



### Features

- Miniature package for design flexibility
- Long operating life
- Conductive plastic element
- Bushing or PC board mount
- Quadrature output
- RoHS compliant\*



## 3315 - 9 mm Square Sealed Incremental Encoder

### Electrical Characteristics

|                                       |  |
|---------------------------------------|--|
| Output.....                           | 2-bit quadrature code, Channel A leads Channel B electrically turning clockwise (CW) |
| Closed Circuit Resistance .....       | 5 ohms maximum   |
| Contact Rating.....                   | TTL compatible loads   |
| Insulation Resistance (500 VDC) ..... | 1,000 megohms minimum  |
| Dielectric Withstanding Voltage       |  |
| Sea Level .....                       | 900 VAC minimum  |
| Electrical Travel .....               | Continuous   |
| Contact Bounce.....                   | 5 milliseconds maximum   |
| RPM (Operating).....                  | 120 maximum  |

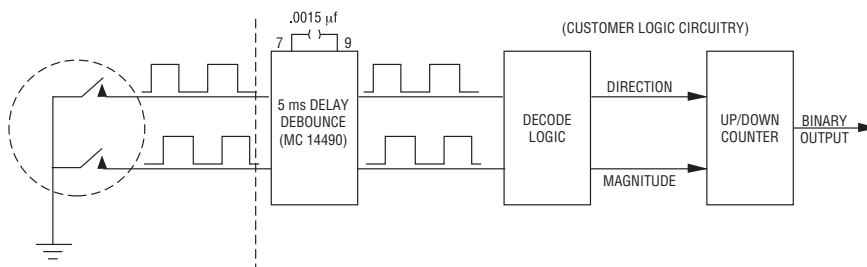
### Environmental Characteristics

|                                  |  |
|----------------------------------|--|
| Operating Temperature Range..... | -40 °C to +125 °C (-40 °F to +257 °F)            |
| Storage Temperature Range.....   | -55 °C to +125 °C (-67 °F to +257 °F)            |
| Humidity .....                   | MIL-STD-202, Method 103B, Condition B            |
| Vibration .....                  | 30 G   |
| Contact Bounce.....              | 5.0 millisecond maximum                          |
| Shock .....                      | 100 G  |
| Contact Bounce.....              | 5.0 millisecond maximum                          |
| Rotational Life .....            | 100,000 cycles @ 6 PPR<br>25,000 cycles @ 16 PPR |
| IP Rating.....                   | IP 67  |

### Mechanical Characteristics

|                        |   |
|------------------------|---|
| Mechanical Angle ..... | 360 ° Continuous  |
| Running Torque .....   | 3.53 N-cm (5 oz.-in.) maximum   |
| Mounting Torque        |   |
| Plastic Bushing.....   | 45.19 N-cm (4.0 lb.-in.) maximum  |
| Metal Bushing.....     | 79 N-cm (7.0 lb.-in.) maximum   |
| Weight .....           | 4.5 gm (0.15 oz.)   |
| Terminals .....        | Solderable pins   |
| Soldering Condition    |   |
| Manual Soldering ..... | 96.5Sn/3.0Ag/0.5Cu solid wire or no-clean rosin cored wire; 370 °C (700 °F) max. for 3 seconds  |
| Wave Soldering .....   | 96.5Sn/3.0Ag/0.5Cu solder with no-clean flux; 260 °C (500 °F) max. for 5 seconds  |
| Wash Processes .....   | For recommended wash processes, please refer to <a href="http://www.bourns.com/pdfs/sldclen.pdf">http://www.bourns.com/pdfs/sldclen.pdf</a> |
| Marking.....           | Manufacturer's trademark, part number, and date code  |
| Hardware.....          | One lockwasher and one mounting nut are shipped with each encoder, except where noted in the part number.                                   |

### Suggested Incremental Control Diagram



### Quadrature Output Table



\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.  
 Specifications are subject to change without notice.  
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## How to Order

**3315 Y - 0 0 1 - 006 L**

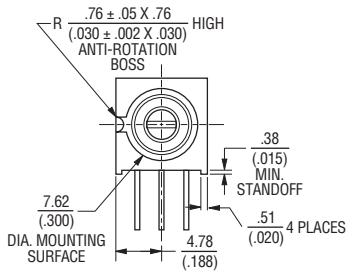
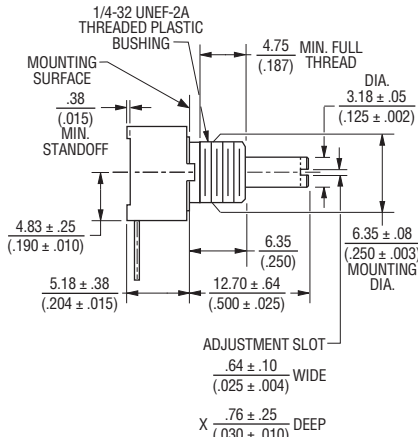
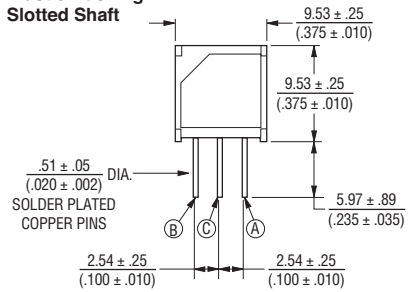


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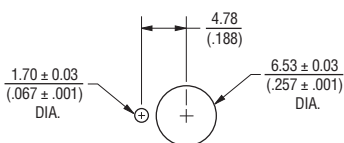
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## Product Dimensions

### COMMON DIMENSIONS 3315-001 Plastic Bushing Slotted Shaft



### MOUNTING HOLE PATTERN



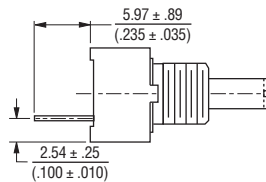
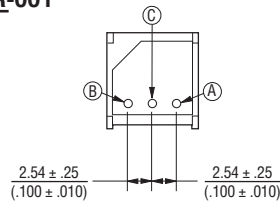
### 3315C-001



### 3315P-001



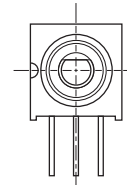
### 3315R-001



### 3315Y-001



### COMMON DIMENSIONS 3315C-101 Plastic Flatted Shaft



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

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## Product Dimensions

### 3315P-101



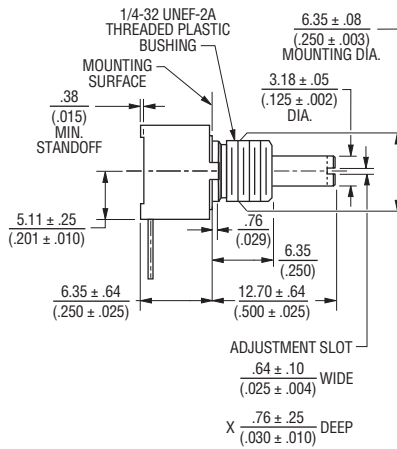
### COMMON DIMENSIONS 3315-002 Metal Bushing



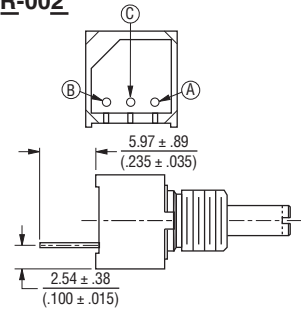
### 3315P-002



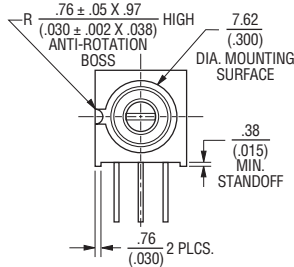
### 3315R-101



### 3315R-002



### 3315Y-101



### 3315Y-002



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



### 3315C-002



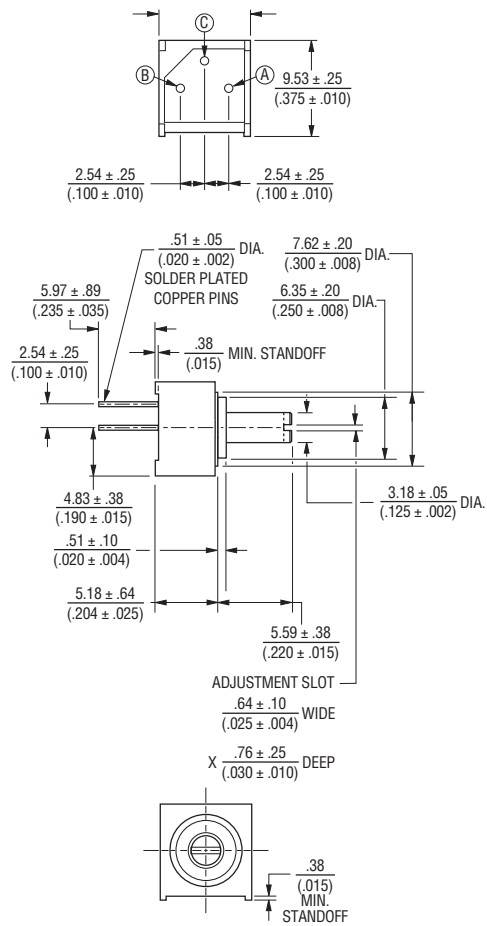
# 3315 - 9 mm Square Sealed Incremental Encoder

# BOURNS®

## Product Dimensions

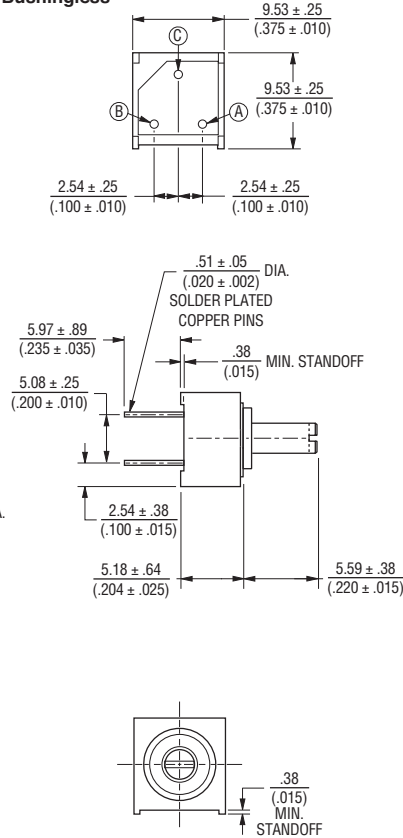
### 3315P-025

Bushingless



### 3315Y-025

Bushingless



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

REV. 10/12

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