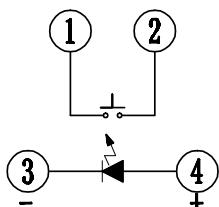


元件面孔位图



电原理图

**轻触开关主要技术指标:** Main Specifications:

气候等级 Climate Grade	额定值 Rated Values	接触电阻 Contact Resistance	耐电压 Dielectric Strength	绝缘电阻 Insulation Resistance	动作力 Operating Force	寿命 Life	盐雾试验 Salt mist Test
-25°C 至 +75°C	30V DC, 30mA	$\leq 0.05\Omega$	250V AC	$\geq 100M\Omega$	260gf±50gf	10W times	12±1 hours.

7	——	圆帽	ABS	1	银白	借A0663右电源
6	——	定位板	PA66	1	黑色	A0670
5	——	LED 灯	——	1	透明	A0670蓝光长负短正
4	——	按钮	PA66	1	瓷白	借A0630
3	——	弹片	不锈钢	1	Ag	借A0630
2	——	塑座	PA66	1	黑色	借A0630
1	——	卡件	H62	1	Ag	借A0630
序号	零件料号	名称	材 料	数 量	镀层/颜色	备 注

>20~	±0.15
>10~20	±0.10
>5~10	±0.05
~5	±0.03
未注公差	

产品名称: 轻触开关

规格型号: TS-H016

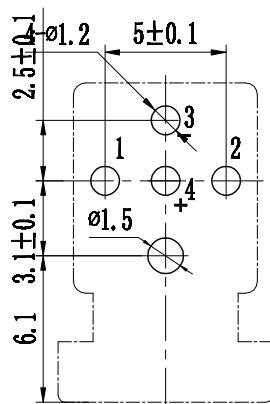
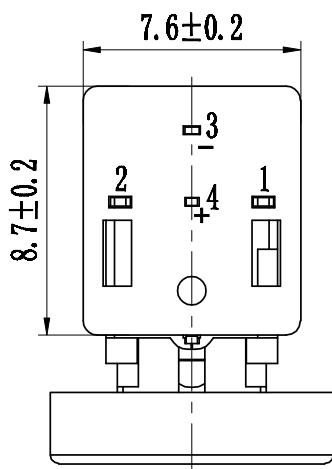
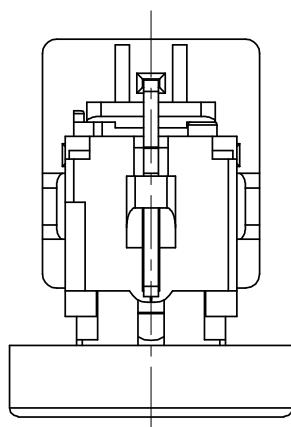
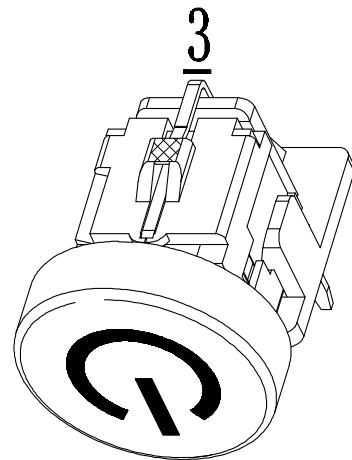
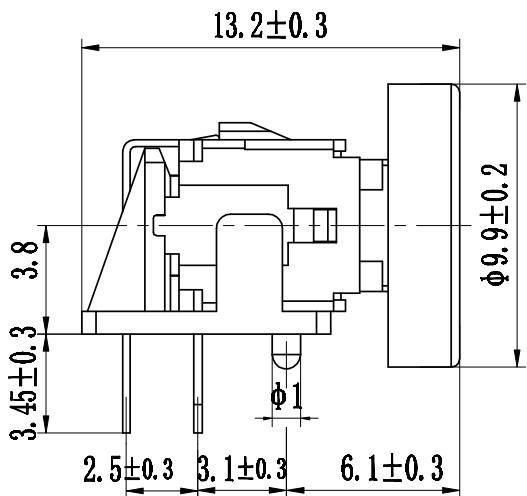
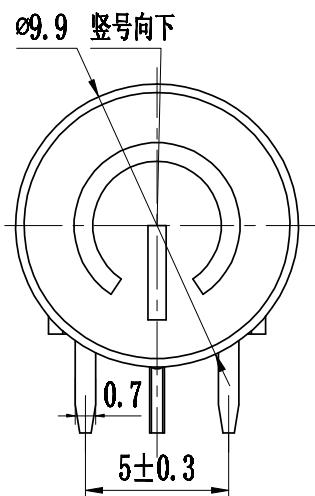
备注

比例 3:1

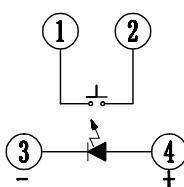
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吴瑶	杨子	陈志朋	2022.03.10	mm
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此数据仅供参考, 实际以样品为准



元件面孔位图



电原理图

轻触开关主要技术指标: Main Specifications:

气候等级 Climate Grade	额定值 Rated Values	接触电阻 Contact Resistance	耐电压 Dielectric Strength	绝缘电阻 Insulation Resistance	动作力 Operating Force	寿命 Life	盐雾试验 Salt mist. Test
-25°C 至 +75°C	30V DC, 30mA	$\leq 0.05\Omega$	250V AC	$\geq 100M\Omega$	260gf±50gf	10W times	12±1 hours.

7	——	Ø9.9小圆帽	ABS	1	银白	借A0669右电源
6	——	定位板	PA66	1	黑色	A0670
5	——	LED 灯		1	透明	A0670红光
4	——	按 钮	PA66	1	瓷白	借A0630
3	——	弹 片	不锈钢	1	Ag	借A0630
2	——	塑 座	PA66	1	黑色	借A0630
1	——	卡 件	H62	1	Ag	借A0630
序号	零件料号	名 称	材 料	数 量	镀层/颜色	备 注

>20~	±0.15
>10~20	±0.10
>5~10	±0.05
~5	±0.03
未注公差	

产品名称: 轻触开关

规格型号: TS-H016

备注

比例 3:1

制定

核对

审批

日期

尺寸单位

吴瑶

杨子

陈志朋

2022.03.10

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此数据仅供参考, 实际以样品为准

	文件编号 FILE NO.		页码 PAGE	1
	发布日期 DATE OF ISSUE	2022年3月10日		
产品承认书 Product Specication		文件版本 EDITION	第 A 版 第 0 次 修订	
名称 Title	带灯轻触开关	产品料号 PART NO.		

### 1. 一般特性 General Characteristics:

1.1 适用范围: 该承认书适用于轻触开关的一般使用范围。

Applicating: This Specification is applied to rotary tact switch used for general application.

1.2 使用温度范围: -25°C ~ +75°C

Operating Temperature Range: -25°C ~ +75°C

1.3 相对湿度: ≤85% RH

Operating Relative Humidity: ≤85% RH

1.4 实验条件: 若没有特别说明, 测试大气条件如下:

Test Conditions: Unless otherwise specified the atmospheric conditions for making measurements and tests are as follows:

(1) 环境温度: 15~20°C

Environment Temperature: 15~20°C

(3) 相对湿度: 45~74%

Relative Humidity: 45~74%

(4) 大气压力: 86~106Kpa (860~1060mbar)

Atmospheric Pressure: 86~106Kpa (860~1060mbar)

### 2. 外观, 结构尺寸 Appearance, structure and Dimensions:

2.1 观外: 产品外观良好, 无锈蚀, 裂纹和镀层缺陷。

Appearance: The switch shall have good finishing, and no rust, crack or plating defects.

2.2 结构及尺寸: 参见产品图纸

Structure & Dimensions Refer to individual product drawing.

2.3 标识: 参见产品图纸。

Markings Refer to individual product drawing.

3. 额定负荷 Ratings DC 30V 30mA

### 4. 电气特性 Electrical Characteristics

NO.	项目 Item	标准 Criteria	实验方法 Test Method
4.1	接触电阻 Contact Resistance	50mΩ Max	以100±2mA, 5V直流电, 采用电压降法测量。也可用误差不超过5%的仪表进行测量, 实验后的电阻取5次测量的平均值。(按动5-10次后测量) Measured by a voltage drop method at 100±2mA Max, 5VDC. Any equipment with error not more than 5% can be used. Resistance after test in the average of

文件编号  
FILE NO.

页码  
PAGE

发布日期  
DATE OF ISSUE

2022年3月10日

# 产品承认书 Product Specication

文件版本  
EDITION

第 A 版 第 0 次 修订

名称 Title

带灯轻触开关

产品料号  
PART NO.

5successive measurements(To measure after operated 5 to 10 times)

4.2	绝缘电阻 Insulation Resistance	100MΩ Min	在相互绝缘的所有端子之间及各接线端子与外露的非载流金属零件之间加载250V直流电，持续时间60±5S 250V DC。 voltage is applied between each pair of terminals between the terminal between and the metal frame for 60±5S
4.3	抗电强度 Dielectric Voltage	无击穿现象发生。 No dielectric breakdown shall occur	在相互绝缘的所有接线端子之间及各接线端子与外壳或非载流金属零件之间加载250V (50~60Hz) 交流电，持续时间60±5S 。 250VAC (50~60Hz, cut-off current 2mA) is applied between non-connected terminals and between terminals and the metal frame for 60±5S
4.4	耐压 Withstand Voltage	应无闪弧及击穿现象漏电流<0.5mA。 No dielectric breakdown shall occur	端子相互间及每一端子和外壳间 250V.AC/50HZ 1 分钟 Between terminals and Between individual terminal and frame 250V.AC/50HZ for 1 min

## 5. 机械特性 Mechanical Characteristics

NO.	项目 Item	标准 Criteria	实验方法 Test Method
5.1	按力 Press Force	160/260 ±50gf	开关垂直于操作方向放置, 在驱动件顶端中心逐渐施力, 测量开关导通所需的最大力度。 Placing the switch such that the direction of switch operation is vertical ,and then gradually increasing the load applied to the center of the knob the maximum load for the knob to come to a stop shall be measured.
5.2	回弹力 Return Force	>50gf	开关垂直于操作方向放置, 在驱动件顶端中心下降至全行程后, 测量顶端向自由位置返回的力度。 Placing the switch such that the direction of switch operation is vertical ,and upon depression of knob in its center the whole travel distance ,the force of the knob to return to its free position shall be measured
5.3	行程 Travel	0.25±0.1mm	开关垂直于操作方向放置, 以一个等于2倍按力的静负荷施加于驱动件顶端中心, 测量顶端的移动距离。Placing the switch such that the direction of switch operation is vertical and then a static load twice the operating force to the center of the knob the travel distance for the knob to come to a stop shall be measured.
5.4	驱动件强度 Actuator Strength	满足5.1、6.1-6.3项要求且操作无件不被损坏或太松。Item 5.1、6.1 to 6.3 shall be satisfied of actuator function and action is in gear	在驱动件顶端面中央, 施加10N的力于按压方向的停止位上5秒。 To the press direction 10 N until the stop for 5 sec .

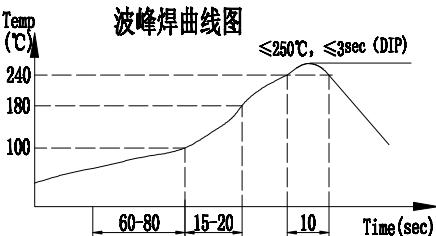
文件编号 FILE NO.	页码 PAGE
发布日期 DATE OF ISSUE	2022年3月10日

# 产品承认书 Product Specication

文件版本 EDITION	第 A 版 第 0 次 修订
名称 Title	带灯轻触开关
产品料号 PART NO.	

5.5	端子强度 Terminal Strength	端子无松动，损坏及绝缘层的破裂，无功能性不良。 Shall be free from terminal looseness, damage and insulator breakage No functional defectivr occur.	任意方向施加5N作用力于接线末端，持续时间10s。 A static load of 5N shall be applied to the tip of terminals for 10s in any direcion 。
	振动 Vibration Proof	实验后：  接触电阻: 5Ω max.  绝缘电阻: 50MΩ Min.  电气性能应符合第4.3-4.5条的要求。  表面及结构无明显变形  After test,  Contact resistance:5Ω max.  Insulation resistance:50MΩ Min.  The electrical performance Specified in item4.3-4.5 shall be satisfied.No abnormalities shall be recognized in appearance and construction	开关采用常规的安装方式牢固地安装在试验设备上，并在下述参数条件下进行试验：  (1) 振频=10~55Hz (2) 振幅1.5mm (3) 振动变化速率: 10~55~10HZ 大约1分钟 (4) 变频方法: 线性型式 (5) 振动方向: 三个相互垂直的方向，其中一个方向是促动元件运动的方向。 (6) 时间: 每个方向2小时 (共6小时)  Switch shall be secured to a testing machine by a normal mounting device and method  (1) Vibration frequency range=10~55Hz (2) Total amplitude =1.5mm (3) Sweep ratio:10~55~10HZ Approx. 1min (4) Method of changing the sweep vibration frequency:linear (5) Direction of vibration:Three perpendicular directions including actuating direction.
5.7	冲击 Mechanical Shock	实验后：  接触电阻: 5Ω max.  绝缘电阻: 50MΩ Min.  无功能性不良, 表面无变形且操作无异常。  After test  Contact resistance: 5Ω max.  Insulation resistance:50MΩ Min.  The Electrical performance Electrical performance No	开关在下述参数条件下进行试验：  (1) 安装方法: 常规方法 (2) 加速度: 490m/S2 (50G) (3) 时间: 11ms (4) 实验方向: 图示6方向 (5) 每个方向3次 (总共18次)  Switch shall be tested according to the following request:  (1) Mounting Method:Normal (2) Acceleration: 490m/S2 (50G) (3) Duration: 11ms

		文件编号 FILE NO.		页码 PAGE	4
		发布日期 DATE OF ISSUE			2022年3月10日
产品承认书 Product Specication		文件版本 EDITION	第 A 版 第 0 次 修订		
名称 Title		带灯轻触开关	产品料号 PART NO.		

5.7	冲击 Mechanical Shock	functional defective occur. Shall be free from mechanical abnormalities.	(4) Test Direction: 6 directions (5) Number of shoks: 3times per direction (18times in total)
5.8	可焊性 Solder Ability	超过80%的浸锡面积被焊料所覆盖。 More than 80% of immersed part shall be covered with solder.	开关在下述参数条件下进行试验: Switch shall be tested according to the following request: (1) 设备: 自动焊接机 (1) Equipment: Auto-Dip Chamber (2) 焊料: 常规 (2) Solder: Normal (3) 焊剂: 焊剂质量百分比为25% 松, 75% 的无色透明溶液。 (3) Flux: Rosin Flux having a nominal composition of 25% solids by mass of white rosin in methyl alcohol solution. (4) 焊接温度: 240-250°C (4) Soldering Temperature 240-250°C (5) 浸渍时间: 3±0.5s (5) Immersing Time: 3±0.5s (6) 浸渍深度: 接线端应浸到离开关根部1.6mm处. (6) Impregnation depth: wiring terminal should be immersed to 1.6mm away from the root. (7) 波峰焊曲线图: (7) wave soldering curve: 
5.9	耐焊接热 Solder Heat Resistance	无外观及功能损坏 NO abnormalities shall be observed appearance and operation	开关在下述参数条件下进行试验: (1) 焊料: 常规; 焊剂: 焊剂质量百分比为25% 松, 75% 的无色透明溶液。 (2) 带方透帽、方帽、圆帽、长帽、高帽、按钮盖、水晶盖的开关 (热变形温度: 120±10°C), 需焊接开关后再带帽。 (3) 焊接温度及浸渍时间-手工焊接: 350±10°C 2-3S. (4) 浸渍深度: 接线端应浸到离开关根部1.6mm处。 Switch shall be tested according to the following request: (1) Solder: Normal; Flux: Rosin Flux having a nominal composition of 25% solids by mass of white rosin in methyl alcohol solution. (2) Switch with square transparent cap, square cap, round cap, long cap, high cap, button cover, crystal cover (thermal deformation temperature: 120±10°C), need to weld the switch before the cap. (3) Soldering Temperature & Manul soldering: 350±10°C 2-3s

文件编号 FILE NO.		页码 PAGE
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发布日期 DATE OF ISSUE	2022年3月10日
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# 产品承认书 Product Specication

文件版本 EDITION	第 A 版 第 0 次 修订
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名称 Title	带灯轻触开关	产品料号 PART NO.
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		(4) Immersion depth: immersion depth shall be at copper plating portion of PCB after mounting. (Thickness of PCB=1.6mm)
5.10	抗焊剂能力 Resistance to Flux	<p>开关在下述参数条件下进行试验:</p> <p>(1) 焊料: 常规</p> <p>(2) 焊剂: 焊剂质量百分比为25%松, 75%的无色透明溶液</p> <p>(3) 焊接温度: <math>260 \pm 5^\circ\text{C}</math></p> <p>浸渍时间: <math>3 \pm 0.5\text{s}</math></p> <p>焊剂浸渍时间: 5-10s</p> <p>(4) 浸渍深度: 接线端应浸到离开关根部1.6mm处.</p> <p>Switch shall be tested according to the following request:</p> <p>(1) Solder: Normal</p> <p>(2) Flux: Rosin Flux having a nominal composition of 25% solids by mass of white rosin in methyl alcohol solution.</p> <p>(3) Soldering Temperature: <math>260 \pm 5^\circ\text{C}</math> Immersing Time: <math>3 \pm 0.5\text{s}</math></p> <p>(3) Soldering Temperature: <math>260 \pm 5^\circ\text{C}</math> Immersing Time: <math>3 \pm 0.5\text{s}</math></p> <p>Flux immersing time shall be at 5-10s in normal room temperature.</p> <p>(4) Immersion depth: immersion depth shall be at copper plating portion of PCB after mounting . (Thickness of PCB=1.6mm)</p>

## 6. Durability characteristics

NO.	项目 Item	标准 Criteria	实验方法 Test Method
6.1	机械寿命 Mechanical life	<p>实验后:</p> <p>接触电阻: <math>5\Omega</math> max.</p> <p>绝缘电阻: <math>50M\Omega</math> Min.</p> <p>操作力衰变应在 <math>\Sigma \pm 30\%</math> 以内无功能性不良, 开关外观及结构应无损坏</p> <p>After test,</p> <p>Contact resistance: <math>5\Omega</math> max.</p> <p>Insulation resistance: <math>50M\Omega</math> Min.</p> <p>Tolerance of operating force</p>	<p>在不带负荷的条件下, 速度为20次/分, 在寿命试验设备上连续转换100,000次。</p> <p>100,000cycles of operation shall be performed continuously at a rate of 20 cycles per minute without load.</p>

文件编号 FILE NO.	页码 PAGE
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发布日期 DATE OF ISSUE
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2022年3月10日
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# 产品承认书 Product Specication

文件版本 EDITION
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第 A 版 第 0 次 修订
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名称 Title	带灯轻触开关	产品料号 PART NO.
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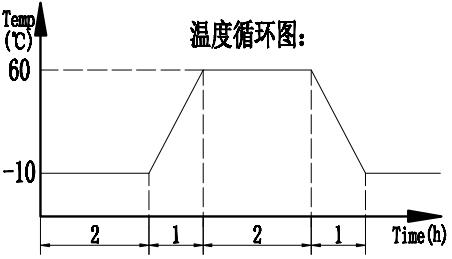
Disintegration shall be within 30% of specified value  
 No functional defrctive occur  
 The switch shall be free from abnormalities in appearance Construction.

在带负荷的条件下,速度为30次/分,在寿命试验设备上连续转换100,000次。30mA 30V DC  
 100,000 cycles of operation shall be performed continuously at a rate of 30 cycles per minute load as follow 30mA 30V DC

## 7. Weather Proof Characteristics 耐候性能:

6.2	Electronics life	Disintegration shall be within 30% of specified value No functional defrctive occur The switch shall be free from abnormalities in appearance Construction.	
			在带负荷的条件下,速度为30次/分,在寿命试验设备上连续转换100,000次。30mA 30V DC 100,000 cycles of operation shall be performed continuously at a rate of 30 cycles per minute load as follow 30mA 30V DC
7.1	低温 Cold Proof	实验后: 接触电阻: 5Ω max. 绝缘电阻: 50MΩ Min. 无功能性不良 开关外观及结构应无损坏 After test, Contact resistance: 5Ω max. Insulation resistance: 50MΩ Min.	试件在-25±2℃的温控箱内保持48小时,然后在正常温度和湿度下恢复1小时,并在此后1小时内对试品进行测量,水滴应消失。 After testing at -25±2℃ for 48 hours, the switch shall be allowed to stand under normal temperature and humidity conditions for 1hour, and measurement shall be made within 1 hour after that. Water drops shall be eliminated.
7.2	高温 Hot Proof	No functional defrctive occur The switch shall be free from abnormalities in appearance Construction.	试件在70±2℃的温控箱内保持48小时,然后在正常温度和湿度下恢复1小时,并在此后1小时内对试品进行测量,水滴应消失。 After testing at 70±2℃ for 48 hours, the switch shall be allowed to stand under normal temperature and humidity conditions for 1hour, and measurement shall be made within 1 hour after that. Water drops shall be eliminated.
7.3	恒定湿热 Moisture Resistance	No functional defrctive occur The switch shall be free from abnormalities in appearance Construction.	试件在40±2℃, 90~95%RH的温控箱内保持48小时,然后在正常温度和湿度下恢复1小时,并在此后1小时内对试品进行测量,水滴应消失。 After testing at 40±2℃, 90~95%RH for 48 hours, the switch shall be allowed to stand under normal temperature and humidity conditions for 1hour, and measurement shall be made within 1 hour after that. Water drops shall be eliminated.
7.4	温度转换 Temperature Cycling	实验后: 接触电阻: 5Ω max 绝缘电阻: 50MΩ Min. 无功能性不良 开关外观及结构应无损坏 After test, Contact resistance: 5Ω max.	试件按下述实验条件试验5次,然后在正常温度和湿度下恢复1小时,并在此后1小时内对试品进行测量,水滴应消失 After 5 cycles of following conditions the switch shall be allowed to stand under normal temperature and humidity conditions for 1hour, and measurement shall be made within 1hour after that. Water drops shall be eliminated.

		文件编号 FILE NO.		页码 PAGE	7
			发布日期 DATE OF ISSUE		
产品承认书 Product Specication			第 A 版 第 0 次 修订		
名称 Title	带灯轻触开关	产品料号 PART NO.			

7.4	温度转换 Temperature Cycling	Insulation resistance: 50MΩ Min. No functional defective occur The switch shall be free from abnormalities in appearance Construction.	 <p>温度循环图:</p> <p>该图展示了温度随时间变化的循环。纵轴表示温度（Temp. °C），横轴表示时间（Time h）。图中显示了一个完整的周期，从-10°C上升到60°C，再下降回-10°C，总时间为4小时，分为两个2小时的阶段，每阶段内有1小时的升温和1小时的降温。</p>
7.5	盐雾实验 Salt Mist	在金属件上没有腐蚀斑点。 No remarkable corrosion shall be recognized in metal part	<p>试件在下述实验后测量：</p> <p>(1) 温度35±2°C  (2) 盐溶液浓度：5±1% (质量百分比)，浸泡5分钟。  (3) 浸泡后的盐沉积物用水冲掉。  (4) 时间12±1小时。</p> <p>The switch shall be checked after the following test:</p> <p>(1) Temperature: 35±2°C  (2) Salt Solution: 5±1% (Solids by mass), immersing time: 5 minute.  (3) After immersing, salt deposit shall be removed by running water.  (4) Duration: 12±1 hours.</p>

## 8. LED SPECIFICATIONS

Color	V <sub>R</sub>	I <sub>F</sub>	Recommended Operating Current	V <sub>F</sub>	
				N o m	M a x
Red	DC 5V	20 mA	20 mA	1.7 V	2.4 V
Green	DC 5V	20 mA	20 mA	1.9 V	2.4 V
Yellow	DC 5V	20 mA	20 mA	1.9 V	2.4 V
Blue	DC 5V	20 mA	20 mA	3.0 V	3.6 V
White	DC 5V	20 mA	20 mA	3.0 V	3.6 V
Full Green	DC 5V	20 mA	20 mA	3.0 V	3.6 V
orange	DC 5V	20 mA	20 mA	2.0 V	2.3 V

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# 产品承认书 Product Specication

名称 Title	带灯轻触开关	产品料号 PART NO.
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## 8. 轻触开关使用说明

### 8.1、一般事项 General matters

本产品主要用于自动化装置，视像装置，家用电器，信息装置及通讯装置等常用电子设备中；如果该产品要用于其它具有更高安全性及可靠性的耐久性设备中（如生命维持装置，宇宙航空装置，防灾及安全性装置）时，请确认是否合用，或者同我方了解详细情况。

This product is mainly used in automation devices, video devices, household appliances, information devices and communication devices and other commonly used electronic equipment; If the product is to be used in other durable equipment with higher safety and reliability(such as life support devices, space space equipment, disaster prevention and safety devices, please confirm hether it is suitable, or ask us for details.

### 8.2、焊接安装 Welding Installation

(1)、如果焊锡时，有施力在端子部位的话，则端子可能会变形且易出现电气性能不良。

(2)、焊锡条件应按照实际的对应条件予以确认。

(3)、焊锡工序完成后，不要尝试用溶剂或类似物品清洗开关

(4)、开关焊锡后，还有热量时，请不要马上操作开关

(5)、如使用水溶性助焊剂，可能会导致开关破损，因此应确保不要用这种助焊剂。

(6)、手工修正焊接的次数应在2次以下，这时第一次和第二次之间应相隔5分钟以下。

(7)、请注意不要让发泡焊剂接触开关安装侧的印刷基板上，若基板上有发泡焊剂的话可能进入到开关而引起导通不良。

(8)、表面实装规格的开关在回流焊接槽进行焊接的话，焊渣、焊剂容易进入，导致按钮开关动作障碍，因此应该避免。

(1)、If there is force applied to the terminal during welding, the terminal may be deformed and prone to poor electrical erformance.

(2)、The soldering conditions shall be confirmed according to the actual corresponding conditions.

(3)、After the welding process is completed, do not try to clean the switch with solvent or similar items

(4)、Do not operate the switch immediately after the switch welding and when there is still heat

(5)、If a water-soluble flux is used, it may cause damage to the switch, so make sure that this flux is not used.

(6)、The number of manual corrections should be less than 2 times, when the first and second time should be separated by less than 5 minutes.

(7)、Please note whether foamed flux should be touched on the printed substrate on the installation side of the switch. If there is foamed flux on the substrate, it may enter the switch and cause poor conductivity.

(8)、If the switch with the surface actual specification is welded in the reflux welding groove, the slag and flux are easy to enter, resulting in a barrier to the movement of the button switch, so it should be avoided.

### 8.3、安装构造，机械设计 Installation structure, mechanical design

(1)、线路板上安装孔及安装图示的尺寸都须参照工程图中所建议的尺寸。

(2)、如果施超出规定值的较大重力于开关上，会导致开关破损及内部弹片变形，成为动作不良的原因，影响开关本身性能，所以应特别小心防止开关承受超出规定值的较大重力。

(3)、把本公司的产品和其它产品配合使用时，请客户确认必须适合的规格、法规或规定.另请客户自身确认本公司产品装到客户使用的系统、

	文件编号 FILE NO.		页码 PAGE	9
	发布日期 DATE OF ISSUE	2022年3月10日		
产品承认书 Product Specication		文件版本 EDITION	第 A 版 第 0 次 修订	
名称 Title	带灯轻触开关	产品料号 PART NO.		

机械、装置上的适用性,如果想变更开关使用条件,请预先与本公司进行协商。

注: 请按操作体可以在垂直方向动作的方向设定开关。只按操作体的一侧或斜向的操作都有可能导致耐久性降低

(4)、因为是没有密封构造的开关,因此请勿在有火粉尘的场所进行使用。不得不使用的情况下,应该考虑采用覆盖物等保护对策。

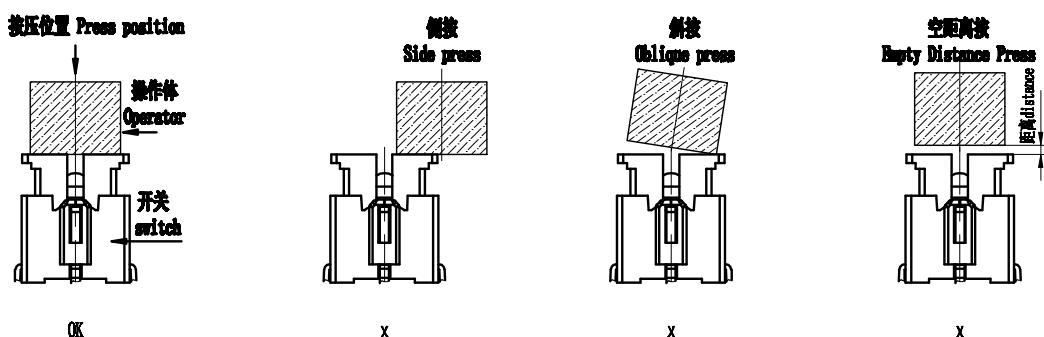
(1)、The dimensions of the mounting hole and the mounting icon on the circuit board shall refer to the dimensions recommended in the rawings.

(2)、If a larger gravity than the specified value is applied to the switch, it will lead to damage to the switch and deformation of the internal shrapnel, which will become the cause of poor action and affect the performance of the switch itself. Therefore, special care should be taken to prevent the switch from bearing larger gravity than the specified value..

(3)、When using our products together with other products, we ask our customers to confirm the specifications, regulations or regulations that must be suitable. Sex, if you want to change the conditions of use of the switch, please consult with us in advance.

Note: Please set the switch according to the direction in which the operator can move in the vertical direction. Only one side of the operating body or oblique operation may result in reduced durability

(4)、Because it is a switch without a sealed structure, it should not be used in places with fire dust. Where it has to be used , consideration should be given to protection responses such as mulching.



#### 8.4、使用环境 Use environment

(1)、如果该产品常用于产生硫化热源周围或有废气存在的地方,应特别留意,因为开关端子可能会氧化变色,性能会受到影响。

(2)、如果在安装开关的模组内有以下所描述的部件材料,需遵循以下要求:

①部品、橡胶材料、粘合剂、包装材料及用于装置内机械部件上的润滑油剂等,不要使用那些可能会产生硫化气体或氧化气体的材料。

②当有用到磷橡胶、润滑油、粘合剂及油脂时,应使用不会产生低分子磷氧烷气体的材料,因为低分子磷氧烷气体会在开关接触部位形成二氧化磷层从而引起接触不良,如有用到(如涂料剂等化学溶剂),请先预先告知我方。

(3)、不要将开关用于高湿或沾湿可能性的环境中,因这样的环境可能会引起端子间电流泄漏,最终影响导通性能。

(4)、外部浸入物的影响:

由于该开关无密封机构,因此可能会由于外部环境中浸入的尘埃而引起接触失效,在使用该开关时,应

	文件编号 FILE NO.		页码 PAGE	10
	发布日期 DATE OF ISSUE	2022年3月10日		
<b>产品承认书 Product Specication</b>		文件版本 EDITION	第 A 版 第 0 次 修订	
名称 Title	带灯轻触开关	产品料号 PART NO.		

采取防尘措施,以下是尘埃浸入的范例, 使用时请注意防止。

①加工过程中切口处及PCB孔处产生碎屑, 或PCB防护材料, 如(报纸、发泡、聚苯乙烯材料等)产生的废弃物等浸入开关内。

②在堆叠PCB时产生的助焊剂或粉末状焊剂浸入开关内。

(1)、If the product is commonly used to generate sulphide heat sources or where exhaust gas is present, special attention should be paid because the switch terminal may oxidize the color change and the performance may be affected.

(2)、If the component material described below is in the installation switch module, the following requirements shall be followed:

①Part, rubber material, binder, packing material and lubricant used on the mechanical parts of the device, etc.. Do not use those that may produce vulcanized gas or oxidation gas Body material.

②When phosphorous rubber, lubricants, adhesives, and oils are used, materials that do not reduce low molecules of phosphoxane gas should be used because of the low score Phosphoxane gas will form phosphorus dioxide layer in the contact area of the switch, causing poor contact. If you use(such as chemical solvents such as coating agents), please inform us in advance.

(3)、Do not use the switch in an environment that is highly wet or wet, because such an environment may cause inter-terminal current leakage and eventually affect the conduction performance.

(4)、The effect of external immersion:

Since the switch has no sealing mechanism, it may cause contact failure due to the immersion of dust in the external environment.

When using the switch, dust protection measures should be taken. The following is an example of dust immersion. Please note the prevention when using it.

①Cracking occurs at incisions and PCB holes during processing, or PCB protective materials such as(newspapers, foaming, polystyrene materials, etc.) produced waste, etc. immersed in the switch.

②The flux or powder flux produced when stacking the PCB is immersed in the switch.

## 8.5、保存方法 Save Method

(1)、为防止本产品的性能劣化和耐焊性及抗氧化能力等性能受到影响,请保管在以下的条件和环境下:

①温度-10℃以上,+40℃以下,湿度85%以下的环境,不要在高温、高湿环境下。

②避免保存在含有腐蚀性气体等的空气中。

③产品购入后,不可超过6个月以上长期保管。

④避免保存在日光能直射的场所。

(2)、在不施加负重外力的包装状态下进行保管。

(3)、保存标准为1个月,限度为3个月以内,请尽早使用。打开包装后,有剩余品时,应将剩余部分以胶袋包装好以同外界隔离,请进行合适的防湿,防腐蚀气体等处理后进行保管。

(1)、In order to prevent the performance of this product from being degraded and the resistance to welding and antioxidant properties are affected, please keep it under the following conditions and circumstances:

# 产品承认书 Product Specication

文件版本  
EDITION

第 A 版 第 0 次 修订

名称 Title

带灯轻触开关

产品料号  
PART NO.

①Soil environment above -10 ° C, below +40 ° C and below 85 % humidity, not under high temperature and high humidity.

②Avoid saving in air containing corrosive gases, etc..

③After the product is purchased, it must not be kept for more than 6 months.

④Avoid keeping places where sunlight can shine directly.

(2)、Keep under the condition of packing without applying external force of load.

(3)、The preservation standard is 1 month and the limit is within 3 months. Please use it as soon as possible. After opening the packaging, when there are surplus products, the remaining parts should be packaged in plastic bags to isolate them from the outside world. Please proceed with the appropriate Anti-moisture, anti-corrosion gas and other treatment after safekeeping.

## 8.6、其它 other

请特别注意严格遵守以下的禁止事项及注意事项:

### (1)、关于火灾,冒烟的禁止事项

① 超过额定负荷使用时,有发生火灾的可能性,故请切勿超负荷使用。如果有误用、异常使用等有可能超过额定电流的话,请采取对策如:通过设置保护电路等切断电流。

②本产品使用的非金属材料,为非阻燃材料,其抗燃等级是根据UL94的判定基准,若有使用94HB等级的材料,则禁止使用在有可能产生蔓延燃烧的地方,或采取延烧防止对策。

### (2)、对于追求安全性产品的注意事项:

①对于产品品质我司以策万全,但有可能发生寿命等故障形式,如性能劣化、短路、常开等。因此,在设计追求安全性产品的时候:“对于零件单一故障,产品会出现什么故障”。请进行事前检讨。

②准备保护电路、保护装置的系统以谋求安全。

③准备安全备用电路,使单一的故障不会导致整体系统的失效,以确保安全性。

Special attention is paid to strict compliance with the following prohibitions and precautions:

### (1)、Prohibition on Fire and Smoke

① Please do not overload if there is a risk of fire in excess of the rated load. If there is misuse, abnormal use, etc. that may exceed the rated current, please take countermeasures Cut off the current by setting up a protective circuit.

②Non-metallic material used in this product is a non-flame retardant material. Its flame resistance grade is based on the UL94 determination Benchmark. If there is a 94HB grade material, it is prohibited to use it. It may cause widespread combustion. The place, or take measures to prevent burning.

### (2)、Attention to the pursuit of safe products:

①For the quality of the product, we use all means, but it may occur in the form of life and other fault forms, such as performance deterioration, short circuit, and constant opening. Therefore, when designing a secure product: "For zero Single fault, what will happen to the product? And ... Please make a prior review.

② Prepare to protect the circuit, protection device system for safety.

③ Prepare a safe backup circuit so that a single failure does not cause the entire system to fail to ensure safety.