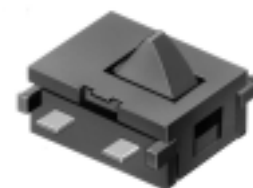


# Lever-type Detector Switches

## SW1AB-411 / -413 Series

### Features

- ◇Miniaturized for space saving design.
- ◇Superior reliability at micro-current by employing a sliding contact.
- ◇This is a compact detector switch which can be pressed either horizontally or vertically.
- ◇Reflow soldering is possible.



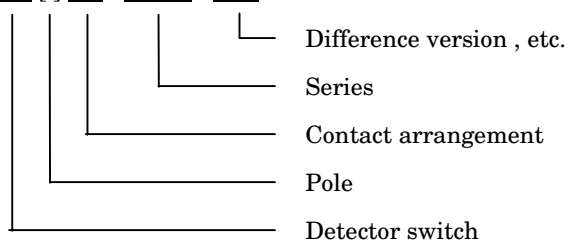
### Applications

- ◇Mechatronic detection for audio and VCR Digital camera FDD units.

Zoom

### Products Number System

SW [ ] AB - [ ] [ ] [ ] - [ ] [ ]



Actual size

### Products Line

No	Products No	Pole	Position	Operating force	Quantity (pcs./reel)	Notes
1	SW1AB-411-T28	1	1	0.34N max.	2,800	
2	SW1AB-413-T29	1	1	0.35N max.	2,900	
3	SW1AB-413-3T19	1	1	0.3N max.	1,900	

### Typical Specifications

Item	SW1AB-411 Series	SW1AB-413 Series
<b>Ratings (max.)</b>	0.1 to 5mA 5V DC (Resistive load)	0.1 to 5mA 5V DC (Resistive load)
<b>Contact resistance</b>	500 milliohm max.	1 ohm max.
<b>Insulation resistance</b>	100 megohm min. 100V DC	100 megohm min. 100V DC
<b>Withstanding voltage</b>	100V AC for 1min.	100V AC for 1min.
<b>Operating life with load</b>	50,000 cycles	50,000 cycles

Dimensions

Unit : mm

No	Style	P.C.B reference Land Dimensions Circuit diagram (TOP VIEW)
1	<p>SW1AB-411-T28</p> <p>Technical drawing of SW1AB-411-T28 switch. Top view shows a square body with dimensions 3.8 x 5.5. Pin 1 is 1.2 from the left edge, and pin 2 is 1.2 from the right edge. Pin 3 is 0.7 from the top edge, and pin 4 is 0.7 from the bottom edge. Side view shows a total travel position of 1.3 and an ON starting position of 2.3. Detail view shows a 0.05 offset and a 3.8 width.</p>	<p>P.C.B reference land dimensions for SW1AB-411-T28. Top view shows pin 1 at 1.2 from the left, pin 2 at 1.2 from the right, and pin 3 at 3.9 from the left edge. Pin 4 is 4.3 from the left edge. The total width is 6.1. The circuit diagram shows a switch with terminals 1, 2, 3, and 4.</p>
2	<p>SW1AB-413-T29</p> <p>Technical drawing of SW1AB-413-T29 switch. Top view shows a square body with dimensions 3.8 x 4.7. Pin 1 is 1.2 from the left edge, and pin 2 is 1.2 from the right edge. Pin 3 is 0.7 from the top edge, and pin 4 is 0.7 from the bottom edge. Side view shows a total travel position of 1.3 and an ON starting position of 3.5. Detail view shows a 0.35 offset, R0.2 and R2.95 radii, and a 1.3 width.</p>	<p>P.C.B reference land dimensions for SW1AB-413-T29. Top view shows pin 1 at 1.2 from the left, pin 2 at 1.2 from the right, and pin 3 at 3.9 from the left edge. Pin 4 is 5.1 from the left edge. The total width is 5.1. The circuit diagram shows a switch with terminals 1, 2, 3, and 4.</p>
3	<p>SW1AB-413-3T19</p> <p>Technical drawing of SW1AB-413-3T19 switch. Top view shows a square body with dimensions 3.8 x 4.7. Pin 1 is 1.2 from the left edge, and pin 2 is 1.2 from the right edge. Pin 3 is 0.7 from the top edge, and pin 4 is 0.7 from the bottom edge. Side view shows a total travel position of 1.3 and an ON starting position of 4.3. Detail view shows a 0.6 offset, R0.3 and R0.5 radii, and a 1.3 width.</p>	<p>P.C.B reference land dimensions for SW1AB-413-3T19. Top view shows pin 1 at 1.2 from the left, pin 2 at 1.2 from the right, and pin 3 at 3.9 from the left edge. Pin 4 is 5.1 from the left edge. The total width is 5.1. The circuit diagram shows a switch with terminals 1, 2, 3, and 4.</p>

**□ Notes**

1. The appearance and specifications of the product may be modified to improve its performance without prior notice.
2. This catalog shows only outline specifications. When using the product, please obtain formal specifications.
3. Please see appendix [Cautions in Using Switches ].
4. This switch is not washable.
5. Soldering shall be done with actuator at free position and take care not to attach flux on plastic portion.
6. Note that if the stress is applied to the terminals during soldering, they might cause deformation and defects in electrical performance.
7. In manual soldering, consideration should be given to apply the soldering iron to the tip of the terminal so that unusual pressure is not applied to the terminal.
8. In case circuit and software design consideration against chattering and bouncing shall be taken as below.
  - Read a few times. (Ex. 5ms for 5 times)
  - Set delay time.
  - Set integral circuit.
9. As to threshold voltage, center setting is recommended.
10. Care shall be taken not to apply stress to the body of switch as it may affect the performance.
11. Please confirm the performance on actual operation by simulation with actual environment environments for high reliability.