

## Features

- Compact design
- High reliability
- Surface mount
- RoHS compliant\*

## Applications

- Micro headphones
- Smart wearable devices

# PEC04 Series – 4 mm Incremental Micro Encoder

### Electrical Characteristics

Output.....	2-bit quadrature code
Contact Rating.....	10 mA @ 5 VDC
Insulation Resistance.....	50 MΩ min. @ 50 VDC
Dielectric Strength	
Sea Level.....	50 VAC 1 min.
Electrical Travel.....	Continuous
Sliding Bounce.....	5 ms max.
Resolution.....	6 or 12 pulses in 360 ° rotation

### Environmental Characteristics

Operating Temperature Range.....	-20 °C to +70 °C
Storage Temperature Range.....	-35 °C to +85 °C
Soldering Condition	
Dip Soldering.....	260 °C for 3 s.
Manual Soldering.....	300 °C for 3 s.
IP Rating.....	IP 40

### Mechanical Characteristics

Mechanical Angle.....	360 ° continuous
Detent Torque.....	10 to 100 gf.cm
Rotational Life.....	30,000 cycles

### Product Characteristics

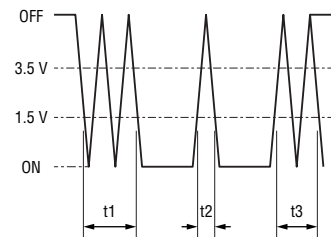
Weight.....	0.1 grams
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### Additional Information

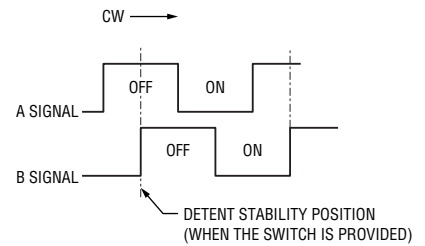
Click these links for more information:



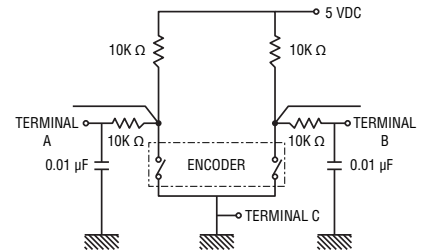
### Switch Circuit



### Quadrature Output Table



### Suggested Filter Circuit



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[www.bourns.com](http://www.bourns.com)



**WARNING**  
Cancer and Reproductive Harm  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

\*\*Excluding FDA Class III devices and generally equivalent classification outside of the United States.

\*\*\*Devices are tested using standard noise reduction filters. For optimum performance, designers should use noise reduction filters in their circuits.

Specifications are subject to change without notice.

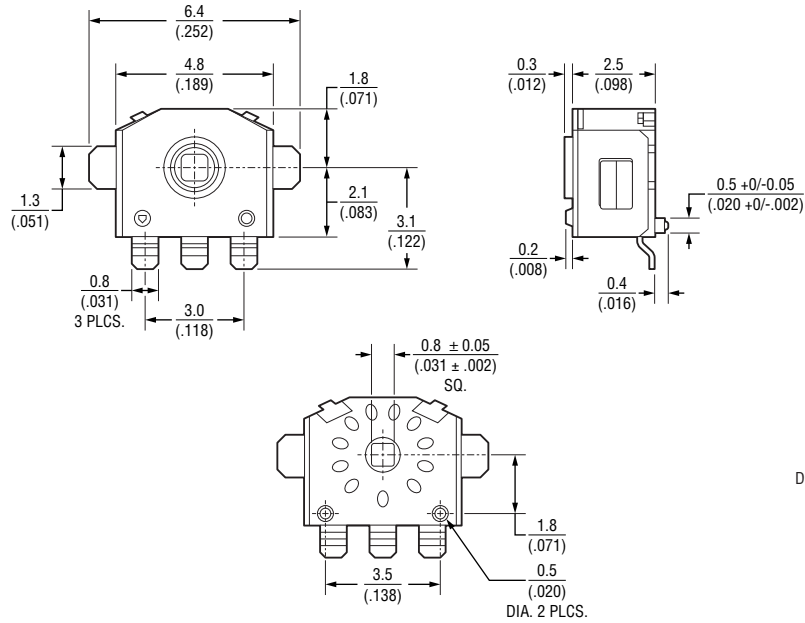
Users should verify actual device performance in their specific applications.

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# PEC04 Series – 4 mm Incremental Micro Encoder

**BOURNS®**

## Product Dimensions



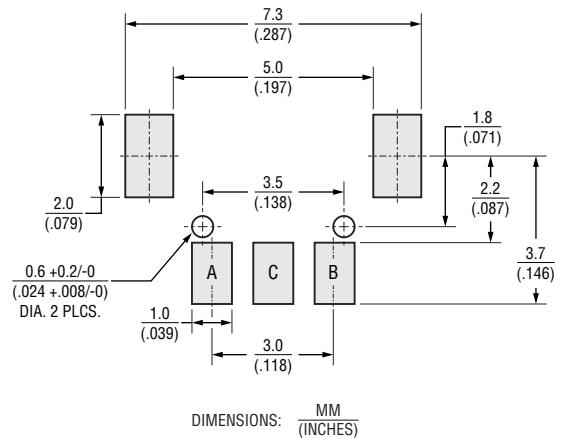
DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

## How To Order

**PEC04 - 1 02 P - N 0006**

- Model Series \_\_\_\_\_
- 4 mm Incremental Micro Encoder
- Detent Option \_\_\_\_\_
- 1 = 12 Detents
- Standard Shaft Length \_\_\_\_\_
- 02 = 0.2 mm
- Shaft Style \_\_\_\_\_
- P = Plastic Shaft
- Switch Configuration \_\_\_\_\_
- N = No Switch
- Resolution \_\_\_\_\_
- 0006 = 6 Pulses per 360 ° Rotation
- 0012 = 12 Pulses per 360 ° Rotation

## Recommended PCB Layout



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

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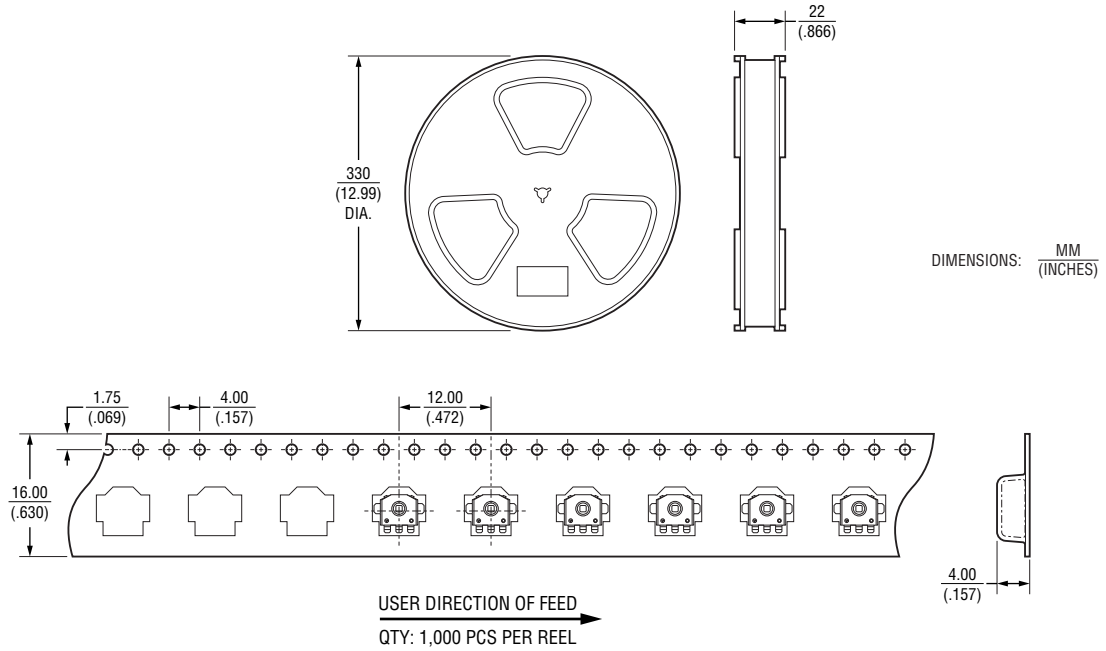
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# PEC04 Series – 4 mm Incremental Micro Encoder

# BOURNS®

## Packaging Specifications



REV. 07/25

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