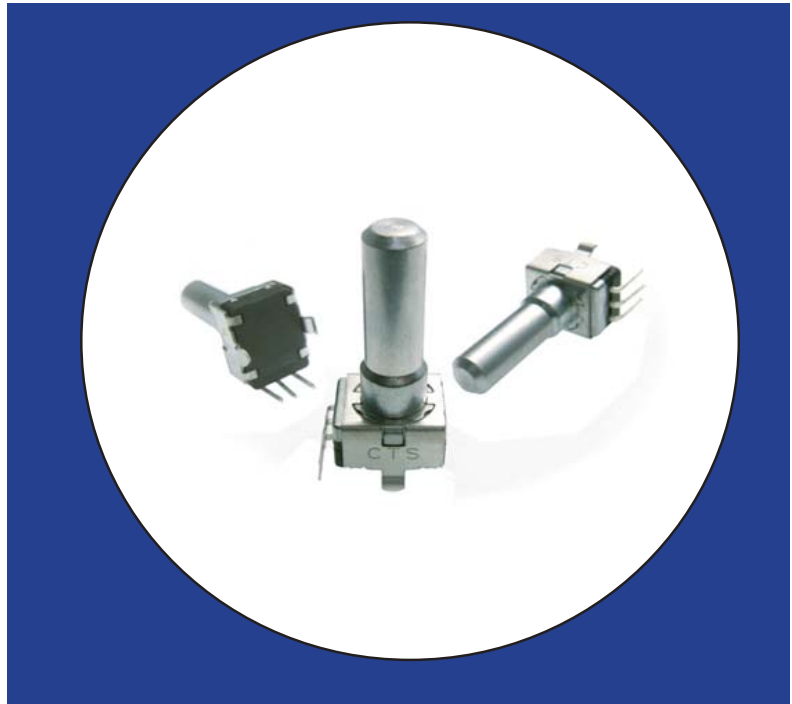


Precision Miniature 9mm Size Rotary Encoder

Features

- Miniature Size
- High Resolution (20 pulses)
- Optional Momentary Switch
- Continuous Rotation
- Durable Metal Shaft & Bushing
- Long Rotational Life (50K, 100K)
- Available with 20 Detents
- RoHS Compliant



Electrical and Mechanical Specifications

Encoder:

Contact Resistance

1Ω maximum

Voltage Rating (each channel)

12 VDC @ 10mA maximum

Phase Difference (FIG. 1)

T1, T2, T3, T4 - 4.0 milliseconds
minimum @ 60 rpm

Chatter (FIG. 3)

t1, t3 – 3.0 milliseconds maximum
@ 60rpm

Bounce (FIG. 3)

t2 – 3.0 milliseconds maximum
@ 60rpm

Detent Points

20 detents available

Rotational Life

Standard: 50,000 cycles
Available: 100,000 cycles

Resolution

20 pulses in 360°

Insulation Resistance

100MΩ minimum at 250 VDC

Temperature Range

Operating: -30°C - +70°C
Storage: -40°C - +85°C

Rotational Torque

10 - 120 gf.cm

Solder Heat Resistance

260°C for 5 seconds

Push-Pull Strength of Shaft

10 kg minimum for 10 seconds

Special

Consult CTS for customized or not listed features including other detent points, resolution, torque and mounting style.

Electrical and Mechanical Specifications (continued)

Optional Momentary Switch:

Switch Contact Resistance

Initial: 100mΩ maximum
After Life Cycles: 200mΩ maximum

Switch Rating

16 VDC @ 0.5A maximum

Switch Bounce

5 milliseconds maximum

Switch Operating Force

600 ± 300 g (21 ± 11 oz.)

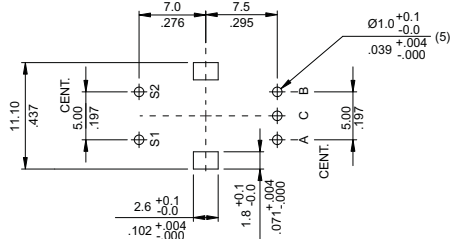
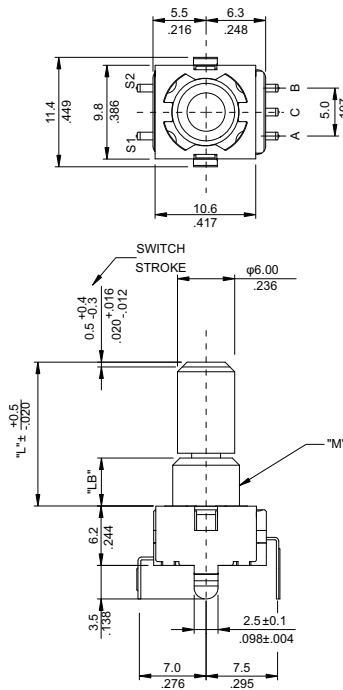
Switch Life

100,000 operations

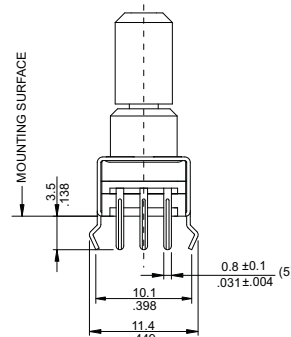
Switch Travel

0.5mm (.020")

TYPE MC-290V Typical 2-Bit Encoder With Momentary Switch, Shaft Perpendicular to PC Board

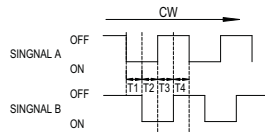


MOUNTING HOLE DETAIL VIEWED FROM MOUNTING SIDE



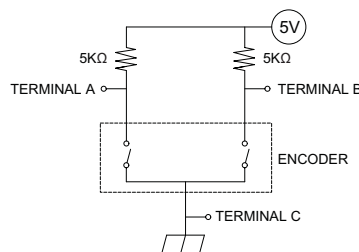
DIMENSION: $\frac{\text{mm}}{\text{inch}}$

OUTPUT SIGNAL (FIG.1)

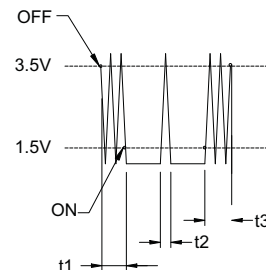


PHASE DIFFERENCE

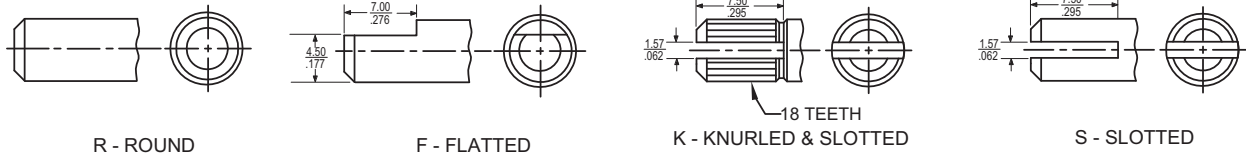
TYPICAL CIRCUIT (FIG.2)



BOUNCE / CHATTER (FIG.3)



Shaft Trim



DIMENSION: $\frac{\text{mm}}{\text{inch}}$

Ordering Information

