

- 规格书 -

产品型号： MDR-10S

产品名称： 旋转编码开关

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WORK	DATE	REMARKS
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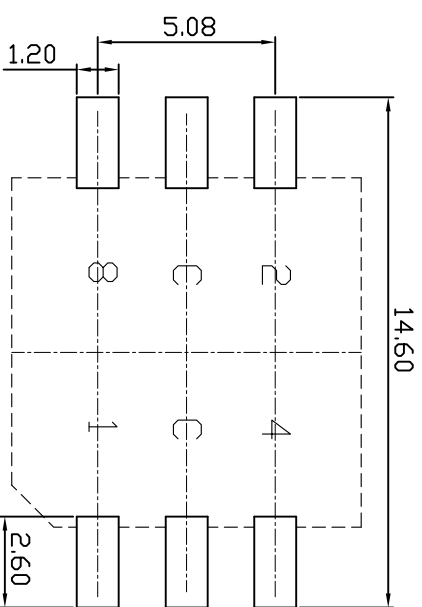
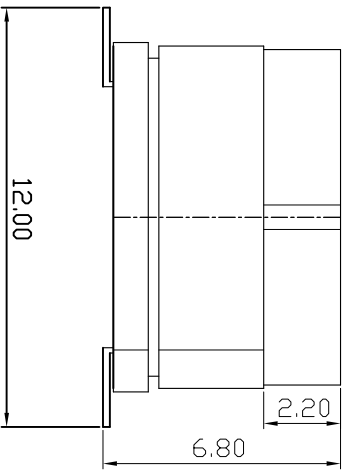
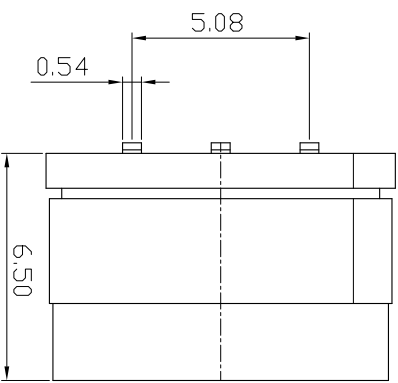
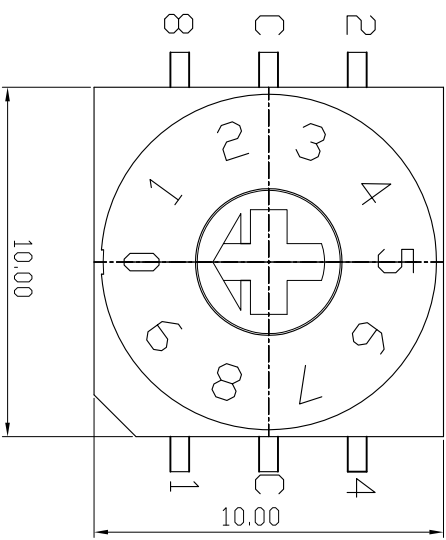
SPECIFICATION

1. MECHANICAL DATA

- PERMISS. AMBIENT TEMP. -40°C - +85°C
- TORQUE MIN. 0.7Ncm
- MECH. LIFETIME MIN. 10° STEPS
- POSITIONS PER ROTATION
- 10, 16(NON-SELF-LOCKING)

2. ELECTRICAL DATA

- OPERATING VOLTAGE <=42V
 - CONTACT LOAD. STATIC <= 0.2A
 - CONTACT LOAD. DYNAMIC <= 0.15A
 - NORMAL AND TEST VOLTAGE 250V 50HZ/1min
 - CONTACT RESISTANT < 80mΩ
 - INSULATION RESISTANCE > 100MΩ
- 3. SOLDER RECOMMENDATIONS**
- SOLDER IRON MAX. 2s/340°C
 - SOLDER BATH MAX. 10s/260°C
- 4. LIFE Cycle : 10,000 Steps**



P.C.B DIMENSION

		Real Code				
		C	1	2	4	8
0		●	●	●		
1		●		●		
2		●	●		●	
3		●		●	●	
4		●	●			●
5		●		●	●	
6		●	●			●
7		●		●	●	
8		●	●			●
9		●		●	●	
A		●	●			●
B		●		●	●	
C		●	●			●
D		●		●	●	
E		●	●			●
F		●		●	●	

APPD	CHKD	D'SGD	TITLE
YD WANG	J.S. KIM	H.S. LEE	ROTARY DIP SWITCH

MODEL NO.	REV
MDR-10S	A

SM SWITCH CO., LTD.



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

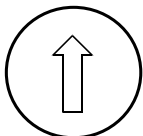
2. Current Range:

2.1 None-Switching : 200 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 	700gf/cm. max	



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)150mA, 42V DC resistive load 2)Rate of operation: 15~20 cycles/ minute 3)Step of operation: 10,000 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>	<p>1)As shown in item 3~5 2)Contact Resistance: 200mΩ max</p>
	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>



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6. 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 - 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: - 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

7. This item is "ROHS" Compliant



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8. Part List

NO	PART NAME	Q'TY	MATERIALS	TREATMENT	REMARK
1	COVER	1	LCP		Print
2	BASE	1			
3	ACTUATOR	1	PA66, STS		
4	CONTACT & TERMINAL	1	PHOSPHOR BRONZE	CONTACT AND TERMINAL PLATING: GOLD PLATING OVER NICKEL	Au 0.03 μ m Min Ni 0.1 μ m Min
5	PCB	1	EPOXY	PLATING: GOLD PLATING	Au 0.05 μ m Min
6	O-Ring	1	SILICONE		

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