

General Specification 基本参数



- | | |
|---|---|
| 1.Rating:
额定功率 | 150mA, DC 42V (Switching)
200mA, DC 42V (None-Switching) |
| 2.Contact Resistance:
接触电阻 | 80mΩ Max. |
| 3.Insulation Resistance:
绝缘电阻 | 100MΩ Min at DC 250V |
| 4.Operating Force:
操作扭力 | 700gf Max. |
| 5.Life Cycle:
使用寿命 | 10,000 steps |
| 6.Sealing:
防护等级 | IP67 (Dust& Water proof)
(防水防尘) |
| 7.Operating Temperature Range:
使用温度 | -40°C +85°C |

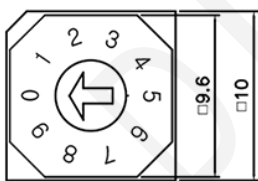
HOW TO ORDER 选型规则

E	D	R	-	10	S	TR
Cover Type 系列型号	Actuator 旋钮样式	Code 编码方式		Position 档位数	Terminal 引脚	Packing 包装
F Octagon Type (Ter' 4x1) 八边形款 (4对1脚) E Square Type (Ter' 4x1) 方形厚款 (4对1脚)	D Arrow 箭头槽 (Height = 0mm) E Cross 十字槽 (Height = 0mm) S 柄高 H7.3mm P 柄高 H1.0mm	R Real Code 二进制正码 C Complement Code 二进制反补码 G Gray Code 格雷码 特殊编码方式详情 请看下方表格		04 4 Position 06 6 Position 08 8 Position 10 10 Position 16 16 Position	- Through-Hole (Ter' 4x1) 直插脚 (4对1脚) S SMD Gull Wing (Ter' 4x1) 贴片 (4对1脚) H Right Angle 5.08mm 侧插5.08mm脚距 H1 Right Angle 2.54mm 侧插2.54mm脚距	- Tube Packing 管装 TR Reel Packing 编带

1. Cover Type 系列型号

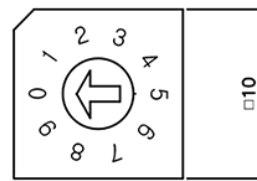


F Type (Octagon) 4x1 Ter'



F: Octagon

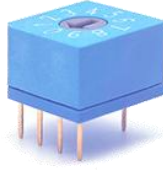
E Type (Square) 4x1 Ter'



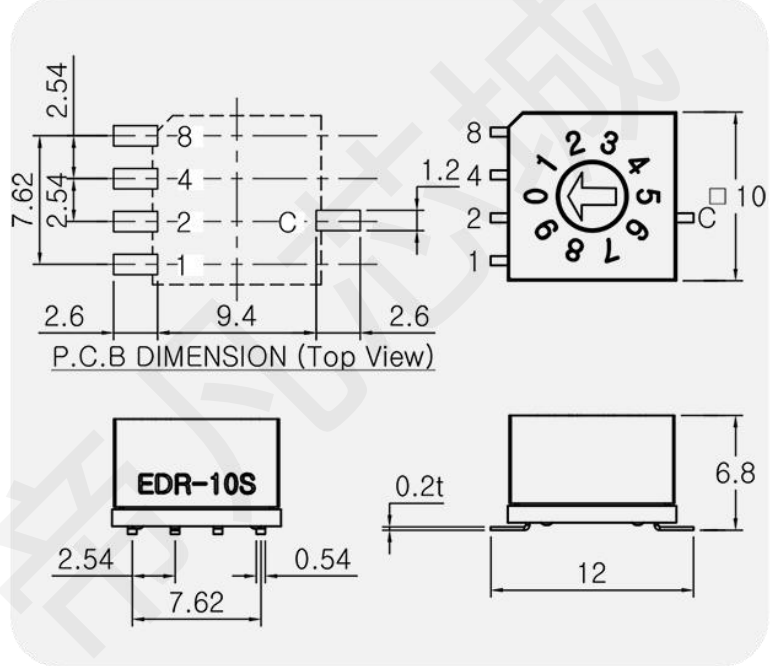
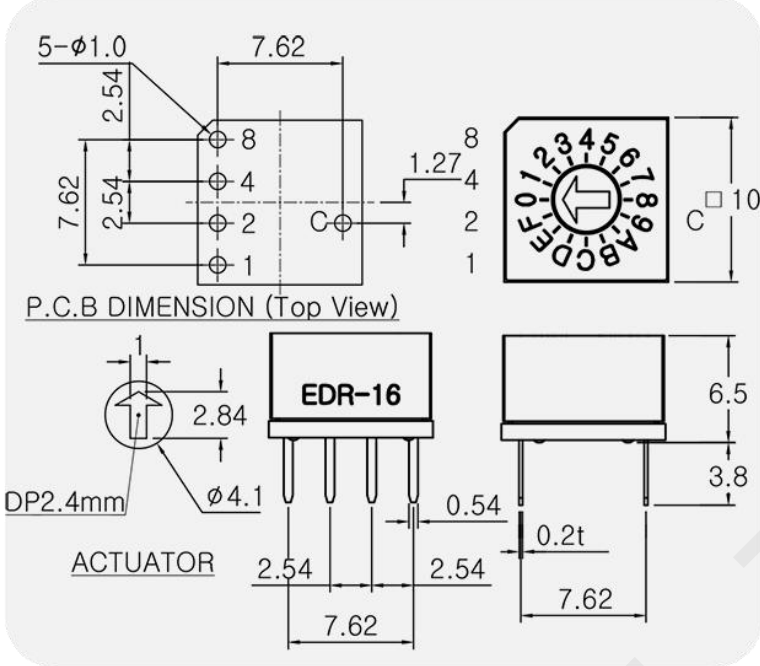
E: Square

2. General Dimension 基本尺寸

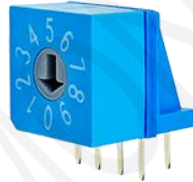
- Through-Hole(4x1)
4对1直插脚



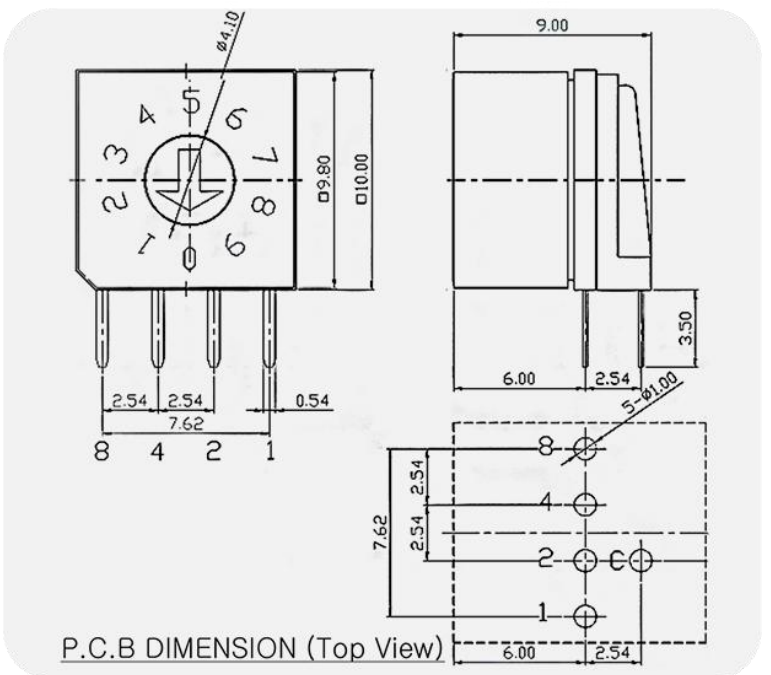
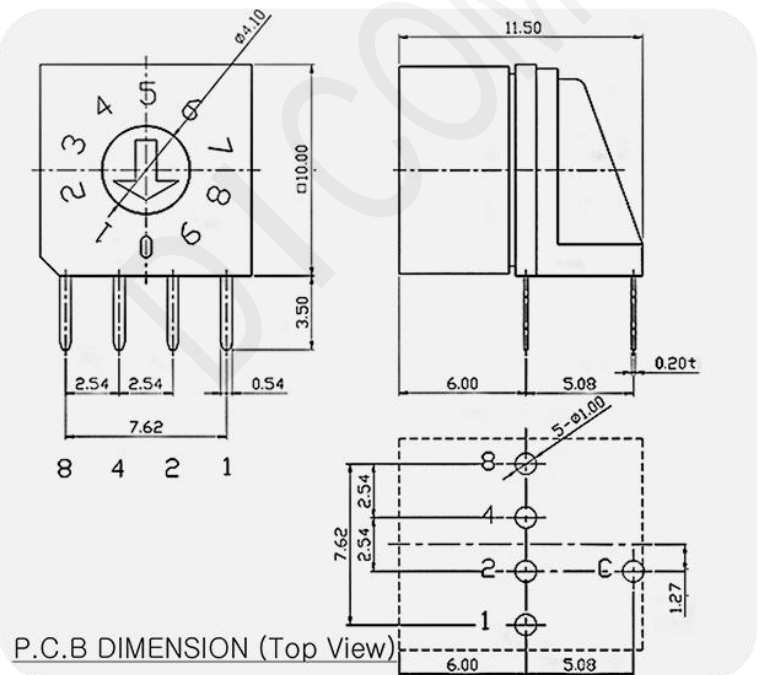
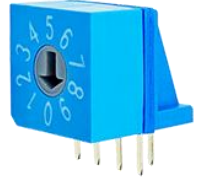
S SMD Gull Wing(4x1)
4对1贴片脚



H Right Angle 5.08mm
5.08mm侧插脚



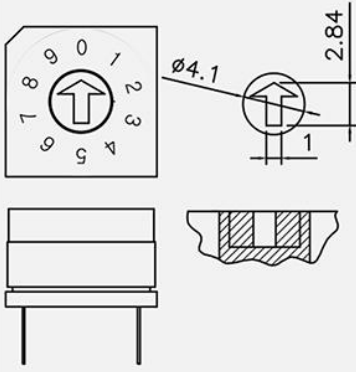
H1 Right Angle 2.54mm
2.54mm侧插脚



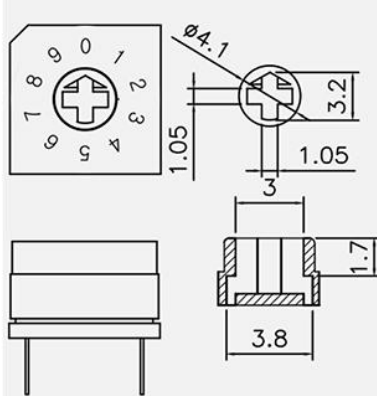
2. Actuator 旋钮样式



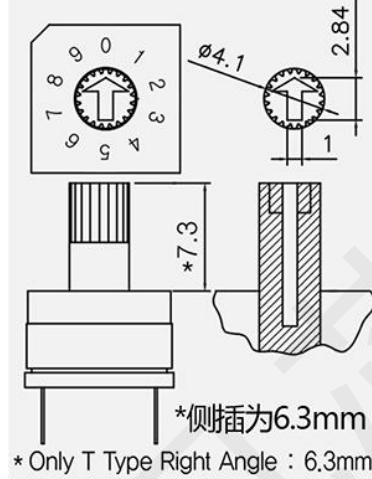
D Arrow (Height = 0mm)



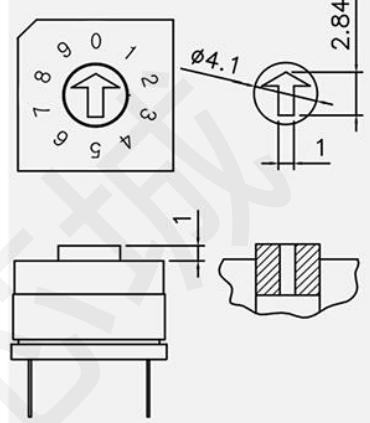
E Cross (Height = 0mm)



S Height = 7.3mm



P Height = 1mm



3. Code & Position 编码方式 & 档位数



R Real Code 二进制正码

Position	Real Code			
	C	1	2	4 8
0	•			
1		•		
2			•	
3				•
4	•			
5		•		
6			•	
7				•
8	•			
9		•		
10			•	
11				•
12	•			
13		•		
14			•	
15				•

C Complement Code 二进制反补码

Position	Complement Code			
	C	1	2	4 8
0	•	•	•	•
1	•	•	•	•
2	•	•	•	•
3	•	•	•	•
4	•	•	•	•
5	•	•	•	•
6	•	•	•	•
7	•	•	•	•
8	•	•	•	•
9	•	•	•	•
10	•	•	•	•
11	•	•	•	•
12	•	•	•	•
13	•	•	•	•
14	•	•	•	•
15	•	•	•	•

S Decimal Code

Position	Decimal Code			
	C	1	2	3 4
1	•			
2		•		
3			•	
4				•

E / F Series Mini Rotary DIP Switch Specification

E / F 系列编码开关 电气参数

1. Description:

1-1 Operating / Storage Temperature Range : -40°C ~ +85°C

2. Rating:

2-1 None-Switching : 200 mA, DC 42V

2-2 Switching : 150 mA, DC 42V

3. Type of Actuation : Rotating

4. Electrical Characteristics

ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
4-1	Visual Examination	By visual examination check without any out pressure & testing.	There shall be no defects that affect the serviceability of the product.
4-2	Contact Resistance	① To be measured between the two terminals associated with each switch pole. ② Measurements shall be made with a 1 kHz shall current contact resistance meter.	80mΩ max.
4-3	Insulation Resistance	250V DC, 1 minute ±5seconds	100 MΩ min.
4-4	Dielectric withstanding Voltage	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. Mechanical Characteristics

ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
5-1	Operation Force	Operating direction shall be clockwise or counter clockwise direction	700gf ·cm max
5-2	Operation Life	Measurements shall be made following the test set forth below: 1)150mA, 42V DC resistive load 2)Rate of operation: 15~20 cycles/ minute 3)Step of operation: 10,000 steps	1)As shown in item 4-3, 4-4 2)Contact Resistance: 200mΩ max

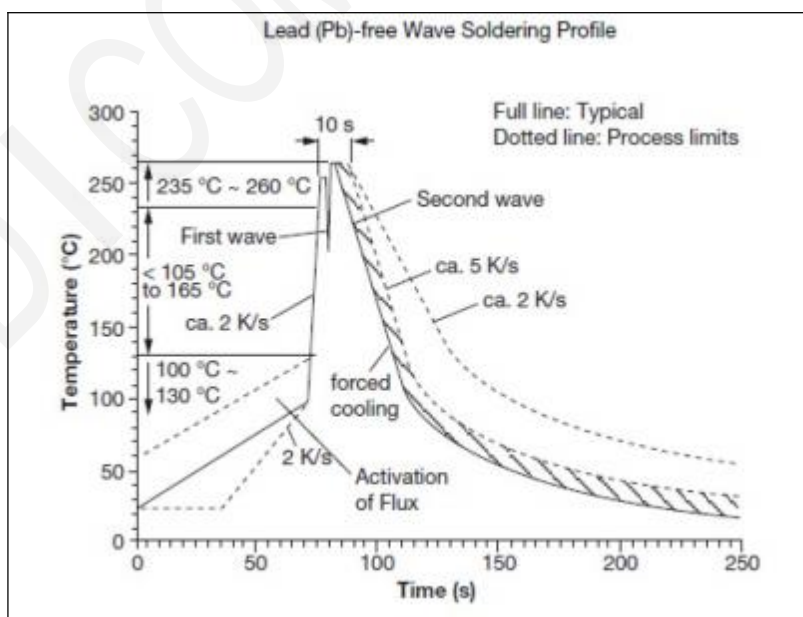
6. Environmental Characteristics

ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
6-1	Resistance Low Temperature	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: $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$ 2)Time: 96 hours	1)As shown in item 4-3, 4-4, 5-1 2)Contact Resistance: 200m Ω max
6-2	Resistance High Temperature	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: $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 2)Time: 96 hours	1)As shown in item 4-3, 4-4, 5-1 2)Contact Resistance: 200m Ω max
6-3	Resistance Humidity	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: $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 2)Relative humidity: 90~95% 3)Time: 96 hours	1)As shown in item 4-4, 5-1 2)Contact Resistance: 200m Ω max 3)Insulation Resistance: 10 M Ω min

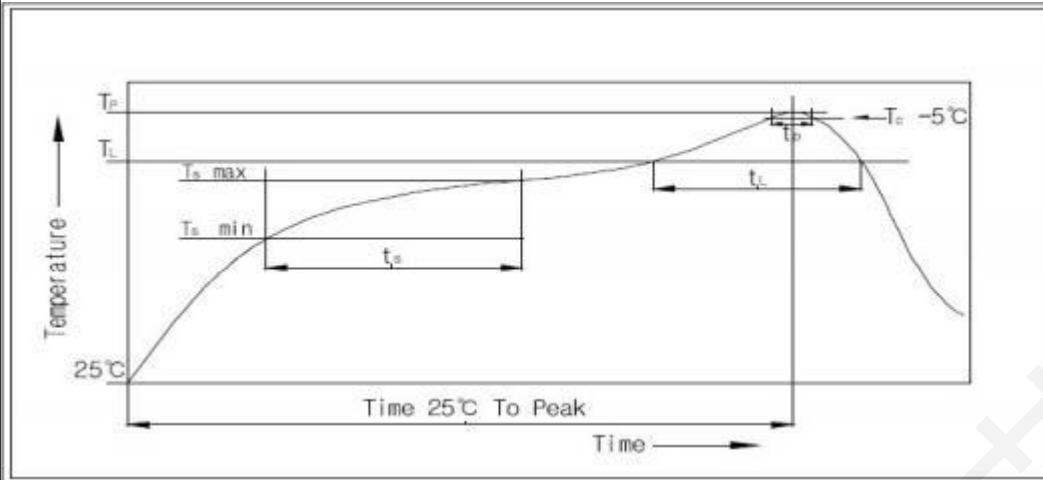
7. This item is "RoHS" Compliant

8. Manual Soldering : Max 350°C, 3 sec.

9. Wave Soldering Conditions:



10. Reflow Soldering Conditions: (SMD type only)



10-1 Condition for Soldering

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)	5~10 seconds
Ramp- Down Rate	6°C/sec max
Time 25°C to Peak Temperature	8 minutes max