

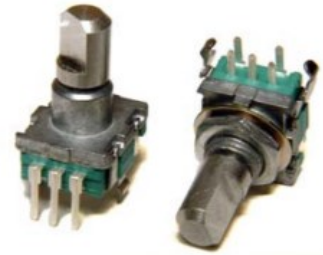
# Rotary Encoder

## Model EN11 Series



### Features:

- 11 mm
- 2 bits gray code
- Incremental/contacting type
- Metal bushing/shaft
- Push-on switch option



### Model Styles Available

|   |          |
|---|----------|
| Top Adjust, with Switch, Threaded Bushing     | EN11-HSM |
| Top Adjust, without Switch, Threaded Bushing  | EN11-HNM |
| Top Adjust, with Switch, Plain Bushing        | EN11-HSB |
| Top Adjust, without Switch, Plain Bushing     | EN11-HNB |
| Side Adjust, with Switch, Threaded Bushing    | EN11-VSM |
| Side Adjust, without Switch, Threaded Bushing | EN11-VNM |
| Side Adjust, with Switch, Plain Bushing       | EN11-VSB |
| Side Adjust, without Switch, Plain Bushing    | EN11-VNB |

### Electrical

|                                   |                          |
|-----------------------------------|--------------------------|
| Pulses ( Per Revolution )         | 15, 20                   |
| Encoder Closed Circuit Resistance | 3 Ohms, max.             |
| Encoder Contact Rating            | 10mA/ 5Vdc               |
| Operating Current, Maximum        | 10mA                     |
| Dielectric Strength               | 300Vac/1mA, 1 minute     |
| Insulation Resistance, Minimum    | 100M ohms at 250Vdc/ 1mA |
| Sliding Noise ( at 60 RPM )       | 2.0ms max.               |
| Contact Bounce ( at 15 RPM)       | 5.0ms max.               |
| Operating Speed ( RPM )           | 100 RPM max.             |
| Switch Power rating               | 10mA/ 5Vdc               |
| Switch Contact Resistance         | 100 milliohms            |
| Actual Electrical Travel, Nominal | Continuous               |

### Mechanical

|                                      |              |
|--------------------------------------|--------------|
| Total Mechanical Travel              | Continuous   |
| Detents ( per Revolution)            | 0, 20 and 30 |
| Rotational Torque of Detent, Maximum | 2.5 oz-in    |
| Switch Operating Force               | 550 gf       |
| Switch Travel                        | 0.5mm        |

#### General Note

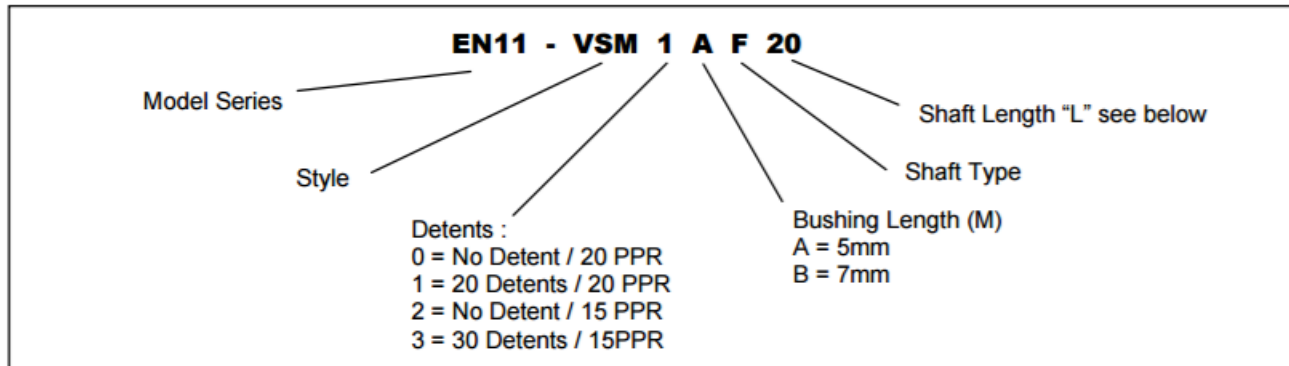
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### Environmental

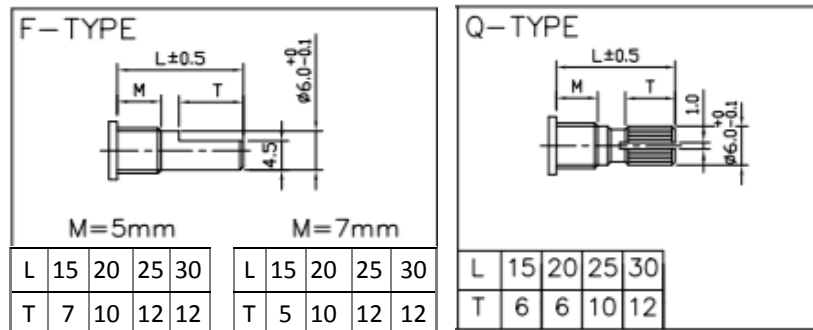
Rotational Life

30,000 cycles

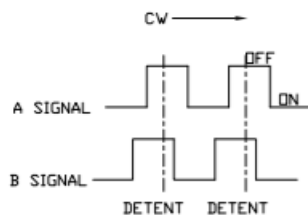
### Ordering



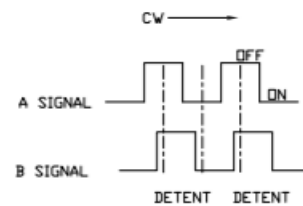
### Shaft Types



### Circuit Diagram



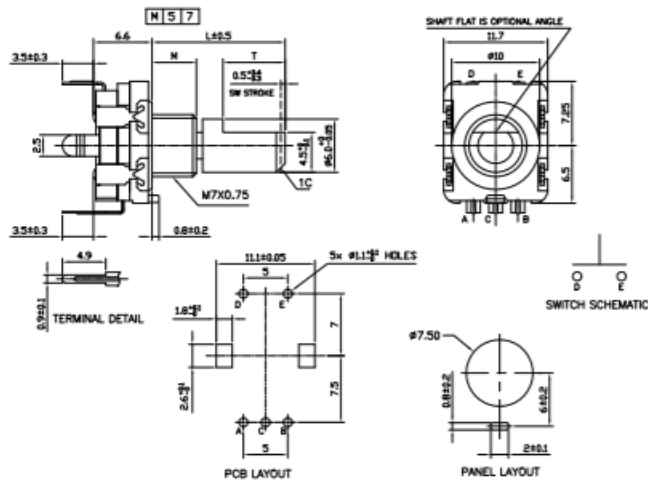
**For 20 PPR (B leads A)**



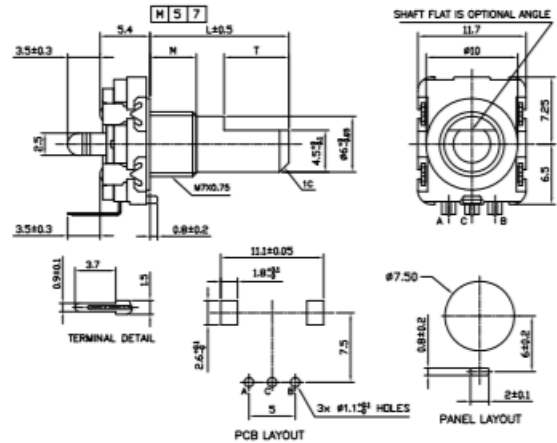
**For 15 PPR (A leads B)**

### Outline Drawings

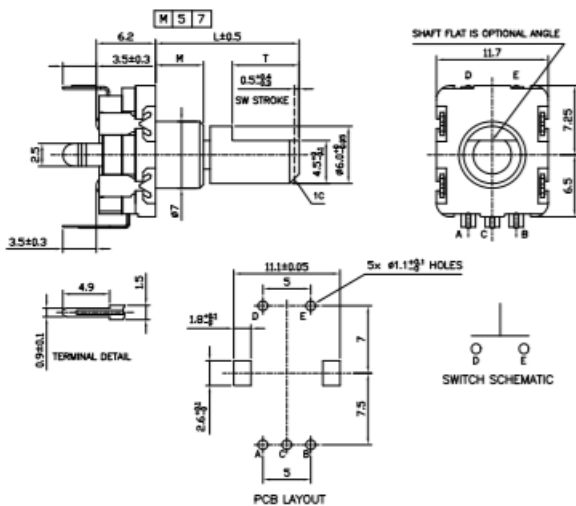
**MODEL EN11-HSM**  
(Top Adjust, with Switch, Threaded Bushing)



**MODEL EN11-HNM**  
(Top Adjust, without Switch, Threaded Bushing)



**MODEL EN11-HSB**  
(Top Adjust, with Switch, Plain Bushing)



**MODEL EN11-HNB**  
(Top Adjust, without Switch, Plain Bushing)

