS. To convert millimeters to inches divide by 25.4.

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