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		**B3FS-4005P**	
		 (Projected type)	7.3 mm	1.47 N		**B3FS-4052P**	500
				2.55 N		**B3FS-4055P**	
		 (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.

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■ Ratings/Characteristics

Rating (resistive load)		1 to 50 mA, 3 to 24 VDC
Minimum applicable load (reference value)		10 μA 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 mΩ max.
Insulation resistance		100 MΩ (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/s² {approx. 100 G} max.
	Malfunction	100 m/s² {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

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

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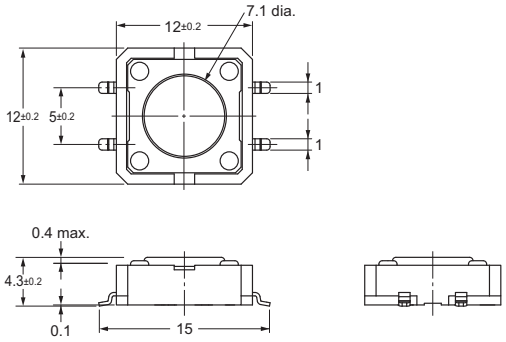
■ Dimensions

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.

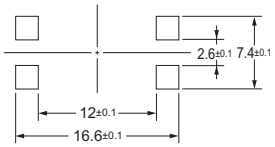
(Unit: mm)

●Flat type
B3FS-4002P
B3FS-4005P

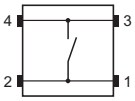




PCB Pad (Example)
(TOP VIEW)
(PCB t= 1.6)



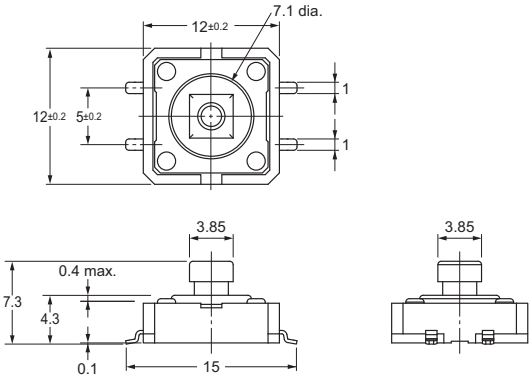
Terminal Arrangement/
Internal Connection
(Top View)



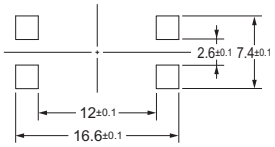
CAD Data

●Projected type
B3FS-4052P
B3FS-4055P

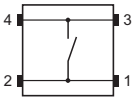




PCB Pad (Example)
(TOP VIEW)
(PCB t= 1.6)



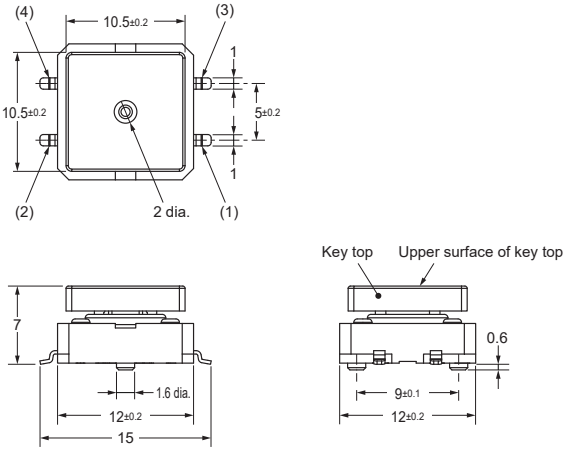
Terminal Arrangement/
Internal Connection
(Top View)



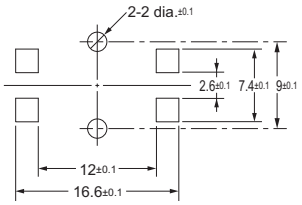
CAD Data

●Key top integrated type
B3FS-4092P-B

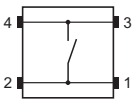




PCB Pad (Example)
(TOP VIEW)
(PCB t= 1.6)



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.



(BOTTOM VIEW)

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■ Key Tops

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

■ Precautions

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

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