

## Sealed Tactile Switch (SMT)

## B3SN

### Sealed Surface-mounting Switches Sealed Structure for High Reliability. Available on Embossed Tape

- Sealed construction conforming to IP67 (IEC-60529) provides high reliability in locations exposed to dust or water. (\* Excluding the terminal section.)
- Available with ground terminals for protection against static electricity.
- Use of a stainless-steel spring provides a crisp clicking action.
- Gold plated version enables stable contact and insulation over long periods of time.
- Available in embossed taping packages for automatic mounting.
- 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

|                           |               |        |                 |       | Without ground terminal |                      |                 |                      | With ground terminal |                      |                 |                      |
|---------------------------|---------------|--------|-----------------|-------|-------------------------|----------------------|-----------------|----------------------|----------------------|----------------------|-----------------|----------------------|
|                           |               |        |                 |       | Bags                    |                      | Embossed taping |                      | Bags                 |                      | Embossed taping |                      |
|                           |               |        |                 |       | Model                   | Minimum packing unit | Model           | Minimum packing unit | Model                | Minimum packing unit | Model           | Minimum packing unit |
| B3SN-3000 Series          | Silver plated | 3.1 mm | 1.57 N {160 gf} | Ivory | B3SN-3012               | 100 pcs              | B3SN-3012P      | 3,000 pcs            | B3SN-3112            | 100 pcs              | B3SN-3112P      | 3,000 pcs            |
|                           |               |        |                 |       |                         |                      | B3SN-3012P-R100 | 100 pcs              |                      |                      | B3SN-3112P-R100 | 100 pcs              |
| B3SN-G Series Gold-plated | Gold plated   |        | 1.76 N {180 gf} | Black | ---                     | ---                  | B3SN-3012P-G    | 3,000 pcs            | ---                  | ---                  | ---             | ---                  |

**Note:** Switches in bags must be ordered in units of 100 pieces, and Switches on embossed taping must be ordered in units of 3,000 pieces. Individual Switches are not sold individually.

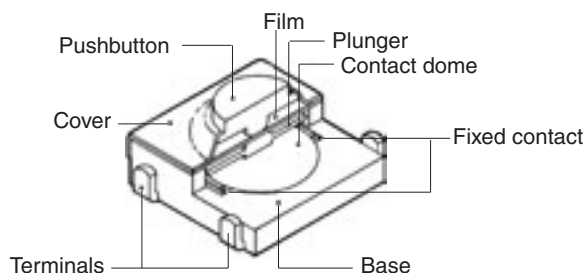
### ■ Ratings/Characteristics

|                                           |                                                              |
|-------------------------------------------|--------------------------------------------------------------|
| 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 250 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.      |
| Durability                                | 100,000 operations min.                                      |
| Weight                                    | Approx. 0.2 g                                                |
| Degree of protection                      | IEC IP67                                                     |
| Washing                                   | Possible                                                     |

## ■ Operating Characteristics

| Item                 | Type | B3SN-3000 Series             | B3SN-G Series                |
|----------------------|------|------------------------------|------------------------------|
| Operating force (OF) |      | 1.57±0.49 N {160±50 gf} max. | 1.76±0.59 N {180±60 gf} max. |
| Releasing force (RF) |      | 0.29 N {30 gf} min.          |                              |
| Pretravel (PT)       |      | 0.25±0.15 mm                 |                              |

## ■ Model Structure



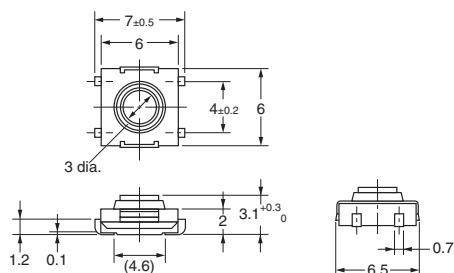
## ■ Dimensions

**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.

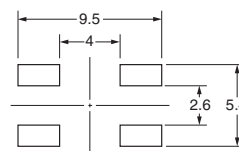


### Without Ground Terminal

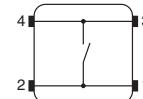
B3SN-3012  
B3SN-3012P  
B3SN-3012-G  
B3SN-3012P-R100



PCB Pad  
(Top View)

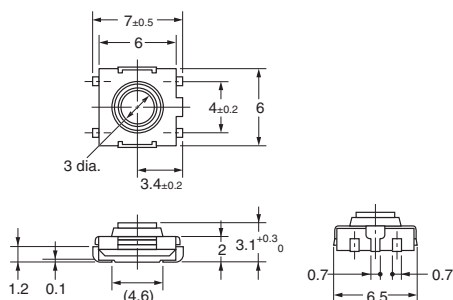


Terminal Arrangement  
/Internal Connections  
(Top View)

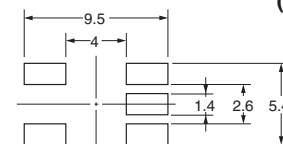


### With Ground Terminal

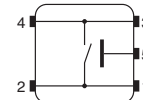
B3SN-3112  
B3SN-3112P  
B3SN-3112P-R100



PCB Pad  
(Top View)



Terminal Arrangement  
/Internal Connections  
(Top View)



**Note:** Unless otherwise specified, a tolerance of  $\pm 0.3$  mm applies to all dimensions. No terminal numbers are indicated on the Switches.

## ■ Precautions

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

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

## OMRON Corporation

Electronic and Mechanical Components Company

### Regional Contact

#### Americas

<https://www.components.omron.com/>

#### Asia-Pacific

<https://ecb.omron.com.sg/>

#### Korea

<https://www.omron-ecb.co.kr/>

#### Europe

<http://components.omron.eu/>

#### China

<https://www.ecb.omron.com.cn/>

#### Japan

<https://www.omron.co.jp/ecb/>