

### Commercial Miniature Encoder

- 2 bit quadrature (Gray code)
- Momentary SPST switch optional
- Durable metal shaft
- 9mm Body



### Electrical and Mechanical Specifications

#### Encoder Ratings :

##### **Contact Resistance**

1  $\Omega$  maximum

##### **Voltage Rating (each channel)**

12 VDC @ 10 mA maximum.

5 VDC @ 1 mA minimum.

##### **Phase Difference (FIG.1)**

$T_1, T_2, T_3, T_4$ —5 milliseconds min.  
at 60 rpm CW/CCW

##### **Contact Bounce / Chatter (FIG.3)**

$t_1, t_2, t_3$ —3 milliseconds max.  
at 60 rpm CW/CCW

##### **Rotational Torque**

10 to 120 g-cm

##### **Rotational Life**

50,000 cycles

##### **Resolution**

20 pulses in 360°

#### Momentary SPST Switch Ratings :

##### **Contact Resistance**

100 m $\Omega$  maximum

##### **Voltage Rating**

16 VDC @ 0.5A max.  
@ 10 mA min.

##### **Switch Bounce**

5 milliseconds maximum

##### **Switch Operating Force**

600  $\pm$  300 grams for 0.5 mm travel

##### **Switch Life**

100,000 operations for 0.5 mm travel

##### **Switch Travel**

0.5 mm

#### General Ratings :

##### **Temperature Ratings**

Storage : -40°C to +85°C

Operation : -30°C to +70°C

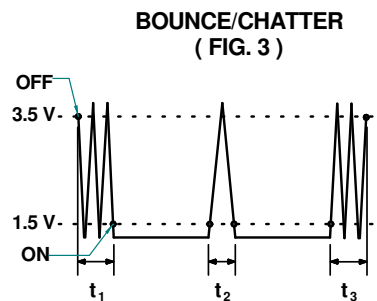
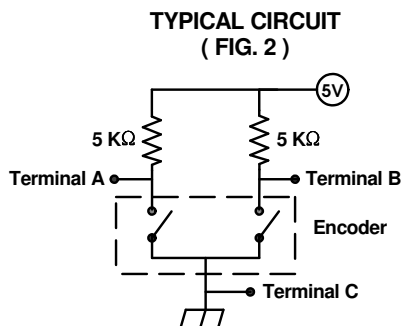
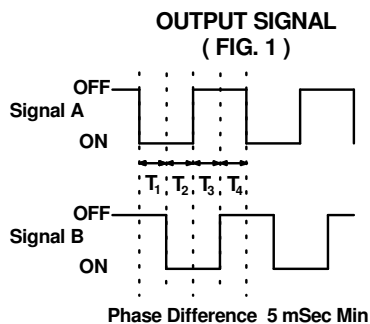
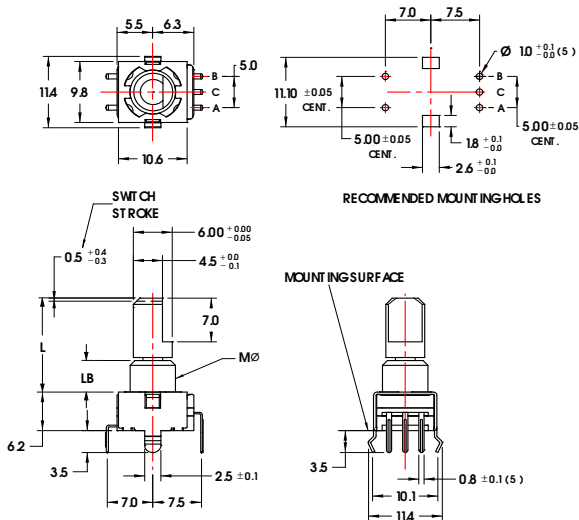
##### **Solderability**

Flux for 5-10 sec., then dip into a  
Solder bath at 300  $\pm$ 5°C for 3 sec.

##### **Pull and Thrust on Shaft**

Withstands a pushing and pulling force of  
10kg-f static load applied in axial direction  
for 10  $\pm$ 1 sec. without physical damage or  
electrical degradation.

## Mechanical Layout ( all dimensions in mm )



## 290 SERIES PART NUMBERING

