

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 |

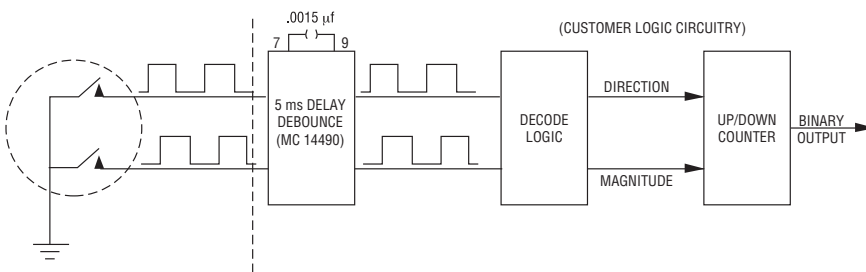
Environmental Characteristics

| | |
|----------------------------------|--|
| 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 25,000 cycles @ 16 PPR |
| IP Rating..... | IP 67 |

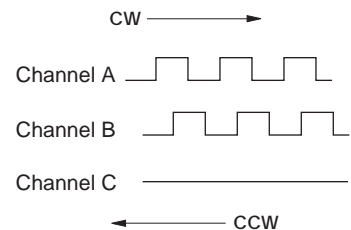
Mechanical Characteristics

| | |
|------------------------|---|
| 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 http://www.bourns.com/pdfs/sldclen.pdf |
| 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



WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

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

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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3315 - 9 mm Square Sealed Incremental Encoder

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How to Order

3315 Y - 0 0 1 - 006 L

| | | | | | | |
|--|-------|-------|-------|-------|-------|-------|
| Model Number Designator _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| 3315 = 9 mm Encoder | | | | | | |
| Terminal Style Designator _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| C = In-line Straight Terminals Side Exit | | | | | | |
| R = In-line Terminals Rear Exit | | | | | | |
| P = 5.08 mm x 2.54 mm Triangular Pattern Rear Exit | | | | | | |
| Y = 5.08 mm x 5.08 mm Triangular Pattern Rear Exit | | | | | | |
| Shaft End Designator _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| 0 = Shaft End Slotted | | | | | | |
| 1 = Shaft End Flatted | | | | | | |
| Shaft Length Designator _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| 0 = 12.7 mm FMS Long Plastic Shaft (Available w/bushing only) | | | | | | |
| 1 = 19.05 mm FMS Long Plastic Shaft (Available w/bushing only) | | | | | | |
| 2 = 5.59 mm FMS (Bushingless version only) | | | | | | |
| Bushing Designator _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| 1 = 6.35 mm x 6.35 mm Plastic | | | | | | |
| 2 = 6.35 mm x 6.35 mm Ni Plated Brass | | | | | | |
| 5 = Bushingless (Board Level) | | | | | | |
| Pulses per Revolution Code _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| 006 = 6 PPR | | | | | | |
| 016 = 16 PPR | | | | | | |
| RoHS Identifier _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| L = Compliant | | | | | | |

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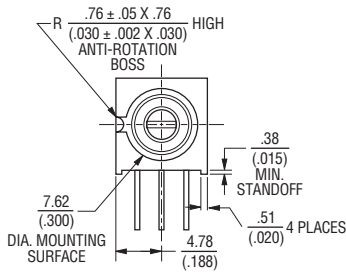
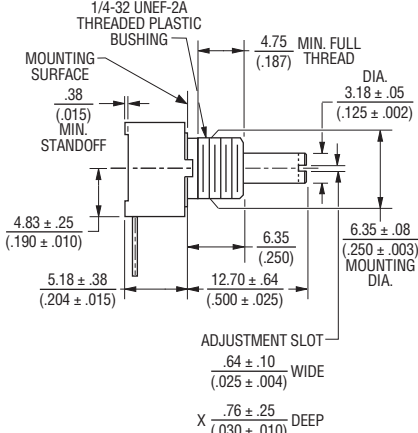
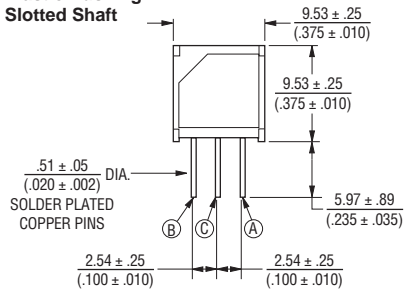
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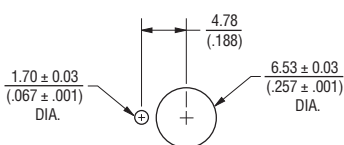
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Product Dimensions

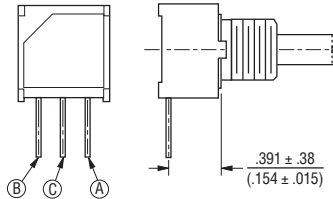
COMMON DIMENSIONS 3315-001 Plastic Bushing Slotted Shaft



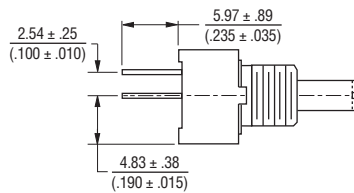
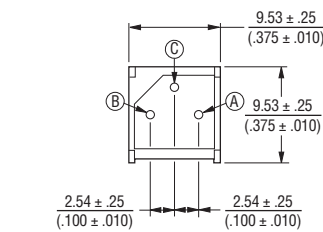
MOUNTING HOLE PATTERN



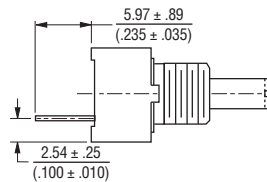
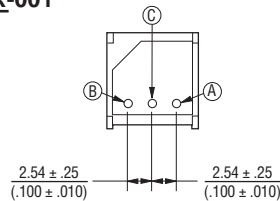
3315C-001



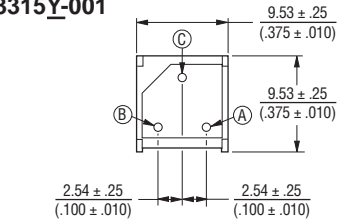
3315P-001



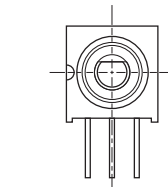
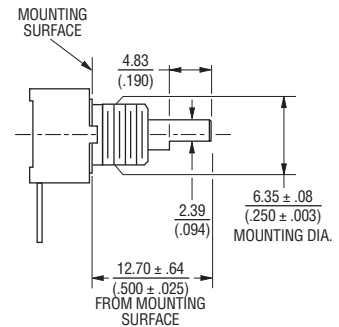
3315R-001



3315Y-001



COMMON DIMENSIONS 3315C-101 Plastic Flatted Shaft



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

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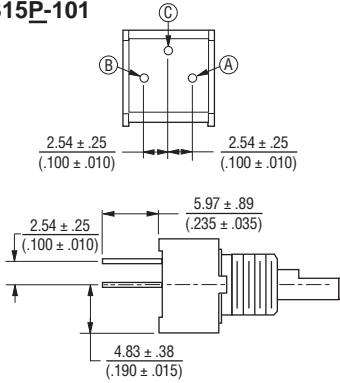
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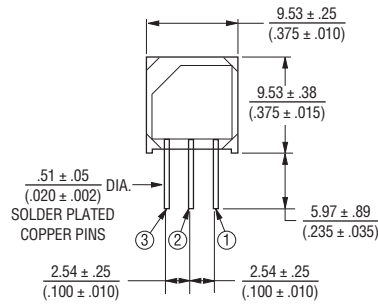
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Product Dimensions

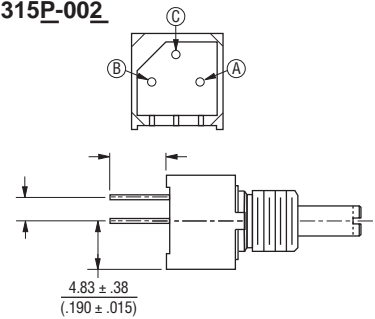
3315P-101



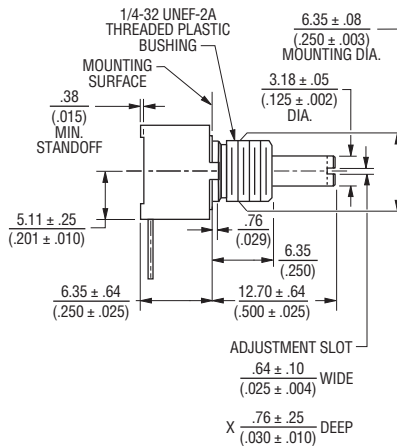
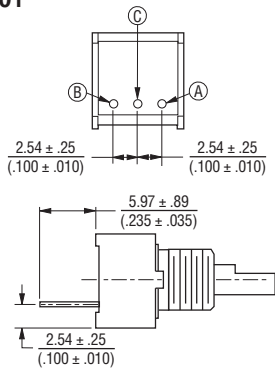
COMMON DIMENSIONS 3315-002 Metal Bushing



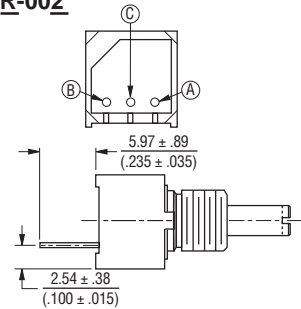
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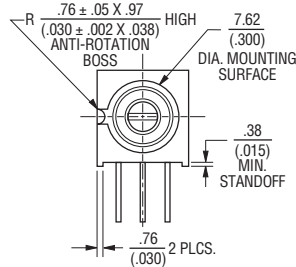
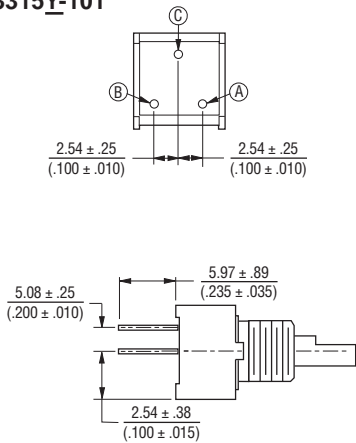
3315R-101



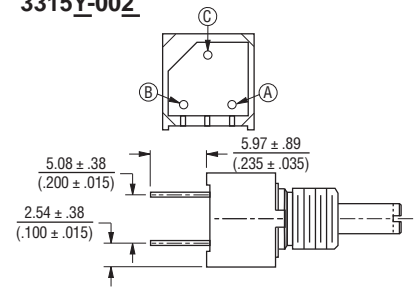
3315R-002



3315Y-101

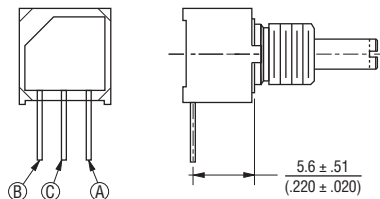


3315Y-002



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

3315C-002



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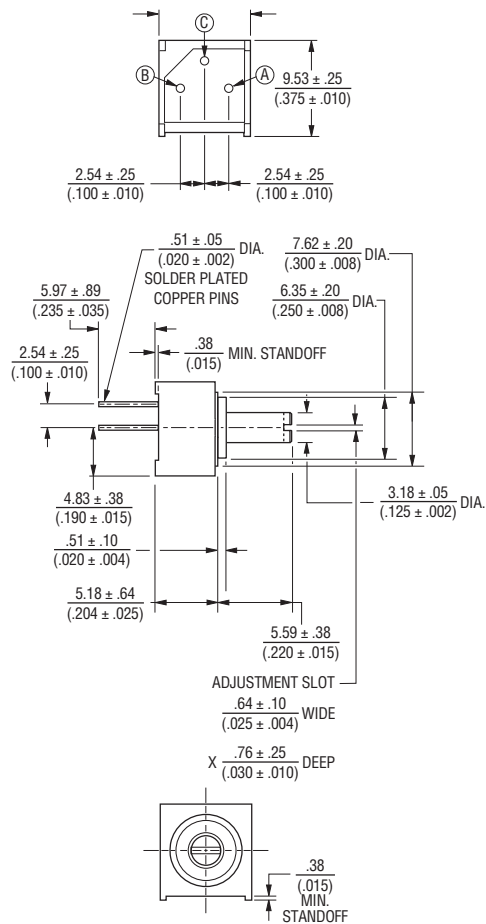
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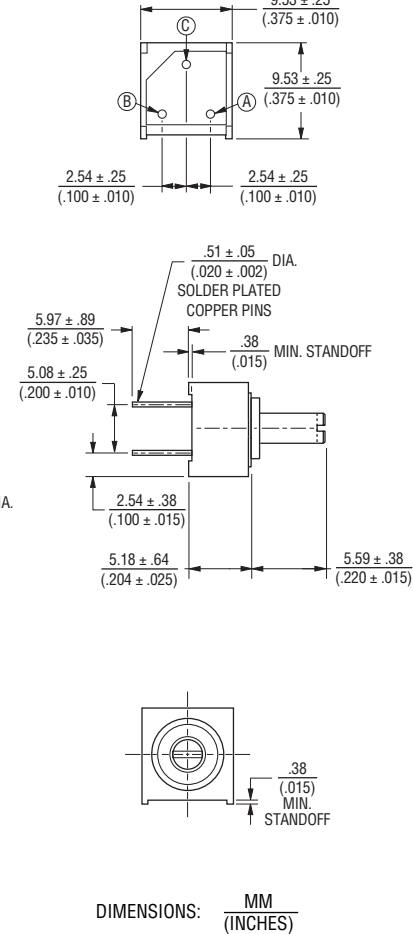
3315P-025

Bushingless



3315Y-025

Bushingless



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