

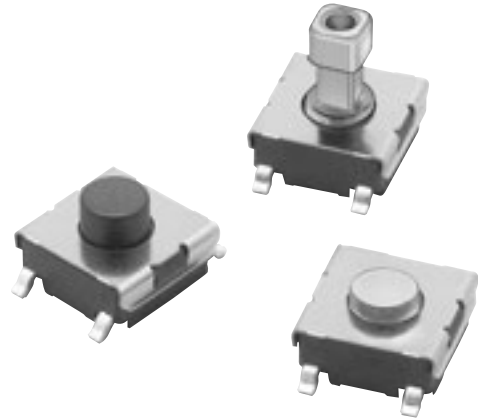
## Tactile Switch (SMT)

## 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.
- A small package containing 100 embossed taping reels is available, in addition to the standard package.



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    | <br>(Flat type)      | 3.1 mm | 0.98 N {100 gf}      | Black         | B3FS-1000 | 100 pcs              | B3FS-1000P      | 3,000 pcs            |
|                  |                  |   |        | 1.47 N {150 gf}      | Ivory         | B3FS-1002 |                      | B3FS-1000P-R100 | 100 pcs              |
|                  |                  |   |        | 2.55 N {260 gf}      | Blue          | B3FS-1005 |                      | B3FS-1002P      | 3,000 pcs            |
|                  |                  | <br>(Flat type)      | 4.3 mm | 0.98 N {100 gf}      | Black         | B3FS-1010 |                      | B3FS-1002P-R100 | 100 pcs              |
|                  |                  |   |        | 1.47 N {150 gf}      | Ivory         | B3FS-1012 |                      | B3FS-1005P      | 3,000 pcs            |
|                  |                  |   |        | 2.55 N {260 gf}      | Blue          | B3FS-1015 |                      | B3FS-1010P      | 1,000 pcs            |
|                  |                  | <br>(Projected type) | 7.3 mm | 0.98 N {100 gf}      | Black         | B3FS-1050 |                      | B3FS-1010P-R100 | 100 pcs              |
|                  |                  |   |        | 1.47 N {150 gf}      | Yellow        | B3FS-1052 |                      | B3FS-1012P      | 1,000 pcs            |
|                  |                  |   |        |                      |               |           |                      | B3FS-1012P-R100 | 100 pcs              |
|                  |                  |   |        |                      | B3FS-1015P    | 1,000 pcs |                      |                 |                      |
|                  |                  |   |        |                      | B3FS-1050P    |           |                      |                 |                      |
|                  |                  |   |        |                      | 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 $\mu$ 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 $\Omega$ max.  |
| Insulation resistance                     | 100 M $\Omega$ 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 <sup>2</sup> {approx. 100G} max.<br>Malfunction: 100 m/s <sup>2</sup> {approx. 10G} max.  |
| Durability                                | Standard models (OF: 0.98 N {100 gf}): 1,000,000 operations min.<br>High-force models (OF: 1.47 N {150 gf}): 300,000 operations min.<br>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<br>Operating force (OF)<br>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<br>{100±30 gf}                | 1.47±0.49 N<br>{150±50 gf} | 2.55±0.69 N<br>{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 <sup>+0.2</sup> / <sub>-0.1</sub> mm |                            |                            |

■ Dimensions (Unit: mm)

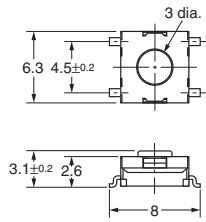
**Note:** The numbers used for terminals in the following graphics are indicated in the “Bottom View” diagram below. In this diagram, the Switch is rotated so that the terminals are on the right and left-hand sides, and the OMRON logo appears the right way up.



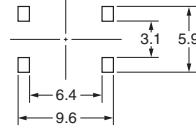
6 × 6 mm Models

Flat Type

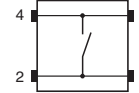
- B3FS-1000
- B3FS-1002
- B3FS-1005
- B3FS-1000P
- B3FS-1002P
- B3FS-1005P
- B3FS-1000P-R100
- B3FS-1002P-R100



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

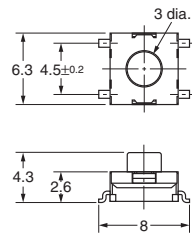


Terminal Arrangement/  
Internal Connection  
(Top View)

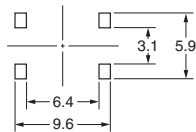


Flat Type

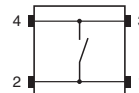
- B3FS-1010
- B3FS-1012
- B3FS-1015
- B3FS-1010P
- B3FS-1012P
- B3FS-1015P
- B3FS-1010P-R100
- B3FS-1012P-R100



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

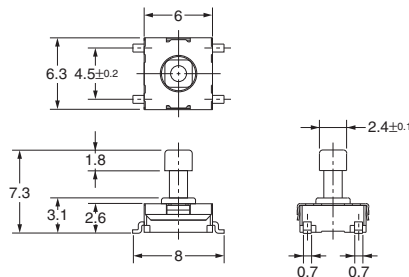


Terminal Arrangement/  
Internal Connection  
(Top View)

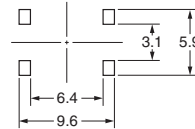


Projected Type

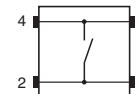
- B3FS-1050
- B3FS-1052
- B3FS-1050P
- B3FS-1052P



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



Terminal Arrangement/  
Internal Connection  
(Top View)



**Note:** Unless otherwise specified, a tolerance of  $\pm 0.4$  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.

Please check each region's Terms & Conditions by region website.

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## OMRON Corporation

Electronic and Mechanical Components Company

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