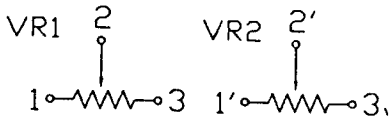
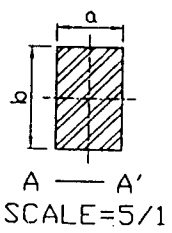
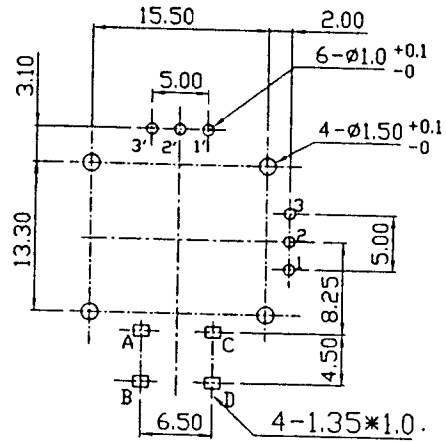
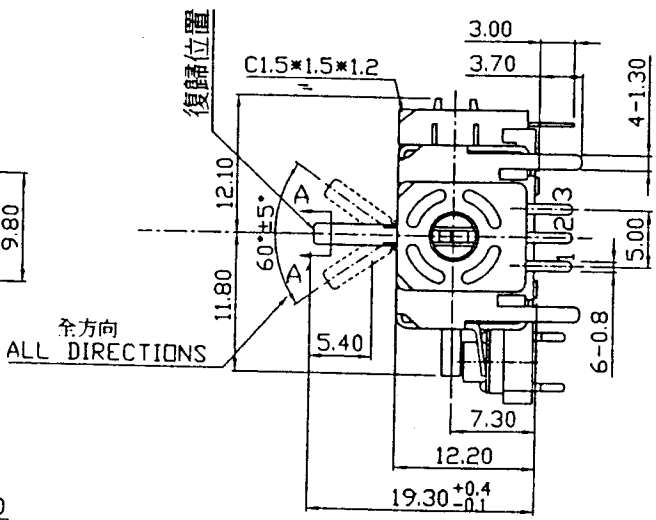
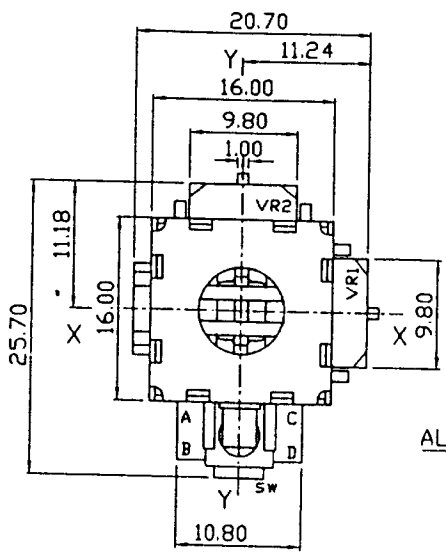


B/425608

NEW



CIRCUIT

	一般規格	特殊規格-1	特殊規格-2		
a	1.19 ⁺⁰ _{-0.03}	1.10 ^{+0.02} _{-0.03}	1.10 ⁺⁰ _{-0.03}		
b	1.86±0.03	1.90±0.03	1.82±0.03		
B	28中6°	32中8°	35中8°	38中8°	40中6°
	28°	32°	35°	38°	40°
	45中6°	50中6°	53中6°	60中6°	
	45°	50°	53°	60°	

TOLERANCES UNLESS OTHERWISE SPEC	
BASIC DIMENSIONS	TOLERANCE
L ≤ 10	±0.3
10 < L ≤ 100	±0.5
100 < L	±0.8
ANGULAR DIMENSION	±5°

零件號碼	名	稱	材	料	規	格	處	理	數	量
			三角法	單位 mm	比例					
			承認	校對	設計					
			胡一帆	周凡	胡守偉					
記號	年月日	承認	校對	設計						
			02.10.29	02.10.29	02.10.29					
							圖名	控杆組立圖		
							圖號	ARKJXK120-D1		

分類號碼: 1/5	搖桿制品規格書 SPECIFICATIONS OF JOYSTICK CONTROLLERS	版本 (version) : PWL-V2.0
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I. 電器性能:
ELECTRICAL CHARACTERISTICS:

1.1	碳膜有效角度 Carbon coat active angle	<input checked="" type="checkbox"/> 50° ±2° <input type="checkbox"/> _____° 中 _____° ±2° <input checked="" type="checkbox"/> 50° ±2° <input type="checkbox"/> _____° middle _____° ±2°
1.2	全阻抗值 Total resistance	<input checked="" type="checkbox"/> 10K <input type="checkbox"/> 50K <input type="checkbox"/> 100K
1.3	Total Resistance Tolerance 全阻抗容許差值	<input checked="" type="checkbox"/> ±20% <input type="checkbox"/> ±10% <input type="checkbox"/> _____% ~ _____%
1.4	阻抗變化特性 Resistance law	直線型: B (線型偏移度±3%以內) Linear type : B (±3% MAX)
1.5	分中阻值誤差 Center position resistance error	推柄自由復歸后, 端子1-2的阻值與端子2-3的阻值之差的絕對值 The absolute value of resistance different between terminal 1-2 and terminal 2-3 after the lever rest 0.50 KΩ Max
1.6	復歸阻值誤差 Reset resistance error	推柄推向端子1方向自由復歸后測得端子1-2或端子2-3的阻值與推柄向端子3方向自由復歸后測得端子1-2或端子2-3的阻值之差的絕對值 The absolute value of resistance different between terminal 1-2 and terminal 1-3 after the lever rest from the direction of terminal 1, and terminal 3 The absolute value of resistance different between terminal 2-3 and terminal 2-3 after lever rest from the direction of terminal 1 and terminal 3 0.50 KΩ Max
1.7	殘留阻值 Residual resistance	端子1&2和2&3同在 200 Ω 以下 Less than 200 Ω between terminal 1&2 and 2&3
1.8	接觸阻抗 Contact resistance	$(R_{1,2}+R_{2,3}-R_{1,3})/2 \leq \text{全阻值} \times 30\%$ 端子 1-2 阻值加上端子 2-3 的阻值之和減去端子 1-3 的阻值之差的一半小於或等於全阻值的百分之三十 Sum of terminal 1-2 resistance plus terminal 2-3 resistance and minus terminal 1-3 resistance \leq total resistance $\times 30\%$
1.9	滑動雜音 Slide Noise	依JIS測定方法, 300mV以下 300mV Max (By JIS method)
1.10	絕緣阻抗 Insulation resistance	在端子和外框架之間加250V D.C 1分鐘以後, 端子和外框架之間的電阻: 100MΩ 以上 More than 100MΩ at DC 250 V 1 minute between individual terminals of resistor and frame 1 minute later

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分類號碼: 2/5	搖桿制品規格書 SPECIFICATIONS OF JOYSTICK CONTROLLERS	版本 (version) : PWL-V2.0
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1. 電器性能:
ELECTRICAL CHARACTERISTICS:

1.11	額定電壓 Rated voltage	Linear Taper B: AC 50V or DC 5V Max Operation Voltage Ea / PR P: Rated Power (W) R: Total Resistance (Ω)
1.12	額定負載功率 Rated Power	Linear Taper B: 0.0125 W
1.13	耐電壓 Dielectric strength	1 minute at AC 250V/ 2ma /50Hz
1.14	抵抗溫度特性 Resistance-Temperature Characteristic	<input checked="" type="checkbox"/> 10K type:+5%~-20%以內 <input type="checkbox"/> 50K、 <input type="checkbox"/> 100K、 <input type="checkbox"/> 120K type:+5%~-25%以內 The controller shall be maintained in a thermostatic chamber at temperature of $70 \pm 3^{\circ}C$ 、without electrical load for s hours after which the total resistance shall be measured immediately、 溫度在 $70 \pm 3^{\circ}C$ 無負荷的恆溫槽中放置 5 小時后測試
1.15	耐熱性 Dry heat	Temperature: $+80 \pm 2^{\circ}C$ Time: 96 hours The controller shall be subjected to standard atmospheric Conditions for 2 hours after which measurement shall be made 溫度在 $80 \pm 2^{\circ}C$ 、放置 96 小時、2 小時后正常狀態下測試
1.16	耐寒性 Cold	Temperature: $-30 \pm 2^{\circ}C$ Time: 96 hours Surface moisture shall be removed, and then the controller shall Be subjected to standard atmospheric conditions for 2hours after Which measurement shall be made 溫度在 $-30 \pm 2^{\circ}C$ 、放置 96 小時、表面水份攝取后 2 小時正常狀態下測試
1.17	耐濕性 Damp Heat	Temperature: $+60 \pm 2^{\circ}C$ Humidity: 90%-95%RH Time: 96 hours Surface moisture shall be subjected to standard atmospheric Conditions for 2 hours after which measurement shall be wade 溫度在 $-60 \pm 2^{\circ}C$ 、放置 96 小時、表面水份攝取后 2 小時正常狀態下測試

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分類號碼: 3/5	搖桿制品規格書 SPECIFICATIONS OF JOYSTICK CONTROLLERS	版本 (version) : PWL-V2.0
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1. 電器性能:
ELECTRICAL CHARACTERISTICS:

1.18	溫度循環測試 Temperature Cycling Test	Low temperature: $-10 \pm 3^{\circ}\text{C}$ 30minutes High temperature: $+60 \pm 2^{\circ}\text{C}$ 30minutes Number of cycles: 5 times Surface moisture shall be removed, and then the controller shall be subjected to standard atmospheric conditions for 2hours after which measurement shall be made 在低溫為 $-10 \pm 3^{\circ}\text{C}$ 放置 30 分鐘,高溫 $60 \pm 2^{\circ}\text{C}$ 放置 30 分鐘,測試 5 次,表面水份攝取后 2 小時正常狀態下測試
1.19	自由落下試驗 Free Falling	Height: 75cm Number of falls: 3 times Without change and lever deformation, but deformations of terminals and molded parts are available 從高度為 75 厘米落下測試 3 次后外觀內部無不良產生,端子變形除外
1.20	焊錫性 Solder ability	Temperature of solder: $235 \pm 5^{\circ}\text{C}$ dipping duration: $3 \pm 0.5\text{s}$, Not less than 3/4 of the surface dipped shall be covered with new solder 焊錫溫度在 $235 \pm 5^{\circ}\text{C}$, 浸錫時間 3 ± 0.5 秒, 浸錫部分表面最小 3/4 被新錫蓋
1.21	焊錫耐熱性 Resistance to soldering heat	Solder temperature of $260 \pm 5^{\circ}\text{C}$ for 5 sec variation of total Resistance shall be within $\pm 5\%$, and terminals shall not work loose to Injure electric contact after test 焊錫溫度 $260 \pm 5^{\circ}\text{C}$ 5 秒, 全阻值變化 $\pm 5\%$ 以內, 無損壞電氣連接的端子松動

2. 機械特性:
MECHANICAL CHARACTERISTICS:

2.1	推柄使用有效角度 Operation angle of lever	$60 \pm 5^{\circ}$
2.2	推柄移動形式 Figure of lever operation	環形方式 Circular operating
2.3	推柄止動強度 Stopper strength of lever	3Kgf-cm Min 3秒以下. More than 3.1 kgf .cm 3 seconds min

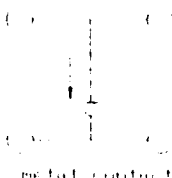
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2. 機械特性:
MECHANICAL CHARACTERISTICS:

2.4	推柄拉拔承受強度 Pull-push strength of lever	壓5Kgf-cm 3秒,拉5Kgf-cm 3秒,扭力0.3Nm. Push 5Kgf-cm 3 sec., pull 5Kgf-cm 3 sec. Torsion moment 0.3Nm Min.
2.5	搖柄動作力矩 Operating force of lever	120gf-cm 以下 Less than 120 gf.cm
2.6	推柄垂直復歸精度 Accuracy of reset Position of lever	±5°
2.7	耐久次數值 Number of cycles	<input checked="" type="checkbox"/> 500,000 Cycles Min <input type="checkbox"/> Other____ (Cycles Min) 滿足以下條件:meet the conditions of: a.全阻值變化 Total resistance: <u>初始值(initial value): ±20%</u> b.雜訊 Slide noise: <u>less than 300mv (by JIS method)</u> c.機械方面能動作 (Mechanical action)

3. 開關特性.
SWITCH CHARACTERISTICS:

3.1	最大定格 Maximum ratings	12V DC 50mA
3.2	接觸阻抗 Contact resistance	100mΩ 以下 100mΩ Max
3.3	開關動作力 Operation force of tact switch	<input type="checkbox"/> 100gf <input checked="" type="checkbox"/> 160gfm <input type="checkbox"/> 260gf
3.4	開關移動作量 Operation force of tact switch	0.5 mm Max
3.5	開關回路 Switch circuit Diagram:	
3.6	耐電壓 Dielectric strength	250 v AC 50 Hz at /1 minute

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3. 開關特性.
SWITCH CHARACTERISTICS:

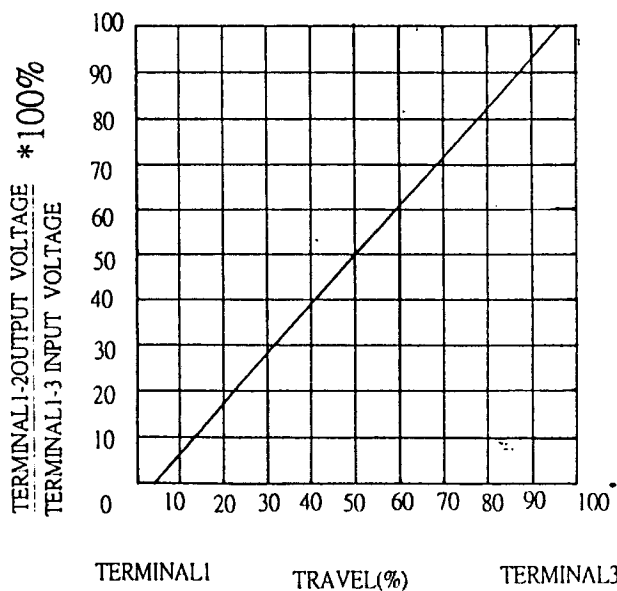
3.7	耐久次數值 Number of cycles	<input checked="" type="checkbox"/> 100,000 Cycles Min <input type="checkbox"/> Other ____ (Cycles Min) 滿足以下條件:meet the conditions of: a.接觸阻抗(Contact resistance): <u>200mΩ MAX</u> b.機械方面能動作(Mechanical action)
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4. 其它
NOTE

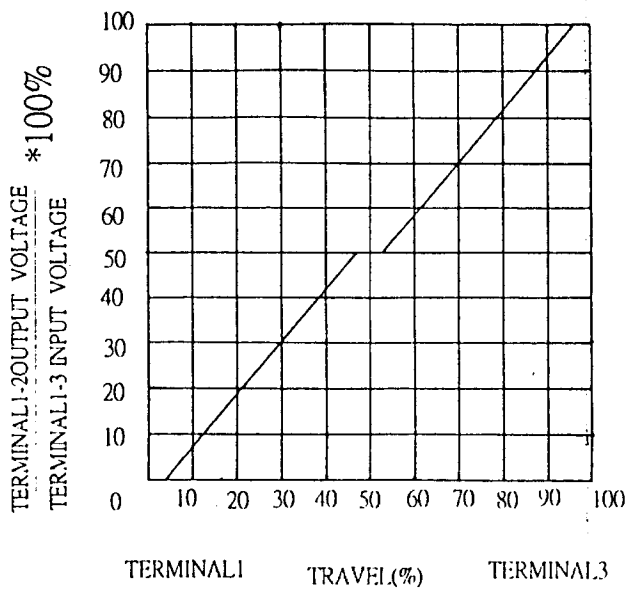
4.1	使用溫度範圍 Operating temperature range	-10°C~70°C.
4.2	保存溫度範圍 Storage temperature range	-30°C~80°C.
4.3	依照 JISC-6443 普通級碳素系可變電阻器。(可變電阻器部分) Meet or exceed JISC-6443 requirements. (potentiometer part)	

5. 附:
直線型: B
Linear type: B

TAPERS B SERIES



TAPERS B WITH 50% TAP



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