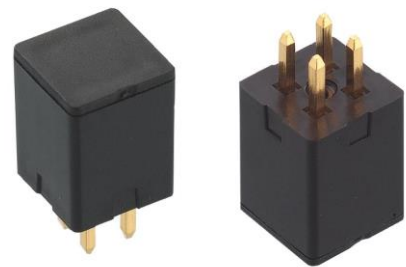


Tilt Sensor Switch

Item No.	RBS130100	Description	Ball-Contact	Version	11
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● **FUNCTIONS**

1. Rotation detecting for vertical PCB.
2. Vibration detecting for horizontal PCB.



● **APPLICATIONS**

1. Rotation Detection for LCD monitor
2. Alarm system
3. Wake up systems for power saving, such like remote controllers
4. Automatically power off for Sporting equipment
5. Toys, Entertainment devices



Tilt Sensor Switch

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● FEATURES

1. PCB direction for applications
 - Suitable for horizontal PCB: Vibration detecting.
 - Suitable for vertical PCB: Rotation detecting.
2. Switch State:
 - Rotation detection: DIP Normal close.
 - Vibration detection:
 RBS130100 acts like a normally close switch which chatters open and close as it is tilted or vibrated. Note that the RBS130100 is not guaranteed to be close --- occasionally the sensing mechanism may remain close when at rest. The engineer should design his or her software to look for high-to-low and low-to-high edge transitions rather than an open or closed state of the switch.
3. Gold-plated ball and terminals, low possibility of oxidization.
4. Housing made of high insulation plastic material, free from electric conduction and rust problem.
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.



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● PATENTS

1. Taiwan Patent No. I 261280
2. U.S.A. Patent No. US 7,473,857 B2
3. U.S.A. Patent No. US 7,256,360 B1
4. China Patent No. ZL 200610078234.3
5. China Patent No. 201220308500.8

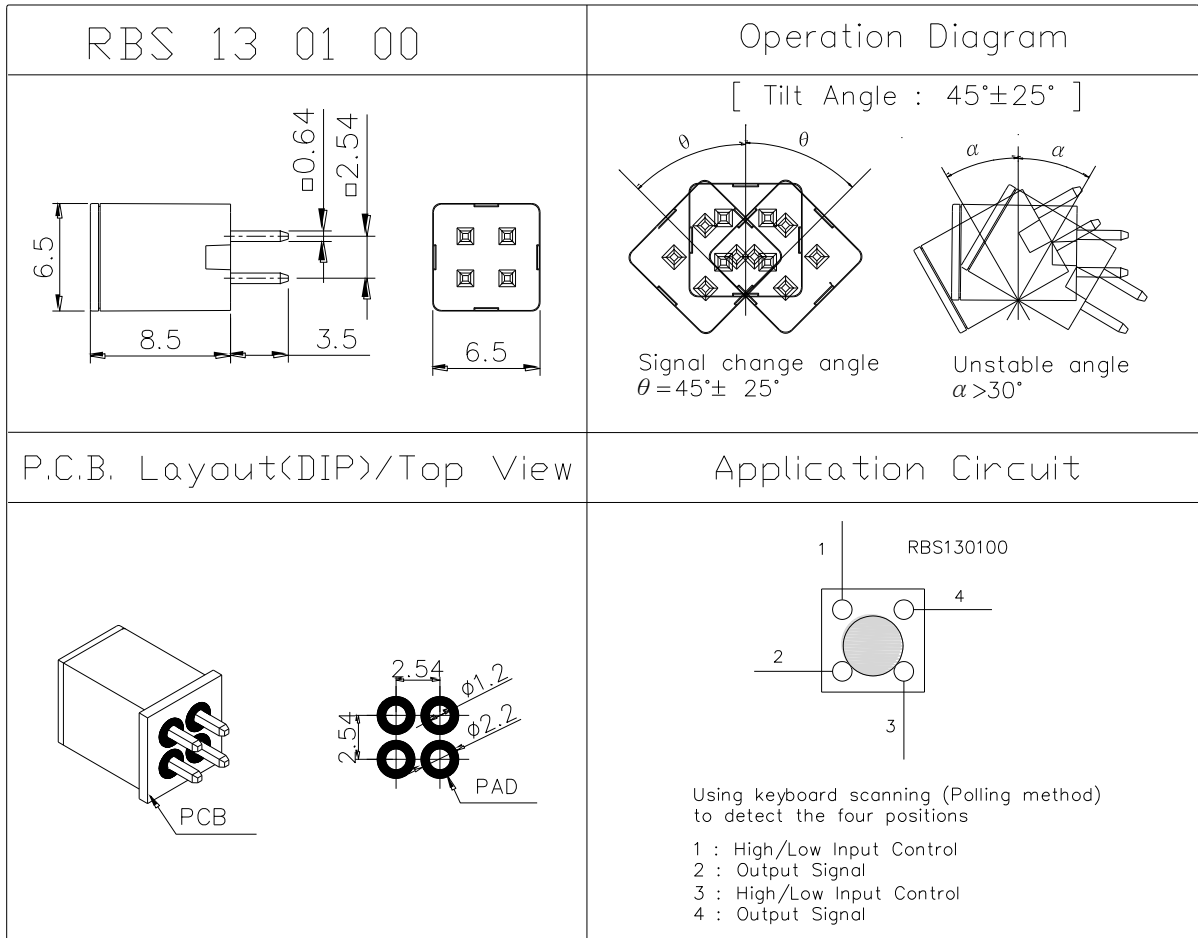


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● DIMENSIONS / OPERATION / P.C.B. LAYOUT (Unit: mm, Tolerance: ±0.25mm)

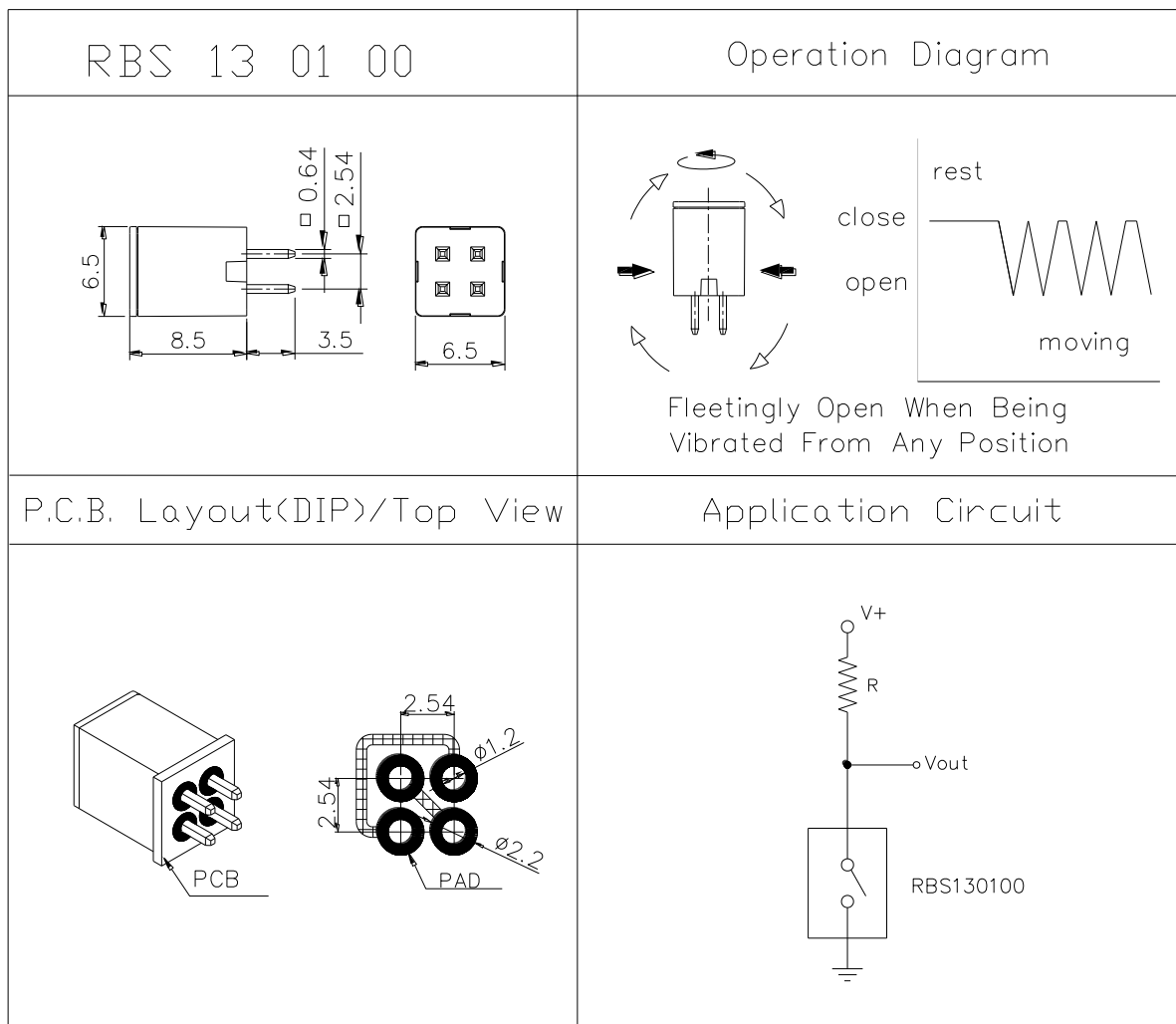
Fig. 1



Tilt Sensor Switch

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Fig. 2



Tilt Sensor Switch

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● Current/Voltage Suggested

Input Current (mA)	Operating Voltage (V)	Condition
1.0	5	--

● ELECTRICAL CHARACTERISTICS

1	Contact Rating	10 mA, 5 VDC
2	Contact Resistance (For rotation detection only)	10 Ω max.
3	Operation Diagram	Refer to Fig. 1
4	Insulation Resistance	1000 MΩ min., 100 VDC
5	Dielectric Strength	500 VDC min., 1 minute
6	Capacitance	5 pF max.
7	Conductive Rate	96% min.



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● RELIABLE TEST ITEMS

Reliable Test for RBS130100

	Test Item	Test Content
1	Operation Temperature	-25°C ~ 85°C
2	Storage Temperature	-40°C ~ 85°C
3	Humidity	40 °C / 95 %RH
4	Mechanical Life	2 Hz, horizontal 1,000,000 times
5	Electrical Life	100,000 times

● SOLDERING CONDITION

Following soldering conditions are for reference only, please use soldering information that solder paste manufacturer recommends.

Condition Suitable Production Process	Soldering Temperature	Soldering Time	Wattage of Manual Soldering	Type
Wave Soldering	260±5°C	< 5 seconds max.	-	DIP
Manual Soldering	300±5°C	< 3 seconds max.	30W or Temperature- controlled manual soldering	DIP



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● PACKAGE

	Part Number	Package	Quantity	Total	Dimension (mm)
1.	RBS130100	PE Bag	500 pcs	500 pcs	205L*145W
		Inner Box	10PE Bags	5,000 pcs	348L*191W*85H
		Carton	3 Boxes	15,000 pcs	364L*278W*213H

※ Package shown as below for reference.



PE Bag



Inner Box



Carton

