Tactile Switch with Sealed Construction for Automatic Soldering

- Available in two sizes: 6 mm square and 12 mm square
- Dome-shaped contact mechanism assures short key stroke and a sharp click to confirm actuation
- Ground terminal available to protect against static electricity
- Ideal for applications such as audio, office and communications equipment, measuring instruments, industrial robots, VCRs, TVs, and vending machines
- Stick packaging style available
- Sealed for CFC (Freon) cleaning
- RoHS Compliant

Ordering Information

<table>
<thead>
<tr>
<th>Type</th>
<th>Plunger</th>
<th>Switch height x pitch</th>
<th>Operating force</th>
<th>Part number</th>
<th>Bags Without ground terminal</th>
<th>Bags With ground terminal</th>
<th>Sticks* Without ground terminal</th>
<th>Sticks* With ground terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard 6x6 mm</td>
<td>Flat</td>
<td>4.3 x 6.5 mm</td>
<td>General-purpose: 160 g</td>
<td>B3W-1000</td>
<td>B3W-1000S</td>
<td>B3W-1100</td>
<td>B3W-1100S</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>High-force: 230 g</td>
<td>B3W-1002</td>
<td>B3W-1002S</td>
<td>B3W-1102</td>
<td>B3W-1102S</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Projected</td>
<td>7.3 x 6.5 mm</td>
<td>General-purpose: 160 g</td>
<td>B3W-1050</td>
<td>B3W-1050S</td>
<td>B3W-1150</td>
<td>B3W-1150S</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>High-force: 230 g</td>
<td>B3W-1052</td>
<td>B3W-1052S</td>
<td>B3W-1152</td>
<td>B3W-1152S</td>
<td></td>
</tr>
<tr>
<td>Standard 12x12 mm</td>
<td>Flat</td>
<td>4.3 x 6.5 mm</td>
<td>General-purpose: 200 g</td>
<td>B3W-4000</td>
<td>B3W-4000S</td>
<td>B3W-4100</td>
<td>B3W-4100S</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>High-force: 350 g</td>
<td>B3W-4005</td>
<td>B3W-4005S</td>
<td>B3W-4105</td>
<td>B3W-4105S</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Projected</td>
<td>7.3 x 6.5 mm</td>
<td>General-purpose: 200 g</td>
<td>B3W-4050</td>
<td>B3W-4050S</td>
<td>B3W-4150</td>
<td>B3W-4150S</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>High-force: 350 g</td>
<td>B3W-4055</td>
<td>B3W-4055S</td>
<td>B3W-4155</td>
<td>B3W-4155S</td>
<td></td>
</tr>
</tbody>
</table>

* Number of switches per stick: 6 x 6 mm Without ground terminal...80/stick
Without ground terminal........75/stick
12 x 12 mm Without ground terminal...45/stick
Without ground terminal........40/stick

Important Note: Switches cannot be water-washed.
■ Accessories

See “B32” Tactile Switch Key Top data sheet for keycaps that fit projected plunger B3W models.

Plunger Identification Table

Use this table to determine keyswitch type by plunger color.

<table>
<thead>
<tr>
<th>Plunger color</th>
<th>Operating force</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>160 g</td>
<td>B3W-1000, 1050, 1100, 1150</td>
</tr>
<tr>
<td>White</td>
<td>200 g</td>
<td>B3W-4000, 4050, 4100, 4150</td>
</tr>
<tr>
<td>Yellow</td>
<td>230 g</td>
<td>B3W-1002, 1052, 1102, 1152</td>
</tr>
<tr>
<td>Yellow</td>
<td>350 g</td>
<td>B3W-4005, 4055, 4105, 4155</td>
</tr>
</tbody>
</table>

Specifications

■ Characteristics

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switching capacity</td>
<td>50 mA 24 VDC (resistive load)</td>
</tr>
<tr>
<td>Contact form</td>
<td>SPST-NO</td>
</tr>
<tr>
<td>Permissible load</td>
<td>1 mA 5 VDC min. (resistive load)</td>
</tr>
<tr>
<td>Contact resistance</td>
<td>100 MΩ max.</td>
</tr>
<tr>
<td>Insulation resistance</td>
<td>100 MΩ min. (at 250 VDC)</td>
</tr>
<tr>
<td>Dielectric strength</td>
<td>500 VAC, 50/60 Hz for 1 minute</td>
</tr>
<tr>
<td>Bounce time</td>
<td>5 ms max.</td>
</tr>
<tr>
<td>Vibration</td>
<td>10 to 55 Hz, 1.5-mm double amplitude</td>
</tr>
<tr>
<td>Shock</td>
<td>Destruction durability 1,000 m/s² (approx. 100 G)</td>
</tr>
<tr>
<td></td>
<td>Malfunction durability 100 m/s² (approx. 10 G)</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>-25° to 70°C</td>
</tr>
<tr>
<td>Humidity</td>
<td>35% to 85% RH</td>
</tr>
<tr>
<td>Service life [mechanical/electrical]</td>
<td>B3W-1: 1,000,000 operations min.  B3W-4: 3,000,000 operations min.</td>
</tr>
<tr>
<td>High-load type</td>
<td>300,000 operations min.</td>
</tr>
<tr>
<td>Weight</td>
<td>B3W-1: Approx. 0.30 g  B3W-4: Approx. 1.00 g</td>
</tr>
</tbody>
</table>
■ Operating Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Part number</th>
<th>B3W-1 □□□□</th>
<th>B3W-4 □□□□</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>General-purpose</td>
<td>High-force</td>
</tr>
<tr>
<td>Operating force (OF) max.</td>
<td>160 g</td>
<td>230 g</td>
<td>200 g</td>
</tr>
<tr>
<td>Release force (RF) min.</td>
<td>20 g</td>
<td>50 g</td>
<td>30 g</td>
</tr>
<tr>
<td>Pretravel (PT)</td>
<td>0.25 ±0.2/-0.1 mm</td>
<td>0.25 ±0.2/-0.1 mm</td>
<td>0.3 ±0.2/-0.1 mm</td>
</tr>
</tbody>
</table>

■ Construction

![Construction Diagram]

■ Engineering Data

■ Operating Force vs. Stroke (Typical Example)

B3W-1 □□□□ series

![Operating Force vs. Stroke Graph]

B3W-4 □□□□ series

![Operating Force vs. Stroke Graph]
Dimensions

Unit: mm (inch)

■ 6 mm Square Types
B3W-1000, B3W-1002

B3W-1100, B3W-1102

Note: Unless otherwise specified, a tolerance of ±0.2 mm applies to all dimensions.
Note: Unless otherwise specified, a tolerance of ±0.2 mm applies to all dimensions.
**Unit: mm (inch)**

### 12 mm Square Types

**B3W-4000, B3W-4005**

- Mounting holes in PCB (top view)
- Terminal arrangement/ Internal connection (top view)

**B3W-4100, B3W-4105**

- Mounting holes in PCB (top view)
- Terminal arrangement/ Internal connection (top view)

**Note:** Unless otherwise specified, a tolerance of ±0.2 mm applies to all dimensions.
Note: Unless otherwise specified, a tolerance of ±0.2 mm applies to all dimensions.
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   (e) Including: Including without limitation

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   (b) Delivery and shipping dates are estimates only; and
   (c) Seller will package Products as it deems proper for protection against normal handling and extra charges apply to special conditions.

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   (iii) Use in consumer products or any use in significant quantities.
   (iv) Systems, machines and equipment that could present a risk to life or property. Please know and observe all prohibitions of use applicable to this product.
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