> OncQue Corporation大日科技股份有限公司

## SENSOR SWITCH

| Item \＃ | VBS01 Series | Description | VIBRATION SWITCH | Version | V99．0 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Page | 1 of 3 |  | Date | March 25，2010 |  |

－FUNCTIONS
Two Axes Vibration Detecting
－APPLICATIONS
1．Toys
2．Sporting equipment
3．Automotive devices
4．Visual devices


5．Home electrical appliances
6．Information devices
7．Communication devices

## －FEATURES

1．No electricity consumption during detection status．
2．Gold－plated ball and terminals，low possibility of oxidization．
3．All plastic materials subject to industrial purpose，resist high temperature and meet fireproof function．
4．Simple ON and OFF signals，easy for design．
5．RoHS compliance，an ideal substitute for mercury switch．
6．A more economical vibration detection option than IC design solution．
7．All made in Taiwan and examined before shipment．
－PATENTS
1．TAIWAN Patent NO． 191436
2．TAIWAN Patent NO． 216556
3．U．S．A．Patent NO．US $6,545,235$ B1
4．U．S．A．Patent NO．US $6,784,386$ B2
5．CHINA Patent NO．ZL 01234013.0
6．CHINA Patent NO．ZL 200320100675.0

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DIMENSIONS／OPERATION／P．C．B．LAYOUT（Unit：mm，Tolerance：$\pm 0.25 \mathrm{~mm}$ ）

| VBS 010100 | Fleetingly Close When Being Shocked | P．C．B．Layout（DIP）／Top View |
| :---: | :---: | :---: | :---: |


| VBS 010200 | Fleetingly Close When Being Shocked | P．C．B．Layout（DIP）／Top View |
| :---: | :---: | :---: | :---: |

－ELECTRICAL CHARACTERISTICS

| 1. | Contact Rating | $10 \mathrm{~mA}, 5 \mathrm{VDC}$ |
| :---: | :--- | :--- |
| 2. | Switching Type | Normal Open（NO） |
| 3. | Insulation Resistance | $1,000 \mathrm{M} \Omega$ min．at 100VDC |
| 4. | Dielectric Strength | 500 VDC min．for 1 minute |
| 5. | Capacitance | 5 pF max． |

－MECHANICAL CHARACTERISTICS

| 1. | Temperature Range | Operating：$-25^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$ <br> Storage：$-40^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$ |
| :---: | :--- | :--- |
| 2. | Pull Force of Terminal | 500 gf for 1 minute |
| 3. | Operation Life | 100,000 cycles |
| 4. | Humidity | $95 \% \mathrm{RH}, 40^{\circ} \mathrm{C}$ for 96 hrs． |
| 5. | Solder Ability | After flux $245 \pm 5^{\circ} \mathrm{C}$ for $5 \pm 0.5$ seconds $95 \%$ coverage |

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BILL OF MATERIAL

| 1. | Housing | ZINC Alloy，Tin Plated over Nickel |
| :---: | :--- | :--- |
| 2. | Base | Polyamide＋Glass－Fiber |
| 3. | Terminal | Copper Alloy，Gold Plated over Nickel |
| 4. | Spring | Copper Alloy Nickel Plated |
| 5. | Steel Ball | Stainless Steel |

PACKAGE

|  | Part Number | Package | Quantity | Total | Size |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | VBS010100 | PE Bag | 500 pcs | 500 pcs | $12.7 \times 17.8(\mathrm{~cm})$ |
|  |  | Inner Box | 10 Bags | $5,000 \mathrm{pcs}$ | $36 \times 20 \times 9(\mathrm{~cm})$ |
|  |  | Carton | 3 Boxes | $15,000 \mathrm{pcs}$ | $36 \times 28 \times 23(\mathrm{~cm})$ |

＊Minimum Order Quantity：One Bag
－NOTE
1．Suggestion Contact Rating： 5 mA
2．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．Don＇t use the switch in the environment with high humidity or other bedewing possibility，as it may cause leaking among the terminals．
5．It might catch fire if the rating exceeds the specifications．Never use the switch beyond the rating．

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