



# 规格书

## SPECIFICATION

CUSTOMER NAME	客户名称:	
CUSTOMER NO.	客户编号:	
SERIES	系 列:	船型开关单边复位两脚15X21MM
MODEL NO.	型 号:	XB-XW-601AB1 series
DRAWING NO.	图 形 号:	Rocker Switch with one side reset and two legs 15X21MM

**If specification of this product meets your request, please confirm all the items of it and return to us with signature and stamp, it will be basis of our production and record. Thanks your cooperation in advance!**

若此产品规格符合贵司要求，敬请确认此规格书内所有项目  
并签名和盖章后回传给我司，以作我司产品制作之  
依据和存档之用，多谢合作！

### EXAMINE & APPROVAL 审批

APPROVE 接受	NOT APPROVE 不接受
SIGNATURE 签署      STAMP盖章      DATE日期	

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<div>研发部</div> <div>戴海明</div> <div>2022. 06. 08</div>	<div>品质部</div> <div>黄自清</div> <div>2022. 06. 08</div>	<div>工程部</div> <div>庞军</div> <div>2022. 06. 08</div>	<div>总经办</div> <div>吴量</div> <div>2022. 06. 08</div>

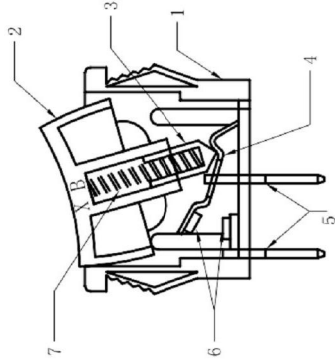
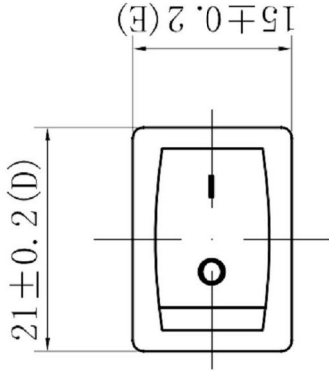
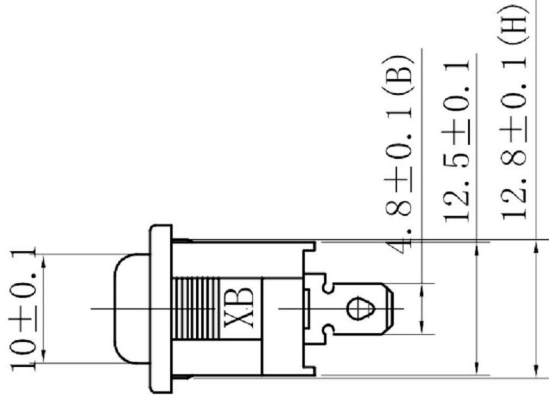
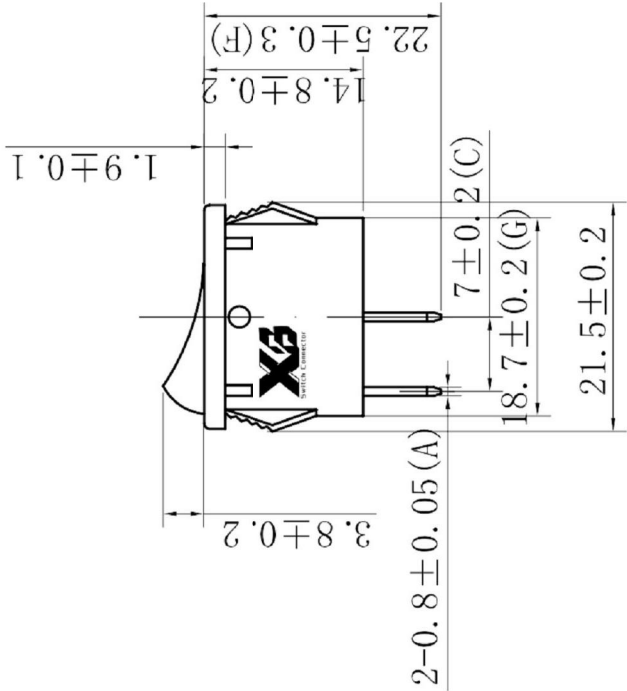
东莞市溪榜电子有限公司

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**Quality core! Afterburner for Made in China!**



技术参数  
接触性能: 通断  
绝缘电阻:  $\geq 100M\Omega$  500VDC  
额定电流电压: AC250V6A  
耐电压:  $\geq 1500VAC/60S$

2P ON-OFF



SCHEMATIC (NON-SHORTING)

序号	名称	数量	材料	阻燃
8	弹簧	1	弹簧钢丝	
7	触点	2	铜点	
6	焊脚	2	黄铜电镀	
5	跳板	1	黄铜电镀	
4	铜套	1	锰钢电镀	
3	盖子	1	PA66	
2	基座	1	PA66	
1				阻燃

OPTIONAL KNOB TYPE  
SCALE: 2.5:1

	A-F		A-E
	A-D		A-C
	A-B		A-A



东莞市溪榜电子有限公司  
DONG GUAN XI BANG ELECTRONICS CO., LTD

UNIT : MM	DWN.	GAO. PENG	DATE
SCALE : 2 : 1	CHK'D	PANG. DONG	DATE
VERSION	01	APPD.	HE. LONG. FEI

TITLE : XB ROCKER SWITCH	ANGLE TOL	± 2
MODEL XB-XB-XW-601AB1 两脚船型开关单边复位15X21MM 复位翘板开关2脚	TOLERANCE	0.0 ± 0.3mm

NO.	PART NAME	MATERIAL	QTY	FINISHING
8	CONTACT POINT	COPPER	1	Ag CLAD
7	SLEEVE	BRASS	1	Ni PLATED
6	SPRING	STEEL WIRE	1	NATURE
5	SPRING PLATED	COPPER STRIP	1	Ag PLATED
4	TERMINAL B	BRASS STRIP	1	Ag PLATED
3	TERMINAL A	COPPER STRIP	1	Ag PLATED
2	CASE	NYLON	1	BLACK
1	KNOB	NYLON	1	BLACK
NO.	PART NAME	MATERIAL	QTY	FINISHING



## 1. 概述 GENERAL

- 1.1 系列 DESIGNATION: 船形开关 ROCKER SWITCH
- 1.2 型号 MODULE No.: 符合产品标识 Shall conform to marking.
- 1.3 电路图 CIRCUIT: 符合产品图 Shall conform to drawing.
- 1.4 额定值 RATING: 符合产品标识 Shall conform to marking.
- 1.5 使用温度 OPERATING TEMPERATURE RANGE: -10 TO 55℃
- 1.6 贮存温度 STORAGE TEMPERATURE RANGE: -20 TO 85℃

## 2. 外观与尺寸 APPEARANCE AND DIMENSIONS

- 2.1 外观 APPAERANCE: 无影响产品使用性能的缺陷。  
There shall be no defects that affect the serviceablity of the product.
- 2.2 标识 MARKING: 应有商标、型号、额定值、认证标志等标识。  
There shall be trademark, module No., rating, license mark and other necessary mark on the switch body.
- 2.3 尺寸 DIMENSIONS: 应符合产品图。  
Shall conform to drawing.

## 3. 性能要求 PERFORMANCE

项目 ITEM	测试条件 TEST CONDITIONS	要求 REQUIREMENT
<b>3.1 电气性能 ELETRICAL PERFORMANCE:</b>		
<b>3.1.1 通断性能 MAKING AND BREAKING</b>	用通断测试仪测量开关端子间处于闭合和断开状态是否合格。 Use the on-off tester to measure wether the state of closing and disconnecting between the switch terminnals is up to standard	闭合时指示灯亮，断开时灯灭。 When switch closed the indicator light,while switch open the indicator off
<b>3.1.2 绝缘电阻 INSULATION RESISTANCE</b>	触点间的绝缘和功能绝缘： 约DC500V的电压施加在处于断开状态的开关的两触点间和开关的不同极之间，相同极性的导电件应连接在一起。施加电压1分钟后进行测量 INSULATION RESISTANCE BETWEEN CONTACT AND OPERATIONAL INSULATION: A d.c. voltage of approximately 500V is applied between the open contacts of each pole of a switch and between the different poles of which all the parts is connected together, the measurement shall be made after the voltage is applied for 1 min.	10MΩ min
	加强绝缘： 约DC500V的电压施加在导电部件和覆在易接触的开关外表面的金属箔及易接触的金属部件之间。施加电压1分钟后进行测量 REINFORED INSULATION: About d.c. voltage of approximately 500V is applied between all live parts and a metal foil covering the outer accessible surface and accessible metal parts, the measurement shall be made after the voltage is applied for 1 min.	100MΩ min
<b>3.1.3 介电强度 DIELECTRIC STRENGTH</b>	触点间和各极间的介电强度： 处于断开状态的开关的两触点间和开关的不同极之间，应能承受基本为正弦波形，频率为50或60Hz的1500V电压1分钟无击穿或闪络现象。 DIELECTRIC STRENGTH BETWEEN CONTACTS AND BETWEEN DIFFERENT POLES: A voltage of substantially sine wave form, with a frequency of 50 or 60Hz and the value of 1500V is	无击穿或闪络现象 No flashover or breakdown shall occur

项目 ITEM	测试条件 TEST CONDITIONS	要求 REQUIREMENT
	applied for 1 min between the open contacts and the different poles. 加强绝缘间的介电强度: 基本为正弦波形的、频率为50或60Hz、数值为3000V的电压施加在导电部件和覆在开关的易接触外表面的金属箔及易接触的金属部件之间应无击穿或闪络现象发生。 DIELECTRIC STRENGTH BETWEEN REINFORCE INSULATION: About voltage of substantially sine wave form, having a frequency of 50 or 60Hz and the value of 3000V is applied for 1 min between all live parts and a metal foil covering the outer accessible surface and accessible metal parts.	无击穿或闪络现象 No flashover or breakdown shall occur
3.1.4 开关的发热 HEATING	开关首先在无电流通过的情况下, 作20个操作循环, 然后将操作件停留在最不利的“闭合”位置, 开关通以电流, 其值为电阻性负载最大额定电流的1.06倍, 试验电流至少维持一小时或维持到端子温度稳定。当每隔5 分钟读取连续三个读数变化不大于 $\pm 2^{\circ}\text{C}$ , 即认为温度稳定。测得的温升不应超过45K。 First of all, the switches are subjected to 20 operating cycles with no current flowing. Then the actuating member is left in the most unfavourable “ON” position and the switches are loaded with a current of 1.06 times the maximum rated current for resistive load. The current is maintained at least for one hour or until a constant temperature at the terminal is attained. A temperature is considered to be constant when three successive readings obtained at every 5min of which value indicate no change greater than $\pm 2^{\circ}\text{C}$ .	端子温升不超过45K; 操作件温度不超过85℃; 金属操作件温度不超过60℃。 The temperature rise at the terminals shall not exceed 45K. The temperature of actuating members shall not exceed 85℃; Metal actuating members shall not exceed 60℃.
3.2 材料性能 MATERIAL PERFORMANCE:		
3.2.1 开关材料的阻燃性: 灼热丝试验 RESISTANCE TO FIRE: GLOW WIRE TEST		
3.2.2 开关材料的耐热性: 球压试验 RESISTANCE TO HEAT: BALL PRESSURE TEST	保持、支持带电导体在其相对位置的非金属零件应能承受125℃的球压试验, 其他零件应能承受75℃的球压试验。 For nonmetal parts which are in contact with, maintain or retain the live parts in position electrical should be carried out the ball pressure test at the 125℃. The other parts should be carried out the ball pressure test at the 75℃.	压痕直径 $\leq 2\text{mm}$ The diameter of the impression shall not exceed 2 mm.
3.2.3 开关材料的耐漏电起痕特性 RESISTANCE TO TRACKING	在不同极的导电部件之间、导电部件与接地金属部件之间、导电部件与易接触的表面之间有特定的爬电路径的所有非金属部件应能通过175V的耐漏电起痕指数(PTI)测试。 All non-metal parts for which a creepage path is specified between live parts of different polarity, between live parts and earthed metal parts and between the live parts and accessible surfaces of a switch shall be carried out the proof tracking test of 175V.	无击穿或闪络现象 No flashover or breakdown shall occur



项目 ITEM	测试条件 TEST CONDITIONS	要求 REQUIREMENT
3.3 机械性能 MECHANICAL PERFORMANCE:		
3.3.1 机械强度 MECHANICAL STRENGTH:	将弹簧冲击器的释放能量校准到 $0.5\text{Nm} \pm 0.04\text{Nm}$ , 用弹簧冲击器对可触及的表面包括驱动元件进行冲击, 对每一个认为薄弱的位置冲击三次。 The spring-operated impact-test apparatus is calibrated to deliver an energy of $0.5\text{Nm} \pm 0.04\text{Nm}$ . Blows are applied to all accessible surfaces, including actuating members by the test apparatus. For all such surfaces three blows are applied to every point that is likely to be weak. 首先对开关的按钮施加15N的拉力1分钟试图拉脱按钮, 然后对所有按钮施加30N压力1分钟。 First a pull of 15N shall be applied for 1 min to try to pull off the actuating member and secondly a push of 30N for 1 min is applied to all actuating member.	试验后不应有影响开关安全和使用的损伤。 There shall be no damages to switch safety and usage
3.3.2 操作性能 OPERATING PERFORMANCE:	用尽可能慢的速度按动开关的按钮。 To operate the actuating member of a switch as slowly as possible.	开关的动触点只能停留在“闭合”和“断开”的位置, 当按钮释放时, 按钮会自动移动到或停留在动触点对应的位置。 The moving contacts of a switch can come to rest only in the "on" and "off" position. When the actuating member is released, it shall move automatically or stay in the position corresponding to that of the moving contacts.
3.3.3 插片端子的安装强度 THE STRENGTH OF TABS:	将80N的轴向压力和98N的轴向拉力依次无冲击地作用在开关的插片上。 A axial push of 80N and a axial pull of 98N shall be applied in turn to the tabs of a switch without jerks.	开关的插片不应出现明显的位移和损伤。 No significant displacement or damage shall occur.
3.4 耐久性能 ENDURANCE:		
3.4.1 提高电压加速测试 INCREASE-VOLTAGE AT ACCELERATED SPEED:	测试电压 APPLIED VOLTAGE: 1.15倍额定电压 1.15 times of rated voltage 测试电流 APPLIED CURRENT: 额定电流 Rated current 操作循环数: THE NUMBER OF OPERATING CYCLE: 100 功率因数 POWER FACTOR : $0.95 \pm 0.05$ 环境温度 AMBIENT TEMPERATURE: $25 \pm 10^\circ\text{C}$ 操作速率 OPERATING RATE: 30次/分钟 30 operations per minute 操作速度 OPERATING SPEED: 大约80mm/s的线性速度 Approximately 80mm/s for lineal actions	1、所有的动作功能正常。 2、通以额定电流, 在周围温度为 $25 \pm 10^\circ\text{C}$ 的条件下进行温升测试, 端子温升不应超过55K。 3、能够承受3.1.3条要求的75%的介电强度测试。 1.All actions function as normal; 2.The temperature rise test at the terminal carried out under rated current and ambient temperature of $25 \pm 10^\circ\text{C}$ .the temperature rise at the terminal does not exceed 55K.
3.4.2 慢速测试 SLOW SPEED TEST:	测试电压 APPLIED VOLTAGE: 额定电压 rated voltage 测试电流 APPLIED CURRENT: 额定电流 Rate current 操作循环数: THE NUMBER OF OPERATING CYCLE: 100 功率因数 POWER FACTOR : $0.95 \pm 0.05$	

项目 ITEM	测试条件 TEST CONDITIONS	要求 REQUIREMENT
	环境温度 AMBIENT TEMPERATURE: $25 \pm 10^{\circ}\text{C}$ 操作速率 OPERATING RATE: 30次/分钟 30 operations per minute 操作速度 OPERATING SPEED: 大约20mm/s的线性速度 Approximately 20mm/s for lineal actions	3. Can subject to the dielectric strength test which the test voltage shall be 75% the corresponding test voltage specified in clause 3.1.3.
3.4.3加速测试 ACCELERATED SPEED TEST:	测试电压 APPLIED VOLTAGE: 额定电压 rated voltage 测试电流 APPLIED CURRENT: 额定电流 Rate current 操作循环数: THE NUMBER OF OPERATING CYCLE: 6A250V1500次或3A250V10000次 功率因数 POWER FACTOR : $0.95 \pm 0.05$ 环境温度 AMBIENT TEMPERATURE: $25 \pm 10^{\circ}\text{C}$ 操作速率 THE RATE OF OPERATIONS: 30次/分钟 30 operations per minute 操作速度 OPERATING SPEED: 大约80mm/s的线性速度 Approximately 80mm/s for lineal actions	

#### 3.5 焊接性能 SOLDERING PERFORMANCE:

3.5.1可焊性试验 SOLDERABILITY TEST:	端子顶部被浸入焊锡池中2mm深, 温度 $230 \pm 5^{\circ}\text{C}$ , 时间3S。 The tip of the terminal shall be dipped 2mm in the bath at temperature $230 \pm 5^{\circ}\text{C}$ for 3 sec.	浸入的部分75%以上表面将被锡覆盖。 A new uniform coating of solder shall cover a minimum of 75% of the surface being immersed.
3.5.2 耐焊接热试验 RESISTANCE TO SOLDERING HEAT TEST:	焊锡炉的方法: 焊锡炉的温度控制在 $260 \pm 5^{\circ}\text{C}$ , 锅炉焊接的时间 $5 \pm 0.5\text{S}$ , 基板的厚度为1.6mm。 SOLDER BATH MOTHOD: Solder temperature $260 \pm 5^{\circ}\text{C}$ ; Immersion time $5 \pm 0.5\text{s}$ . the thickness of PCB 1.6mm.  手工焊接方法: 手工焊接的时, 温度控制在 $350 \pm 5^{\circ}\text{C}$ , 焊接时间 $3.5 \pm 0.5\text{S}$ , 但不能在端子上施加异常力。 SOLDERING IRON MOTHOD: Control temperature $350^{\circ}\text{C} \pm 5^{\circ}\text{C}$ ; Application time $3.5 \pm 0.5\text{sec}$ ; However excessive pressure shall not be applied to the terminal.	本体无变形, 能满足机械、电气性能要求。 Without distoration of case or excessive looseness of terminals, Electrial and mechanical characteristics shall be satisfied.

#### 4、开关的材料 MATERIALS OF THE SWITCH

零件名称 PARTS	材料名称 MATERIAL	供应商 MANUFACTURER
附产品图	附产品图	附产品图