

1. 一般特性 General Characteristics

- 1.1 额定值(Rating Value): DC 12V 50mA
- 1.2 工作温度(Work Temperature Range): -10℃ ~ 70℃
- 1.3 存贮温度(Store Temperature Range): -20℃ ~ 80℃
- 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℃~35℃ 相对湿度: 45%~85% RH 气压: 8,600~10,600 帕
Temperature: 5℃~35℃ 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 (≤100mA) 条件下测试. Measured at low current (100mA or less). | 低电阻测试仪 Low Resistance Meter | 100mΩ 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. Measurement shall be made between adjacent terminals, between terminal and shell. | 绝缘测试机 Insulation Resistance Tester | 100MΩ min |
| 3.3 | 耐压测试 Dielectric Withstand Voltage | 输入一定电压 (50-60Hz, 电压值 AC 250V) 1 分钟, 漏电流为 2mA, 测试邻近端子间. Apply certain voltage (50-60Hz, AC 250V) 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 keystoke 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±50gf |
| 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 keystoke of the switch vertically, the travel distance of keystoke moving from its free position to maximum moving distance shall be measurement. | 游标卡尺 Vernier Caliper | 0.25±0.1 |

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 260±5℃，时间 5±1 秒。 The top of the terminals shall be dipped in the solder bath at 260±5℃ for5±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：100,000 次 实验后： 绝缘电阻：10MΩ Min 操作力：变化在±50%内 开关外观及结构无损坏。 Life test:100,000cycles After test: Insulation resistance: 10MΩ Min Operating force: Change should be within ±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 $260\pm 5^{\circ}\text{C}$ ，焊接时间 5 ± 1 秒。（焊接时不可于端子施加外力）。 Terminals shall be dipped in the solder bath at $260\pm 5^{\circ}\text{C}$ for 5 ± 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 $-20\pm 2^{\circ}\text{C}$ 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 $-20\pm 2^{\circ}\text{C}$ 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. |

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