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	Date Issued	<b>2020-04-06</b>	Prepared by	<b>Josephine</b>
	Date revised	<b>2020-11-23</b>	checked by	<b>Jay</b>
<b>Product Specification</b>	Rev. No.	<b>13</b>	Approved by	<b>Mei Chen</b>
<b>Title : Key Switch</b>				

## 1. SCOPE(适用范围)

This specification covers the performance, tests and quality requirements for the **Key Switch**.  
 (本规范涵盖了 **Key Switch** 按键开关的性能、测试和质量要求。)

## 2. PRODUCT DESCRIPTION(产品描述)

DESCRIPTION(描述)	Part Number(料号)
<b>按键开关7x7x9.2插件自锁6脚平头 蓝白黑</b>	<b>XB7070-Z-92</b>

## 3. APPLICABLE DOCUMENT (适用文件)


The following documents form a part of this specification to the extent specified herein. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence. (下列文件构成本规范的一部分, 在此规定的范围内。本规范要求与产品图纸有冲突时, 以产品图纸为准。如果本规范的要求与参考文件发生冲突, 应以本规范为准。)

## 4. REQUIREMENTS (要求)

### 4.1. Design and Structure and Materials (设计和结构与材料)

### 4.2. Ratings (额定功率)

Item (项目)	Standard (标准)
Rated Voltage (Maximum)额定电压	<b>30V DC</b>

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Rated Current (Maximum)额定电流	<b>0.1A</b>
Operating temperature range工作温度范围	<b>-15°C ~ +55°C From -15 to +55 degree centigrade</b>
Storage Temperature Range储存温度范围	<b>-25°C ~ +65°C From -25 to +65 degree centigrade</b>

#### 4.3. Appearance & Dimension Requirement (产品外观及尺寸要求)

4.3.1. The structure of product is compact, and assembly of parts has no badness. (产品外形结构紧凑,无配合不良.)

4.3.2. The plastic parts of product have no serious defects such as very serious shrink, scarcity, fleck, disrepair, transmutation, etc. (产品塑胶部件无严重缩水、披锋、欠注、斑点、破损或变形现象.)

4.3.3. Lead feet and shell have no serious defects such as oxidation, smudge, disrepair, burr, defects on plating. (产品引脚和外壳无严重氧化、脏污、变形、毛刺或电镀不良.)

4.3.4. Operating switch is unhindered, rhythmmed , and there is not palpable clag. (开关操作顺畅,节奏感强,无明显卡塞现象。)

4.3.5. Construction and dimensions : Refer to individual product drawing. (产品结构及尺寸参见产品规格图纸)

#### 5.0 TEST STANDARD (测试条件)

5.1 Unless otherwise specified, the standard range of atmospheric conditions for making measurements and tests are as follows (除另有说明外,用以进行测量和测试的标准环境条件范围如下)

Ambient temperature(环境温度): 5°C to 35°C

Normal humidity (正常湿度): 45% to 85%


Air pressure (气压): 86Kpa to 106Kpa

5.2 However if doubt arises on the decision based on the measured Values under the above-mentioned Conditions.The following conditions shall be employed:  
(但是在对判定产生疑问时,按下述状态实施)

Temperature (温度): 20±2°C

Relative humidity (相对湿度): 65±5%

Air pressure (气压): 86Kpa to 106Kpa

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## 6.0 PERFORMANCE AND TEST DESCRIPTION (性能和测试类型)

### 6.1 APPEARANCE (外观)


ITEM	DESCRIPTION (类型)	TEST CONDITION (测试条件)	REQUIREMENT (要求)
1	<b>Appearance</b> (外观)	<b>Visual.</b> (目视)	<b>Should not have any flaw Scratch discoloration and crushed</b> (无任何裂痕、刮伤、污染和变形)

### 6.2 ELECTRICAL (电气)

ITEM	DESCRIPTION (类型)	TEST CONDITION (测试条件)	REQUIREMENT (要求)
2	<b>Contact resistance.</b> (接触电阻)	<b>Measured at low current (100mA or less).</b> (在低电流 ( $\leq 100\text{mA}$ ) 条件下测试.)	<b>50 m<math>\Omega</math> Max.</b>
3	<b>Insulation Resistance.</b> (绝缘电阻)	<b>Measurement shall be made between adjacent terminals, between terminal and shell.</b> (测试相邻引脚之间, 引脚与外壳之间的绝缘阻抗.)	<b>100 M<math>\Omega</math> min.</b>
4	<b>Dielectric strength.</b> (耐电压)	<b>Apply certain voltage (50-60Hz, AC 250V) for 1 minute between adjacent contacts of the connector with 2mA leakage sensitivity.</b> (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.)	<b>There shall be no breakdown.</b> (无击穿、闪烁现象)

### 6.3 MECHANICAL (机械)

ITEM	DESCRIPTION (类型)	TEST CONDITION (测试条件)	REQUIREMENT (要求)
1	<b>Operation</b> (操作力) <b>Force</b>	<b>Operate the keys toke of the switch and then increase press strength gradually, Measured maximum operation force while the travel of the switch is full.</b> (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。)	<b>160gf <math>\pm</math> 80gf</b>

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2	<b>Full travel (行程)</b>	<p><b>Operate the keys to the switch vertically, the travel distance of keys to the maximum moving distance shall be measurement.</b> (垂直操作开关按键, 量测开关顶端最大移动距离.)</p>	<b>2.4 ± 0.2mm</b>
3	<b>Operation Life (寿命试验)</b>	<p><b>Switch shall be operated continuously at about 90 cycles /min without load.</b> (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。)</p>	<p><b>Life test</b>寿命: 100,000cycles 次 <b>After test</b>实验后: <b>Insulation resistance</b>绝缘电阻: 100MΩ Min <b>Operating force</b>操作力: Change should be within ±50% of specified value. <b>No abnormalities shall be recognized in appearance and construction.</b>变化在±50%内开关外观及结构无损坏。</p>

#### 6.4 ENVIRONMENTAL (环境)

ITEM	DESCRIPTION (类型)	TEST CONDITION (测试条件)	REQUIREMENT (要求)
1	<b>Solder ability (可焊性)</b>	<p><b>The top of the terminals shall be dipped in the solder bath at 260±5°C for 5±1 seconds.</b> 端子顶部被浸入焊锡炉中, 温度为 260±5°C, 时间 5±1 秒。</p>	<p><b>Ninety-five percent of terminals shall be dipped.</b> 引脚至少 95%上锡。</p>
2	<b>Resistance to Soldering heat (耐焊接热)</b>	<p><b>Terminals shall be dipped in the solder bath at 260±5°C for 5±1 seconds without additional force for terminals.</b> 端子焊接部分浸入焊炉, 焊炉温度 260±5°C, 焊接时间 5±1 秒。(焊接时不可于端子施加外力)。</p>	<p><b>Appearance should be not damaged, electrical and mechanical characteristics shall be satisfied.</b> 本体无变形, 能满足于机械、电气性能。</p>




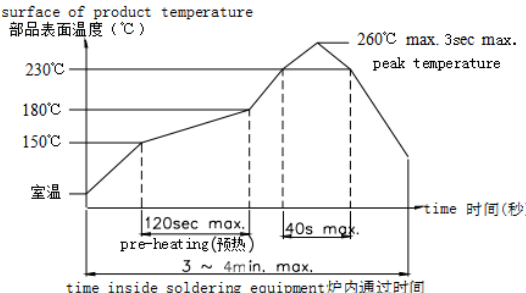
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3	<b>Resistance to Heat Test (耐高温测试)</b>	<b>The switch shall be stored at a temperature of 80±2°C for 96 hours, Measurements shall be made after it be subjected to the standard conditions for 1 hour. 放置在温度 80±2°C环境中 96 小时后, 再置于正常条件下 1 小时后测定。</b>	<b>Appearance, electrical and mechanical characteristics shall be satisfied.外观, 机械及电气性能均符合要求</b>
4	<b>Resistance to Cold Test (耐低温测试)</b>	<b>The switch shall be stored at a temperature of -20±2°C for 96 hours, Measurements shall be made after it be subjected to the standard conditions for 1 hour. 放置在温度-20±2°C环境中 96 小时后, 再置于正常条件下 1 小时后测定。</b>	<b>Appearance, electrical and mechanical characteristics shall be satisfied.外观, 机械及电气性能均符合要求</b>
5	<b>Resistance to Humidity Test (耐湿性测试)</b>	<b>The switch shall be stored at a temperature of 40±2°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). 放置于温度 40±2°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)。</b>	<b>Appearance, electrical and mechanical characteristics shall be satisfied.外观, 机械及电气性能均符合要求</b>
6	<b>Salt Spray Test (盐雾试验)</b>	<b>The salt spray test shall be conducted at the following conditions样品按下列条件进行试验： (1).Density(浓度): 溶液(5±1)% NaCl (质量百分比) (2).Temperature温度: 35±5°C (3).Time时间: 8 hours (4).After immersing, salt deposit shall be removed by running water.试验后, 将盐沉积物用水冲掉。</b>	<b>No remarkable corrosion shall be recognized in metal parts. (在金属件上没有严重腐蚀斑点。)</b>

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7	<b>Automatic Flow Soldering</b> (自动焊接)	<p><b>For the product of SMT , type solder according to the following conditions</b>  <b>对于 SMT 产品，请按以下条件进行焊接</b></p>  <p><b>Caution: the condition mentioned above is a temperature on the PWB surface on which parts are mounted. There are cases where PWB temperature greatly differs from switch's surface temperature depending on PWB material, size, thickness, etc. The switch's surface temperature shall not allowed to exceed 260°C</b>  <b>注意：以上提及的条件是零部件上 PWB 表面的温度，由于 PWB 的材料、尺寸、厚度等不同，PWB 从开关表面获得的温度也会有很大不同，因此，千万小心不要让开关表面温度超过 260°C</b></p>	<p><b>Should not have any flaw scratch and crack</b>          (无任何裂痕、刮伤和破裂)  <b>No visual damage to insulator.</b>          (绝缘体不得有严重变形)</p>
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**7.0 OTHER PRECAUTIONS 其他注意事项:**

7.1. Following the soldering process, do not try to clean the switch with a solvent or the like.

进行焊接过程中，不可以用溶剂或类似品清洗开关

7.2. Safeguard the switch assembly against flux penetration from its topside.

防止助焊剂从开关的顶端渗入

