



THE DATASHEET OF B3FS-1012P



Tactile Switch (SMT)

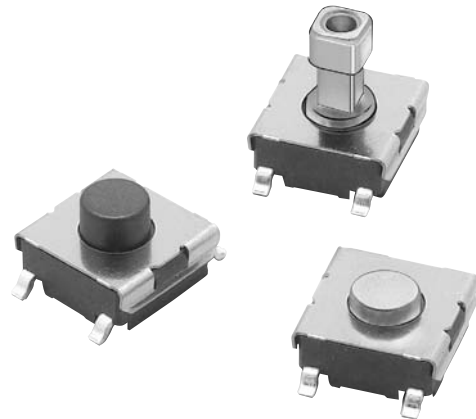
B3FS

6 × 6-mm Surface-mounting Switches for High-density Mounting.

Available on Embossed Tape




- Provide a sharp click and high durability.
- Tape packing style also available.
- B32-series Key Tops mount to models with projected plungers.

RoHS Compliant



■ List of Models

6 × 6 mm Models

Type	Contact material	Plunger type	Height	Operating force (OF)	Plunger color	Bag		Embossed taping	
						Model	Minimum packing unit	Model	Minimum packing unit
B3FS-1000 models	Silver plated	 (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	1,000	B3FS-1010P	
				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

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°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 (initial value)	100 m Ω max.
Insulation resistance	100 M Ω min. (at 100 VDC with insulation tester)
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 (OF: 0.98 N {100 gf}): 1,000,000 operations min. High-force models (OF: 1.47 N {150 gf}): 300,000 operations min. High-force models (OF: 2.55 N {260 gf}): 100,000 operations min.
Weight	Approx. 0.2 g
Degree of protection	IEC IP00
Washing	Not possible

■ Operating Characteristics

6 × 6 mm Models

Item	Type Operating force (OF) Model	B3FS-1000		
		0.98 N	1.47 N	2.55 N
		B3FS-10□0□□	B3FS-10□2□□	B3FS-10□5□□
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)

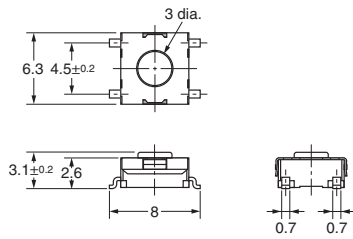
Note: The numbers used for terminals in the following graphics are indicated in the “Bottom View” diagram below. In this diagram, the Switch is rotated so that the terminals are on the right and left-hand sides, and the OMRON logo appears the right way up.



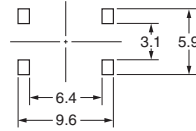
6 6 mm Models

Flat Type

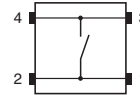
- B3FS-1000
- B3FS-1002
- B3FS-1005
- B3FS-1000P
- B3FS-1002P
- B3FS-1005P



PCB Pad
(Top View)
(PCB t= 1.6)

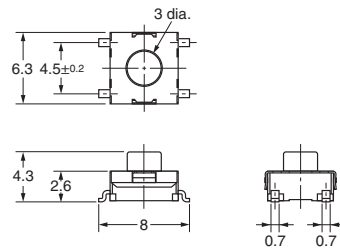


Terminal Arrangement/
Internal Connection
(Top View)

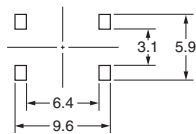


Flat Type

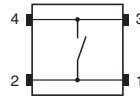
- B3FS-1010
- B3FS-1012
- B3FS-1015
- B3FS-1010P
- B3FS-1012P
- B3FS-1015P



PCB Pad
(Top View)
(PCB t= 1.6)

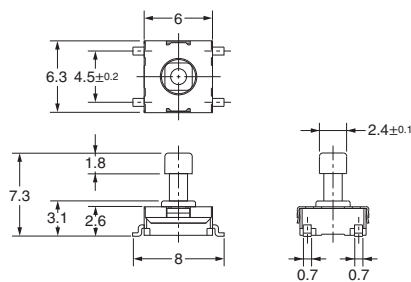
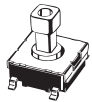


Terminal Arrangement/
Internal Connection
(Top View)

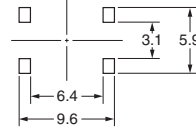


Projected Type

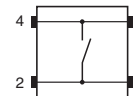
- B3FS-1050
- B3FS-1052
- B3FS-1050P
- B3FS-1052P



PCB Pad
(Top View)
(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 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.

- 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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