

- 规格书 -

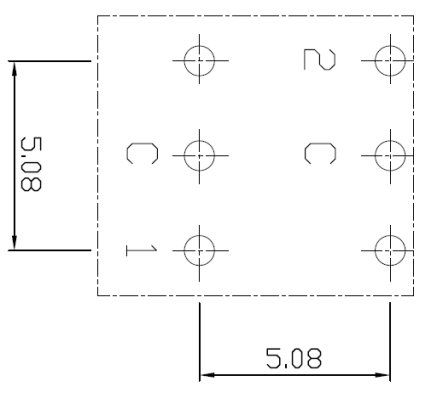
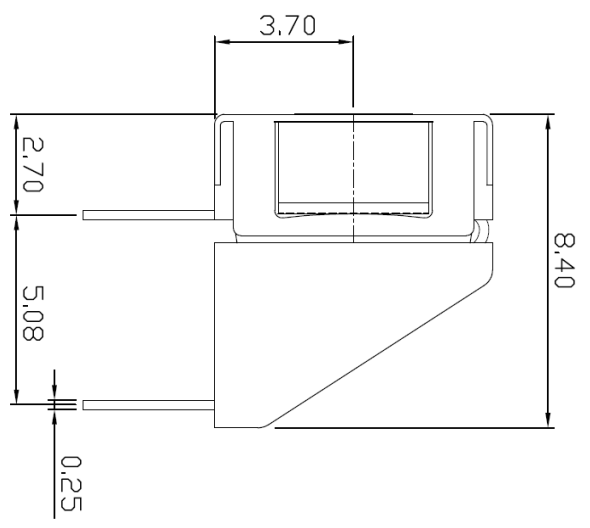
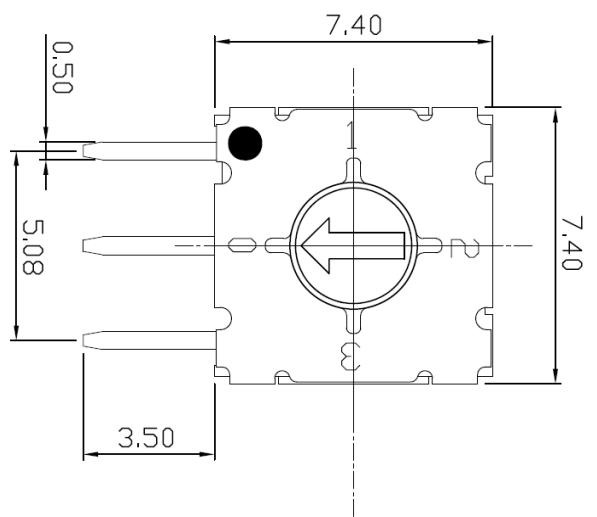
产品型号: STAR-04H

产品名称: 旋转编码开关

SM SWITCH CO.,LTD

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| MARK | DATE | REMARKS |
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| △ | | |



P.C.B. DIMENSION

| 04 P o s i t i o n | Real Coded | | |
|--|------------|---|---|
| | C | 1 | 2 |
| 0 | ● | | |
| 1 | ● | ● | |
| 2 | ● | | ● |
| 3 | ● | ● | ● |

| | | | |
|---------------------|----------|----------|-------------------------------|
| APPD | CHKD | D'SGCD | TITLE |
| Y.D. WANG | J.S. KIM | H.S. LEE | MINI ROTARY DIP SWITCH |
| | | | MODEL NO. STAR-04H |
| | | | REV 7 |
| SM SWITCH CO., LTD. | | | |



MINI ROTARY DIP SWITCH SPECIFICATION

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1. Style:

This specification describes "Rotary Switch" mainly used as signal switch of electric devices with the general requirements of mechanical and electrical characteristics.

1.1 Operating / Storage Temperature Range : -40°C ~ +85°C

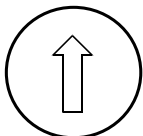
2. Current Range:

2.1 None-Switching : 400 mA, 42V

2.2 Switching : 150 mA, 42V

3. Type of Actuation : Rotating

4. Test Sequence :

| ELECTRICAL PERFORMANCE | ITEM | DESCRIPTION | TEST CONDITIONS | REQUIREMENTS |
|------------------------|-----------------|--|--|---|
| | 1 | Visual Examination | By visual examination check without any out pressure & testing. | There shall be no defects that affect the serviceability of the product |
| | 2 | Contact Resistance | ① To be measured between the two terminals associated with each switch pole ② Measurements shall be made with a 1kHz shall current contact resistance meter | 80mΩ max.(initial) |
| | 3 | Insulation Resistance | 250V DC, 1minute ±5seconds | 100MΩ min |
| | 4 | Dielectric withstanding Volotage | 250V AC(50Hz or 60Hz)shall be applied between all the adjacent terminal and between the terminal and the frame For 1 minute | There shall be no breakdown or flashover |
| 5 | Operation Force | Applied in the direction of operation  | 120gf ±30gf | |



MINI ROTARY DIP SWITCH SPECIFICATION

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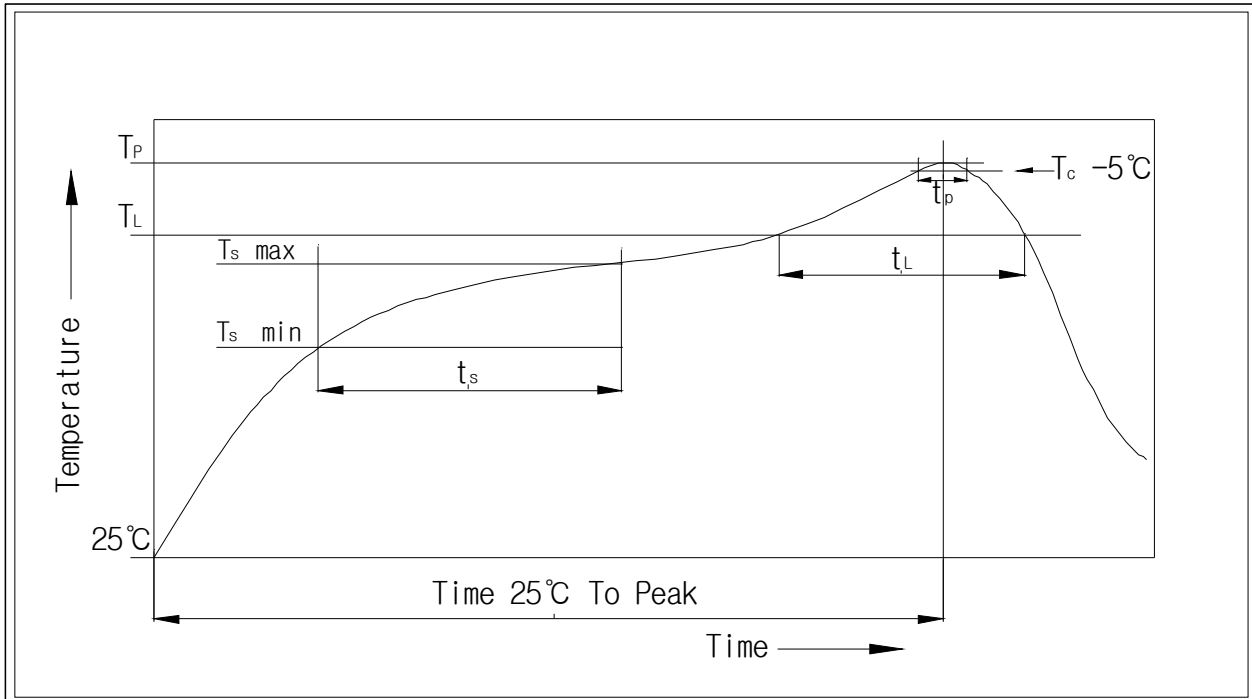
| | | | | |
|---|---|-----------------------------------|---|---|
| M A C H I N P E R F O R M A N C E | 6 | Operation Life | <p>Measurements shall be made following the test set forth below:</p> <p>1)100mA, 42V DC resistive load 2)Rate of operation: 15~20 cycles/ minute 3)Step of operation: 25,000 steps</p> | <p>1)As shown in item 3,4 2)Contact Resistance: 200mΩ max 3)Final-after test</p> |
| | 7 | Resistance Low Temperature | <p>Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made:</p> <p>1)Temperature: -60℃ ±3℃ 2)Time: 96 hours</p> | As shown in item 2~5 |
| | 8 | Resistance High Temperature | <p>Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made:</p> <p>1)Temperature: 125℃ ±2℃ 2)Time: 96 hours</p> | <p>1)As shown in item 3~5 2)Contact Resistance: 200mΩ max</p> |
| | 9 | Resistance Humidity | <p>Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made:</p> <p>1)Temperature: 40℃ ±2℃ 2)Relative humidity: 90~95% 3)Time: 96 hours</p> | <p>1)As shown in item 4 2)Contact Resistance: 200mΩ max 3)Insulation Resistance: 10MΩ min</p> |



MINI ROTARY DIP SWITCH SPECIFICATION

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5. Reflow Soldering Conditions:



1) Classification Reflow Profiles

| Profile Feature | Pb-Free Assembly |
|---|---------------------------------|
| Average Ramp-UP Rate($T_s \text{ max}$ to T_P) | 3°C/second max |
| Preheat <ul style="list-style-type: none"> - Temperature Min($T_s \text{ min}$) - Temperature Max($T_s \text{ max}$) - Time ($t_s \text{ min}$ to $t_s \text{ max}$) | 150°C 200°C 60-180seconds |
| Time maintained above: <ul style="list-style-type: none"> - Temperature (T_L) - Time (t_L) | 217°C 60-150seconds |
| Peak/Classification Temperature(T_P) | 260°C +0°C/ -5°C |
| Time within 5°C of actual Peak Temperature(T_P) | min 30 seconds |
| Ramp-Down Rate | 6°C/sec max |
| Time 25°C to Peak Temperature | 8 minutes max |

6. This item is "ROHS" Compliant



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7. Part List

| NO | Part Name | Q'ty | Materials | Treatment | Remark |
|----|--------------|------|-----------------|---------------|---|
| 1 | Cover | 1 | Stainless Steel | | Print |
| 2 | Spring Plate | 1 | Stainless Steel | | |
| 3 | Guide Plate | 1 | Stainless Steel | | |
| 4 | Contact | 1 | Phosphor Bronze | Plating: Gold | Au 0.03 μ m Min Ni 0.1 μ m Min |
| 5 | Terminal | 1 | Phosphor Bronze | Plating: Gold | Au 0.03 μ m Min Ni 0.3 μ m Min |
| 6 | Rotor | 1 | LCP | | |
| 7 | Base | 1 | LCP | | |
| 8 | O-Ring | 1 | Silicone | | |