

## SENSOR SWITCH

Item #	RBS02 Series	Description	TILT SWITCH	Version	V99.0
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### ● FUNCTIONS

1. Horizontal Tilt Detecting
2. Vertical Rotation Detecting
3. Shock Detecting



### ● APPLICATIONS

1. Digital picture frames rotation and up-side down detecting
2. Cameras rotation detecting
3. Automotive devices
4. Home electrical appliances
5. Information devices
6. Communication settings

### ● FEATURES

1. Tiny size, suitable for small space.
2. Wing-shaped terminals, a feature enables half body of the sensor switch to be buried into PCB.
3. No electricity consumption during detection status.
4. Gold-plated ball and terminals, low possibility of oxidization.
5. All plastic materials subject to industrial purpose, resist high temperature and meet fireproof function.
6. Simple ON and OFF signals, easy for design.
7. RoHS compliance, an ideal substitute for mercury switch.
8. A more economical tilt and rotation detection option than IC design solution.
9. All made in Taiwan and examined before shipment.

### ● PATENTS

1. TAIWAN Patent NO. 168208
2. TAIWAN Patent NO. 195196

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● DIMENSIONS / OPERATION / P.C.B. LAYOUT (Unit: mm, Tolerance: ±0.25mm)

<p>RBS 02 06 02</p>	<p>Triggered Angle Range <math>\theta &gt; 10^\circ; \theta &lt; -10^\circ</math></p>	<p>P.C.B. Layout (SMT) / Top View</p>
<p>RBS 02 07 02</p>	<p>Triggered Angle Range <math>\theta &gt; 10^\circ; \theta &lt; -10^\circ</math></p>	<p>P.C.B. Layout (SMT) / Top View</p>
<p>RBS 02 08 02</p>	<p>Triggered Angle Range <math>\theta &gt; 20^\circ; \theta &lt; -20^\circ</math></p>	<p>P.C.B. Layout (SMT) / Top View</p>
<p>RBS 02 09 02</p>	<p>Triggered Angle Range <math>\theta &gt; 20^\circ; \theta &lt; -20^\circ</math></p>	<p>P.C.B. Layout (SMT) / Top View</p>

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RBS 02 09 12	Triggered Angle Range $\theta > 20^\circ$ ; $\theta < -20^\circ$	P.C.B. Layout (SMT) / Top View

RBS 02 10 02	Triggered By Vibration	P.C.B. Layout (SMT) / Top View

RBS 02 11 02	Triggered Angle Range $\theta > 10^\circ$ ; $\theta < -10^\circ$	P.C.B. Layout (SMT) / Top View

RBS 02 12 02	Triggered By Vibration	P.C.B. Layout (SMT) / Top View

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### ● ELECTRICAL CHARACTERISTICS

1.	Contact Rating	10mA, 5VDC
2.	Contact Resistance	10Ω max.
3.	Differential Angle	Refer to the drawing
4.	Insulation Resistance	50MΩ min. at 100VDC
5.	Dielectric Strength	50VDC min. for 1 minute
6.	Capacitance	5pF max.

### ● MECHANICAL CHARACTERISTICS

1.	Temperature Range	Operating : -25°C to +85°C Storage : -40°C to +85°C
2.	Pull Force of Terminal	500 gf for 1 minute
3.	Operation Life	100,000 cycles
4.	Humidity	95% RH, 40°C for 96 hrs.
5.	Solder Ability	After flux 260±5°C for 5±0.5 seconds 95% coverage
6.	Reflow Soldering Heat for SMT Type	Reflow zone 260±5°C for 20 seconds max.

### ● BILL OF MATERIAL

1.	Housing	Copper Alloy, Gold Plated over Nickel
2.	Terminal	Copper Alloy, Gold Plated over Nickel
3.	Ball	Copper Alloy, Gold Plated over Nickel
4.	Isolation Base	Liquid Crystal Polymer + Glass-Fiber

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● PACKAGE (Minimum Order Quantity: One Bag / One Reel)

	Part Number	Package	Quantity	Total	Size
1.	RBS020602 RBS020702 RBS021102	PE Bag	1,000 pcs	1,000 pcs	12.7 x 17.8 (cm)
		Inner Box	10 Bags	10,000 pcs	36 x 20 x 9 (cm)
		Carton	3 Boxes	30,000 pcs	36 x 28 x 23 (cm)
2.	RBS020802 RBS020902 RBS021002 RBS021202	PE Bag	2,000 pcs	2,000 pcs	12.7 x 17.8 (cm)
		Inner Box	10 Bags	20,000 pcs	36 x 20 x 9 (cm)
		Carton	3 Boxes	60,000 pcs	36 x 28 x 23 (cm)
3.	RBS020912T RBS021202T	Reel	2,500 pcs	2,500 pcs	Diameter = 30; Width = 2.1 (cm)
		Inner Box	2 Reels	5,000 pcs	36 x 34 x 7 (cm)
		Carton (1)	4 Boxes	20,000 pcs	37 x 36 x 31 (cm)
		Carton (2)	10 Boxes	50,000 pcs	70 x 36 x 38 (cm)
4.	RBS021002T	Reel	2,000 pcs	2,000 pcs	Diameter = 30; Width = 2.1 (cm)
		Inner Box	2 Reels	4,000 pcs	36 x 34 x 7 (cm)
		Carton (1)	4 Boxes	16,000 pcs	37 x 36 x 31 (cm)
		Carton (2)	10 Boxes	40,000 pcs	70 x 36 x 38 (cm)

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### ● NOTE

1. Suggestion for Application: Application in occasions that require vibration functions, adding design of "ON DELAY" is recommended. For great vibration, Optical type products are recommended.
2. Suggestion Contact Rating: 5mA
3. For the continued product improvement as one of the company policy, specifications may change or update without notice. The latest information can be obtained through our sales offices. Normally, all products are supplied under our standard conditions.

### ● PRECAUTIONS FOR USE

1. If the products is intended to be used for other endurance equipments requiring higher safety and reliability such as life support system, space and aviations devices, disaster and safety system, it's necessary to make verification of conformity or contact us for the details before using.
2. Don't try to clean the switch with a solvent or similar substance after the soldering process.
3. The switch might be damaged if using the water-soluble flux.
4. The switch might be apart if the soldering condition over specification.
5. Don't use the switch in the environment with high humidity or other bedewing possibility, as it may cause leaking among the terminals.
6. It might catch fire if the rating exceeds the specifications. Never use the switch beyond the rating.

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