## **Model EN11 Series**

# **Electronics**

#### Features:

- 11 mm rotary encoder
- 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/ 1 mA |
| 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 miliohms              |
| Actual electrical travel, nominal | Continuous                |

#### Notes:

1. Specifications subject to change without notice

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## **Model EN11 Series**



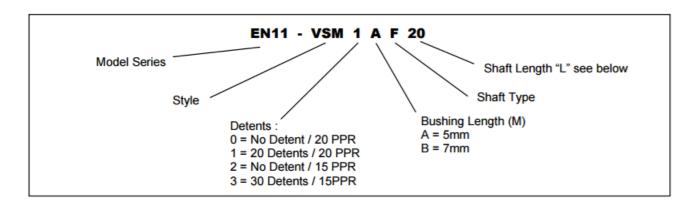
## **Mechanical**

| 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        |

### **Environmental**

| Operating temperature range | -10°C to +70°C |
|-----------------------------|----------------|
| Rotational life             | 30,000 cycles  |

## **Ordering Information**



#### Notes:

1. Contact our customer service for custom designs and features.

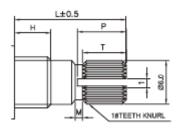
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## **Model EN11 Series**



## **Shaft Types**

**Q** Type



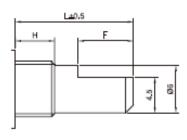
#### **H** = 5mm

| L | 15 | 20 | 25 | 30 |
|---|----|----|----|----|
| Р | 7  | 7  | 11 | 14 |
| Т | 6  | 6  | 10 | 12 |
| М | 2  | 2  | 2  | 4  |

#### H = 7mm

| L | 15 | 20 | 25 | 30 |
|---|----|----|----|----|
| Р | 7  | 7  | 11 | 14 |
| Т | 6  | 6  | 10 | 12 |
| М | 1  | 1  | 2  | 4  |

## **F** Type



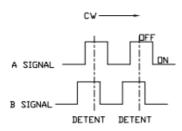
#### H = 5mm

| L | 15 | 20 | 25 | 30 |
|---|----|----|----|----|
| F | 7  | 10 | 12 | 12 |

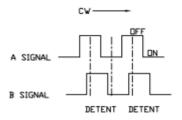
#### **H** = 7mm

| L | 15 | 20 | 25 | 30 |
|---|----|----|----|----|
| F | 5  | 10 | 12 | 12 |

# **Circuit Diagram**



For 20 PPR (B leads A)



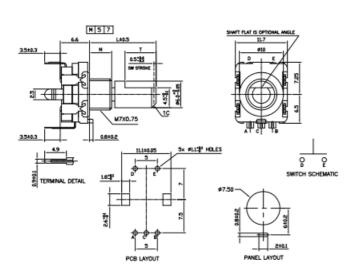
For 15 PPR (A leads B)

## **Model EN11 Series**

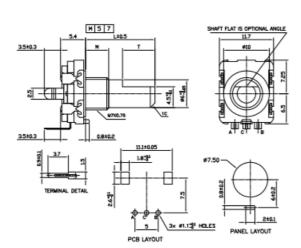


## **Outline Drawings**

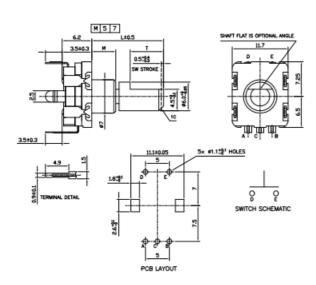
#### MODEL EN11-HSM (Top Adjust, with Switch, Threaded Bushing)



#### 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)

