

- 规格书 -

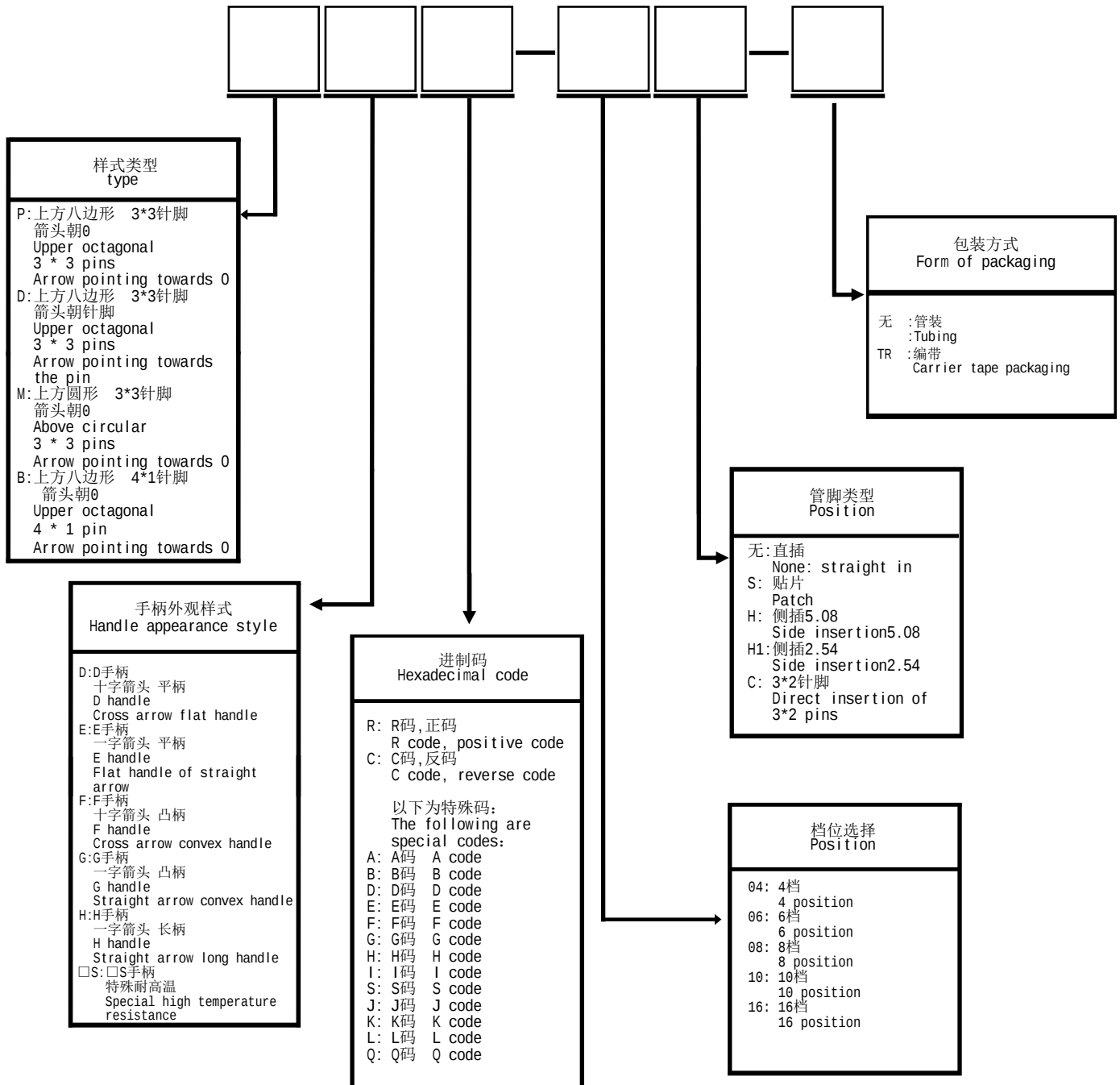
产品型号: MER-04H1

产品名称: 旋转编码开关

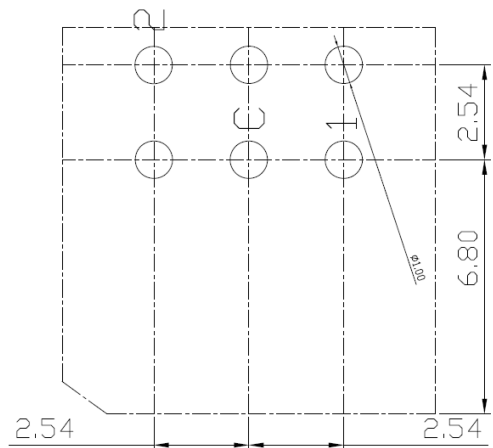
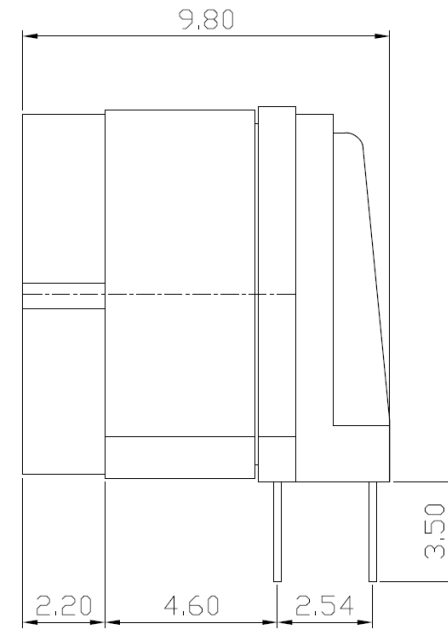
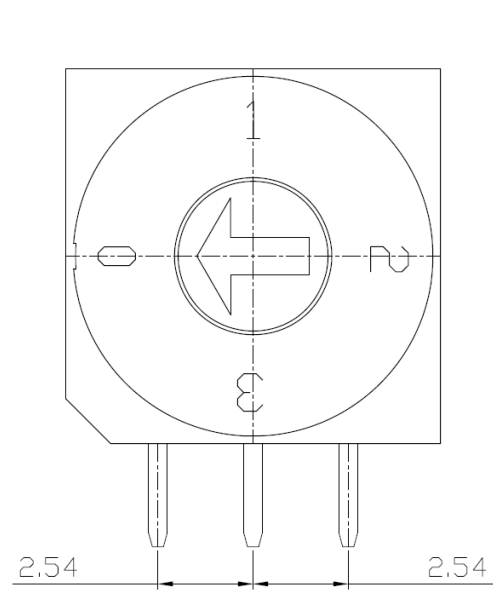
SM SWITCH CO.,LTD

Add : 江苏省无锡市新吴区圣丰联智谷7栋5楼
 韩国京畿道富川市三鹊路22号富川科技园103-506栋
TEL : +86-510-8591-9217
H.P : 138-6177-3466
Web : WWW.SIMAOKJ.CN

➤ Type selection table description.



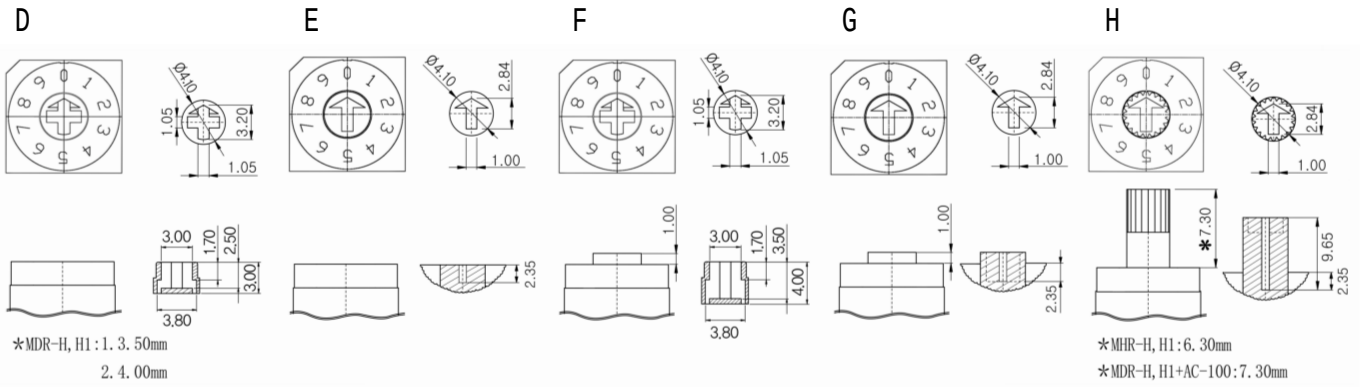
● Please check the type of switch according to the type specification.



P.C.B DIMENSION

D'SGD	H.S LEE			TITLE: ROTARY DIP SWITCH	
		CO	mm	MODELNO: MER-04H1	
		Scale	1:1	SM SWITCH CO.,LTD	
CHKD	J.S KIM	Rev	A/0		
APPD	Y.D WANG				

1 手柄尺寸外观 Handle size and appearance



2 编码表 Code

R Real Code

		Real Code			
		C	1	2	
04 Position	0	•			
	1	•	•		
	2	•		•	
	3	•	•	•	

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

C Complement Code

		Complement Code			
		C	1	2	
04 Position	0	•	•	•	
	1	•		•	
	2	•	•		
	3	•			

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

G Gray Code

		Gray Code			
		C	1	2	4 8
10 Position	0	•	•		•
	1	•	•		
	2	•	•	•	
	3	•	•	•	
	4	•	•	•	
	5	•	•	•	
	6	•	•	•	
	7	•	•	•	
	8	•	•	•	
	9	•	•	•	

Q Code

		Gray Complement Code			
		C	1	2	4 8
10 Position	0	•	•	•	
	1	•	•	•	
	2	•	•	•	
	3	•	•	•	
	4	•	•	•	
	5	•	•	•	
	6	•	•	•	
	7	•	•	•	
	8	•	•	•	
	9	•	•	•	

3 特殊编码表 Special Code

A Code

		Real Code			
		C	1	2	4 8
10 Position	0	•	•		
	1	•	•		
	2	•	•	•	
	3	•	•	•	
	4	•	•	•	
	5	•	•	•	
	6	•	•	•	
	7	•	•	•	
	8	•	•	•	
	9	•	•	•	

B Code

		Complement Code			
		C	1	2	4 8
16 Position	0	•	•	•	
	1	•	•	•	
	2	•	•	•	
	3	•	•	•	
	4	•	•	•	
	5	•	•	•	
	6	•	•	•	
	7	•	•	•	
	8	•	•	•	
	9	•	•	•	
	A	•	•	•	
	B	•	•	•	
	C	•	•	•	
	D	•	•	•	
	E	•	•	•	
	F	•	•	•	

D Code

		Dezimal			
		C	1	2	3 4
04 Position	0	•			•
	1	•	•		
	2	•		•	
	3	•			•

E Code

		Real Code			
		C	1	2	4 8
06 Position	0	•			
	1	•	•		
	2	•		•	
	3	•	•	•	
	4	•			•
	5	•	•	•	•

F Code

		Real Code		
		C	1	2
04 Position	0	•	•	
	1	•		•
	2	•	•	•
	3	•		

H Code

		Complement Code			
		C	1	2	4 8
16 Position	0	•	•	•	
	1	•	•	•	
	2	•	•	•	
	3	•	•	•	
	4	•	•	•	
	5	•	•	•	
	6	•	•	•	
	7	•	•	•	
	8	•	•	•	
	9	•	•	•	
	A	•	•	•	
	B	•	•	•	
	C	•	•	•	
	D	•	•	•	
	E	•	•	•	
	F	•	•	•	

I Code

		Real Code		
		C	1	2
04 Position	0	•		
	1	•	•	
	2	•		•
	3	•	•	•

S Code

		Special Code BCD (Intermittent Switching)			
		C	1	2	4 8
10 Position	0	•	•		
	1	•	•		
	2	•	•	•	
	3	•	•	•	
	4	•	•	•	
	5	•	•	•	
	6	•	•	•	
	7	•	•	•	
	8	•	•	•	
	9	•	•	•	

J Code

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

K Code

		Special Code mit / with 2 "C" (Terminal)			
		C	1	2	C
Position	0			•	0
	1	•	•		
	2	•	•		
	3	•	•		

L Code

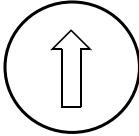
		Decimal (06 Position) (Terminal)				
		C	1	2	3 4	5
06 Position	0	•				
	1	•	•			
	2	•	•	•		
	3	•	•	•	•	
	4	•	•	•	•	
	5	•	•	•	•	



旋转编码开关
产品规格书
ROTARY DIP SWITCH
SPECIFICATION

Rev. A
P: 1/5

1. 规格:
Style:
本规范描述“旋转开关”主要用作信号开关电气设备具有一般要求的机械和电气特性。
This specification describes "Rotary Switch" mainly used as signal switch of electric devices with the general requirements of mechanical and electrical characteristics.
1.1 操作/存储温度范围: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$ / $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
Operating / Storage Temperature Range : $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$ / $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
2. 电流范围:
Current Range
2.1 未工作状态: 200 mA, 42V None-Switching : 200 mA, 42V
2.2 工作状态: 150 mA, 42V Switching : 150 mA, 42V
3. 操作类型 : 旋转
Type of Actuation : Rotating
4. 测试顺序:
Test Sequence:

电 气 性 能 P E R F O R M A N C E	项目 ITEM	描述 DESCRIPTION	试验条件 TEST CONDITIONS	要求 REQUIREMENTS
	1	目测 Visual Examination	通过目测检查, 无需任何压力和测试 By visual examination check without any out pressure & testing.	应无影响产品使用能力的缺陷 There shall be no defects that affect the serviceability of the product
	2	接触电阻 Contact Resistance	①在与每个开关及相关的两个端子之间进行测量 To be measured between the two terminals associated with each switch pole ②测量应采用1kHz电流接触电阻计 Measurements shall be made with a 1kHz shall current contact resistance meter	80m Ω max. (initial)
	3	绝缘电阻 Insulation Resistance	250VDC, 1分钟 $\pm$ 5秒 250VDC, 1minute $\pm$ 5seconds	100M Ω min
	4	介质耐压 Dielectric withstanding Volotage	250VAC (50Hz或60Hz) 应施加在所有 相邻端子之间以及端子和框架之间1分钟 250VAC(50Hz or 60Hz) shall be applied between all the adjacent terminal and between the terminal and the frame For 1 minute	不得有击穿或闪络现象 There shall be no breakdown or flash over
	5	动作力 Operation Force	应用于操作方向 Applied in the direction of operation 	最大700gf/cm 700gf/cm. max



旋转编码开关
产品规格书
ROTARY DIP SWITCH
SPECIFICATION

Rev. A
P: 2/5

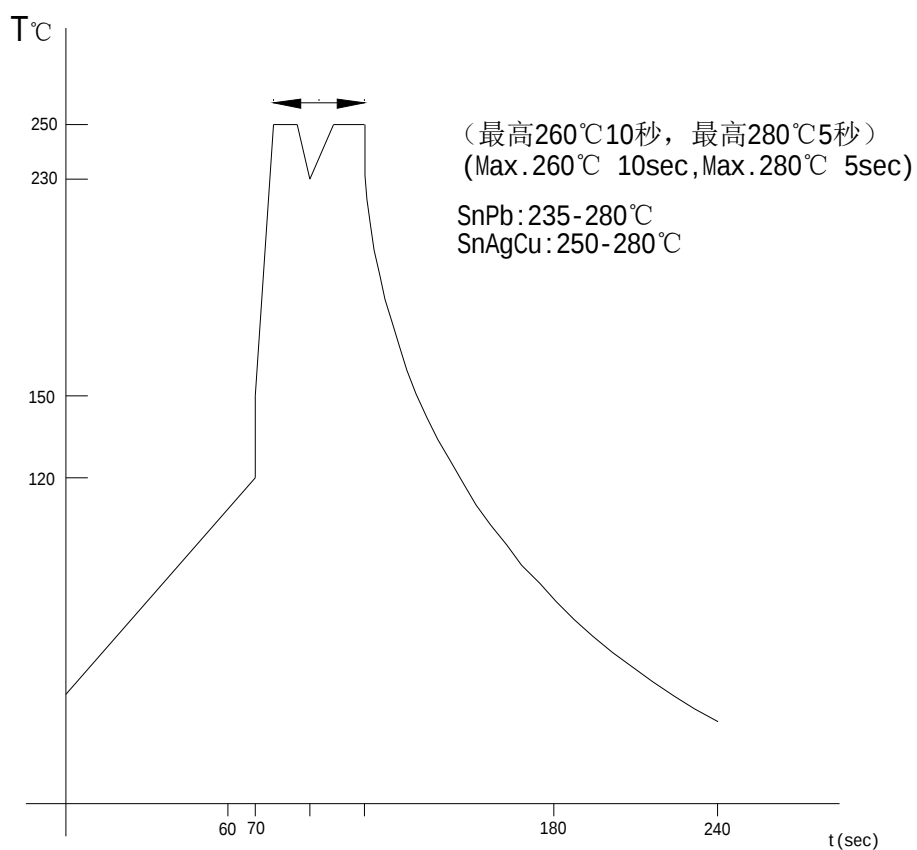
机械性能
MACHINPERFORMANCE

6	工作寿命 Operation Life	应在以下试验后进行测量: 1) 150mA, 42V直流电阻负载 2) 操作速率: 15~20次循环/分钟 3) 平均无故障寿命: 10000次 Measurements shall be made following the test set forth below: 1)150mA, 42V DC resistive load 2)Rate of operation: 15~20cycles/minute 3)Average fault-free life: 10,000 steps	1) 如第3、4、项所示 2) 接触电阻: 最大200mΩ 3) 试验后的最终结果 1) As shown in item 3,4 2) Contact Resistance: 200mΩ max 3) Final-after test
7	低温测试 Resistance Low Temperature	在进行以下试验后, 样品应在正常温度和湿度条件下放置一小时 测量前: 1) 温度: -40℃ ± 3℃ 2) 时间: 96小时 Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made: 1)Temperature: -40℃ ± 3℃ 2)Time: 96 hours	如项目2~5所示 As shown in item 2~5
8	高温测试 Resistance High Temperature	在进行以下试验后, 样品应在正常温度和湿度条件下放置一小时 在进行测量之前: 1) 温度: 85℃ ± 2℃ 2) 时间: 96小时 Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made: 1) Temperature: 85℃ ± 2℃ 2) Time: 96 hours	1) 如项目3~5 2) 所示, 接触电阻: 最大200mΩ 1) As shown in item 3~5 2) Contact Resistance: 200mΩ max
9	湿度测试 Resistance Humidity	在进行以下试验后, 样品应在正常温度和 湿度条件下放置一小时 测量前: 1) 温度: 40℃ ± 2℃ 2) 相对湿度: 90~95% 3) 时间: 96小时 Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made: 1)Temperature: 40℃ ± 2℃ 2)Relative humidity: 90~95% 3)Time: 96 hours	1) 如第4项所示 2) 接触电阻: 最大200mΩ 3) 绝缘电阻: 最小10MΩ 1) As shown in item 4 2) Contact Resistance: 200mΩ max 3) Insulation Resistance: 10MΩ min
10	焊接条件 Solder Condition	1. 手工焊接3s/350℃ Iron Soldering 3s /350℃ 2. 波峰焊5s/280℃ Wave Soldering 5s / 280℃	
11	储存条件 Storage conditions	保管时尤其应注意避开高湿高温和有腐蚀性气体的环境。如需要长时间保存, 请放置在常温干燥处。 When storing, special attention should be paid to avoiding environments with high humidity, high temperature, and corrosive gases. If it needs to be stored for a long time, please place it in a dry place at room temperature.	

5. 该项目符合"ROHS"
This item is "ROHS" Compliant
该项目符合"IP67"
This item is "IP67" Compliant

6. 手工焊接
manual Soldering
: 最高350℃ 最高3秒
: Max.350℃ Max.3sec

7. 波峰焊条件:
Wave Soldering Conditions:





旋转编码开关
产品规格书
ROTARY DIP SWITCH
SPECIFICATION

Rev. A
P: 4/5

8. 部件说明
ParList

序号 NO	部件名称 Part Name	数量 Q'ty	材质名称 Materials	表面处理 Treatment	备注 Remark
1	外壳 Cover	1	PA66		丝 印: 黑色 Print: Black
2	底座 Base	1			
3	手柄 Actuator	1	POM		
4	连接器与端子 Contact& Terminal	1	磷青铜 Phosphor Bronze	触点和端子镀层 : 镀金, 镀镍 Contact and terminalplating : gold plating over nickel	金 0.03 μ m 最小 镍 0.1 μ m 最小 Au 0.03 μ m Min Ni 0.1 μ m Min
5	PCB	1	EP0XY	镀层: 金 Plating: Gold	金 0.05 μ m 最小 Au 0.05 μ m Min
6	O型圈 O-Ring	1	硅胶 Silicone		



旋转编码开关
产品规格书
ROTARY DIP SWITCH
SPECIFICATION

Rev. A
P: 5/5

9. 包装方式
Packaging method

9.1 管装

Pipe installation

直插,侧插,贴片类型卡套管包装数量: 50件/卡套管

Direct insertion, side insertion, patch type, sleeve packaging quantity: 50 pieces/sleeve

