



规格书

SPECIFICATION

CUSTOMER NAME	客户名称:	
CUSTOMER NO.	客户编号:	
SERIES	系 列:	电源旋转开关
MODEL NO.	型 号:	XB-HR31-N62A-1P-F3N-R
DRAWING NO.	图 形 号:	Power Rotary Switch

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	

PREPARED BY.制表人	CHECKED BY.校对	APPROVED BY.审核	APPROVAL BY.批准
研发部 戴海明 2022. 06. 08	品质部 黄自清 2022. 06. 08	工程部 庞军 2022. 06. 08	总经办 吴量 2022. 06. 08

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Dong Guan XB ElectronicsCo., Ltd

AccountNumber: 705540238

BankName: CitibankN.A., HongKongBranch

Country/Region: Hong Kong

BankCode:006

BankAddress: 3GardenRoad, Central, Hong Kong

SWIFT/BIC: CITIHKHX (CITIHKHXXXX*If 11 characters are required)

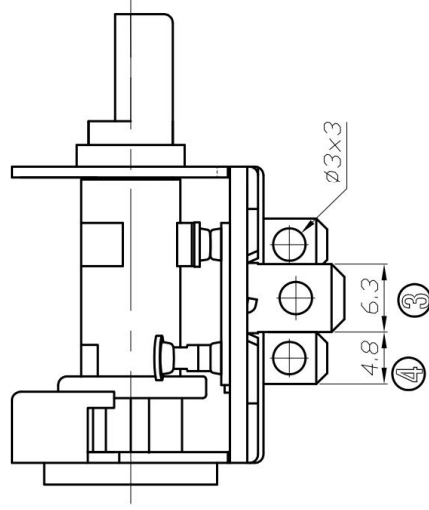
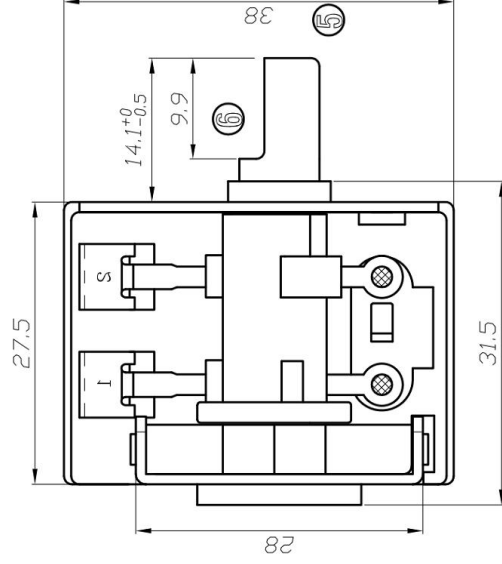
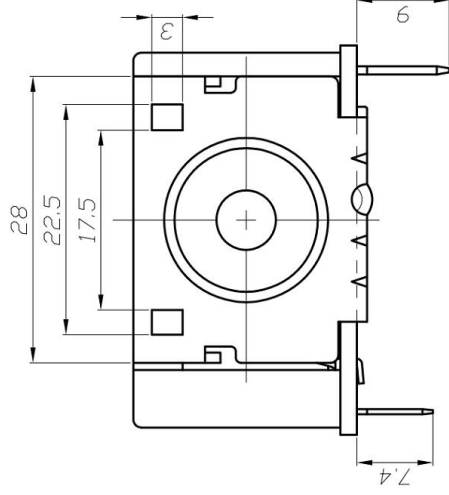
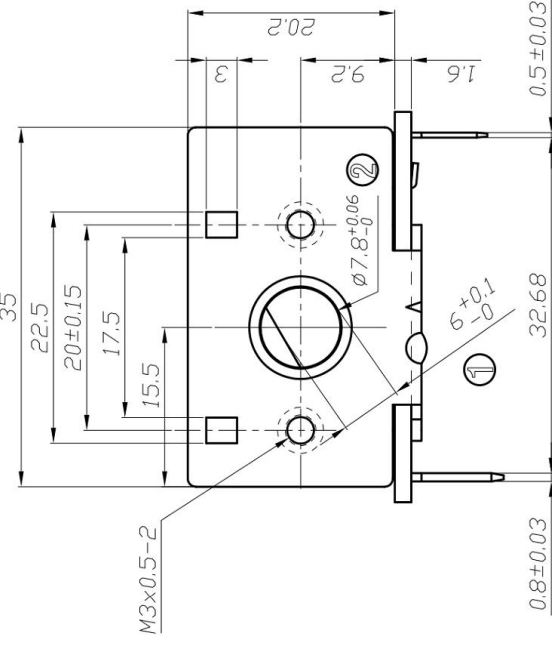
MAiL: HK@ALPSR.CN XB@ALPSR.CN XB@ALPSR.COM

Quality core! Afterburner for Made in China!



CAD FILE:

ROHS



1POLE 6 POSITIONS
FUNCTION 3

1	2	
		
	X	
X	X	
		
X	X	
	X	

1. 旋转开关型号 ROTARY SWITCH MODEL NO:
HR31-N62A-1P-F3N-R
2. 额定RATING: 16A 125VAC(CQC)
12A 250VAC(CQC)

CQC CERTIFICATENO

- ### 3. 所有部件均使用环保材料

ALL MATERIALS USING MEET THE RoHS DIRECTIVE

8					TOLERANCE UNLESS SPECIFIED				
7									
6					WITHIN 1.5mm : ±0.1mm OVER 1.5mm : ±0.2mm	A	2012-9-25	初版	ZENQ. CHEN
5						ISSUE	DATE	DESCRIPTIONS OF REVISION	APPD.
4	CONTACT	SUS	1	Ag CLAD	TITLE : 电源旋转开关				
3	CASE	PPA/BASS SRTP	1	BLACK/Ag PLATED	MODEL: Power Rotary Switch				
2	COVER	STEEL STRIP	1	Ni PLATED	SCALE: 5:1				
1	KNOB	PPA	1	BLACK	UNIT : mm				
NO.	PARTS	MATERIALS	Q'TY	FINISH	东莞市溪榜电子有限公司				
					 DONG GUAN XI BANG ELECTRONI CS CO., LTD.				
					JUN. YANG				
					DWN.				
					CHK'D				
					DONG. PANG				
					ZENQ. CHEN				
					DRWG NO.: XB-HR31-N62A-1P-F3N-R				



东莞市溪榜电子有限公司

DONG GUAN XI BANG ELECTRONICS CO., LTD

ROTARY POWER SWITCH TEST
SPECIFICATION
电源旋转式开关测试规格
MODEL NO. XB-HR31 SERIES

1. APPLICATION TEMPERATURE RANGE (适用温度范围): 0~55°C

2. TEST CONDITION (测试环境):

THE SWITCH IS TESTED AT A TEMPERATURE RANGE OF 0~105°C AND RELATIVE HUMIDITY RANGE OF 45~85%.

* 环境温度范围 : 0 ~ 105°C

* 相对湿度范围 : 45 ~ 85%

3. RATING (额定):

16A 125VAC / 12A 250VAC

4. ELECTRONICAL PERFORMANCE (电气性能):

4-1. CONTACT RESISTANCE (接触电阻):

MEASURED BY FALL-OF-POTENTIAL METHOD AT DC 0.2V/1A SHOULD BE LESS THAN 50mΩ INITIAL.

* 以微电阻计在 **DC 0.2V/1A** 的测试规格值下, 接触电阻值应该小于 **50mΩ**.

4-2. INSULATION RESISTANCE (绝缘电阻):

MEASURED WITH DC 500V APPLIED BETWEEN TERMINALS OF OPEN CONTACTS AND BETWEEN TERMINAL OF OPPOSITE POLARITY OR METAL PART. SHOULD BE MORE THAN 100MΩ.

* 绝缘电阻计于 **DC 500V 设定值**下量测于开路的端子或不同回路的端子, 其绝缘电阻值应该大于 **100MΩ**.

4-3. DIELECTRIC STRENGTH (耐电压):

THE SWITCH SHALL WITHSTAND WITHOUT BREAKDOWN A POTENTIAL OF AC 1500V 0.5mA FOR MINUTE BETWEEN TERMINALS OF OPEN CONTACTS AND TERMINALS OF OPPOSITE POLARITY OR METAL PART.

* 不同极的两支端子开路时, 必须通过一分钟 1500VAC 0.5mA 的耐电压.

* 端子与金属外壳, 必须通过一分钟 1500VAC 0.5mA 的耐电压.

5. OVERLOAD AND ENDURANCE TEST (过负载与寿命测试):

TEST CONDITION 测试状况	TEST VOLT. 测试电压	TEST CURRENT 测试电流	TEST LOAD 测试负载	OPERATING SPEED 操作速率	NO. OF CYCLE 操作次数
OVERLOAD 过负载	125VAC	20A	75%~80%P.F.	8 CYCLES PER MIN. 每分钟 8 次	50
	250VAC	15A			
ENDURANCE 电气寿命测试	125VAC	16A			6000
	250VAC	12A			

	MECHANICAL LIFE 机械寿命	WITHOUT LOAD 无负载	-	8 CYCLES PER MIN. 每分钟 8 次	MIN.10000 最少 10000 次	
6. TEMPERATURE TEST (温升试验): THE TEMPERATURE TEST SHOULD BE TAKEN AFTER ENDURANCE TEST WITH ITS RATED CURRENT AND VOLTAGE. THE TEMPERATURE RISING SHALL NOT BE MORE THAN 45°C. * 温升测试应该于寿命测试结束后随即测试, 以同样的电流与电压量测温升, 温升值必须低于摄氏 45°.						
7. MECHANICAL PERFORMANCE (机械性能): 7-1. TERMINAL STRENGTH (端子强度): A STATIC LOAD OF 1 Kgf BEING APPLIED ON THE TIP OF TERMINAL IN ANY DIRECTION FOR 1 MINUTE. THE TERMINAL MAY BE DEFORMED BUT NO BACKLASH SHOULD BE OBSERVED. * 施以固定 1Kgf 的力量于同一方向在端子的顶端一分钟, 端子允许变型, 但是不可以有任何位移(偏向)与端子断裂及绝缘材料的破裂. 7-2. SOLDERING (焊锡特性): IMMERSE THE TERMINAL LEADS INTO MOLTEN SOLDER AT TEMPERATURE OF 230±5°C FOR 3±0.5 SECONDS. MORE THAN 75% OF PART IMMERSED SHOULD BE COVERED WITH SOLDER. * 端子浸入 230±5°C 温度溶化的焊锡中 3±0.5 秒, 75%以上的部分应该被焊锡包覆. 7-3. SOLDERING HEAT (基板抗热性): IMMERSE THE TERMINAL LEADS IN MOLTEN SOLDER AT TEMPERATURE OF 350±5°C FOR 3±0.5 SECONDS. AND LEFT IN NORMAL TEMPERATURE AND HUMIDITY. NO TRANSFORMATION AND BACKLASH OF TERMINAL SHALL BE OBSERVED. * 端子浸入 230±5°C 温度溶化的焊锡中 3±0.5 秒, 存放在正常的温度与湿度, 注意端子不可以变形与松动. 7-4. ACTUATOR STRENGTH (柄的强度): A STATIC LOAD OF 5 Kgf BEING APPLIED IN THE OPERATION DIRECTION FOR 15 SECONDS. THERE SHALL NOT BE ANY TROUBLES AS DEVIATION AND BENDING. * 以 5Kgf 的力量, 施压 15 秒. 不可以有偏向与弯曲的情形. 7-5. FALLING TEST (落下实验): SWITCH FALLING DOWN FREE FROM 1 METER HIGH. TERMINALS MAYBE HAVE BENT AND DEVIATION AFTER TEST. BUT TESTING OBJECT SHOULD NOT HAVE MECHANICAL AND ELECTRONICAL DAMAGE. * 将开关由一公尺的高度自由落下, 端子也许已经弯曲与偏向, 但是开关本体不可以有机构与电气性能的破坏.						
8. SPACINGS (间距): SPACING BETWEEN UNINSULATED LIVE-METAL PARTS OF OPPOSITE POLARITY AND ALSO THOSE PARTS AND DEAD-METAL PARTS INCLUDING OPENINGS FOR MOUNTING SCREWS ARE NOT LESS THAN 1.2mm THROUGH-AIR OR OVER-SURFACE FOR SWITCHES RATED 250V OR LESS. * 开关的额定为 250V 或较小时, 两个不同极的非隔离活动金属部件与固定金属部件包括固定螺丝的空间距离与爬行距离不可小于 1.2mm.						

9. CONTACT FORCE (接触力量): INITIAL (初始): ≥100gf.
10. OPERATION FORCE (操作力量): 750~1500gf-cm
11. NOTICE(开关使用注意事项): 13-1. When welding, any pressure applied to the terminals may cause conditions as looseness, deformation of terminals and electrical degradations. 给端子进行焊接时，如果在端子上施加负荷，因条件不同会有松动、变形、及电特性退化的可能，请在使用时注意。 13-2. When welding, water-soluble flux may causes corrosion to switches. For second time welding job, please proceed welding after it is recovered to room temperature. 进行二次焊接时，请在第一次焊接部份恢复到常温之后再行进行。连续加热可能使外围部变形、端子松动，脱落及电特性降低。 13-3. Continuous heating may cause loose off, deformation of terminals and electrical degradations. 焊接时，水溶剂助焊剂有可能腐蚀开关的可能，请避免使用。 13-4. Do not clean it with water. 不能用水清洗 13-5. After final assembly as a completed product, please make sure that there's no erosion gas/materials released from peripheral parts/materials as it may causes contact failure of switches. 如果使用开关的整机的周边材料产生腐蚀性气体，有可能造成接触不良等现象，所以请事先进行充分确认。 13-6. Storage, 保管方法 a. Keep it storage under normal temperature, humidity and prevent from direct sunshine, erosion gas. Products sure be used within 6 months. 产品以交货时的状态在常温，常湿，不受直射阳光照射，不产生腐蚀性气体的场所保管，自交货起6个月以内为限度，请尽可能快的使用。 b. For small quantity which taken from main packages, please keep it in plastic bags and sealed. And have it storage under up-mentioned environment. 开封后用塑料袋与外界气体隔断，请在与上述相同环境下保管，并尽快使用。 c. Do not pile up package more than 2 levels. 请不要过分地堆积。

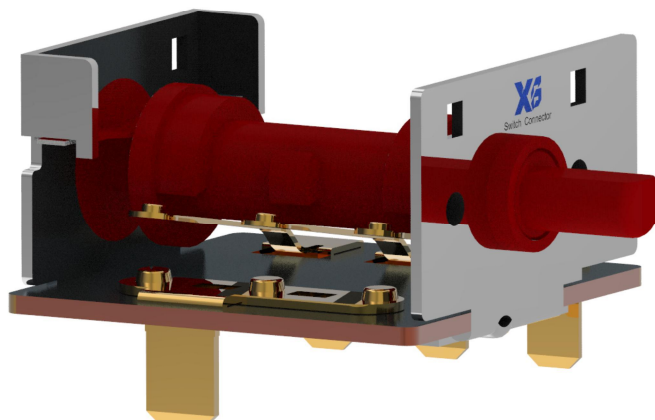
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			SPEC-008	阮霓展	路建宏	高鹏
			版 次 VERSION			
			A 版 0 次			

website: www.alpsr.cn www.alpsr.com www.xbswitch.com www.gdxjdz.com



东莞市溪榜电子有限公司

DONG GUAN XI BANG ELECTRONICS CO., LTD.



ROTARY POWER SWITCH

SPECIFICATION 规格:

Rating 额定:

16A 125VAC (CQC)

12A 250VAC (CQC)

Electrical (电气性能)

(接触电阻) INITIAL CONTACT RESISTANCE: 50mΩ Max

(操作力量) OPERATION FORCE: 750-1500gf

(绝缘电阻) INSULATION RESISTANCE: 100MΩ Min 500VDC

(耐电压) WITHSTAND VOLTAGE: 1500VAC FOR 1 MINUTE

(电气寿命) ENDURANCE: 10,000 CYCLES

Material (材质)

(柄) ACTUATOR: PA66+30%GF/PBT+30%GF (UL 94V-0)

(电木板) BASE: PHENOLIC LAMINATE (UL 94V-0)

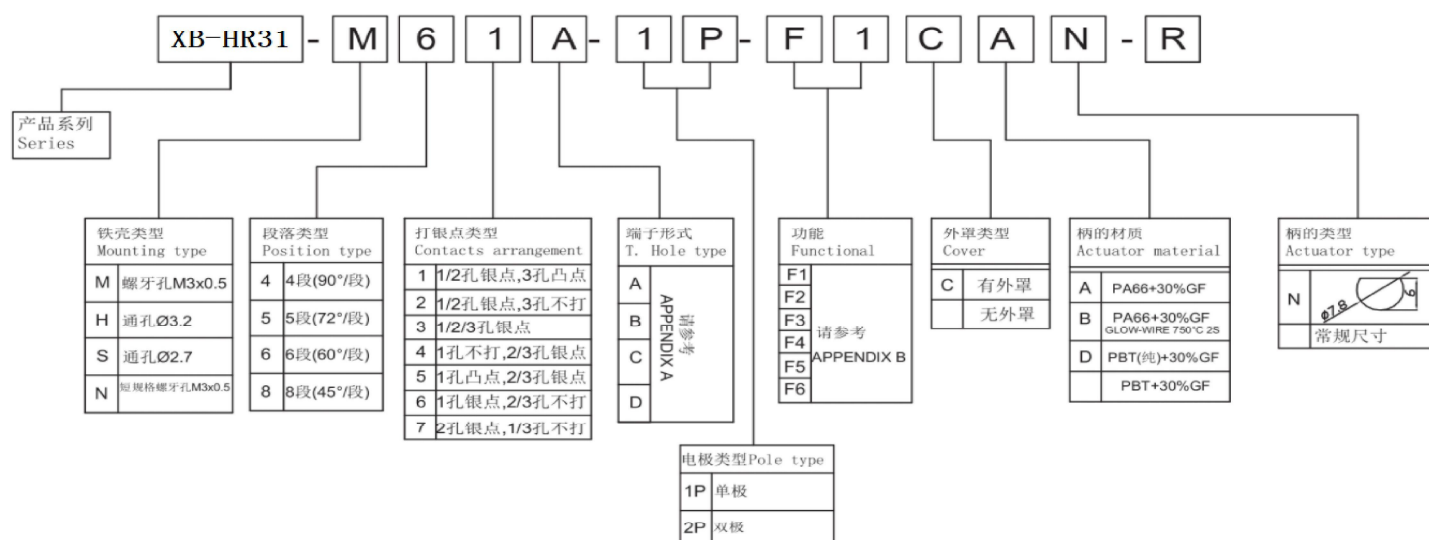
(铁壳) BRACKET: SPCC ZINC PLATED

(端子) TERMINAL: COPPER ALLOY

(接点) CONTACT: SILVER ALLOY

XB-FR31 SERIES 旋转电源开关

HOW TO ORDER 采购识别码



1 POLE/4 POSITIONS
FUNCTION 1

1	2	3	
X			
	X		
X	X		

1POLE /5 POSITIONS
FUNCTION 1

1	2	3	
X			
	X		
		X	
	X	X	

1 POLE/8 POSITIONS
FUNCTION 1

1	2	3	
X	X		
			
X	X	X	
	X	X	

1 POLE/8 POSITIONS
FUNCTION 1

1	2	3	
X	X	X	
X	X		
			
	X	X	
		X	
			
			

1 POLE/4 POSITIONS
FUNCTION 2

1	2	3	
X			
X		X	
X	X	X	

1POLE /6 POSITIONS
FUNCTION 2

1	2	3	
X	X		
			
X	X	X	
	X		

2 POLE/4 POSITIONS
FUNCTION 1

A1			A2	IN
1	2	3		
X		X		
	X			
X		X		
	X			

註七:A67P1L-5段1POLE
註六:A66P1O-4段2POLE /FUNCTION 1
註五:A41P1E-6段/FUNCTION 2
註四:A22P1E-4段/FUNCTION 2
註三:A10P1R-4段/FUNCTION 1
註二:A09P1L-8段/FUNCTION 1
註一:A06P1O-6段/FUNCTION 1