

規 格 書

SPECIFICATION

SERIES 系列: TORCH SWITCH

MODEL NO. 型號: TPS SERIES

1. RATING 額定值: 1A 250V AC

2. CIRCUIT 回路:

3. TIMING 切換類型: NON-SHORTING

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

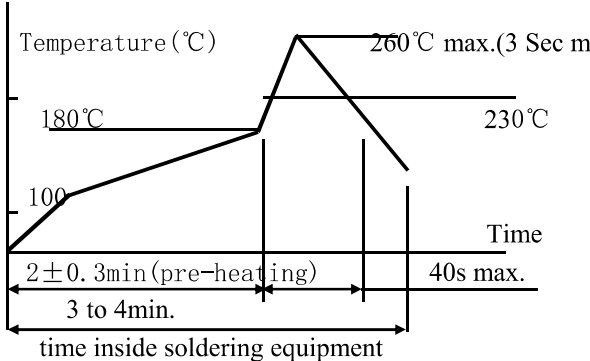
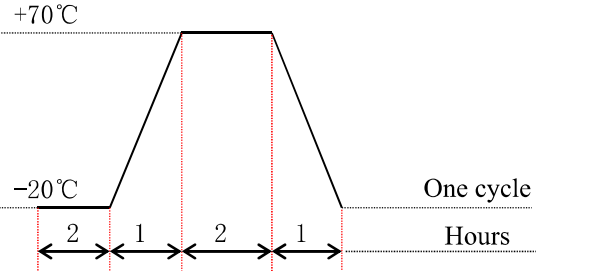
溫度 5~35°C，濕度 45~85% 標準狀態下測試。

5. 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。

| ITEM 項目 | | TEST CONDITION 測試條件 | PERFORMANCE 性能 |
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| 6. ELECTRONICAL PERFORMANCE 電氣性能 | | | |
| 6.1 | CONTACT RESISTANCE 接觸電阻 | Being tested at 1 kHz small current and voltage (100mA,20mV) by contact resistance meter. 在 1 kHz 小電流電壓 (100mA,20mV) 下測量。 | 100 mΩ max. 100 毫歐 以下。 |
| 6.2 | 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。 | 100 M Ω min. 100 兆歐 以上。 |
| 6.3 | WITHSTAND VOLTAGE 耐電壓 | AC 500 V and induction current 1 mA 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. 無擊穿現象出現。 |
| 7. MECHANICAL PERFORMANCE 機械性能 | | | |
| 7.1 | OPERATING FORCE 動作力 | Place the switch vertically to the operation direction,impress force to the centre of knob, and test the maximun force of onstate. 開關垂直於操作方向放置，在推杆中心逐漸施力，測量開關導通所需的最大力度。 | 750±300gf |
| 7.2 | 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 | PERFORMANCE 性能 |
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| 7.3 | KNOB STRENGTH 推杆強度 | place the switch vertically to the operation direction, test the maximum pulling force that knob can withstand 開關垂直於操作方向放置，測量推杆所能承受的最大拉力。 | 1kg |
| 8. DURABILITY 耐久性 | | | |
| 8.1 | 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°C for 3 seconds. 端子頂部被浸入焊錫池 2mm 深, 溫度250±5°C, 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% | |
| 8.2 | SOLDERING RESISTANT TEST 耐焊性試驗 | Manual soldering temperature 350±5°C, 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±5°C, 時間為3±0.5秒, 但不能在端子上施加異常壓力。 | Without deformation of case or excessive looseness of terminals, meet mechanical and electrical properties 本體無變形, 能滿足於機械、電器性能。 |
| | | 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 | |
| 8.3 | LIFE TEST 壽命試驗 | 50,000 cycles of operation at a rate of 15-18 cycles per minute with unloading 無負載條件下, 每分鐘 15-18 次的速度操作 50,000 次。 | (1) Contact resistance 150 mΩ max. 接觸電阻 150 毫歐以下 (2) Operating force 30% initial value 動作力變化範圍初始值30% (3) ITEM 項目—6.2 (4) ITEM 項目—6.3 |

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| 8.4 | <p>REFLOW SOLDERING HEAT TEST 回流焊接熱試驗</p> |  <p>Temperature (°C)</p> <p>180°C</p> <p>260°C max.(3 Sec max.)</p> <p>230°C</p> <p>100</p> <p>Time</p> <p>2±0.3min (pre-heating)</p> <p>40s max.</p> <p>3 to 4min.</p> <p>time inside soldering equipment</p> <p>*Temperature means The temperature of the PC board surface * PC board thickness for 1.0 mm *溫度指PC板表面的溫度 *PC板厚度為1.0毫米</p> <p>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% Allowable soldering time: 1 time 回流焊次數: 1次</p> | <p>Without deformation of case or excessive looseness of terminals, meet mechanical and electrical properties 本體無變形,能滿足於機械、電器性能。</p> |
| ITEM | 項目 | TEST CONDITION 測試條件 | PERFORMANCE 性能 |
| 8.5 | <p>HEAT RESISTANT TEST 耐熱試驗</p> | <p>80±2°C for 96 hours, test after keeping in normal condition for 30 minutes. 在 80±2°C 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 150 mΩ max. 接觸電阻150毫歐以下</p> |
| 8.6 | <p>MOISTURE RESISTANT TEST 耐濕試驗</p> | <p>40±2°C 90-95% RH for 96 hours. test after keeping in normal condition for 30 minutes. 在40±2°C 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> | <p>(2) Insulation resistance 50 MΩ min. 絕緣電阻50兆歐以上</p> |
| 8.7 | <p>COLD RESISTANT TEST 耐冷試驗</p> | <p>At -20±3°C for 96 hours, test after keeping in normal condition for 30 minutes. 在 -20±3°C 環境中放96小時,再置於正常環境中, 30 分鐘後進行測試。</p> | <p>(3) ITEM 項目—6.3 (4) ITEM 項目—7.1</p> |
| 8.8 | <p>TEMPERATURE CYCLING TEST 溫度交變試驗</p> | <p>According to following figure, after 5 cycles, test after keeping in normal condition for 30 minutes. 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>  <p>+70°C</p> <p>-20°C</p> <p>One cycle</p> <p>Hours</p> <p>2 1 2 1</p> | |

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| 8.9 | <p>STORAGE ENVIROMENT 儲存環境</p> | <p>Under sealing pack condition,stored temperature don't exceed 30°C 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.</p> <p>密封包裝狀態下，儲存溫度為≤30°C，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°C and relative humidity is 75% RH; in the enviroment of no sunshine direct and no corrosive gas,the stored time shouldn't exceed 48H</p> <p>無密封包裝狀態下，儲存溫度為≤30°C，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.</p> <p>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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