

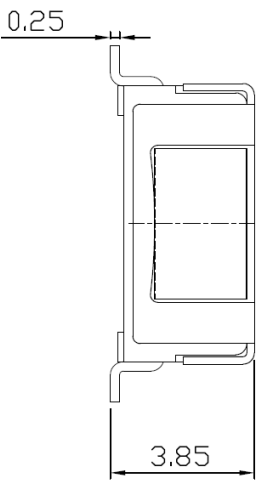
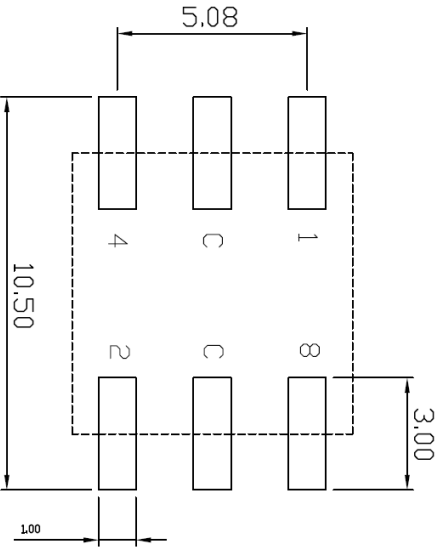
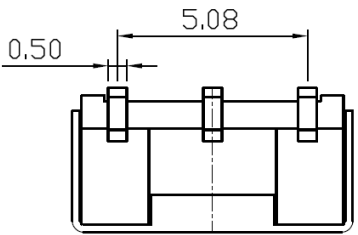
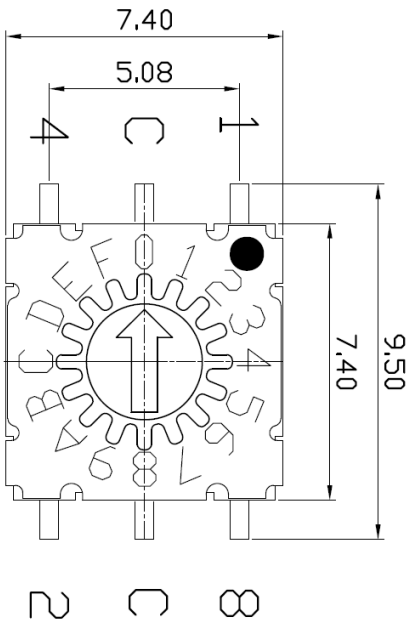
- 规格书 -

产品型号: STAR-16S

产品名称: 旋转编码开关

SM SWITCH CO.,LTD

Add : 江苏省无锡市新吴区弘毅路8号金帛座706室
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| | | |
|------|------|---------|
| MARK | DATE | REMARKS |
| △ | | |
| △ | | |

| | | Real Code | | | | | | | |
|---|---|-----------|---|---|---|---|---|---|---|
| | | C | 1 | 2 | 4 | 8 | | | |
| 0 | ● | ● | | | | | | | |
| 1 | ● | ● | | | | | | | |
| 2 | ● | | ● | | | | | | |
| 3 | ● | | | ● | | | | | |
| 4 | ● | | | | ● | | | | |
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| 6 | ● | | | | | | ● | | |
| 7 | ● | | | | | | | ● | |
| 8 | ● | | | | | | | | ● |
| 9 | ● | | | | | | | | |
| A | ● | | | | | | | | |
| B | ● | | | | | | | | |
| C | ● | | | | | | | | |
| D | ● | | | | | | | | |
| E | ● | | | | | | | | |
| F | ● | | | | | | | | |

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|---------|-------------|---------|------------|-------------|-------------------|---------|
| NO. | DESCRIPTION | QTY | MATL | SPEC | FINISH | REMARKS |
| 3ANG | UNIT M/M | SCL. | MODEL NAME | STAR-16S | ROTARY DIP SWITCH | |
| APPD. | CHKD. | D'SCD | TITLE | STAR-16S | | |
| YD WANG | J.S KIM | H.S LEE | DRAWG. NO. | Sheet 1 / 2 | 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> |
| | 10 | Solder Condition | <p>1. Iron Soldering 3s / 350℃ 2. Wave Soldering 5s / 280℃ 3. Reflow Soldering 10s / 260℃</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 max to T_P) | 3°C/second max |
| Preheat - Temperature Min(T_s min) - Temperature Max(T_s max) - Time (t_s min to t_s max) | 150°C 200°C 60-180seconds |
| Time maintained above: - 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



MINI ROTARY DIP SWITCH SPECIFICATION

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7. Part List

| NO | Part Name | Q'ty | Materials | Treatment | Remark |
|----|--------------|------|-----------------|---------------|---|
| 1 | Cover | 1 | Stainless Steel | | Laser |
| 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 | | |