

S.T. INDUSTRIAL (ASIA) LIMITED

Specifications 技術特性表

PART NO. 型號： PB-22E27 / PB-22E37
 SERIES 系列： PUSH BUTTION SWITCH
 RATING 額定值： 0.1A 30V DC
 CIRCUIT 回路： 2P2T
 TIMING 切換類型：

A: OPERATING TEMPERATURE RANGE IS -10°C TO 60°C. IT IS USUALLY APPLIED TO ELECTRONIC AND ELECTRICAL APPLIANCE PRODUCTS.

溫度 -10°C~60°C 環境內使用。一般適用於電子、電氣方面產品使用。

B: STANDARD TEST TEMPERATURE SHALL BE 5°C TO 35°C AND HUMIDITY SHALL BE 45% TO 85% .

溫度 5~35°C，濕度 45~85% 標準狀態下測試。

ITEM 項目		TEST CONDITION 測試條件	PERFORMANCE 性能
ELECTRONICAL PERFORMANCE 電氣性能			
電氣性能1	CONTACT RESISTANCE 接觸電阻	Being tested at 1kHz small current and voltage (100mA, 20mV) by contact resistance meter. 在1kHz 小電流電壓 (100mA,20mV) 下測量。	50 mΩ max. 50毫歐 以下。
電氣性能2	INSULATION RESISTANCE 絕緣電阻	DC 500 V shall be applied for test between terminals and between terminals and frame for one minute. 在端子之間和端子與殼之間加 DC 500 V 條件下,持續1分鐘測量。	100MΩ min. 100兆歐 以上。
電氣性能3	WITHSTAND VOLTAGE 耐電壓	AC 500 V and induction current 1mA shall be applied for test between terminals and between terminals and frame for one minute. 在端子之間和端子與殼之間加 AC 500 V (50Hz或60Hz) 感應電流1mA條件下,持續1分鐘測量。	There shall be no breakdown. 无击穿现象出现。
MECHANICAL PERFORMANCE 機械性能			
機械性能4	OPERATING FORCE 動作力	Measure at the point of 3mm from the tip of the knob. 在距離推杆前沿 端 3mm作測定點。	200±100gf

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机械性能5	TERMINAL STRENGTH 端子強度	A static force of 500 g being applied in one direction on the tip of the terminal for 1 minute. 一個 500 克之靜負荷施加於端子頂部的一個方向持續1分鐘。	There shall be no sign of mechanical and electrical damage. 無任何迹象顯示機械及電器性能之損壞。
ITEM 項目		TEST CONDITION 測試條件	PERFORMAENCE 性能
測試條件6	KNOB STRENGTH 推杆強度	A static force of 1kg being applied in one direction of knob for one minutes. 一個1公斤靜負荷施加於推杆之一個方向持續1分鐘。 續1分鐘。	Knob can be operated normally without deformation 推杆無變形,可以正常操作。
DURABILITY 耐久性			
耐久性7	SOLDERING TEST 可焊性試驗	The tip of the terminals shall be dipped 2 mm in the solder bath within temperature of 250±5℃ for 3 seconds. 端子頂部被浸入焊錫池 2mm 深,溫度250±5℃,時間3秒。	Over 95% of the immersed surface was covered by tin. 浸入的部份95%以上表面將被錫覆蓋。
		The condition mentioned is temperature for lead-free soldering . 無鉛錫測試 Alloy:Sn 96.5% Cu 3% Ag 0.5% 成份: 錫 96.5% 銅 3% 銀 0.5%	
耐久性8	SOLDERING RESISTANT TEST 耐焊性試驗	Dip soldering temperature 280±5℃,soldering time 3±0.5 seconds,immersion depth up to the surface of the board, thickness of PCB 1.6 mm. 浸錫爐的溫度控制在 280±5℃, 焊接的時間 3±0.5秒,於(基板)厚度為 1.6 mm.	Without deformation of case or excessive looseness of teminals, meet mechanical and electrical properties. 本體無變形,能滿足於機械、電器性能。
		Manual soldering temperature 350±10℃, soldering time 3±0.5 seconds,however excessive pressure shall not be applied to the terminal. 手焊接的時候溫度需控制在350±10℃,時間為 3±0.5秒,但不能在端子上施加異常壓力。	
		The condition mentioned is temperature for lead-free soldering . 無鉛錫測試。 Alloy:Sn 96.5% Cu 3% Ag 0.5% 成份: 錫 96.5% 銅 3% 銀 0.5%	
		Remark:Don't use in wave Soldering. 備注:不可用於波峰焊接	

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耐久性9	LIFE TEST 壽命試驗	<p>10,000 cycles of operation at a rate of 15-18 cycle per minute with unloading</p> <p>無負載條件下，每分鐘 16-19 次的速度操作 10,000 次。</p>	<p>(1) Contact resistance 50mΩ max. 接觸電阻50毫歐以下</p> <p>(2) Operating force 30% initial value 動作力變化範圍初始值30%</p> <p>(3) ITEM 項目—2</p> <p>(4) ITEM 項目—3</p>
ITEM 項目		TEST CONDITION 測試條件	PERFORMAENCE 性能
	HEAT RESISTANT TEST 耐熱試驗	<p>80±2℃ for 96 hours, test after keeping in normal condition for 30 minutes.</p> <p>在 80±2℃ 環境中放96小時,再放在正常環境中30分鐘後進行測試。</p>	<p>(1) Contact resistance 50mΩ max. 接觸電阻50毫歐以下</p> <p>(2) Insulation resistance 50 MΩ min. 絕緣電阻50兆歐以上</p> <p>(3) ITEM 項目—6.3</p> <p>(4) ITEM 項目—7.1</p>
測試條件11	MOISTURE RESISTANT TEST 耐濕試驗	<p>40±2℃ 90-95%RH for 96 hours. test after keeping in normal condition for 30 minutes.</p> <p>在40±2℃ 90-95%RH 環境中放96小時,再放在正常環境中, 30分鐘後進行測試。</p>	
測試條件12	COLD RESISTANT TEST 耐冷試驗	<p>At -20±3℃ for 96 hours, test after keeping in normal condition for 30minutes.</p> <p>在 -20±3℃ 環境中放96小時, 再置於正常環境中, 30分鐘後進行測試。</p>	
測試條件13	TEMPERATURE CYCLING TEST 溫度交變試驗	<p>According to following figure, after 5 cycles, test after keeping in normal condition for 30 minutes.</p> <p>如圖示之環境中, 循環5次後, 再置於正常環境中, 30分鐘後進行測試。</p> <div style="text-align: center;"> <p style="font-size: small;">+ 70℃</p> <p style="font-size: small;">- 20℃</p> <p style="font-size: small;">2 1 2</p> <p style="font-size: small;">One cycle</p> <p style="font-size: small;">Hours</p> </div>	

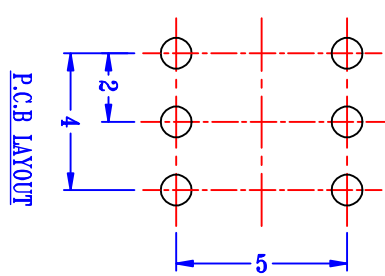
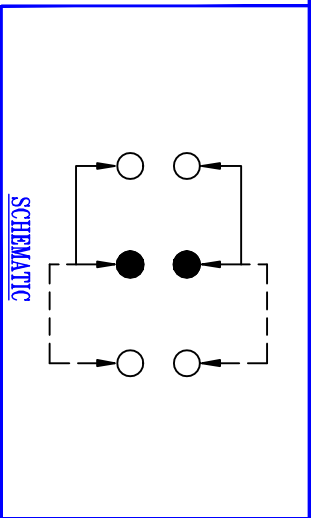
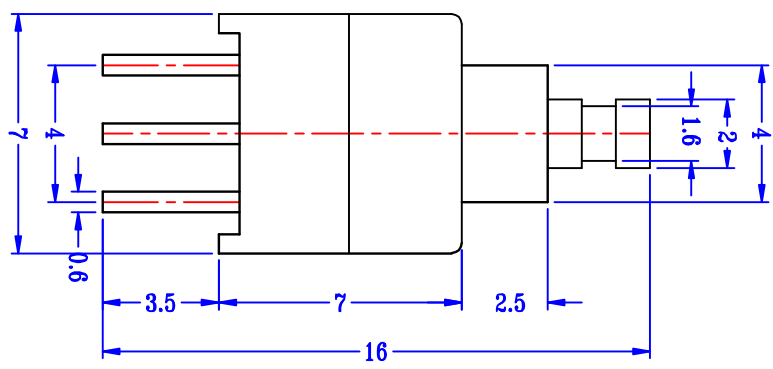
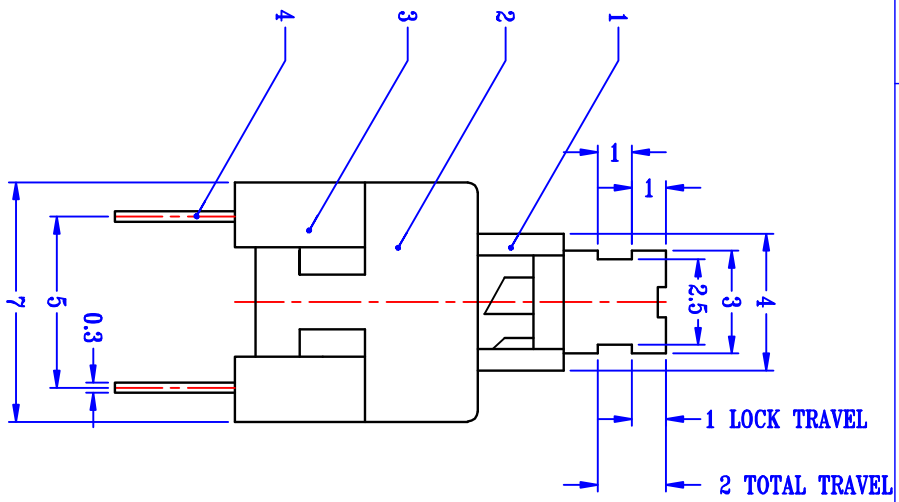
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<p>測試條件14</p>	<p>STORAGE ENVIROMENT 儲存環境</p>	<p>Under sealing pack condition,stored temperature don't exceed 30℃ and relative humidity is 75% RH; in the enviroment of no sunshine direct and no corrosive gas,the stored time ought to be three months but within six month at most. 密封包裝狀態下，儲存溫度為≤30℃，相對溫度75% RH; 無陽光直射，無腐蝕性氣體的環境中，儲存時間為3個月，最長不宜超過6個月。</p> <p>Without sealing pack condition,stored temperature don't exceed 30℃ and relative humidity is 75% RH; in the enviroment of no sunshine direct and no corrosive gas,the stored time shouldn't exceed 48H 無密封包裝狀態下，儲存溫度為≤30℃，相對溫度75% RH; 無陽光直射，無腐蝕性氣體的環境中，儲存時間最長不宜超過48小時。</p> <p>Don't excessive overlap or overstocking when keeping this goods,in case of damage. 保存時應注意物品不能過量重疊、積壓、以免損壞</p>	
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CAD FILE:



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7	SPRING	SUS WIRE	1	NATURAL						
6	CLIP	PPS	2	Ag CLAD						
5	LOCK PIN	SUS WIRE	1	NI PLATED						
4	TERMINAL	BRASS STRIP	6	Ag PLATED						
3	CASE	NYLON+F.G	1	BLACK						
2	COVER	POM	1	WHITE						
1	KNOB	POM	1	BLUE						
NO.	PARTS	MATERIALS	QTY	FINISH						

TOLERANCE UNLESS SPECIFIED					
WITHIN 1.5mm : ±0.1mm					
OVER 1.5mm : ±0.2mm		ISSUE	DATE		
TITLE : PUSH SWITCH		DESCRIPTIONS OF REVISION		UNIT : mm	APPD.
MODEL: PB-22E27		SCALE: 1:1		DRWG NO.: PB-22E27 (021)	
S.T. INDUSTRIAL (ASIA) LIMITED		DWN.	叶满根	28-Sep-2013	
		CHK'D	黎敏	28-Sep-2013	
		APPD.	ENG-008	28-Sep-2013	