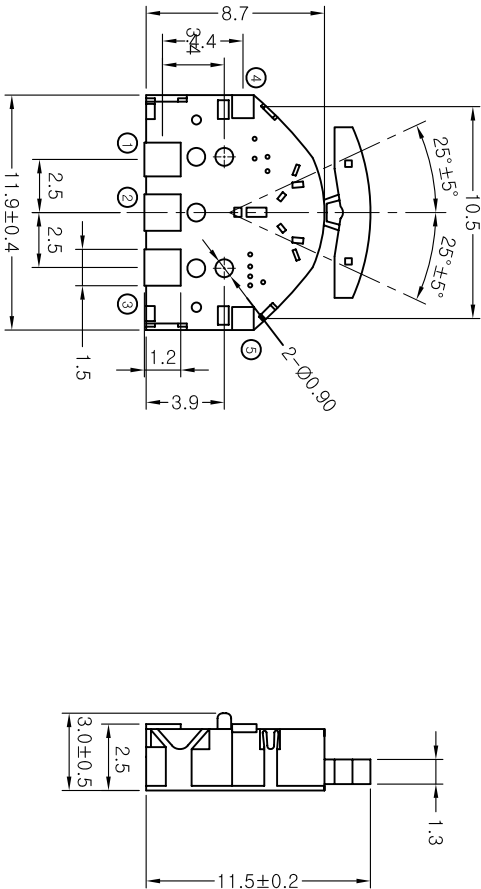
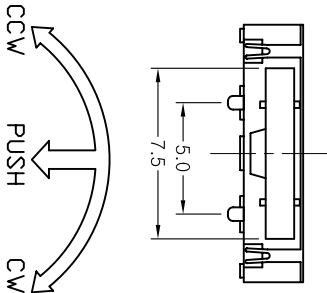


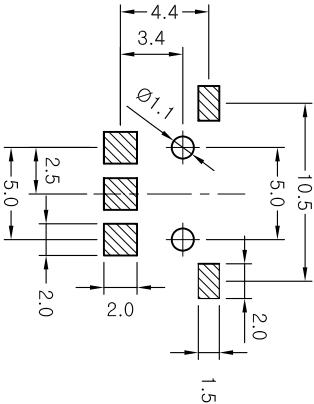
■ DIMENSION:



■ FUNCTION TABLE:

Terminal Direction	①	②	③	④	⑤
	Push				
CCW					
CW					

■ PCB LAYOUT RECOMMENDED:



5	Terminal	4	Brass	Plating Silver		
4	Spring	1	Stainless Steel			
3	Base	1	Nylon	BLACK		
2	Shell	1	Stainless steel			
1	Keystoke		Nylon	BLACK		
ITEM	PART NAME	TER'NO.	QTY.	MATERIAL	FINISHING	REMARK

APPROVALS		DATE	TITLE: DETECTOR SWITCH		
DRAWN	2006.12.28	2006.12.28	东莞市凯华电子有限公司 KAHUA ELECTRONICS CO.,LTD		
CHECKED	2006.12.28	2006.12.28			
APPROVALS	2006.12.28	2006.12.28	DE11103S02		
TOLERANCES ARE		ANGLE	UNIT: mm	SCALE:	PROJ. SHEET 1 OF 1

1. 一般特性 General Characteristics

- 1.1 额定值(Rating Value): 5V 10mA
- 1.2 工作温度(Work Temperature Range): $-10^{\circ}\text{C} \sim 70^{\circ}\text{C}$
- 1.3 存储温度(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 产品塑胶部件无缩水. 披锋. 欠注. 斑点. 破损或变形现象.
 The plastic parts of product have no defects such as very serious shrink, scarcity, fleck, disrepair, transmutation, etc.
- 2.3 产品引脚和外壳无氧化. 脏污. 变形. 毛刺或电镀不良.
 Lead feet and shell have no defects such as oxidation, smudge, disrepair, burr, defects on plating.
- 2.4 开关操作顺畅, 节奏感强, 无明显阻碍.
 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	输出电压 Output Voltage	在 5V 1mA 条件下分别测定 A、B 端子与地线端子间的电压。 Voltage level shall be measured at 5V DC, 1mA between A,B terminal and ground terminal.	电压表 Voltage Meter	最大 1V 电压。 1V 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	最小 10MΩ。 10MΩ Min.
3.3	耐压测试 Dielectric Withstand Voltage	输入 100VAC 电压(50-60Hz)1 分钟, 漏电流设为 2mA, 测试邻近端子间及端子与外壳间。 Apply 100VAC (50-60Hz) for 1 minute between adjacent terminals or between ground and terminals with 2mA leakage sensitivity.	耐压测试机 Puncture Tester	没有绝缘破坏. 电弧等异常。 No arcing, breakdown and damaging insulation.

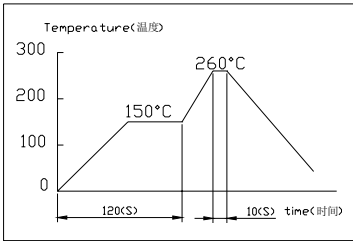
4. 机械特性 Mechanical Characteristics

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 vertically, and then increase press strength gradually, Measured maximum operation force while the travel of the switch is full.	推拉力计 Push-Pull Force Gauge	垂直方向： 200±100gF 水平方向： 100±50gF Push portion： 200±100gF Lever portion： 100±50gF
4.2	行 程 Full travel	垂直操作开关按键，量测开关顶端的最大移动距离。 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	0.8±0.5mm。 0.8±0.5mm。
4.3	端子强度 Load Strength of Terminal	于开关端子任意方向施加 0.3Kg 的力，持续时间 1 分钟。 Apply 0.3Kg load to terminal of the switch in any direction for 1 minute.	推拉力计 Push-Pull Force Gauge	端子无脱落，断裂，松动等导常。 Terminals shall be not broken off, rupture, looseness and other defects.

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	盐雾实验 Salt Mist Test	试件在下述实验后测量： 1. 温度： 35±5°C 2. 盐溶液浓度：5±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±5°C 2. Salt solution: 5±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.

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
5.2	机械寿命 Operation Life Without Load	开关在寿命试验设备上以 15-20 次 / 分的速度连续被操作 50,000 次。 Switch shall be operated 50,000cycles at 15-20 cycles /min without load.	寿命试验机 Life Tester	实验后: 输出电压: 1V Max。 绝缘电阻: 10MΩ Min。 操作力: 变化在±30%内 开关外观及结构无损坏。 After test, Output voltage: 1V Max, Insulation resistance: 10MΩ Min Operating force: Change should be within ±30% of specified value. NO abnormalities shall be recognized in appearance and construction.
	电气寿命 Operation Life With Load	开关在 10mA, 5V DC 条件下, 于寿命试验设备上以 15-20 次 / 分的速度连续被操作 50,000 次。 Switch shall be operated 50,000cycles at 15-20 cycles /min with 5V DC 10mA(Resistive Load).	寿命试验机 Life Tester	
5.3	耐焊接热 Resistance to Soldering heat	试件在下述条件下进行试验: 1. P.C.B. 厚度为 0.8mm, 2. 开关在 150℃条件下预热 2 分钟 后再于 260℃的回流焊炉 中焊接, Switch shall be measured after following test: 1. 0.8mm thick glass epoxy P.C.B 2. Switches shall be heat up at 150℃ for 2 minutes, then be soldered at 260℃. Temperature profile(Reference) 	回流焊炉 Re-flow soldering 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. 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
5.4	可焊性试验 Solder ability Test	端子顶部被浸入焊锡炉中, 温度为 $230\pm5^{\circ}\text{C}$, 时间 5 ± 1 秒。 The top of the terminals shall be dipped in the solder bath at $230\pm5^{\circ}\text{C}$ for 5 ± 1 seconds.	控温锡炉 Solder Stove	引脚至少 95% 上锡。 Ninety-five percent of terminals shall be dipped.
5.5	耐高温测试 Resistance to Heat Test	放置在温度 $80\pm2^{\circ}\text{C}$ 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 $80\pm2^{\circ}\text{C}$ 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	试验后, 外观及结构无损坏, 3.1, 3.2 项符合要求。 Appearance, construction and item 3.1, 3.2 shall be satisfied.
5.6	耐低温测试 Resistance to Cold Test	放置在温度 $-25\pm2^{\circ}\text{C}$ 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 $-25\pm2^{\circ}\text{C}$ 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	试验后, 外观及结构无损坏, 3.1, 3.2 项符合要求。 Appearance, construction and item 3.1, 3.2 shall be satisfied.
5.7	耐湿性测试 Resistance to Humidity Test	放置于温度 $40\pm2^{\circ}\text{C}$, 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 $40\pm2^{\circ}\text{C}$, 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	试验后, 外观及结构无损坏, 3.2 项符合要求。 Appearance, construction and item 3.2 shall be satisfied.