

# Rotary Encoder

## Model EN08



### Features:

- 8 mm rotary encoder
- 2 bits Gray code
- Incremental / contacting type
- Metal bushing / shaft
- S.P.S.T. momentary switch option
- Dual encoders with concentric shaft
- RoHS compliant



### Description:

These RoHS-compliant rotary encoders feature a compact 8mm design with options of a SPST momentary switch and dual encoders with concentric shafts. This 3-model series is suitable for a wide range of applications including digital audio/video equipment, navigation systems, appliances and machine tools. The encoders have a mechanical-type contact and are sealed to IP50 specifications. The EN08 series feature a 2-bit Gray code. Their versatility and options make them one of the most easily integrated encoder series on the market. The compact 8 mm encoders have 20 detents per revolution with rotational torque of detent rated at a maximum of 1.0 oz-in. The operating life is 50,000 cycles, and the optional SPST momentary switch life is rated at 15,000 actuations. The encoders feature a maximum operating speed of 30 RPMs at 10 pulses per revolution. The closed circuit resistance is rated at a maximum of 3.0 Ohms with a 1.0 mA/5Vdc contact rating. The SPST switch has a maximum operating force of 850 gf and travels up to 0.5 mm. Operating temperatures range from -30°C to +70°C.

### Applications:

- Audio/video control
- Navigation systems
- Test instrumentation
- Speed control
- Menu selection

## Model Styles Available

EN08-N	Side adjust, single encoder
EN08-S	Side adjust, single encoder, with momentary switch
EN08-C	Side adjust, dual encoders, concentric shaft



General Note  
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### Electrical Specifications

Pulses (per revolution)	10
Encoder closed circuit resistance	3.0 Ohms, max.
Encoder contact rating	1.0 mA / 5 Vdc
Operating current, maximum	1.0 mA
Dielectric strength	200 Vac, 1 minute
Insulation resistance, minimum	100M Ohms
Sliding noise (at 60 RPM)	5 ms max.
Contact bounce (at 15 RPM)	10 ms max.
Operating speed (RPM), maximum	30 RPM
Switch power rating	10 mA / 5 Vdc
Switch contact resistance	100 milliohms
Actual electrical travel, nominal	Continuous

### Mechanical Specifications

Total mechanical travel	Continuous
Detents (per revolution)	0, 20
Rotational torque of detent, maximum	1.0 oz-in
Switch operating force, maximum	850 gf
Switch travel, maximum	0.5 mm

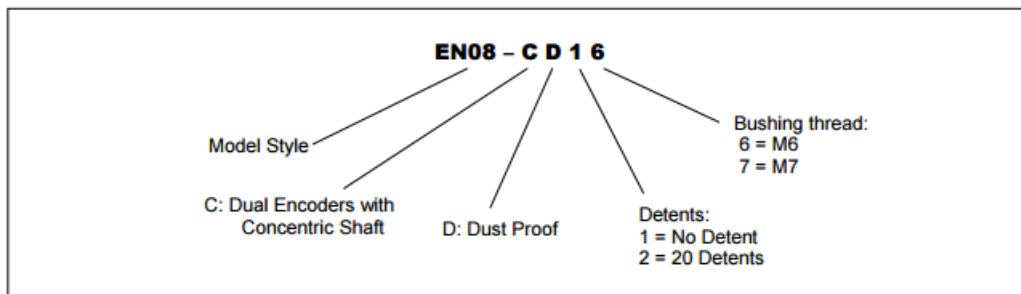
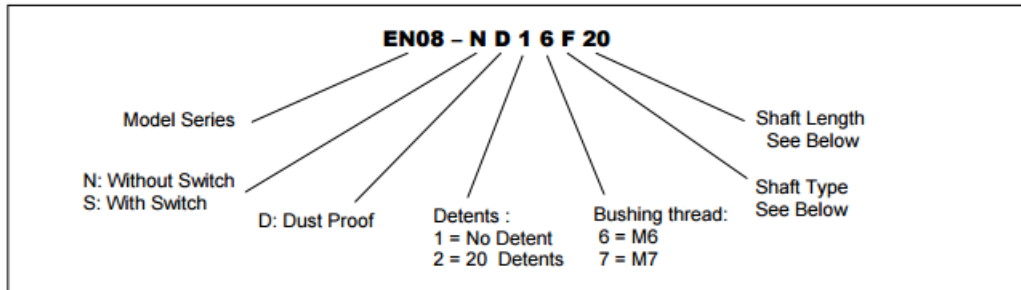
### Environmental Specifications

Operating temperature range	-30°C to +70°C
Operation life	Switch: 15,000 actuations, Encoders: 50,000 cycles

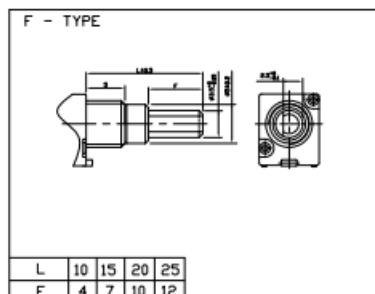
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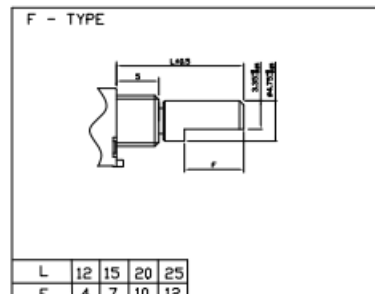
### Ordering Information



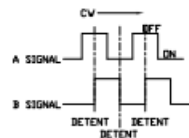
Shaft Type for P08x-N



Shaft Type for P08x-S



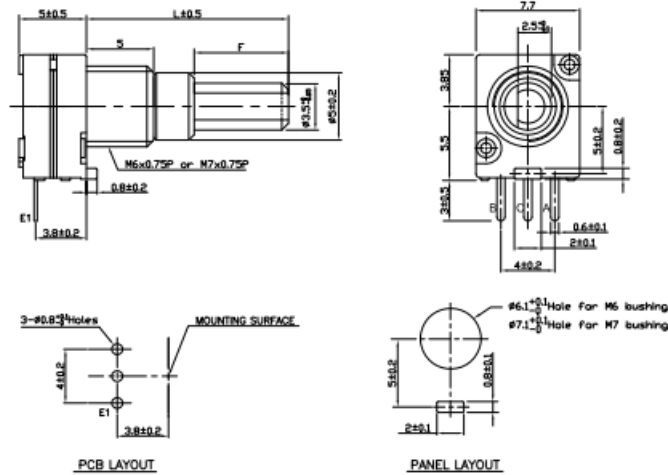
### Circuit Diagram



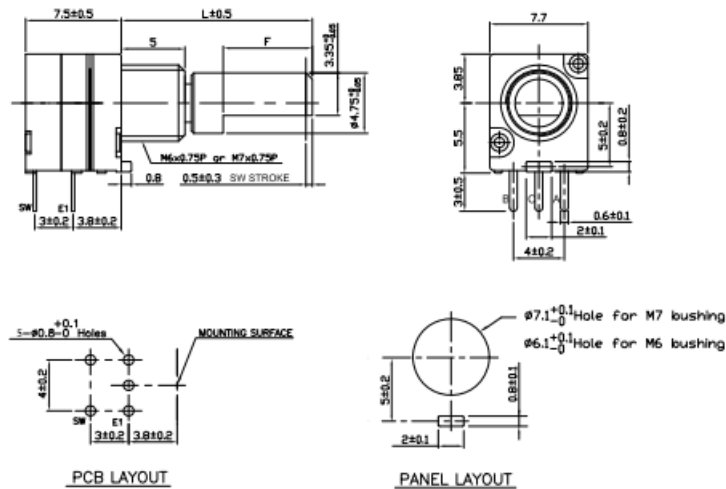
<sup>2</sup> Contact our customer service for custom designs and features.

### Outline Drawing

#### EN08-N (Single Encoder)



#### EN08-S (Single Encoder, with Momentary Switch)



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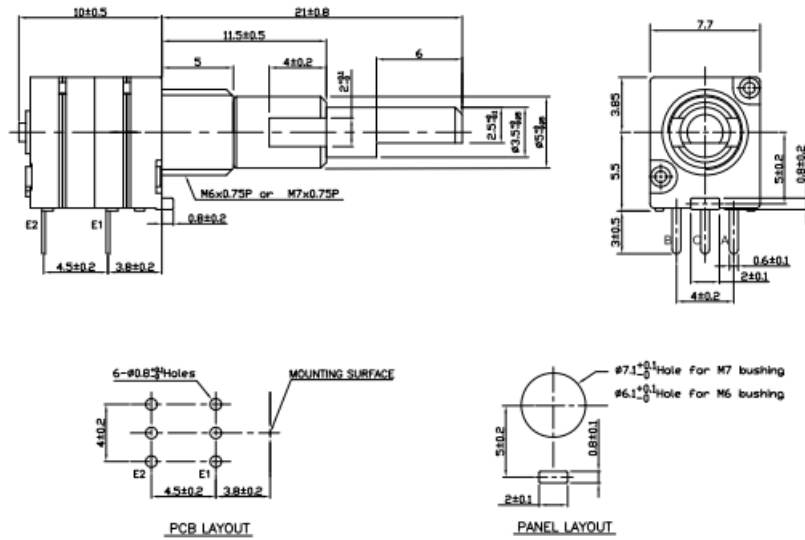
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### Outline Drawing

EN08-C (Dual Encoders, Concentric shaft)



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