OMRON

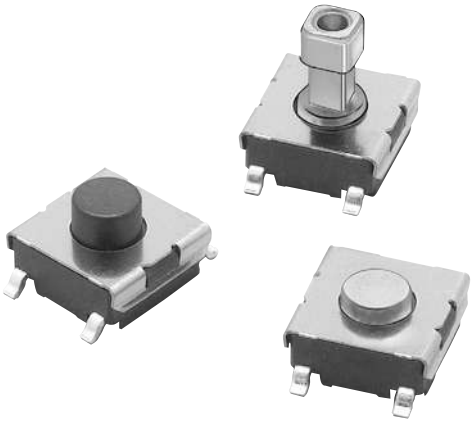
Tactile Switch (SMT)

B3FS

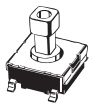
Surface-mounting Switches Ideal for High-density Mounting

- Tape packing style also available
- Allows reflow soldering
- 3 actuator heights for design flexibility; Projected plunger versions allow installation of B32-series keytops

RoHS Compliant



■ List of Models

Type	Plunger type	Height	Operating force (OF)	Plunger color	Bag		Embossed taping	
					Model	Quantity per package	Model	Quantity per package
6 × 6 mm B3FS-1000 models	 (Flat type)	3.1 mm	0.98 N {100 gf}	Black	B3FS-1000	100	B3FS-1000P	3,000
			1.47 N {150 gf}	Ivory	B3FS-1002		B3FS-1002P	
			2.55 N {260 gf}	Blue	B3FS-1005		B3FS-1005P	
	 (Flat type)	4.3 mm	0.98 N {100 gf}	Black	B3FS-1010		B3FS-1010P	1,000
			1.47 N {150 gf}	Ivory	B3FS-1012		B3FS-1012P	
			2.55 N {260 gf}	Blue	B3FS-1015		B3FS-1015P	
	 (Projected type)	7.3 mm	0.98 N {100 gf}	Black	B3FS-1050		B3FS-1050P	
			1.47 N {150 gf}	Yellow	B3FS-1052		B3FS-1052P	

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

■ Ratings/Characteristics

Ratings	1 to 50 mA, 5 to 24 VDC (resistive load)
Ambient operating temperature	-25°C to +70°C at 60%RH max. (with no icing or condensation)
Ambient operating humidity	35% to 85% (at +5 to +35°C)
Contact form	SPST-NO
Contact resistance	100 mΩ max. (initial value) (rated: 1 mA, 5 VDC)
Insulation resistance	100 MΩ min. (at 100 VDC)
Dielectric strength	250 VAC, 50/60 Hz for 1 min
Bounce time	5 ms max.
Vibration resistance	Malfunction: 10 to 55 Hz, 1.5-mm double amplitude
Shock resistance	Destruction: 1,000 m/s^2 {approx. 100G} max. Malfunction: 100 m/s^2 {approx. 10G} max.
Durability	Standard models (0.98 N {100 gf}): 1,000,000 operations min. High-force models (1.47 N {150 gf}): 300,000 operations min. High-force models (2.55 N {260 gf}): 100,000 operations min.
Weight	B3FS-1000: Approx. 0.2 g

■ Operating Characteristics

	B3FS-1000		
Item	**0.98 N**	**1.47 N**	**2.55 N**
Operating force (OF)	0.98±0.29 N {100±30 gf}	1.47±0.49 N {150±50 gf}	2.55±0.69 N {260±70 gf}
Releasing force (RF)	0.2 N {20 gf} min.	0.49 N {50 gf} min.	0.49 N {50 gf} min.
Pretravel (PT)	0.25 $^{+0.2}/_{-0.1}$ mm		

■ Dimensions (Unit: mm)

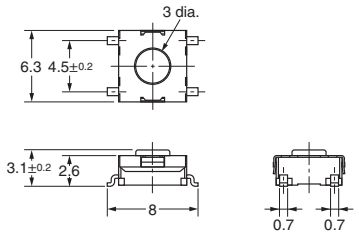
Note: The numbers used for terminals in the following graphics are indicated in the “Bottom View” diagram below. In this diagram, the Switch is rotated so that the terminals are on the right and left-hand sides, and the OMRON logo appears the right way up.



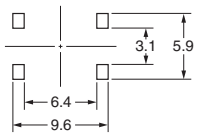
Flat Type

B3FS-1000
B3FS-1002
B3FS-1005
B3FS-1000P
B3FS-1002P
B3FS-1005P

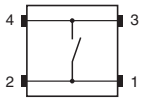




PCB Pad
(Top View)
(One-side PCB t= 1.6)



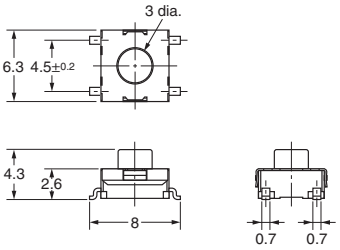
Terminal Arrangement/ Internal Connection
(Top View)



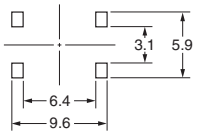
Flat Type

B3FS-1010
B3FS-1012
B3FS-1015
B3FS-1010P
B3FS-1012P
B3FS-1015P

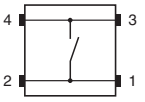




PCB Pad
(Top View)
(One-side PCB t= 1.6)

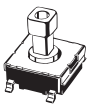


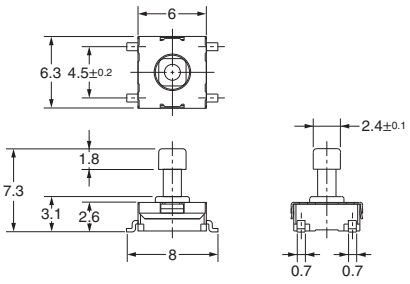
Terminal Arrangement/ Internal Connection
(Top View)



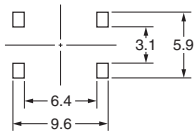
Projected Type

B3FS-1050
B3FS-1052
B3FS-1050P
B3FS-1052P

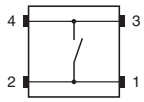




PCB Pad
(Top View)
(One-side PCB t= 1.6)



Terminal Arrangement/ Internal Connection
(Top View)



Note: Unless otherwise specified, a tolerance of ±0.4 mm applies to all dimensions. No terminal numbers are indicated on the Switches.

■ Key Tops

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

■ Precautions

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

- Application examples provided in this document are for reference only. In actual applications, confirm equipment functions and safety before using the product.
- Consult your OMRON representative before using the product under conditions which are not described in the manual or applying the product to nuclear control systems, railroad systems, aviation systems, vehicles, combustion systems, medical equipment, amusement machines, safety equipment, and other systems or equipment that may have a serious influence on lives and property if used improperly. Make sure that the ratings and performance characteristics of the product provide a margin of safety for the system or equipment, and be sure to provide the system or equipment with double safety mechanisms.

Note: Do not use this document to operate the Unit.

OMRON Corporation
ELECTRONIC AND MECHANICAL COMPONENTS COMPANY **Contact: www.omron.com/ecb**

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