



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-FR04-302B3Q16L-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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Country/Region: Hong Kong

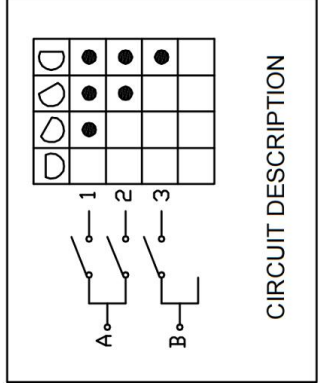
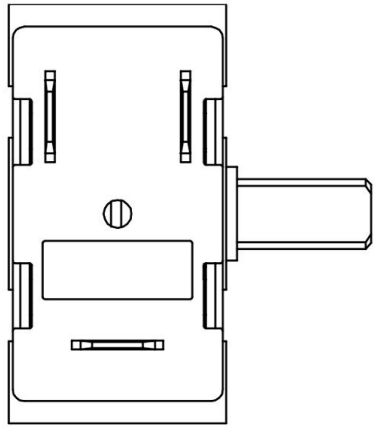
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Quality core! Afterburner for Made in China!



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								UNIT : mm	DRWG NO.: XB-FR04-302B3Q16L-R		
3	CASE	PPA/BASS SRTIP		1	BLACK/Ag PLATED	MODEL: Power Rotary Switch								SCALE: 5:1	JUN. YANG	2012-9-25	
2	COVER	STEEL STRIP		1	Ni PLATED									DWN.			
1	KNOB	PPA		1	BLACK									CHK'D	DONG. PANG	2012-9-25	
NO.	PARTS	MATERIALS	Q'TY	FINISH										APPD.	ZENQ. CHEN	2012-9-25	
														东莞市溪榜电子有限公司 DONG GUAN XI BANG ELECTRONI CS CO., LTD. Switch Connector			



ROTARY POWER SWITCH TEST

电源旋转式开关测试规格

MODEL NO. XB-FR04 SERIES

1. TEST CONDITION (测试环境):

THE SWITCH IS TESTED AT A TEMPERATURE RANGE OF -40°C ~ 125°C ;

AND RELATIVE HUMIDITY RANGE OF 45~85%;

STORAGE TEMPERATURE RANGE: 0°C ~ 55°C (NORMAL HUMIDITY AND PRESS);

* 测试环境温度： -40°C ~ 125°C

* 相对湿度范围：45 ~ 85%

* 储存温度范围： 0°C ~ 55°C

2. Rating (额定):

16A 125/250VAC 40T125 (UL, C-UL; ENEC17; N; CQC)

16(6)A 125/250VAC 40T125 (UL, C-UL; ENEC17; N; CQC)

16A 42VDC 40T125 (UL, C-UL; ENEC17; N; CQC)

3. ELECTRIC PERFORMANCE (电气性能):

3-1 CONTACT RESISTANCE (接触电阻):

MEASURED BY FALL-OF-POTENTIAL METHOD AT DC 0.2V/1A SHOULD BE LESS THAN $50\text{m}\Omega$ 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 $50\text{m}\Omega$

3-2 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 $100\text{M}\Omega$.

* 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 $100\text{M}\Omega$.

3-3 DIELECTRIC STRENGTH (耐电压):

THE SWITCH SHALL WITHSTAND WITHOUT BREAKDOWN A POTENTIAL OF AC 1500V 0.5mA FOR 1 MINUTE BETWEEN TERMINALS OF OPEN CONTACTS AND TERMINALS OF OPPOSITE POLARITY, AC 3000V 0.5mA FOR 1 MINUTE BETWEEN TERMINALS AND METAL COVER.

* 不同極的兩支端子開路時，必須通過一分鐘 0.5mA 1500VAC 的耐電壓.

* 端子與外殼，必須通過一分鐘 0.5mA 3000VAC 的耐電壓.

4. ELECTRICAL LIFE (电气寿命测试):

ALL OF THE ELECTRICAL LIFE ALL OVER 10,000 CYCLES.

电气寿命：10000 次

5. MECHANICAL PERFORMANCE (机械性能):

5-1. OPERATION FORCE (操作力量):

1800gf ± 500gf

5-2. ACTUATOR STRENGTH (柄的强度):

1、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.

5-3. FALLING TEST (落下实验):

SWITCH BE FALLING DOWN FREE FROM 1 METER HIGH. TERMINALS MAYBE HAVE BENT AND DEVIATION AFTER TEST. BUT TESTING OBJECT SHOULD NOT HAVE MECHANICAL AND ELECTRICAL 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.

6-4. SOLDERING (焊锡特性):

IMMERSE THE TERMINAL LEADS INTO MOLTEN SOLDER AT TEMPERATURE OF $230 \pm 5^{\circ}\text{C}$ FOR 3 ± 0.5 SECONDS. MORE THAN 75% OF PART IMMERSED SHOULD BE COVERED WITH SOLDER.

* 端子浸入 $230 \pm 5^{\circ}\text{C}$ 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.

6-5. TERMINAL STRENGTH (端子强度):

A STATIC FORCE OF 8 KGF BEING APPLIED IN ONE DIRECTION ON THE TIP OF THE TERMINAL FOR 1 MINUTE. THE TERMINAL MAY BE DEFORMED, BUT SHALL NOT SUSTAIN ANY TROUBLE AS DEVIATION AND BREAKING OF TERMINAL, AND BREAKING OF INSULATION MATERIAL.

* 施以固定 8Kgf 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.

6-6. SOLDERING HEAT RESISTANCE OF BASE (基座抗热性):

TEMPERATURE AND DURATION OF DIPPING 焊锡温度与持续时间

TYPE OF TERMINAL 端子型式	TEMPERATURE 温度	DIPPING TIME 焊锡时间
TERMINAL FOR PCB WIRING * PCB 端子	$260 \pm 5^{\circ}\text{C}$	5 SECONDS Max.
TERMINAL FOR LEAD WIRING * 焊线端子	$350 \pm 5^{\circ}\text{C}$	3 SECONDS Max.

THERE SHALL NOT BE EXTREME DEFORMING IN APPEARANCE.

ELECTRICAL PERFORMANCE OF THE ABOVE ITEM 3 SHALL BE ASSURED.

* 基座不可以有极度变形状况发生.

* 上文第 3 项的电子性能应该被保证.

6. Step angle (切换角度)

30° 、 45° 、 60°

7. NOTICE (开关使用注意事项):

8-1. 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.

- 8-2. 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。
- 8-3. 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。
- 8-4. DO NOT CLEAN IT WITH WATER.
不能用水清洗
- 8-5. 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。
- 8-6. STORAGE 保管方法
- 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。
 - 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。
 - DO NOT PILE UP PACKAGE MORE THAN 2 LEVELS.
请不要过分地堆积。

修订日期 REVISED DATE	修订内容 DESCRIPTION	修订者 REVISED BY	文件编号 FILE NO.	制 定 WRITE BY	审 核 CHECKED BY	核 准 APPROVED BY
				Long.Liu.Ting	Lai.Hai.Jie	He.Long.Fei

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

XB-FR04 SERIES
旋转电源开关
ROTARY POWER SWITCH



Material (材質)

- (端子座) TERMINAL BASE:PA 66(UL 94V-0)
- (柄) ACTUATOR:PA66(UL 94V-0)
- (彈簧) SPRING:STAINLESS STEEL WIRE
- (接觸片) CONTACT: SILVER PLATED COPPER ALLOY
- (端子) TERMINAL: SILVER PLATED COPPER ALLOY
- (接點) CONTACT:Ag ALLOY

SPECIFICATION 規格:

Rating 額定:

- 16A/26A 125/250VAC 40T125(UL;CUL)
- 16A 42VDC 40T125(UL;CUL;CQC;EMEC17;NEMKO)
- 16A/20A 125/ 250VAC 40T125(CQC;EMEC17;NEMKO)

Electrical (電氣性能)

- (接觸電阻) CONTACT RESISTANCE:50mΩ Max
- (絕緣電阻) INSULATION RESISTANCE:100MΩ Min ,AT 500VDC
- (耐電壓) DIELECTRIC STRENGTH:1500VAC 1 MINUTE
- (電氣壽命) ELECTRICAL LIFE:10, 000 CYCLES

HOW TO ORDER 采购识别码

