



## Features

- Low profile incremental encoder
- High-class rotational feel
- Haptic detent feedback
- RoHS compliant\*

## PER56 - 56 mm Low Profile Incremental Ring Encoder

### Additional Information

Click these links for more information:



## Electrical Characteristics

|                                 |                       |
|---------------------------------|-----------------------|
| Output.....                     | 2-bit quadrature code |
| Contact Rating.....             | 10 mA @ 5 V DC        |
| Insulation Resistance           |                       |
| .....                           | 100 MΩ @ 250 V DC     |
| Dielectric Withstanding Voltage |                       |
| Sea Level.....                  | 300 V AC              |
| Electrical Travel.....          | Continuous            |
| Contact Bounce (15 RPM).....    | 2 ms max.**           |

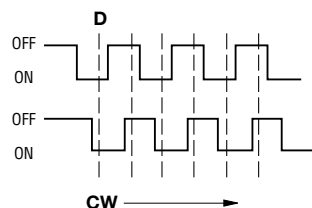
## Environmental Characteristics

|                            |                  |
|----------------------------|------------------|
| Operating Temperature..... | -20 °C to +70 °C |
| Storage Temperature.....   | -40 °C to +85 °C |
| IP Rating.....             | IP 40            |
| Soldering Condition        |                  |
| Wave Soldering.....        | 260 °C for 5 s   |
| Manual Soldering.....      | 300 °C for 3 s   |

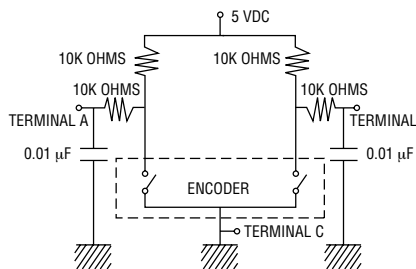
## Mechanical Characteristics

|                        |                  |
|------------------------|------------------|
| RPM (operating) .....  | 60 max.          |
| Mechanical Angle ..... | 360 ° continuous |
| Detent Torque .....    | 50 to 200 gf-cm  |
| Rotational Life.....   | 50,000 cycles    |

### Quadrature Output Table



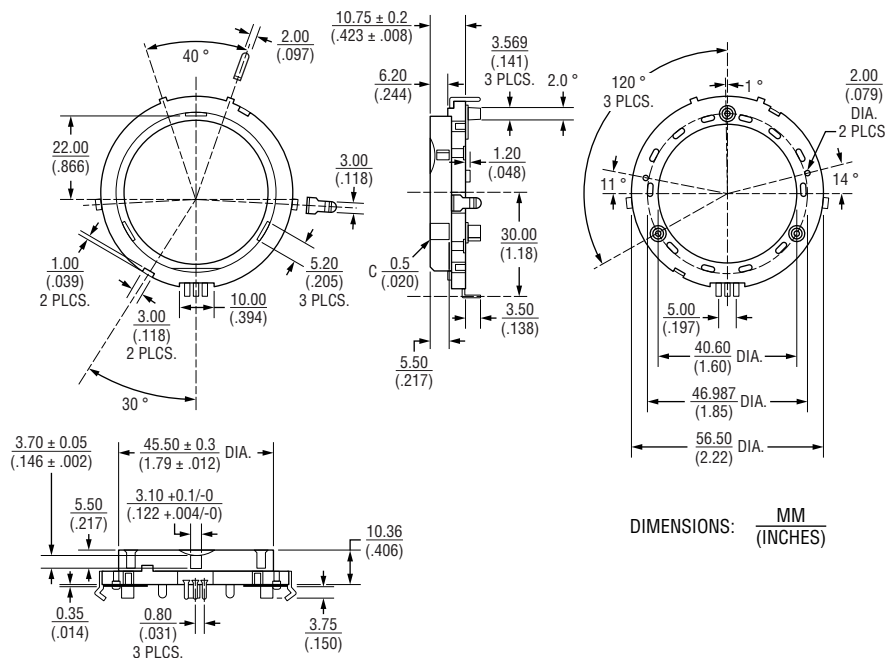
### Suggested Filter Circuit



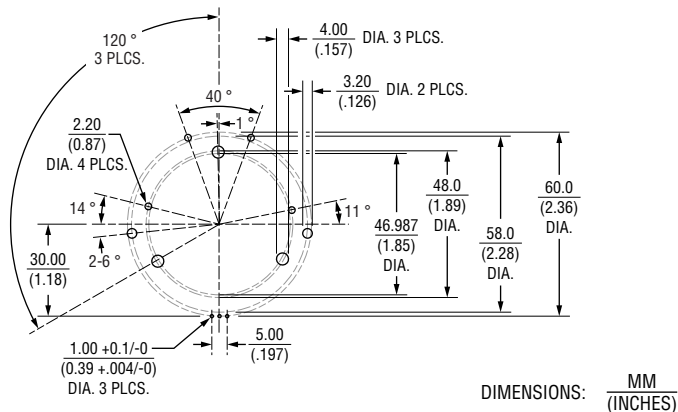
### CAUTION

 Do not store product in high temperature and humidity, direct sunlight and/or places where corrosive gases may be generated. Please use product within 6 months from the date of delivery and promptly after unpacking.

## Product Dimensions



## Recommended PCB Layout



## WARNING

## Cancer and Reproductive Harm

[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

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

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

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## PER56 - 56 mm Low Profile Incremental Ring Encoder

**BOURNS®**

### How To Order

**PER56 1 - P1 15 - N 0015**

|                                     |       |       |       |       |       |
|-------------------------------------|-------|-------|-------|-------|-------|
| Model                               | _____ | _____ | _____ | _____ | _____ |
| Number of Units                     | _____ | _____ | _____ | _____ | _____ |
| 1 = Single                          |       |       |       |       |       |
| Orientation                         | _____ | _____ | _____ | _____ | _____ |
| P = PC Pins Down Facing             |       |       |       |       |       |
| Detent Option                       | _____ | _____ | _____ | _____ | _____ |
| 1 = 30 Detents (15 Pulses)          |       |       |       |       |       |
| Ring Height                         | _____ | _____ | _____ | _____ | _____ |
| 15 = 15 mm                          |       |       |       |       |       |
| Switch Configuration                | _____ | _____ | _____ | _____ | _____ |
| N = No Switch                       |       |       |       |       |       |
| Resolution                          | _____ | _____ | _____ | _____ | _____ |
| 0015 = 15 Pulses per 360 ° Rotation |       |       |       |       |       |

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