

# B3FS-4

## SMD Tactile Switch

### 12 × 12-mm Surface-mounting Switches for High-density Mounting

- Surface-mounting device of B3F-4000 series.
- Distinctive snapping action and extended mechanical/electrical durability.
- Available in embossed taping packages for automatic mounting.
- B32-series Key Tops mount to models with projected plungers.



### Model Number Legend

B3FS - 40 □ □ P - □  
 (1) (2) (3)

**(1) Plunger types**

- 0 : Flat type
- 5 : Projected type
- 9 : Key top integrated type

**(2) Force required for operation (Operating Force)**




- 2 : 1.47 N
- 5 : 2.55 N

**(3) Attachment structure**

- No display: Standard
- B : With boss

### Ordering Information

#### 12 × 12 mm Models

Type	Contact material	Plunger type	Height	Operating force (OF)	Plunger color	Embossed taping	
						Model	Minimum packing unit
B3FS-4000 Series	Silver plated	 (Flat type)	4.3 mm	1.47 N	Black	B3FS-4002P	1,000
				2.55 N			
		 (Projected type)	7.3 mm	1.47 N		B3FS-4052P	500
				2.55 N			
		 (Key top integrated type)	7 mm	1.47 N		B3FS-4092P-B	700

**Note:** Order in multiples of the minimum order unit. Switches are not sold individually.

## ■ Ratings/Characteristics

Rating (resistive load)	1 to 50 mA, 3 to 24 VDC	
Minimum applicable load (reference value)	10 $\mu$ A at 1 VDC (resistive load)	
Ambient operating temperature	-25 to +70 degC at 60%RH max. (with no icing or condensation)	
Ambient operating humidity	35 to 85%RH (at +5 to +35 degC)	
Contact configuration	SPST-NO	
Contact resistance (initial value)	100 m $\Omega$ max.	
Insulation resistance	100 M $\Omega$ (at 250 VDC with insulation tester)	
Dielectric strength	500 VAC 50/60 Hz for 1 min	
Vibration resistance	Malfunction	10 to 55 Hz, 1.5-mm double amplitude
Shock resistance	Destruction	1,000 m/s <sup>2</sup> {approx. 100 G} max.
	Malfunction	100 m/s <sup>2</sup> {approx. 10 G} max.
Durability	3,000,000 operations min. (OF: 1.47 N) 1,000,000 operations min. (OF: 2.55 N)	
Weight	Approx. 1 g	
Degree of protection	IEC IP00 equivalent	
Washing	Not possible	

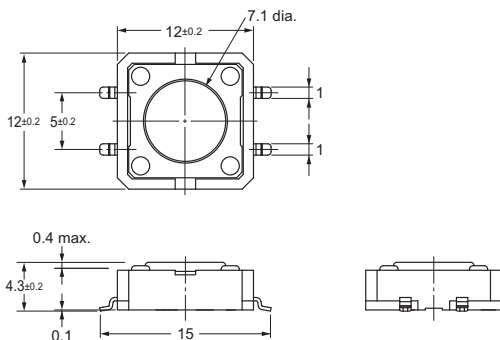
## ■ Operating Characteristics

Item	Type	B3FS-4000 Series	
	Operating force (OF)	1.47 N	2.55 N
Model		B3FS-40□2P	B3FS-40□5P
Operating force (OF)		1.47 $\pm$ 0.49 N	2.55 $\pm$ 0.69 N
Releasing force (RF)		0.15 N min.	0.29 N min.
Pretravel (PT)		0.25 $\pm$ 0.15 mm	0.25 $\pm$ 0.15 mm

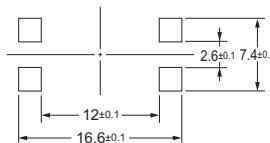
Dimensions

CAD Data marked products. 2D drawings and 3D CAD models are available. For CAD information, please visit our website, which is noted on the last page.

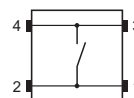
● Flat type  
B3FS-4002P  
B3FS-4005P



PCB Pad (Example)  
(TOP VIEW)  
(PCB t= 1.6)

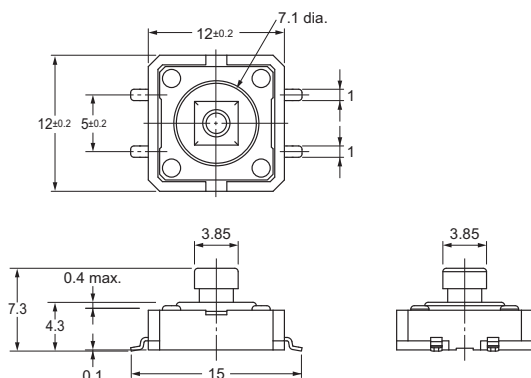


Terminal Arrangement/  
Internal Connection  
(Top View)

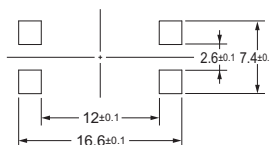


CAD Data

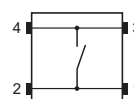
● Projected type  
B3FS-4052P  
B3FS-4055P



PCB Pad (Example)  
(TOP VIEW)  
(PCB t= 1.6)

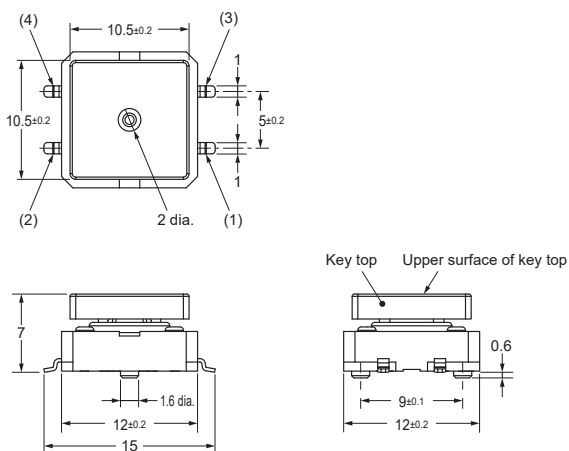


Terminal Arrangement/  
Internal Connection  
(Top View)

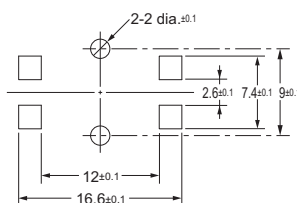


CAD Data

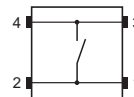
● Key top integrated type  
B3FS-4092P-B



PCB Pad (Example)  
(TOP VIEW)  
(PCB t= 1.6)



Terminal Arrangement/  
Internal Connection  
(Top View)



CAD Data

Note: 1. All units are in millimeters unless otherwise indicated. Unless otherwise specified, a tolerance of ±0.4 mm applies to all dimensions.

Note: 2. The numbers used for terminals in the following graphics are indicated in the "Bottom View" diagram in the right. In this diagram, the Switch is rotated so that the terminals are on the right and left-hand sides, and the OMRON logo appears the right way up.



## ■ Key Tops

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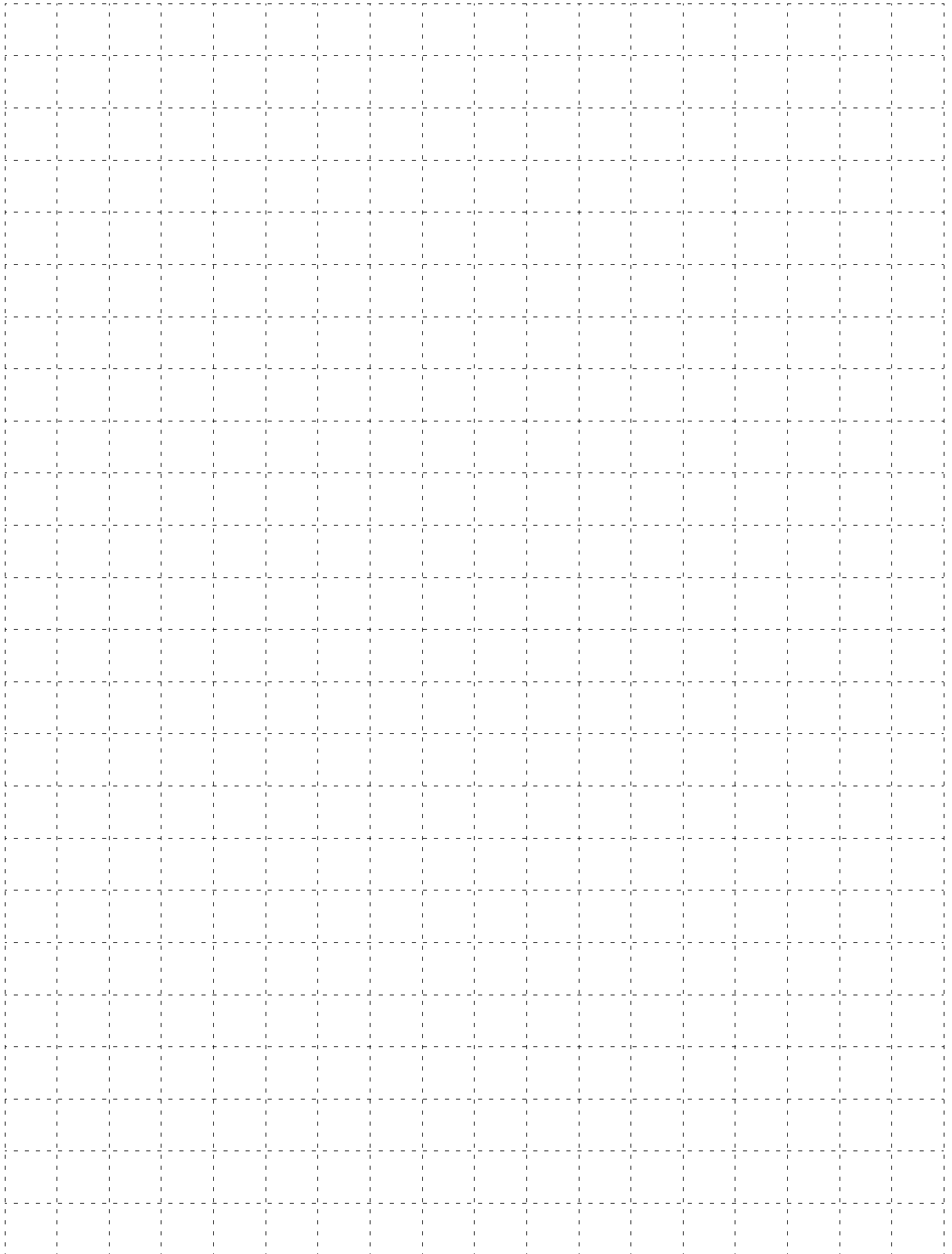
B32-series Key Tops are available for projected plungers. Refer to the Datasheet of B32 for details.

## ■ Precautions

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Be sure to read the safety precautions common to all Tactile Switches for correct use.

## MEMO

A large grid of dashed lines for taking notes, consisting of 20 columns and 20 rows of squares.

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