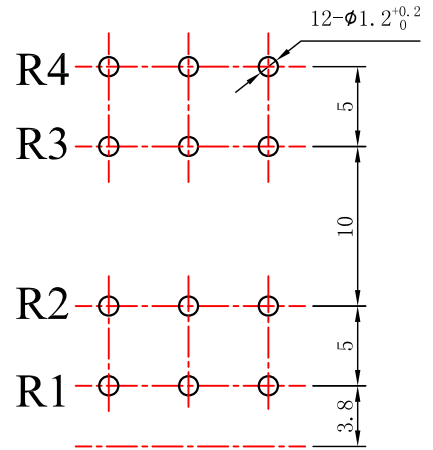
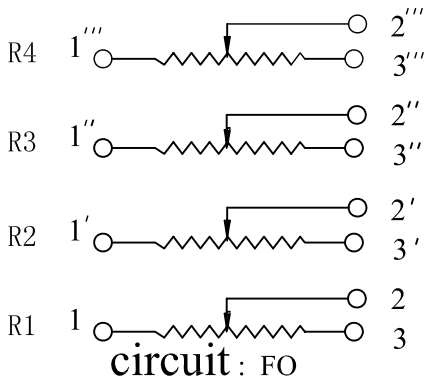


SHAFT SHOWN IN FULL C.C.W.POSITION



Mounting hole detail

轴的类型:

KA Shaft Style 18 Teeth 01

L1	8.5	13.5	18.5
A	6.5	11.5	16.5
L	15	20	25

Washer垫圈(可选项) Nut螺母(可选项)

FB Shaft Style

L1	8.5	13.5	18.5
A	7	12	12
L	15	20	25

SB Shaft Style

L1	3.5	8.5	13.5	18.5	23.5	33.5
L	10	15	20	25	30	40

KQ Shaft Style 18 Teeth Knurl KR Shaft Style

		3.5	6	7	8	10	12	12
A	2.0	0.5	1	1.5	1.5	1.5	2	4
M	0.5	12	15	17	18	20	25	30
L	10							

01	增加轴的选项		2012-11-09	04	
00	ORIGINAL DRAWING		2011-04-25	03	
.ISSU.	REVIAION		DATE	02	
			TOL.UTHERWISE SPEC		深圳明佳创新电子有限公司
			BASIC DIMENSIONS	TOL.	
DSGD.	CHKD.	APPD.	$L \leq 10$	$\pm 0.3$	MODEL:
			$L > 10$	$\pm 0.5$	R16102FOXBV1
	SCALE	X. XX:1	$100 \leq L$	$\pm 0.8$	
	UNIT	mm	ANGLE	$\pm 5^\circ$	DRAWING:
					MJ-R161-0020

**電位器規格書**
**SPECIFICATIONS**

適用型號 : R161 單/雙聯金屬柄系列電位器  
 APPLICABLE MODELS : R161 Single-unit/Dual-unit Coherer Handle Series electricity

**一 构造 CONSTRUCTION**

形状,寸法,依照图面规定

外觀 各部应良好无锈蚀、裂痕、电镀不良现象  
 APPEARANCE: EVRY PART SHOULD BE FINISHED NOT TO EXIST RUST  
 FLAW CRACK AND PLATING

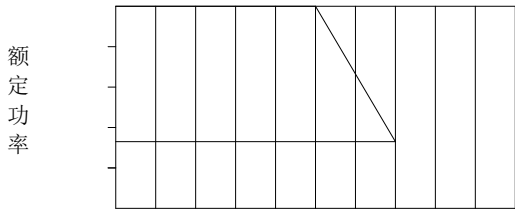
**二 机械的性能 (Mechanical characteristics)**

Item 项目	Measures And Test Method 测试方法	Specifications 规格
回转力矩: Rotational torque	常温 5℃至 35℃ Standard atmospheric conditions	20~250gf. cm
全轉角度: Total rotational angle	有效旋转角度 Angle of effective rotation	300°± 10°
回转止动强度: Rotational stopper strength	测试时间: 旋转至 1 脚端和 3 脚端各 10±1 秒。 Test duration: rotate to terminal land teminal 3 specifically for 10±1 sec.	≥6Kgf.cm
軸抗推拉強度: Push-pull strength	测试时间: 使用推力 10 秒后立即再使用拉力 20 秒。 测试点及方向: 测试点为轴心顶部, 方向为轴向。 Test duration: 10 sec. Of push force immediately followed by 20 sec. Of pull force should be applied. Test point and direction: the strength should be applied to the top end of the shaft in axial direction.	≥8Kgf.cm
軸搖晃度: Shaft wobble	在距离轴心顶端 5mm 处施加與轴心垂直的力。 Apply force perpendicular to the shaft at the position of 5mm to be top end of the shaft.	0.7*L/30mm P-P max.
C.C.扭力: Click torque		■ 100~300 gf. cm □ 无 □ 1C □ 41C

**三 电气的性能 (Electrical characteristics)**

Item 项目	Measures And Test Method 测试方法	Specifications 规格
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**電位器規格書**
**SPECIFICATIONS**

全阻抗值: Total resistance	測量 1 端和 3 端間的阻抗值。 Measurement shall be made by the resistance between terminal 1 and 3.	_K Ω □ ± 10% ■ ± 20%
殘留阻值: Residual resistance	滑動子至於移動距離的兩末端時，端子 1-2 間，端子 2-3 間的阻抗測定。 The resistances at each end of the mechanical between terminal 1 and 2, terminal 2 and 3 shall be measured.	$R \leq 10K \Omega$ 10 Ω $10K \Omega < R < 250K \Omega$ 20 Ω $R \geq 250 K \Omega$ 0.1%max.of total resistance
額定功率：(W) Poer Rating	端子 1 和 3 間所能連續負荷之最大電力。 Power rating is based on continuous full load operation at the maximum voltage between terminal 1 and terminal3. 定格電力的衰減曲線 Derating curve   周圍溫度(°C) Ambient temperature(°C)	B:0.1W A、C: 0.05W
耐電壓: Withstanding Voltage:	施加 2000V 之交流電壓，測試 1 分鐘。 測試位置：端子和外殼，端子和軸心間。 Applying 2000V AC measure for 1minute. Applied position: between terminal and frame. Between terminal and shaft.	1mainute at500V AC
絕緣電阻： Insulation resistance	施加 500V 之交流電壓，測試 1 分鐘。 測試位置：端子和外殼，端子和軸心間。 Applying 500V DC measure for 1minute. Applied position: between terminal and frame. Between terminal and shaft.	100MΩ min. at 500V DC
回轉雜音: Rotational noise	在端子 1-3 間加直流電壓 20V(額定電壓 ≤ 20V，則以額定電壓值測試)後，測定的雜音電壓。軸轉速：1 回轉/3 秒 shaft rotation:1rotation/3s Apply DC 20V(rated voltage ≤ 20V, apply by rated voltage.) * 瞬間雜音及抽頭位置之雜音不計。 * 帶 CC 定位點機種時，定位點位置雜音除外。 * The section noise and tap position noise are excepted. In with click type, the click position noise is excepted.	未滿 47 mV Less than 47mV

## 電位器規格書

### SPECIFICATIONS

最高使用電壓： Maximum operating voltage	Rated voltage 额定电压 E= (V) P:power rating 额定功率 (W) R:nominal total resistance 公称全阻抗值 (Ω) 当额定电压超过最高使用电压的时候，最高使用电压即为额定电压。 When the rated voltage exceeds the maximum operating voltage shall be the rated voltage.	150V AC 20V DC
电阻特性曲线： Resistance taper	电压法测定 Measured shall be made by the resistance law method 请参照特性曲线一览表 Resistance taper list	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> W <input type="checkbox"/> 其它
同步誤差： Tracking Error	在端子 1-3 间，①-③间，输入频率 1KHz，电压 2V 的正弦波实效值，测量端子 1-2 间，端子①-②间的输出电压（适用于 15C 和 25C 线型，端子 2-3 间，②-③间也应测量输出电压）结合第一次的测量结果，应为同一标准，如对测量结果没有质疑，则将此电压作为测试电压值。 The voltage of 2 V r. m. s. Shall be applied between terminals 1 to 3 and between terminals ①to③by measuring frequency at 1KHz. The output voltage shall be measured between terminals 1 and 2 and between terminal①to②(for the 15C and 25C taper. The measurement shall be made between terminals 2 and 3 and between terminals ② and ③)it should be the same standard with the first measuring result. If there is not any doubt about the results this DC. Voltage shall be used as the test volgate.	<input type="checkbox"/> 无  <input checked="" type="checkbox"/> Within $\leq \pm 3.5\text{dB}$ at $-40 \sim 0\text{dB}$

#### 四 耐久性能(Durability)

Item 项目	Measures And Test Method 测试方法	Specifications 规格
回转寿命 Rotational life:	轴以 600 周/小时（来回算一周）的速度旋转，24 小时旋转 5000~8000 周，有效旋转角度超过 90%，共 10000 ±200 周。 The moving contact, without electrical load, shall be rotated from one end stop to the other and returned to its original position exceeds 90% effective angle. This procedure constitutes 1cycle. And the moving contact shall be subjected to 600cycles per hour. Total 10000 ±200cycles. (5000 to 8000 continuous cycles for 24h).	总阻变化值：规格值的 ±15% Change in total resistance is relative to the value before test: ±15% 转动噪音：150mVp-p 以下 Rotational noise: 150mVp-pless then C 残留电阻：R1, $2 \leq$ 规格值得 2 倍 R2, $3 \leq$ 全阻抗 1% (全阻值 $\leq$ 2K 时，则 $\leq$ 规格值的 2 倍)

#### 五 其它性能 (Else)

Item 项目	Measures And Test Method 测试方法	Specifications 规格
使用温度： Storage Temperature Range	温湿度计测量（使用时环境温度） Temperature and humidity meter measurement (ambient temperature) when using	$-10^{\circ}\text{C} \sim +70^{\circ}\text{C}$

## 電位器規格書

### SPECIFICATIONS

焊锡耐热性: Resistance To Soldering Heat		Soldering method 手焊条件 (60W) : Bit temperature 温度: 300°C ± 10°C Application time of soldering 时间: 3s ± 0.5s Wave soldering 波峰焊条件 Printed wiring board: single-sided copper clad laminate board with thickness of 1.6mm 使用基板: t=1.6mm 的单面覆铜板。 Preheating: 1, surface temperature of board: 100°C or less. 2, preheating time: within 1 min. 预热: 基板表面温度 100°C 以下, 时间 1 分钟以内。 Soldering: solder temperature 265 °C ± 5 °C or less, immersion time: within 5s ± 1s 焊接: 温度 265°C ± 5°C 或以下, 时间 5s ± 1s 以内。			Change in total resistance is relative to the value before test: ± 5% . without deformation of case or terminals loosening, electrical characteristics shall be satisfied with specification 总阻变化值: 初测期 ± 5% 外观无变形, 端子无松动, 电气性能符合规定要求	
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