



ISO 9001 國際品質認證  
ISO 9001 CERTIFICATE

松暉電機工業股份有限公司  
SONG HUEI ELECTRIC CO., LTD.  
佛山市松暉電機科技有限公司  
FOSHAN SONG HUEI ELECTRIC CO., LTD.

一般事項 General

|                                 |                |
|---------------------------------|----------------|
| 使用溫度範圍<br>Operating temperature | -30 °C ~ 80 °C |
| 儲存溫度<br>Storage temperature     | -40 °C ~ 85 °C |

電氣特性 Electrical Characteristics

|                               |                                       |
|-------------------------------|---------------------------------------|
| 額定功率<br>Power rating          | DC 5 V 0.5 mA                         |
| 絕緣阻抗<br>Insulation resistance | $\geq 50 \text{ M}\Omega$ at DC 250 V |
| 耐電壓<br>Withstand voltage      | For 1 minute or more ( at AC 300 V )  |

|                       |                                                                                                                                                                                                                  |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 滑動雜訊<br>Sliding noise | <p><math>t_1, t_3 \leq 3 \text{ mS}</math>, <math>t_2 \leq 2 \text{ mS}</math> ( Test conditions 測試條件: <math>360^\circ / \text{S}</math> )<br/>Using the C / R filter circuit is recommended 建議使用 C / R 濾波電路</p> |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                    |                                                 |
|--------------------|-------------------------------------------------|
| 分解能力<br>Resolution | 6 pulses / 360 ° for each phase 每相 6 脈衝 / 360 ° |
|--------------------|-------------------------------------------------|

|                         |                                      |
|-------------------------|--------------------------------------|
| 相位差<br>Phase difference | $\Delta T = 0.23 \pm 0.17 \text{ T}$ |
|-------------------------|--------------------------------------|

|                                                     |                                                     |
|-----------------------------------------------------|-----------------------------------------------------|
| 輸出信號和旋轉方向<br>Output signal and rotational direction | <p>順時針方向 A Signal</p> <p>C.W direction B Signal</p> |
|-----------------------------------------------------|-----------------------------------------------------|

機械特性 Mechanical Characteristics

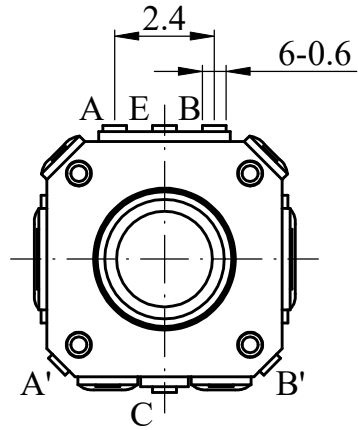
|                                       |                                                                                                                                                       |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 全回轉角度<br>Total rotational angle       | 360 °                                                                                                                                                 |
| 全回力矩<br>Rotational torque             | 10~45gf.cm<br>过 SMT后: 5~40gf.cm                                                                                                                       |
| 軸推拉強度<br>Shaft push-pull strength     | 3 Kgf max                                                                                                                                             |
| 定位點數及位置<br>Number and position detent | 12 detents ( Step angle: $30^\circ \pm 2^\circ$ )                                                                                                     |
| 軸向間隙<br>Shaft play in axial direction | 0.3 mm max                                                                                                                                            |
| 軸擺動<br>Shaft wobble                   | $1 * L / 30 \text{ mm p-p}$ 以下 ( L: 指安裝平面到軸的柄端的距離 )<br>$1 * L / 30 \text{ mm p-p}$ Max L: Distance between mounting surface and the top of the shaft. |
| 回轉壽命<br>Rotational life               | 20,000 cycles at a speed of 600 cycles / per hour<br>每小時 600 圈的速度測試                                                                                   |



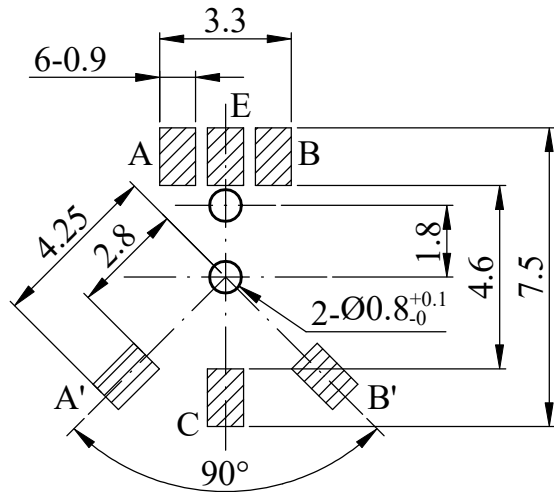
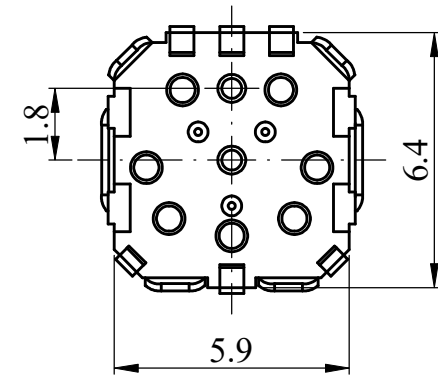
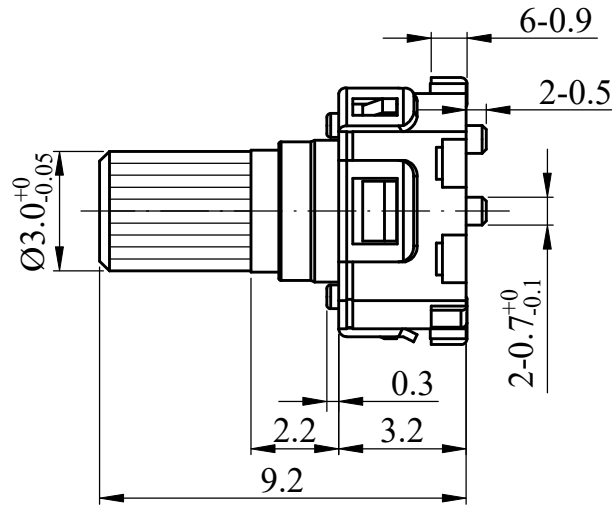
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|                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 焊錫耐熱性<br>Resistance to soldering heat                                                                                            | 預熱:基板表面溫度 180 °C 以下, 時間 2±0.3分 鐘以內,<br>Preating must be finished within 2±0.3 minutes to reach max 180°C of copper foil surface after a PCB is placed a reflow soldering furnance.<br>焊接溫度250°C以下, 僅允許時間3±1秒以內.<br>Soldering temperature is only allowed within 3+1 seconds at max. 250°C of copper foil surface after preheating.<br>允許焊錫過程次數1次以下。<br>Allowable frequency of soldering process 1 time max. |
| 推動開關規格 Push-on Switch Specific Ations                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                             |
| 開關電路<br>Switch circuit                                                                                                           | Single pole and single throw ( push on ) 單極單投 ( 推動 )                                                                                                                                                                                                                                                                                                                                                        |
| 開關工作行程<br>Switch travel (mm)                                                                                                     | 0.1+0.1/-0mm                                                                                                                                                                                                                                                                                                                                                                                                |
| 開關作動力<br>Switch operating force                                                                                                  | 320 ± 100 gf.cm                                                                                                                                                                                                                                                                                                                                                                                             |
| 開關額定功率<br>Switch rating power                                                                                                    | DC 5 V 10 mA                                                                                                                                                                                                                                                                                                                                                                                                |
| 開關接觸阻抗<br>Switch contact resistance                                                                                              | 第一個週期: 100 mΩ, 在有效的壽命範圍結束後 200 mΩ。<br>First period 100 mΩ ; 200 mΩ after the end of useful life is reached                                                                                                                                                                                                                                                                                                  |
| 開關按壓壽命<br>Switch push life                                                                                                       | 20,000 cycles ( 600 cycles / H, shaft push load 500gf max ; 按壓力 500gf 以下, 600 次 / H )                                                                                                                                                                                                                                                                                                                       |
| Note 注明: 當產品無帶開關結構時, 以上推動開關規格整項取消<br>Note: When product without switch structure, the above switch specifications are cancelled. |                                                                                                                                                                                                                                                                                                                                                                                                             |

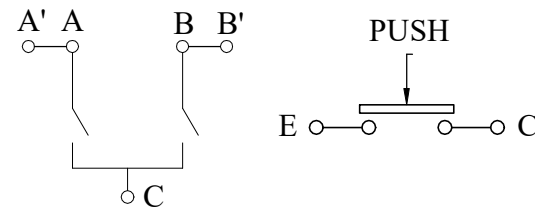


P.C.B LAYOUT



CIRCUIT

SWITCH



| Non notation tolerance |      |
|------------------------|------|
| < 10                   | ±0.3 |
| 10 ~ 100               | ±0.5 |
| > 100                  | ±0.8 |



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MODEL: ED0601(9.2KC)/0496

|       |         |      |            |
|-------|---------|------|------------|
| △     |         |      |            |
| △     |         |      |            |
| △     |         |      |            |
| △     | 修正电路图   | 何鸿根  | 2019.10.31 |
| ISSUE | SUBJECT | NAME | DATE       |

Approval

**R&D**  
2019-10-31  
藍濟毅

Checked

廠長  
2019-10-31  
鄧記穩

Projected

**R&D**  
2019-10-31  
何鸿根

|             |        |       |            |
|-------------|--------|-------|------------|
| UNIT        | mm     | SCALE | 5:1        |
| VERSION     | 1.1    | DATE  | 2019.10.18 |
| DRAWING NO. | ED-104 |       |            |

RECORD