

## 7x7mm Miniature Rotary DIP Switch

### Features

#### Optimized Mechanical Features

- Robust metal bracket design
- Standard through hole and surface mount gull-wing terminal configurations
- Binary Coded Decimal, Hexadecimal code and Single pole output
- Clockwise or counterclockwise rotation

#### Optimized Contact System

- Robust wiping contact
- Precise detents

#### Materials

- Gold plated beryllium copper contacts
- Tin coated terminals for better solderability
- High temperature materials (UL94V-0)
- RoHS compliant



## Electrical and Mechanical Specifications

#### Switch Options

4,10,16 positions

#### Output

Binary Coded Decimal  
Hexadecimal Code  
Single Pole

#### Switch Contact Resistance

100 milliohms maximum

#### Insulation Resistance

1000 Mohms minimum between  
insulated terminals

#### Dielectric Strength

250 VAC for 1 minute between  
adjacent terminals

#### Maximum Rating

100 mA, 50 VDC

#### Minimum Load

1  $\mu$ A 20m VDC

#### Operating Temperature

- 40°C to +85°C

#### Rotational Torque

40~200 gf-cm

#### Actuation Life

10,000 steps

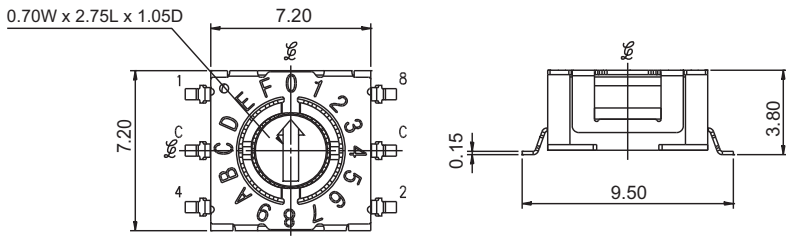
#### Allowable Solder Time

Reflow soldering up to 5 seconds at 260°C max.  
Wave soldering up to 10 seconds at 260°C max.  
Manual soldering up to 4 seconds at 350°C max.

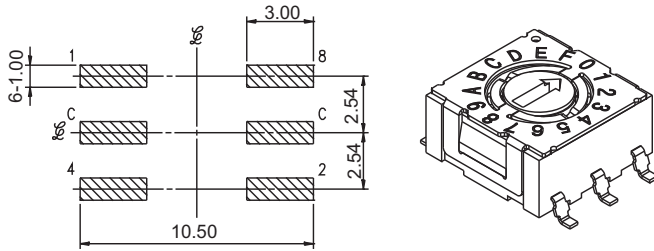
#### Packaging

Standard : Anti-static tube packaging  
Optional : Tape and reel packaging

## CTS SERIES 220AM - Surface Mount Gull Wing



### PCB LAYOUT



DIMENSION : mm  
STANDARD TOLERANCE :  
.XX (2 PLACE) : ±0.30

## CODE TABLE

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

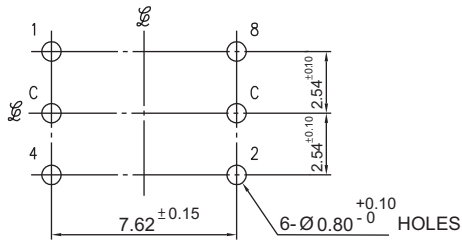
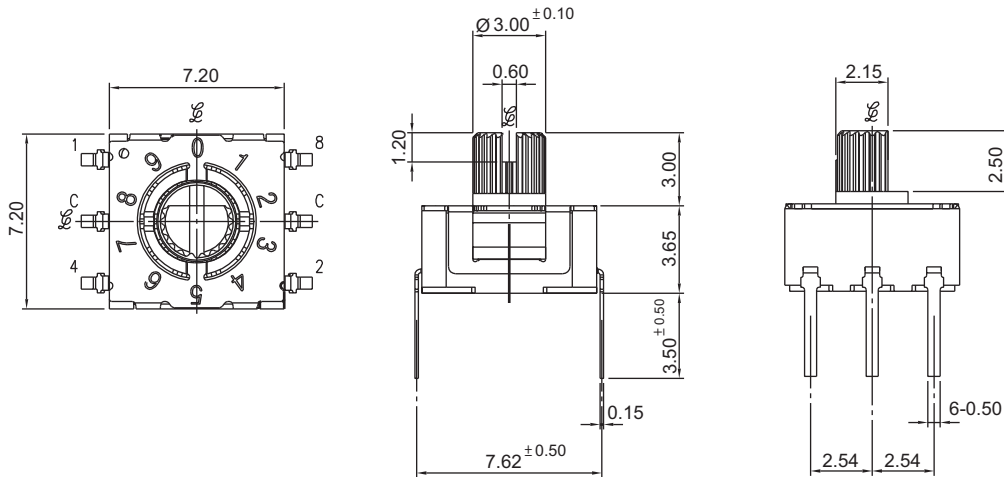
		CODE			
		0	1	2	3
0	●				
1		●			
2			●		
3				●	

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

Dot indicates terminal to common connection. All switches are continuous rotation.  
4 Position - Single pole

Dot indicates terminal to common connection. All switches are continuous rotation.  
10 Position - Numbered 0 through 9  
16 Position - Numbered 0 through F

## CTS SERIES 220AD - Standard Through Hole



DIMENSION : mm  
STANDARD TOLERANCE :  
.XX (2 PLACE) : ±0.30

## CODE TABLE

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

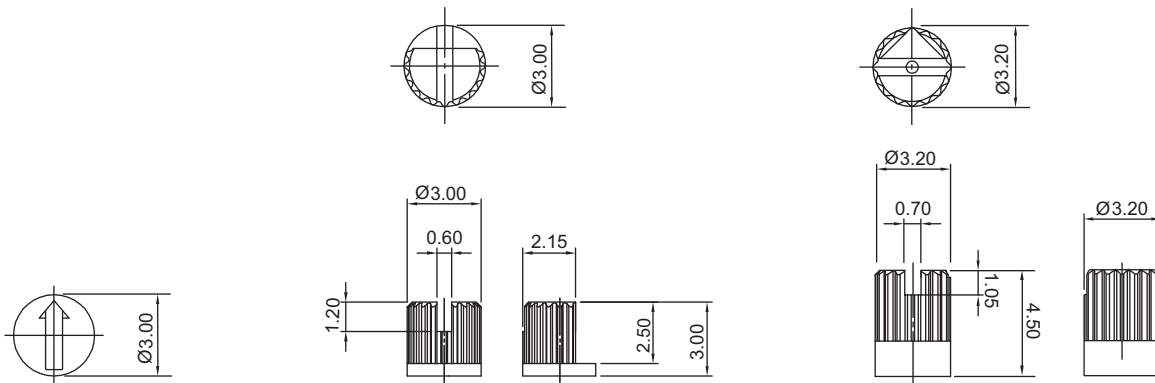
		CODE			
		0	1	2	3
0	●				
1		●			
2			●		
3				●	

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

Dot indicates terminal to common connection. All switches are continuous rotation.  
4 Position - Single pole

Dot indicates terminal to common connection. All switches are continuous rotation.  
10 Position - Numbered 0 through 9  
16 Position - Numbered 0 through F

## Actuator Options



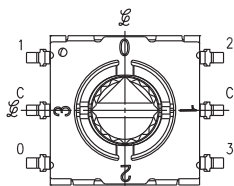
**A: FLUSH ARROW ROTOR**

**B: KNURLED, SLOTTED, FLATTED SHAFT**

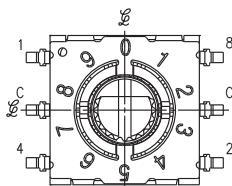
**C: KNURLED, SLOTTED SHAFT**

DIMENSION : mm  
STANDARD TOLERANCE :  
.XX (2 PLACE) :  $\pm 0.30$

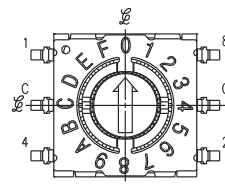
## Position Options



**04: 4 POSITIONS**



**10: 10 POSITIONS**



**16: 16 POSITIONS**

## Ordering Information

