



深圳市首韩科技有限公司

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## 承 认 书

## SPECIFICATION FOR APPROVAL

客 户 Customer:

产品名称 Project:

自锁开关

规格型号 Part No:

5.8 ZSGT

贵公司承认印 Approval signatures

料 号/Part No.	签 章/Signatures

日期 Date:

拟制/Drawn	李春风	
审核/Check	张栋	
批准/Approved	罗孝金	



## 1. 一般特性 General Characteristics

- 1.1 额定值(Rating Value): DC30V/0.1A
- 1.2 工作温度(Work Temperature Range):  $-10^{\circ}\text{C} \sim 70^{\circ}\text{C}$
- 1.3 存贮温度(Store Temperature Range):  $-20^{\circ}\text{C} \sim 80^{\circ}\text{C}$
- 1.4 正常测试条件(未有特殊说明量测在以下条件进行):

General test condition (Tests and measurements shall be made under the following standard conditions unless otherwise specified):

正常温度:  $5^{\circ}\text{C} \sim 35^{\circ}\text{C}$       相对湿度: 45%~85% RH      气压: 8,600~10,600 帕  
Temperature:  $5^{\circ}\text{C} \sim 35^{\circ}\text{C}$       Relative humidity: 45%~85%      Air pressure: 8,600~10,600 pa

## 2. 产品外观及尺寸要求 Appearance & Dimension Requirement

- 2.1 产品外形结构紧凑, 无配合不良.  
The structure of product is compact, and assembly of parts has no badness.
- 2.2 产品塑胶部件无严重缩水、披锋、欠注、斑点、破损或变形现象.  
The plastic parts of product have no serious defects such as very serious shrink, scarcity, fleck, disrepair, transmutation, etc.
- 2.3 产品引脚和外壳无严重氧化、脏污、变形、毛刺或电镀不良.  
Lead feet and shell have no serious defects such as oxidation, smudge, disrepair, burr, defects on plating.
- 2.4 开关操作顺畅, 节奏感强, 无明显卡塞现象.  
Operating switch is unhindered, rhythmmed, and there is not palpable clag.
- 2.5 产品结构及尺寸参见产品规格图纸.  
Construction and dimensions: Refer to individual product drawing.

## 3. 电气特性 Electronic Characteristics

No.	项 目 Item	测试方法 Test Method	测试设备 Equipment	特性要求 Requirements
3.1	接触电阻 Contact Resistance	在低电流 ( $\leq 100\text{mA}$ ) 条件下测试. Measured at low current (100mA or less).	低电阻测试仪 Low Resistance Meter	$100\text{m}\Omega \text{ max}$
3.2	绝缘阻抗 Insulation Resistance	测试相邻引脚之间, 引脚与外壳之间的绝缘阻抗(DC 500V). Measurement shall be made between adjacent terminals, between terminal and shell(DC 500V).	绝缘测试机 Insulation Resistance Tester	$100\text{M}\Omega \text{ min}$
3.3	耐压测试 Dielectric Withstand Voltage	输入一定电压(50-60Hz, 电压值 AC 500V)1 分钟, 漏电流为 2mA, 测试邻近端子间. Apply certain voltage (50-60Hz, AC 500V) for 1 minute between adjacent contacts of the connector with 2mA leakage sensitivity.	耐压测试机 Puncture Tester	没有绝缘破坏. 电弧等异常. No arcing, break down and damaging insulation.

## 4. 机械特性 Mechanical Characteristics

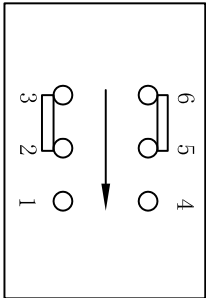
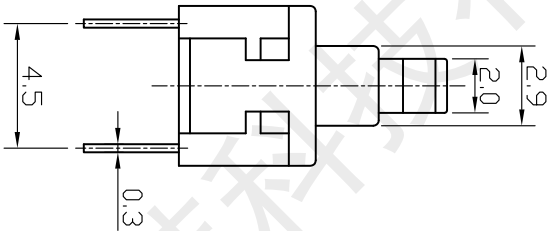
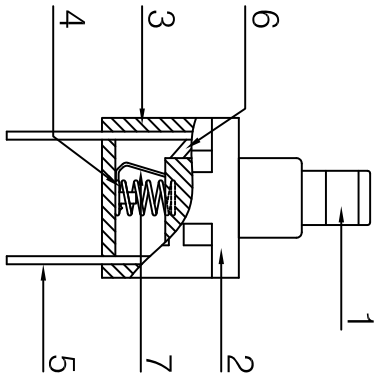
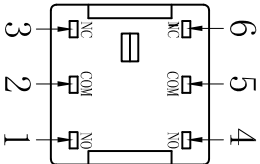
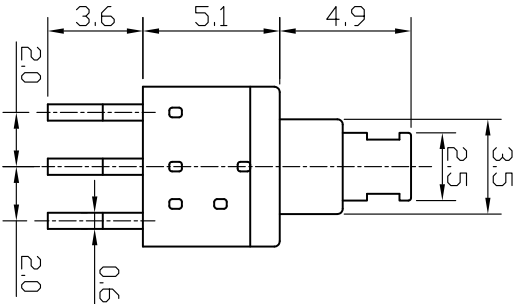
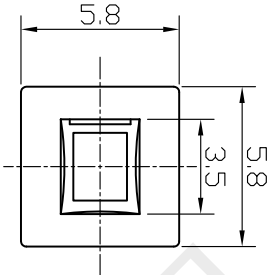
No.	项 目 Item	测试方法 Test Method	测试设备 Equipment	特性要求 Requirements
4.1	操 作 力 Operation Force	逐渐施力操作开关按键，测量开关到达全部工作行程时所需的最大操作力度。 Operate the keystroke of the switch and then increase press strength gradually, Measured maximum operation force while the travel of the switch is full.	测力计 Force Gauge	$150 \pm 50\text{gf}$
4.2	行 程 Full travel	垂直操作开关按键，量测开关顶端最大移动距离。 Operate the keystroke of the switch vertically, the travel distance of keystroke moving from its free position to maximum moving distance shall be measurement.	游标卡尺 Vernier Caliper	$2.0 \pm 0.15\text{mm}$

## 5. 可靠性测试 Reliability trial

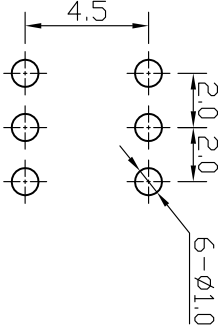
No.	项 目 Item	测试方法 Test Method	测试设备 Equipment	特性要求 Requirements
5.1	可焊性试验 Solder ability Test	端子顶部被浸入焊锡炉中，温度为 $230 \pm 5^\circ\text{C}$ ，时间 $5 \pm 1$ 秒。 The top of the terminals shall be dipped in the solder bath at $230 \pm 5^\circ\text{C}$ for $5 \pm 1$ seconds.	控温锡炉 Solder Stove	引脚至少 95% 上锡。 Ninety-five percent of terminals shall be dipped.
5.2	寿命试验 Operation Life	开关在寿命试验设备上以约 90 次 / 分的速度连续被操作，具体次数见规格图示。 Switch shall be operated continuously at about 90 cycles /min without load.	寿命试验机 Life Tester	寿命：10,000 次 实验后： 绝缘电阻： $10\text{M}\Omega$ Min 操作力：变化在 $\pm 50\%$ 内 开关外观及结构无损坏。 Life test: 10,000 cycles After test: Insulation resistance: $10\text{M}\Omega$ Min Operating force: Change should be within $\pm 50\%$ of specified value. No abnormalities shall be recognized in appearance and construction.

## 5. 可靠性测试 Reliability trial

No.	项 目 Item	测试方法 Test Method	测试设备 Equipment	特性要求 Requirements
5.3	耐焊接热 Resistance to Soldering heat	端子焊接部分浸入焊炉，焊炉温度 $230 \pm 5^{\circ}\text{C}$ ，焊接时间 $5 \pm 1$ 秒。（焊接时不可于端子施加外力）。 Terminals shall be dipped in the solder bath at $230 \pm 5^{\circ}\text{C}$ for $5 \pm 1$ seconds without additional force for terminals.	控温锡炉  Solder Stove	本体无变形，能满足于机械、电气性能。 Appearance should be not damaged, electrical and mechanical characteristics shall be satisfied.
5.4	耐高温测试 Resistance to Heat Test	放置在温度 $80 \pm 2^{\circ}\text{C}$ 环境中 96 小时后，再置于正常条件下 1 小时后测定。 The switch shall be stored at a temperature of $80 \pm 2^{\circ}\text{C}$ for 96 hours, Measurements shall be made after it be subjected to the standard conditions for 1 hour.	高低温 试验机 High & Low Temperature Tester	外观，机械及电气性能均符合要求。 Appearance, electrical and mechanical characteristics shall be satisfied.
5.5	耐低温测试 Resistance to Cold Test	放置在温度 $-25 \pm 2^{\circ}\text{C}$ 环境中 96 小时后，再置于正常条件下 1 小时后测定。 The switch shall be stored at a temperature of $-25 \pm 2^{\circ}\text{C}$ for 96 hours, Measurements shall be made after it be subjected to the standard conditions for 1 hour.	高低温 试验机 High & Low Temperature Tester	外观，机械及电气性能均符合要求。 Appearance, electrical and mechanical characteristics shall be satisfied.
5.6	耐湿性测试 Resistance to Humidity Test	放置于温度 $40 \pm 2^{\circ}\text{C}$ ，相对湿度为 90~96% 环境中 96 小时后，再置于正常条件下 1 小时后测定（注意要擦去水滴）。 The switch shall be stored at a temperature of $40 \pm 2^{\circ}\text{C}$ , relative humidity 90~96% for 96 hours, Measurements shall be made after it be subjected to the standard conditions for 1 hour (Wipe out water drip).	恒温恒湿箱  Temperature & Humidity Tester Chamber	外观，机械及电气性能均符合要求。 Appearance, electrical and mechanical characteristics shall be satisfied.
5.7	盐雾实验 Salt Mist Test	试件在下述实验后测量： 1. 温度： $35 \pm 5^{\circ}\text{C}$ 2. 盐溶液浓度： $5 \pm 1\%$ （质量百分比）， 3. 试验时间： 24 小时， 4. 试验后，将盐沉积物用水冲掉。 The switch shall be checked after following test: 1. Temperature: $35 \pm 5^{\circ}\text{C}$ 2. Salt solution: $5 \pm 1\%$ (Solids by mass) 3. Duration: 24 hours, 4. After immersing, salt deposit shall be removed by running water.	盐雾 试验机  Salt Spray Tester	在金属件上没有严重腐蚀斑点。  No remarkable corrosion shall be recognized in metal parts.



Circuit Diagram



PCB Layout Recommended

7	Hookpin	/	1	Carbon Steel	/	/	/
6	Contact	/	2	Copper-Silver Composite	/	/	/
5	Terminal	/	6	Brass	Plating silver	/	/
4	Spring	/	1	Stainless Steel	/	/	/
3	Base	/	1	PBT	Gray	UL 94HB	/
2	Cover	/	1	POM	Black	UL 94HB	/
1	Keystoke	/	1	POM	White	UL 94HB	/
ITEM PART NAME		TER	NO.	QTY.	MATERIAL	FINISHING	REMARK

APPROVALS		DATE	SH 首韩科技				
DRAWN	李春风	2005.10.29	深圳市首韩科技有限公司				

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