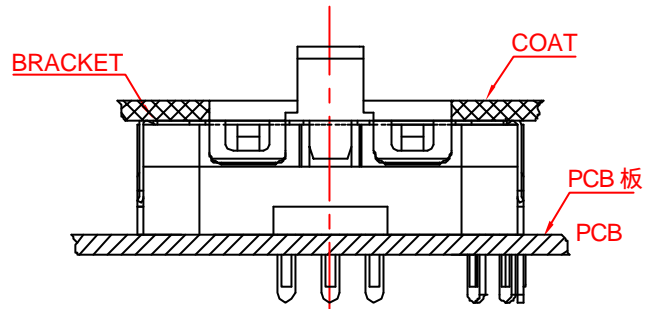
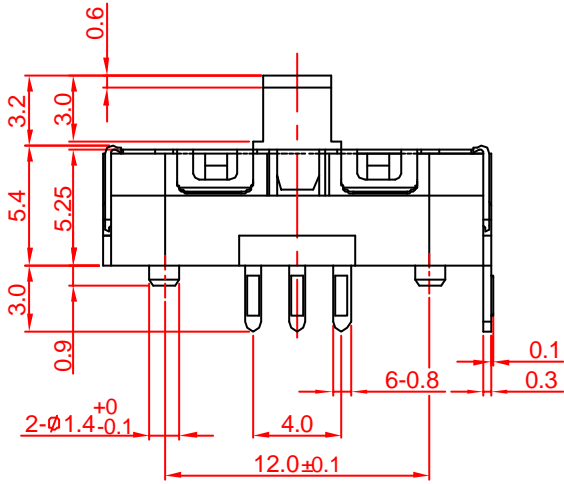
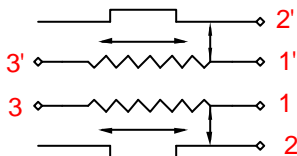


P.C.B MOUNTING HOLES DETAIL



NOTE:

For the special characteristic of the VR'frame , please stable the part after assembling it for the purpose of protection.



CIRCUIT

**ROHS COMPLIANCE**

				Third Angle Projection	MODEL NAME:	JT8P-3.2T-B10K-1-16Y		
					DRAWING NO.	JT8-16Y-03		
					CODE NO.			
2008.10.2 Yu qian 首次出圖					PATH:	STICK CONTROLLER \JT8\SPEC.		
TOLERANCES		UNIT	SCALE		DRAWN BY	CHECKED BY	APPROVED BY	
less than 10	±0.3	m/m	1 / 1		余倩	余倩	余倩	
10-100	±0.5							
above 100	±0.8	VERSION						
angular dimension	±5°	A		2008.10.2				

# 機種規格說明書

(SPECIFICATION)

本公司使用機種:

OUR PART NAME: STICK CONTROLLER

本公司使用名稱:

OUR PART NAME: JT8P-3.2T-B10K-1-16Y

客戶名稱:

CUSTOMER'S NAME: \_\_\_\_\_

Page : 1 OF 9

Version : A

Drawing NO.: JT8-16Y-03

## 一、電氣特性 (Electrical Characteristics)

序號 NO.	項目 ITEM	性能 PERFORMANCE	測試條件 TEST CONDITIONS		
1	Total resistance 全阻值	10K $\pm 0\%$ 50K $\pm 0\%$ 100K $\pm 0\%$ 120K $\pm 0\%$	Between terminal 1 and terminal 3. 1-3 端子間.		
2	Resistance taper 阻抗特性 型式	Type B; Refer to attached drawing "Resistance taper characteristics" B 型; 見附頁 " 阻抗特性圖 "	Percentage of the voltage of terminal 1-2 to the voltage of terminal 1-3. 端子 1-2 電壓對端子 1-3 電壓的百分比。		
3	Rated voltage 額定電壓	Linear Taper B : AC 50V DC 5V B 型: AC 50V DC 5V	$E = \frac{PR}{100}$ E:額定電壓 Rated voltage(V) P:額定功率 Rated power(W) R:公稱全阻值 Nominal total resistance( ) The rated voltage is calculated by above formula. When the rated voltage exceeds the maximum operating voltage, the maximum operating voltage should be the rated voltage. 額定電壓按以上公式計算, 當額定電壓超過最大工作電壓時, 最大工作電壓即為額定電壓.		
備注: (REMARK)			核 準 APPROVED	審 核 REVIEWED	經辦者 PREPARED
			余 倩	鐘學峰	余 倩
			2008.10.7	2008.10.7	2008.10.7

TOP-UP INDUSTRY CORP.

# 機種規格說明書

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客戶名稱:

CUSTOMER'S NAME: \_\_\_\_\_

Page : 2 OF 9

Version : A

Drawing NO.: JT8-16Y-03

## 一、電氣特性 (Electrical Characteristics)

序號 NO.	項目 ITEM	性能 PERFORMANCE	測試條件 TEST CONDITIONS									
4	Rated power 額定功率	Linear Taper B: 0.0125W B 型: 0.0125W	<p>The rated power should be changed according to the following chart when the ambient temperature changed. 它與環境溫度按以下曲線變化。</p> <p>Derating curve of rated dissipation</p> <table border="1"> <caption>Derating curve data</caption> <thead> <tr> <th>Ambient temperature (°C)</th> <th>Ratio to rated dissipation (%)</th> </tr> </thead> <tbody> <tr><td>0</td><td>100</td></tr> <tr><td>50</td><td>100</td></tr> <tr><td>70</td><td>33</td></tr> </tbody> </table>	Ambient temperature (°C)	Ratio to rated dissipation (%)	0	100	50	100	70	33	
Ambient temperature (°C)	Ratio to rated dissipation (%)											
0	100											
50	100											
70	33											
5	Contact resistance 接觸阻抗 (ENR)	<p>20% or less of the total resistance (Before the life test); 全阻值的 20% 以下(壽命測試前).</p> <p>25% or less of the total resistance (After the life test); 全阻值的 25% 以下(壽命測試后);</p>	<p>By the test length of operation travel, 測試長度為全運轉長度。</p>									
備注: (REMARK)			<table border="1"> <thead> <tr> <th>核 準 APPROVED</th> <th>審 核 REVIEWED</th> <th>經辦者 PREPARED</th> </tr> </thead> <tbody> <tr> <td>余 倩</td> <td>鐘學峰</td> <td>余 倩</td> </tr> <tr> <td>2008.10.7</td> <td>2008.10.7</td> <td>2008.10.7</td> </tr> </tbody> </table>	核 準 APPROVED	審 核 REVIEWED	經辦者 PREPARED	余 倩	鐘學峰	余 倩	2008.10.7	2008.10.7	2008.10.7
核 準 APPROVED	審 核 REVIEWED	經辦者 PREPARED										
余 倩	鐘學峰	余 倩										
2008.10.7	2008.10.7	2008.10.7										

TOP-UP INDUSTRY CORP.

# 機種規格說明書

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CUSTOMER'S NAME: \_\_\_\_\_

Page : 3 OF 9

Version : A

Drawing NO.: JT8-16Y-03

## 一、電氣特性 (Electrical Characteristics)

序號 NO.	項目 ITEM	性能 PERFORMANCE	測試條件 TEST CONDITIONS
6	Insulation resistance 絕緣阻抗值	More than 100 M 100 M 以上	Apply DC250V 1 Minute to the individual terminals and frame 金屬支架與端子間加 DC250V 電壓 1 分鐘
7	Withstand voltage 耐電壓特性	Without arcing or breakdown 無損壞或弧光	Apply one minute of 250VAC to the individual terminals and frame 在特定端子與支架間加 AC250V 電壓 1 分鐘.

## 二、機構特性 Mechanical characteristics

序號 NO.	項目 ITEM	性能 PERFORMANCE	測試條件 TEST CONDITIONS
1	Figure of the slide bars operation 滑柄動作形式	Slides on the 2D flat 平面移動的形式	/
2	The stopper strength of the slide bars 滑柄止動強度	More than 3.0Kgf 3 seconds min 大於 3.0Kgf, 至少 3 秒鐘	Apply side force on the slide bars perpendicular to the slide bars' s axial direction. 垂直於滑柄的力作用於滑柄上.
3	Total rotational angle 全回轉角度	/	360 °(ENDLESS) 360 °連續
4	Pull strength of slide bars 滑柄拉拔強度	More than 3.0 Kgf 3 seconds min 大於 3.0Kgf, 至少 3 秒鐘	Apply specified pull force on the slide bars upward. 作用於滑柄上, 沿滑柄方向向上.
5	Push Strength of slide bars 滑柄推壓強度	More than 3.0 Kgf 3 seconds min 大於 3.0Kgf, 至少 3 秒鐘	Apply specified push force on the slide bars downward. 作用於滑柄上, 沿滑柄方向向下.
備注: (REMARK)			核 準 APPROVED
			審 核 REVIEWED
			經辦者 PREPARED
			余 倩
			鐘學峰
			余 倩
			2008.10.7
			2008.10.7
			2008.10.7

TOP-UP INDUSTRY CORP.

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OUR PART NAME: STICK CONTROLLER

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OUR PART NAME: JT8P-3.2T- B10K -1-16Y

客戶名稱:

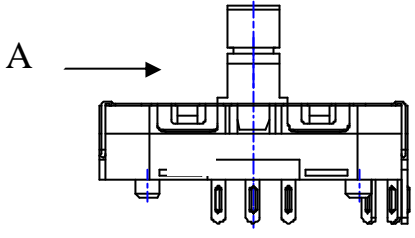
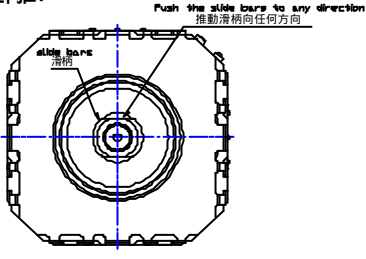
CUSTOMER'S NAME: \_\_\_\_\_

Page : 4 OF 9

Version : A

Drawing NO.: JT8-16Y-03

### 二、機構特性 Mechanical characteristics

序號 NO.	項目 ITEM	性能 PERFORMANCE	測試條件 TEST CONDITIONS
6	Operation travel of the slide bars 滑柄使用有效行程	2 mm	The maximum travel of the slide bars pushed to any direction on the 2D flat. 滑柄在 2D 平面在推向任何方向的最大行程
7	Operating force of slide bars 滑柄作用力	120±50gf	The push force is to made the slide bars to be slid by A direction. 沿 A 方向使滑柄滑動的推力. 
8	Accuracy of reset position of slide bars 滑柄復歸精度	±0.2 mm	Measure the distance between the center of the slide bars and the center after the slide bars pushed to the any direction on the 2D flat and resets. 測量滑柄的中心和滑柄在 2D 平面推向任何方向後復歸的中心的距離. 
備注: (REMARK)			核 準
			審 核
			經辦者
			APPROVED
			REVIEWED
			PREPARED
			余 倩
			鐘學峰
			余 倩
			2008.10.7
			2008.10.7
			2008.10.7

# 機種規格說明書

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OUR PART NAME: JT8P-3.2T- B10K -1-16Y

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CUSTOMER'S NAME: \_\_\_\_\_

Page : 5 OF 9

Version : A

Drawing NO.: JT8-16Y03

### 二、機構特性 Mechanical characteristics

序號 NO.	項目 ITEM	性能 PERFORMANCE	測試條件 TEST CONDITIONS
9	Terminal strength 端子強度	Without damage or excessive looseness of terminals or poor contact. 端子無毀損或過度鬆動,或接觸不良。	A force of 3N (306gf)being applied in one direction at the tip of the terminal for one minute and only one time to each terminal. 以 3N (306gf)的靜力以單一方向對每一個端子施力 1 分鐘,此測試每端子只做一次。

### 三、耐久性能 Endurance characteristics (單一測試項目 Single test of item)

序號 NO.	項目 ITEM	性能 PERFORMANCE	測試條件 TEST CONDITIONS
1	Free falling 自由落下試驗	No damage and lever deformation, but deformations of terminals and molded parts are allowed. 無不良產生,端子變形除外。	Height: 75cm Number of falls: 3 times 從高度為 75 釐米落下測試 3 次後
2	Dry heat 耐熱性	Variation of total resistance should be within $\begin{matrix} +5\% \\ -30\% \end{matrix}$ . To be operated mechanically. 全阻值變化要在 $\begin{matrix} +5\% \\ -30\% \end{matrix}$ 以內, 機械方面能動作。	Temperature: $\pm 80$ Time: 96 hours The controller shall be subjected to standard atmospheric conditions for 2 hours after which measurement shall be made. 溫度在 $\pm 80$ 放置 96 小時,2 小時后正常狀態下測試。

備注:  
(REMARK)

核 準 APPROVED	審 核 REVIEWED	經辦者 PREPARED
余 倩	鐘學峰	余 倩
2008.10.7	2008.10.7	2008.10.7

TOP-UP INDUSTRY CORP.

# 機種規格說明書

(SPECIFICATION)

本公司使用機種:

OUR PART NAME: STICK CONTROLLER

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OUR PART NAME: JT8P-3.2T- B10K -1-16Y

Page : 6 OF 9

客戶名稱:

Version : A

CUSTOMER'S NAME: \_\_\_\_\_

Drawing NO.: JT8-16Y-03

## 三. 耐久性能 Endurance characteristics (單一測試項目 Single test of item)

序號 NO.	項目 ITEM	性能 PERFORMANCE	測試條件 TEST CONDITIONS		
3	Cold 耐寒性	The total resistance change should be within $\pm 0\%$ . To be operated mechanically. 全阻值變化要在 $\pm 0\%$ 以內， 機械方面能動作。	Temperature: $-30 \pm$ Time: 96 hours Surface moisture shall be removed, and then the controller shall be subjected to standard atmospheric conditions for 2 hours after which measurement shall be made. 溫度在 $-30 \pm$ 放置 96 小時, 表面水份攝取后 2 小時正常狀態下測試。		
4	Damp heat 耐濕性	Insulation resistance: more than 10M with 250V insulation resistance tester. The total resistance change should be within $\pm 0\%$ . To be operated mechanically. 用 250V 絕緣測試機測試，絕緣阻抗 10M 以上， 全阻值變化要在 $\pm 0\%$ 以內， 機械方面能動作。	Temperature: $+60 \pm 2$ Humidity: 90~95%RH Time: 96 hours Surface moisture shall be subjected to standard atmospheric conditions for 2 hours after which measurement shall be made. 溫度在 $60 \pm$ , 濕度: 90~95%RH 放置 96 小時， 表面水份攝取后 2 小時正常狀態下測試。		
5	Temperature cycling test 溫度循環 測試	The total resistance change should be within $\pm 0\%$ . To be operated mechanically.	Low temperature : $-10 \pm$ 30 minutes High temperature: $+60 \pm$ 30 minutes Number of cycles: 5 Surface moisture shall be removed, and then the controller shall be subjected to standard		
備注: (REMARK)			核 準 APPROVED	審 核 REVIEWED	經辦者 PREPARED
			余 倩	鐘學峰	余 倩
			2008.10.7	2008.10.7	2008.10.7

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Page : 7 OF 9

Version : A

Drawing NO.: JT8-16Y-03

## 三. 耐久性能 Endurance characteristics (單一測試項目 Single test of item)

序號 NO.	項目 ITEM	性能 PERFORMANCE	測試條件 TEST CONDITIONS									
		全阻值變化要在 $\pm 0\%$ 以內， 機械方面能動作。	atmospheric conditions for 2 hours after which measurement shall be made. 在低溫為 $-10 \pm$ 放置 30 分鐘, 高溫 $60 \pm$ 放置 30 分鐘, 測試 5 次. 表面水份攝取后 2 小 時后正常狀態下測試.									
6	Resistance to soldering 焊錫性	Not less than 3/4 of the surface dipped shall be covered with new solder. 浸錫部分表面最少 3/4 被新錫 覆蓋.	Temperature of solder: $235 \pm$ , Dipping duration: $3 \pm 0.5$ S. 焊錫溫度: $235 \pm$ , 浸錫時間: $3 \pm 0.5$ 秒.									
7	Resistance to soldering heat 焊錫耐熱性	Variation of total resistance shall be within $\pm 5\%$ , and terminals shall not work loose to injure electric contact, after test. 全阻值變化 $\pm 5\%$ 以內, 測試後 無端子鬆動, 不會損壞電氣接 點。	Soldering temperature $260 \pm$ for 5 sec. 焊錫溫度 $260 \pm 5$ , 5 秒.									
8	Number of cycles 耐久次數值	Total resistance Initial value $\pm$ 20%. No mechanical malfunction. 全阻值變化 初始值 $\pm 0\%$ . 機械方面能動作.	500,000 Cycles min									
備注: (REMARK)			<table border="1"><thead><tr><th>核 準 APPROVED</th><th>審 核 REVIEWED</th><th>經辦者 PREPARED</th></tr></thead><tbody><tr><td>余 倩</td><td>鐘學峰</td><td>余 倩</td></tr><tr><td>2008.10.7</td><td>2008.10.7</td><td>2008.10.7</td></tr></tbody></table>	核 準 APPROVED	審 核 REVIEWED	經辦者 PREPARED	余 倩	鐘學峰	余 倩	2008.10.7	2008.10.7	2008.10.7
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Page : 8 OF 9

Version : A

Drawing NO.: JT8-16Y-03

## 四、一般事項 General

序號 NO.	項目 ITEM									
1	如無特殊要求,試驗與測試將按以下條件進行: Unless otherwise specified, test and measurement should be carried out in following conditions:									
	溫度 Ambient temperature	5 to 35								
	相對濕度 Relative humidity	25% to 85%								
	氣壓 Air pressure	86 KPa to 106 KPa								
2	遇有疑慮時,則測試應在以下狀態下進行: If there is any doubt arise from judgement ,test shall be conducted at the following conditions:									
	溫度 Ambient temperature	20 ±2								
	相對濕度 Relative humidity	60% to 70%								
	氣壓 Air pressure	86 KPa to 106 KPa								
3	使用溫度範圍 Operating temperature range	-20 to+60								
4	儲存溫度範圍 Storage temperature range	-40 to+85								
備注: (REMARK)	<table border="1"><thead><tr><th>核 準 APPROVED</th><th>審 核 REVIEWED</th><th>經辦者 PREPARED</th></tr></thead><tbody><tr><td>余 倩</td><td>鐘學峰</td><td>余 倩</td></tr><tr><td>2008.10.7</td><td>2008.10.7</td><td>2008.10.7</td></tr></tbody></table>	核 準 APPROVED	審 核 REVIEWED	經辦者 PREPARED	余 倩	鐘學峰	余 倩	2008.10.7	2008.10.7	2008.10.7
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2008.10.7	2008.10.7	2008.10.7								

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Page : 9 OF 9

Version : A

Drawing NO.: JT8-16Y-03

五、外觀、形狀和尺寸、動作形式、回路形式

Appearance, Style and Dimensions ,Type of actuating ,Contact arrangement

序號 NO.	項目 ITEM			
1	外觀 Appearance	不可有影響產品服務性的暇疵存在 Shall be no defects that affect the serviceability of the product		
2	形狀和尺寸 Style and Dimensions	參考成品圖 Refer to the assembly drawings		
3	Type of actuating 動作形式	Put feedback & Slides on the 2D flat 按壓回彈和在 2D 平面滑動		
4	回路形式 Contact arrangement	參考成品圖 Refer to the assembly drawings		
<div style="border: 1px solid black; padding: 5px; display: inline-block;">RoHS Compliance</div>				
備注: (REMARK)		核 準	審 核	經辦者
		APPROVED	REVIEWED	PREPARED
		余 倩	鐘學峰	余 倩
		2008.10.7	2008.10.7	2008.10.7

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