

 XKB Connectivity	Doc. No.	TM-A0162-21	Page No.	2/7
	Date Issued	2020-04-06	Prepared by	Josephine
	Date revised	2020-11-23	checked by	Jay
Product Specification	Rev. No.	01	Approved by	Mei Chen
Title: DETECTION SWITCH 检测开关				

Item (项目)	Standard (标准)
Rated Voltage (Maximum) 额定电压	30V DC
Rated Current (Maximum) 额定电流	0.1A
Operating temperature range 工作温度范围	-40°C ~ +85°C From -40 to +85 degree centigrade
Storage Temperature Range 储存温度范围	-40°C ~ +85°C From -40 to +85 degree centigrade

5. 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

8. PERFORMANCE AND TEST DESCRIPTION (XKB Connectivity 性能和测试类型)

8.1 APPEARANCE (外观)

ITEM	DESCRIPTION(类型)	TEST CONDITION(测试条件)	REQUIREMENT(要求)
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 XKB Connectivity	Doc. No.	TM-A0162-21	Page No.	3/7
	Date Issued	2020-04-06	Prepared by	Josephine
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Title: DETECTION SWITCH 检测开关				

1	Appearance (外观)	Visual. (目视)	Should not have any flaw Scratch discoloration and crushed (无任何裂痕、刮伤、 污染和变形)
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8.2 ELECTRICAL (电气)

ITEM	DESCRIPTION(类型)	TEST CONDITION (测试条件)	REQUIREMENT(要求)
2	Low level contact resistance. (接触电阻)	To be measure with AC 1KHz±200Hz (Max 20mv,Max 50mA)or 0.1mA,12V DC (在1千赫兹±200赫兹AC mV, 或0.1mA, 12V DC电流下测试)	100 mΩ Max.
3	Insulation Resistance. (绝缘电阻)	Measurements shall be made following application of DC100V potential between terminals and between individual terminals and frame for one minute. (在端子与端子之间, 端子与外壳之间施加 DC100V, 一分钟, 测量相邻两端的绝缘电阻)	100 MΩ min.
4	Dielectric strength. (耐电压)	AC 250 V (50Hz or60Hz) shall be applied between terminals and between individual terminals and frame for one minute. (在端子与端子之间, 端子与外壳之 间施加 AC250V(50HZ-60HZ))	There shall be no breakdown. (无击穿、闪烁现象)

8.3 MECHANICAL (机械)

ITEM	DESCRIPTION(类型)	TEST CONDITION (测试条件)	REQUIREMENT(要求)
5	Actuating (动作力) Force	Place the switch such that the direction of switch operation is vertical and then gradually increase the load applied to the center of the stem, the maximum load required for the stem to come to a stop shall be measured. (开关的动作方向为垂直放置开关向推柄中心 逐渐地增加负荷直到推柄停止时所测量的最大 负荷)	20gf ± 10 gf

 XKB Connectivity	Doc. No.	TM-A0162-21	Page No.	4/7
	Date Issued	2020-04-06	Prepared by	Josephine
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6	Terminal strength 端子强度	A static load of 400gf shall be applied To the terminal for 1 minute in any direction. (在排脚前端任意一个方向加 400gf 力度测试, 时间为1分钟)	Electrical characteristics shall be satisfied without damage or excessive looseness of terminals. (在排脚中没有裂开. 松动等异常, 满足于机械、电器性能)
7	Displacement of actuator (knob) 推柄强度	Fixed switch so that the switch is perpendicular to the direction of operation and exerts 2 Kgf force in the opposite direction of the push handle for 1 minute. (固定开关, 使开关与操作方向垂直, 以推柄动作方向反方向施加2Kgf力持续 1 分钟)	The handle is not seriously deformed and can work normally. (柄部无严重变形, 可以正常工作)
8	XKB Connectivity LIFE TEST 寿命试验	Endurance without loading: A switch shall be subjected to 100,000 cycles at a speed of 15 to 18 cycles per minute without loading. (在负荷的条件下以每分钟 15~18 回的速度进行 100,000 次的测试)	(1) Contact Resistance (接触电阻): 100mΩMAX. (2) Insulation resistance (绝缘电阻): 100M Ω MIN. (3) Dielectric strength (耐电压): AC 250V, 1 minute. (4) Operating force (作动力): 25gf±10gf (5) Without damage to parts arcing or breakdown etc. (测试后外表无损伤, 并且满足机械性能)

8.4 ENVIRONMENTAL (环境)

ITEM	DESCRIPTION (类型)	TEST CONDITION (测试条件)	REQUIREMENT (要求)
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Product Specification

Title: DETECTION SWITCH 检测开关

9	Solder ability (可焊性)	<p>Test temperature:245±5°C Test time :5sec During test,the stick detect temperature in the oven.Then switch terminal soak in the oven.It put 2 minute under normal temperature after testing.</p> <p>试验温度: 245±5°C 试验时间: 5s; 试验时以测温棒侦测锡炉温度; 开关端子浸入与焊锡接触, 在规定时间内 f 取出; 测试后再常温下测试后再常温下静止 2 分钟</p>	<p>The area must be reach 90% on the surface of switch terminal</p> <p>开关端子上锡面积应达到 90%以上</p>
10	Moisture Resistance (耐潮湿)	<p>Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 30 minute before measurements are made:</p> <p>样品按下列条件进行耐潮湿试验,试验后在正常温度和湿度条件下放置 30分钟后测定</p> <p>(1)Temperature温度: 60±2°C (2)Relative humidity相对湿度: 90 to 95% (3)Time时间: 48 hours</p> <p>Water drops shall be removed.擦除水珠</p>	<p>Contact resistance接触电阻: 100 m□ Max. Insulation resistance绝缘电阻 : 100 M□ Min.</p> <p>There shall be no defects in appearance or in the mechanical functions</p> <p>. (无论是在外观上还是在机械功能上, 都不得有任何缺陷)</p>
11	TLow Temperature Resistance 耐低温	<p>Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 30 minute before measurements are made:</p> <p>样品按下列条件进行耐低温试验, 试验后在正常温度和湿度条件下放置 30分钟后测定</p> <p>(1)Temperature温度:-40±2°C (2)Time时间: 96 hours</p> <p>Water drops shall be removed.擦除水珠</p>	<p>Contact resistance接触电阻: 100 m□ Max. Insulation resistance绝缘电阻 : 100 M□ Min.</p> <p>There shall be no defects in appearance or in the mechanical functions</p> <p>. (无论是在外观上还是在机械功能上, 都不得有任何缺陷)</p>

 XKB Connectivity	Doc. No.	TM-A0162-21	Page No.	6/7
	Date Issued	2020-04-06	Prepared by	Josephine
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12	Heat Resistance 耐热	<p>Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 30 minute before measurements are made:</p> <p>样品按下列条件进行耐热试验, 试验后在正常温度和湿度条件下放置30 分钟后测定</p> <p>(1) Temperature温度: 85±2°C</p> <p>(2) Time时间: 96 hours</p>	<p>Contact resistance接触电阻: 100 mΩ Max. Insulation resistance绝缘电阻: 100 MΩ Min.</p> <p>There shall be no defects in appearance or in the mechanical functions. (无论是在外观上还是在机械功能上, 都不得有任何缺陷)</p>
13	Salt Spray Test 盐雾试验	<p>The salt spray test shall be conducted at the following conditions :</p> <p>样品按下列条件进行盐雾试验</p> <p>(1) Density (浓度): 溶液(5±1)% NaCl (质量百分比)</p> <p>(2) Temperature温度: 35±2°C</p> <p>Time时间: 48 hours</p>	<p>Appearance shall no rust, oxidation, corrosion and other undesirable phenomena. (外观须无生锈、氧化、腐蚀等不良现象)</p>

9. SOLDERING AND CLEANING PROCESSES 焊接和清洗:

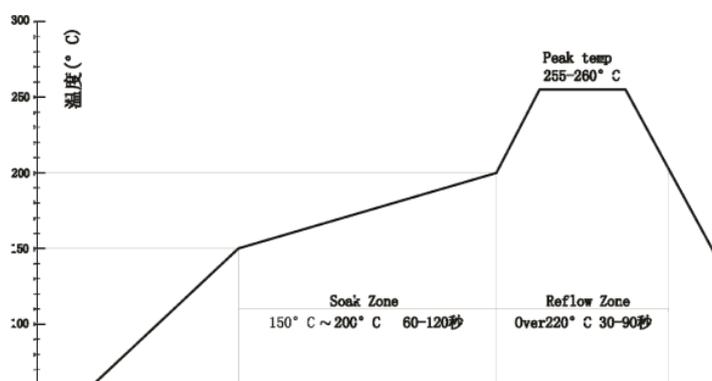
9.1. Keep all switch contacts in their "OFF" position for all operations.

XKB Connectivity在所有操作过程中, 请确保开关在OFF位置

9.2. Wave soldering (波峰焊): DIP Suggestions solder temperature at 260°C(500°F) max.5 seconds . DIP型推荐焊接焊锡温度为260°C (500°F) 最多5秒

9.3. Hand soldering (手焊): Use a soldering iron of 30 watts controlled at 350°C approximately 5 seconds. while applying solder.
使用30W烙铁控制温度在350°C,焊接时长约5秒

9.4. Reflow soldering profile (回炉焊): When the maximum temperature of the reflow furnace is 260 °C and the temperature is 260 °c. 10 seconds MAX. (reference) SMT型回焊炉最高温度为260°C, 温度为260°C时, 最长时间不超过10秒 (如图)



 XKB Connectivity	Doc. No.	TM-A0162-21	Page No.	7/7
	Date Issued	2020-04-06	Prepared by	Josephine
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10. PACKAGING 包装

Please refer to the packing drawing. XKB Connectivity 请参考产品包装图纸

Rev.	Description	Date revised	Created/ Revised by
21	New Release	2021/04/30	Josephine Lin