

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 μ A 20m VDC

Operating Temperature

- 40°C to +85°C

Rotational Torque

40~200 gf-cm

Actuation Life

10,000 steps

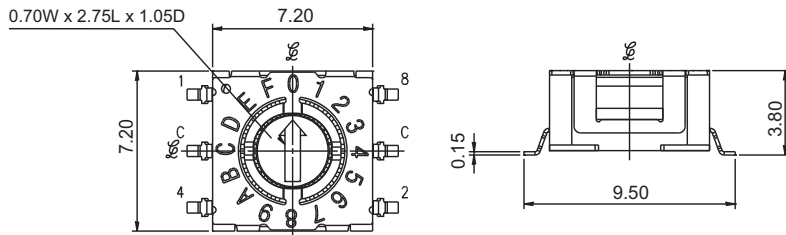
Allowable Solder Time

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.

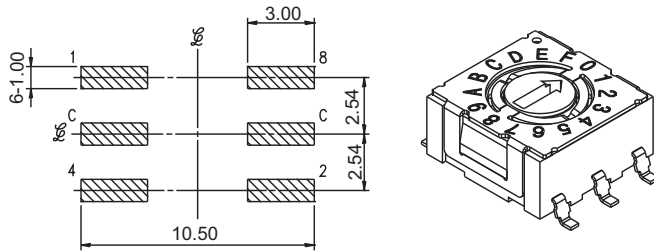
Packaging

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

CTS SERIES 220AM_10,16R - Surface Mount Gull Wing, 10 and 16 Position



PCB LAYOUT



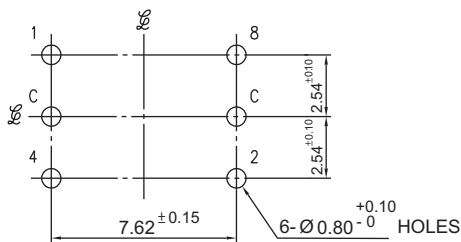
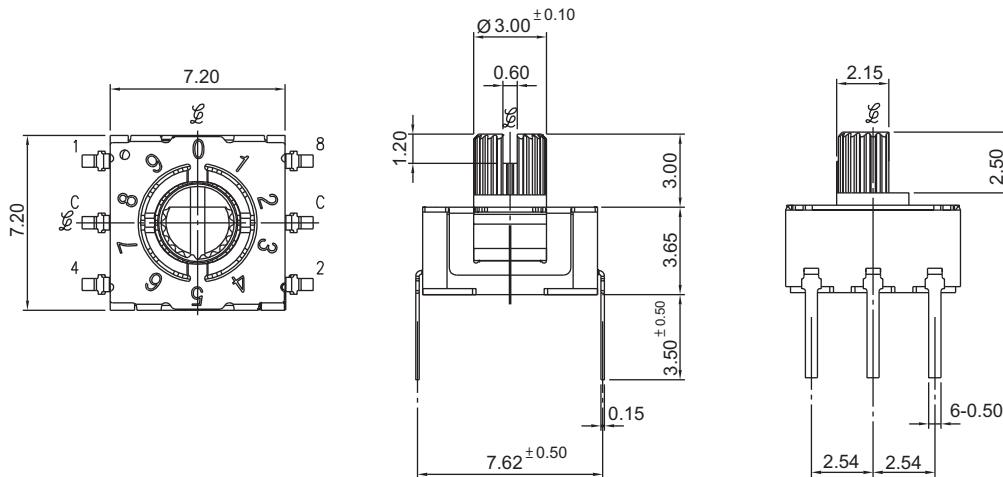
DIMENSION : mm
STANDARD TOLERANCE :
.XX (2 PLACE) : ±0.30

CODE TABLE

POSITIONS	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.
10 Position - Numbered 0 through 9
16 Position - Numbered 0 through F

CTS SERIES 220AD_10,16 - Standard Through Hole, 10 and 16 Position



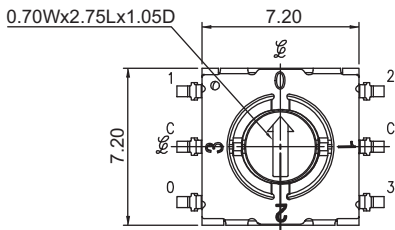
DIMENSION : mm
STANDARD TOLERANCE :
.XX (2 PLACE) : ±0.30

CODE TABLE

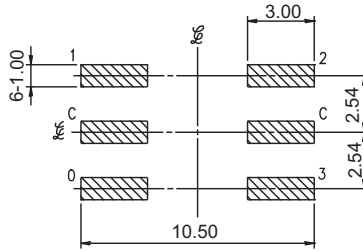
POSITIONS	CODE			
	1	2	4	8
0				
1	●			
2		●		
3	●	●		
4			●	
5	●		●	
6		●	●	
7	●	●	●	
8				●
9	●			●
A		●	●	●
B	●	●	●	●
C			●	●
D	●	●	●	●
E		●	●	●
F	●	●	●	●

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

CTS SERIES 220AM_04R - Surface Mount Gull Wing, 4 Position



PCB LAYOUT

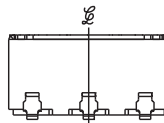
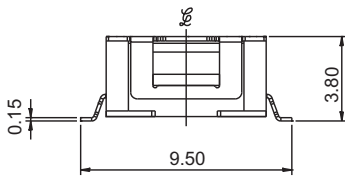


CODE TABLE

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

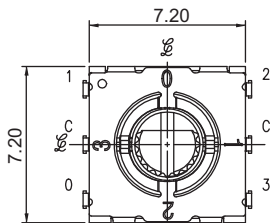
Dot indicates terminal to common connection. All switches are continuous rotation.

4 Position - Single pole

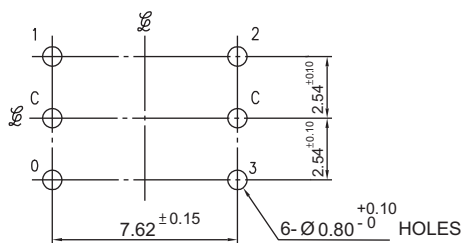


DIMENSION : mm
STANDARD TOLERANCE :
.XX (2 PLACE) : ±0.30

CTS SERIES 220AD_04 - Standard Through Hole, 4 Position



PCB LAYOUT

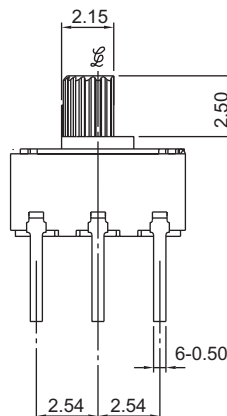
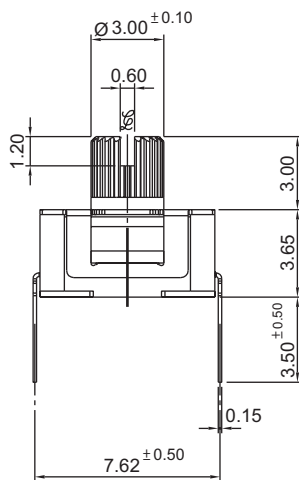


CODE TABLE

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

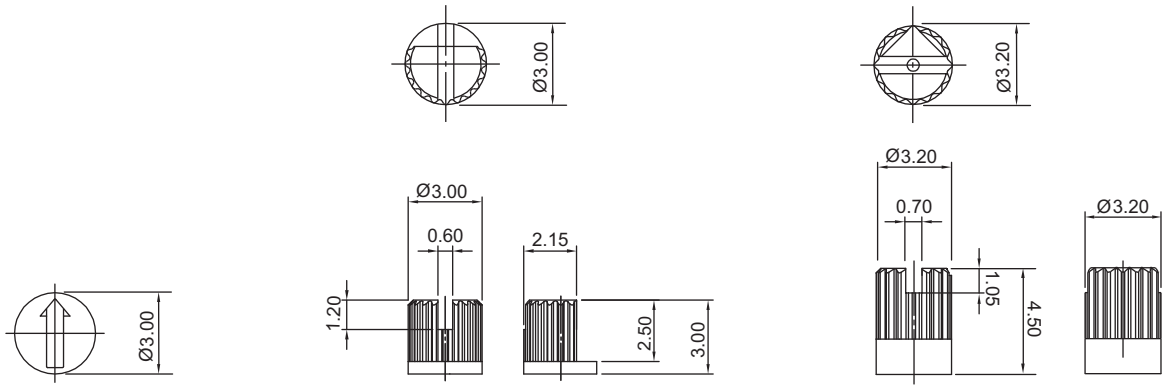
Dot indicates terminal to common connection. All switches are continuous rotation.

4 Position - Single pole



DIMENSION : mm
STANDARD TOLERANCE :
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Actuator Options



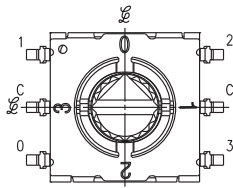
A: FLUSH ARROW ROTOR

B: KNURLED, SLOTTED, FLATTED SHAFT

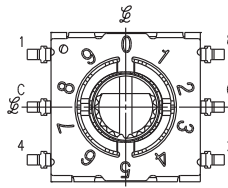
C: KNURLED, SLOTTED SHAFT

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

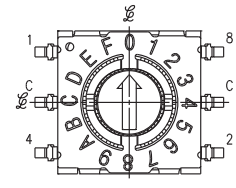
Position Options



04: 4 POSITIONS



10: 10 POSITIONS



16: 16 POSITIONS

Ordering Information

220 - AM A 04 R

AM: SURFACE MOUNT GULL WING, 3.8MM HEIGHT
AD: STANDARD THROUGH HOLE, 3.6MM HEIGHT

A: FLUSH ARROW ROTOR
B: KNURLED, SLOTTED, FLATTED SHAFT
C: KNURLED, SLOTTED SHAFT

04: 4 POSITIONS
10: 10 POSITIONS
16: 16 POSITIONS

BLANK: TUBE PACKAGING
R: TAPE & REEL PACKAGING (SURFACE MOUNT ONLY)

Mouser Electronics

Authorized Distributor

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CTS:

[220AMA16R](#) [220ADA10](#) [220AMA10R](#) [220ADC16](#) [220AMC16R](#) [220ADC10](#) [220AMC10R](#) [220ADA16](#) [220AMA04R](#)
[220ADA04](#) [220ADB10](#) [220ADC04](#) [220AMB10R](#) [220AMB16R](#) [220AMC04R](#) [220ADB04](#)