# Rotary Encoder

## Model EN12 Series

**Features:**

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

RoHS 2 compliant



## Model Styles Available

| | |
|---|---|
| Top Adjust, with Switch | EN12-HS |
| Top Adjust, without Switch | EN12-HN |
| Side Adjust, with Switch | EN12-VS |
| Side Adjust, without Switch | EN12-VN |

## Electrical

| | |
|---|---|
| Pulses ( Per Revolution ) | 12 & 24 |
| Closed Circuit Resistance, Ohms | 3 Ohms, max. |
| Contact Rating | 1mA/ 5Vdc |
| Operating Current, Maximum | 1mA |
| Dielectric Strength | 300Vac/ 1mA, I 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, 12, 24 |
| Rotational Torque of Detent, Maximum | 1.4 oz-in |
| Switch Operating Force | 550 gf |
| Switch Travel | 0.5mm |

General Note
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## Environmental

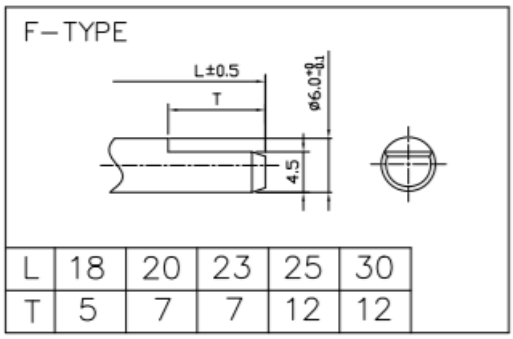
| | |
|---|---|
| Rotational Life | 30,000 cycles |

## Ordering

**EN12 - VS 1 1 A F 20**

- Model Series
- Style
- Pulses: 1=12 Pulses, 2=24 Pulses
- Detents : 0 = No Detent, 1= 12 Detents (for 12 pulses only), 2= 24 Detents (for 24 pulses only)
- Bushing Length A = 5mm
- Flatted Shaft
- Shaft Length "L" see below

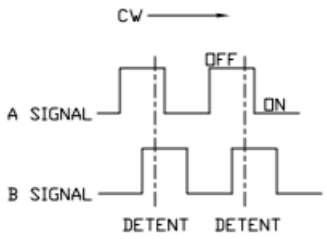
**Shaft Length Options**




| L | 18 | 20 | 23 | 25 | 30 |
|---|---|---|---|---|---|
| T | 5 | 7 | 7 | 12 | 12 |

**18 Length = 17.5mm**
**23 Length = 22.5mm**

## Circuit Diagram



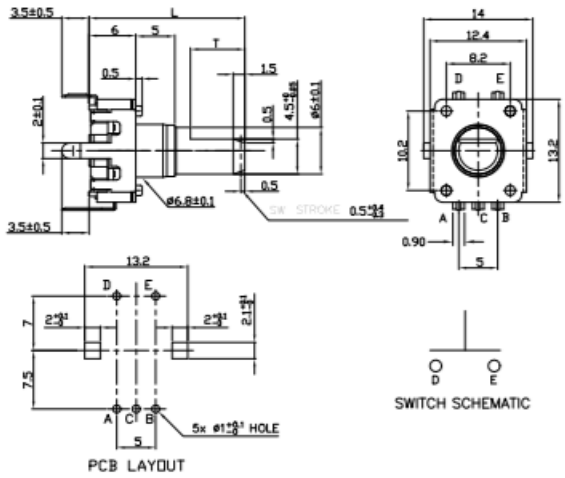

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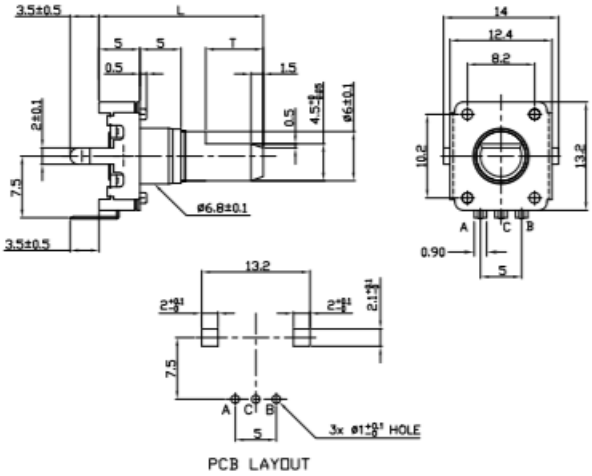
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## Outline Drawings

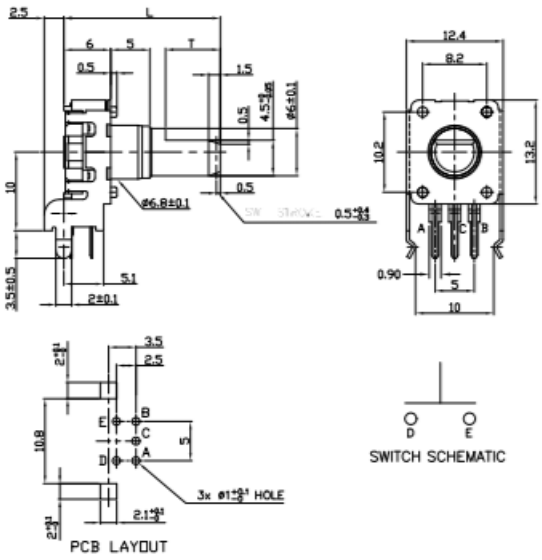
### EN12-HS (Top Adjust, with Switch)



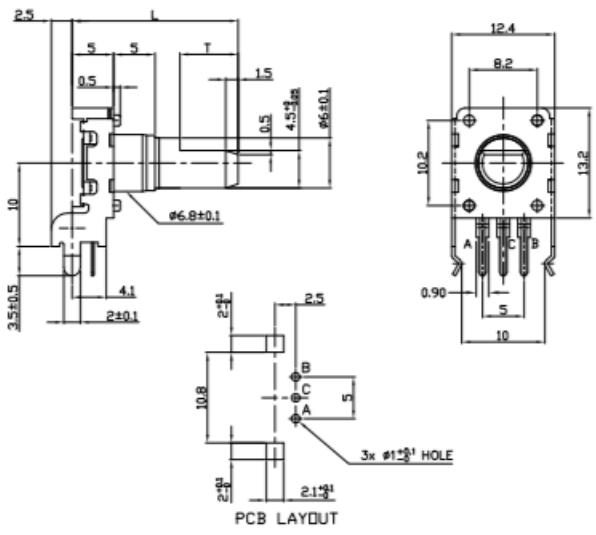

### EN12-HN (Top Adjust, without Switch)




### EN12-VS (Side Adjust, with Switch)




### EN12-VN (Side Adjust, without Switch)





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