

7x7mm Miniature Rotary DIP Switch

Features

Optimized Mechanical Features

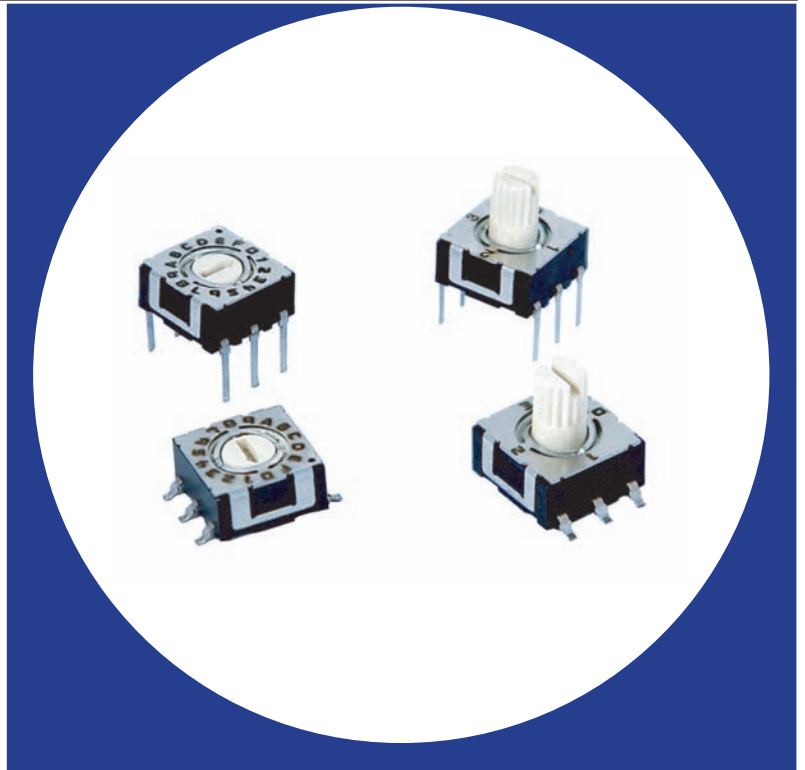
- Robust metal bracket design
- Standard through hole and surface mount gull-wing terminal configurations
- Real code
- Clockwise or counterclockwise rotation

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 Function

4,10,16 positions

Output Code

Real

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

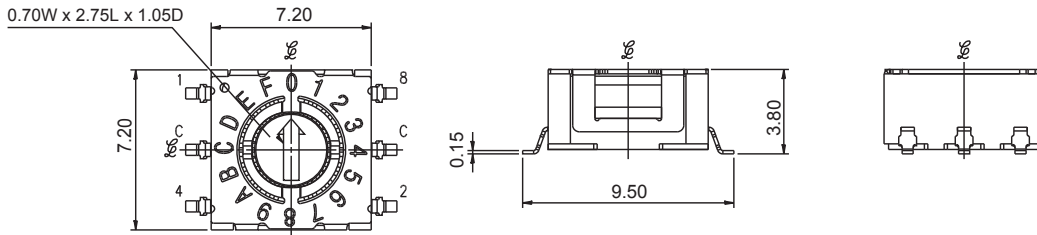
Allowable Solder Time

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.

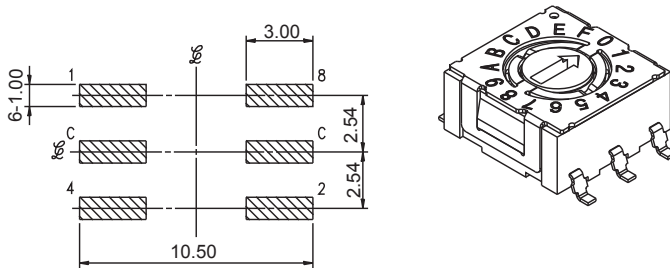
Packaging

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

CTS SERIES 220AM - Surface Mount Gull Wing



PCB LAYOUT



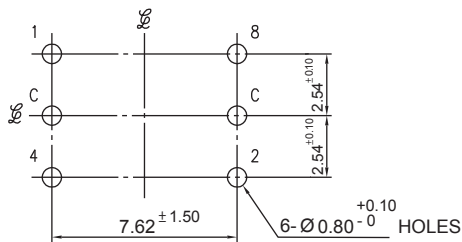
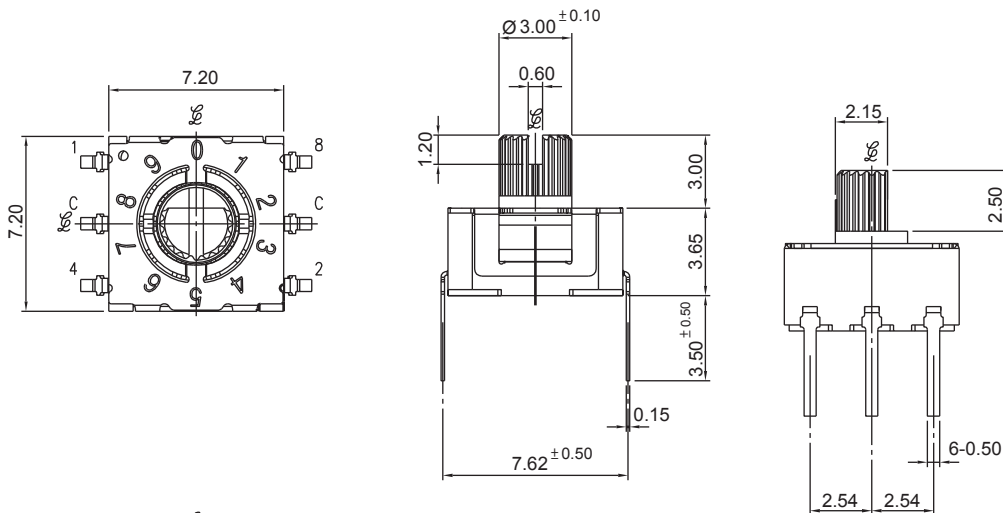
DIMENSION : mm
STANDARD TOLERANCE :
.XX (2 PLACE) : ±0.30

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.
4 position output is 0 thru 3
10 position output is 0 thru 9
16 position output is 0 thru F

CTS SERIES 220AD - Standard Through Hole



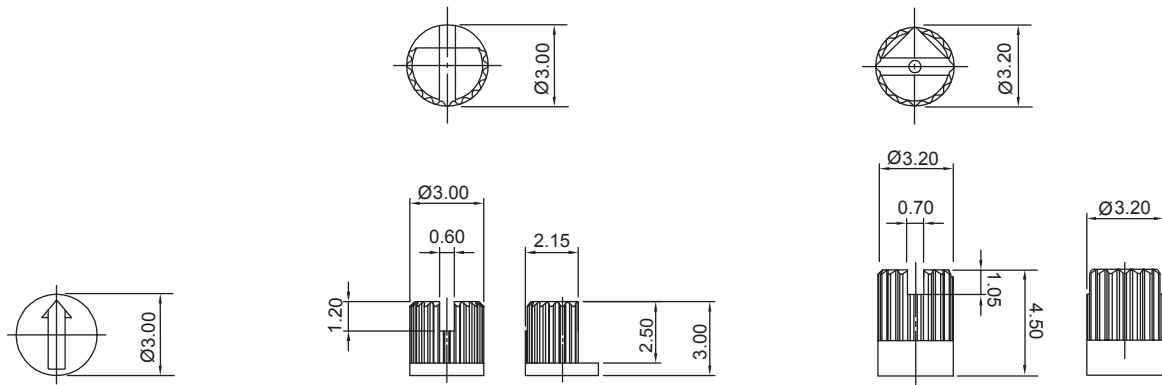
DIMENSION : mm
STANDARD TOLERANCE :
.XX (2 PLACE) : ±0.30

CODE TABLE

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| 2 | | ● | | |
| 3 | ● | ● | | |
| 4 | | | ● | |
| 5 | ● | | ● | |
| 6 | | ● | ● | |
| 7 | ● | ● | ● | |
| 8 | | | | ● |
| 9 | ● | | | ● |
| A | ● | ● | ● | ● |
| B | ● | ● | ● | ● |
| C | | ● | ● | ● |
| D | ● | ● | ● | ● |
| E | ● | ● | ● | ● |
| F | ● | ● | ● | ● |

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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

Ordering Information

