

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 tapping 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.

■ Ratings/Characteristics

Rating (resistive load)		1 to 50 mA, 3 to 24 VDC
Minimum applicable load (reference value)		10 μ 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 Ω max.
Insulation resistance		100 M Ω (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 ² {approx. 100 G} max.
	Malfunction	100 m/s ² {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

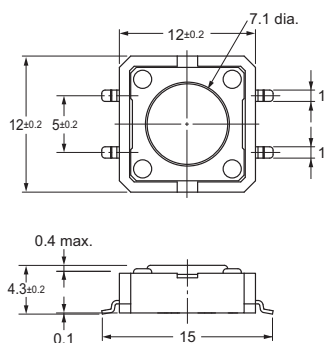
Type	B3FS-4000 Series	
	1.47 N	2.55 N
Operating force (OF)	1.47 N	2.55 N
Item	Model	
	B3FS-40□2P	B3FS-40□5P
Operating force (OF)	1.47±0.49 N	2.55±0.69 N
Releasing force (RF)	0.15 N min.	0.29 N min.
Pretravel (PT)	0.25±0.15 mm	0.25±0.15 mm

Dimensions

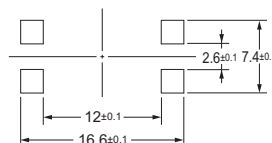
CAD Data marked products. 2D drawings and 3D CAD models are available.
For CAD information, please visit our website, which is noted on the last page.

(Unit: mm)

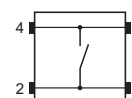
Flat type B3FS-4002P B3FS-4005P



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

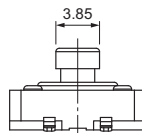
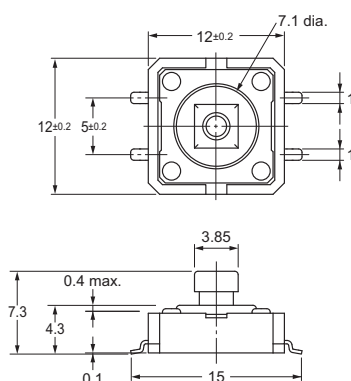


Terminal Arrangement/ Internal Connection (Top View)

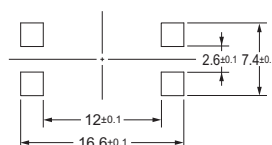


CAD Data

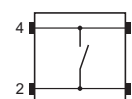
Projected type B3FS-4052P B3FS-4055P



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

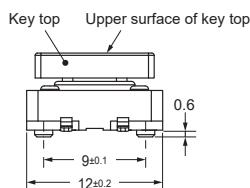
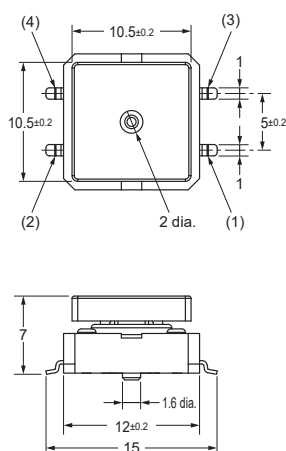


Terminal Arrangement/ Internal Connection (Top View)

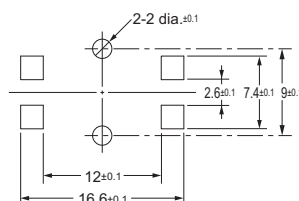


CAD Data

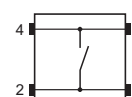
Key top integrated type B3FS-4092P-B



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.



■ 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.

MEMO

This image shows a full page of blank graph paper. The grid consists of small, uniform squares formed by thin, light gray dashed lines. There are 20 columns and 20 rows of these squares, creating a total of 400 small square units. The margins are consistent on all sides, and there is no text or other markings on the page.

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