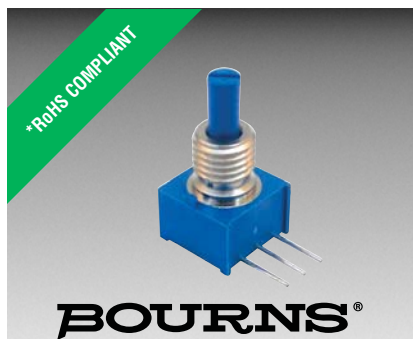




Features

- 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

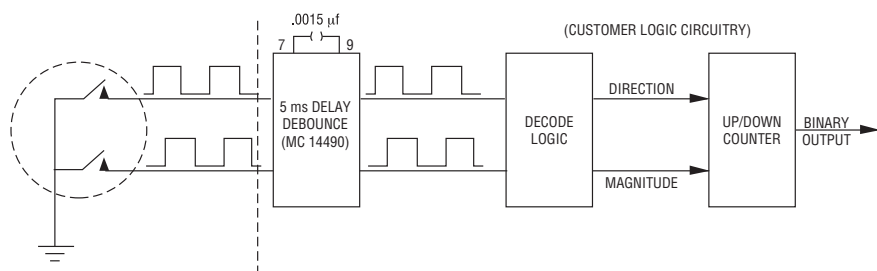
Environmental Characteristics

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

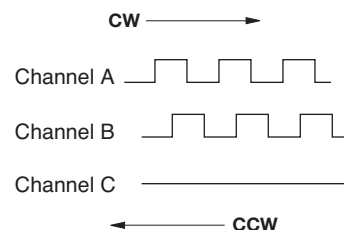
Mechanical Characteristics

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



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						

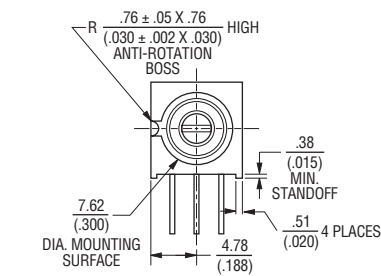
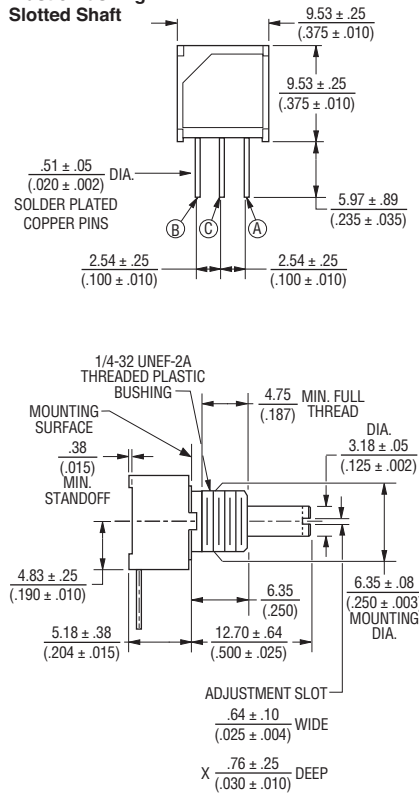
3315 - 9 mm Square Sealed Incremental Encoder

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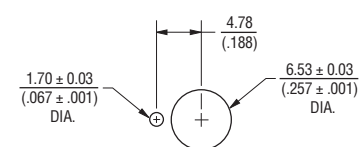
Product Dimensions

COMMON DIMENSIONS 3315-001

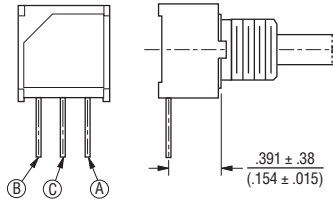
Plastic Bushing
Slotted Shaft



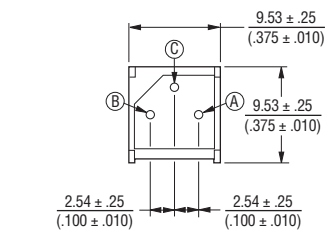
MOUNTING HOLE PATTERN



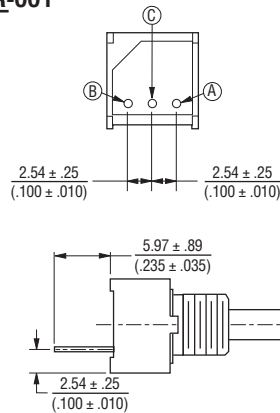
3315C-001



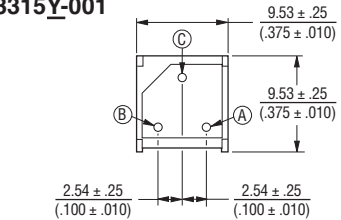
3315P-001



3315R-001

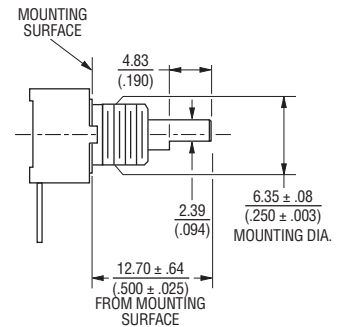


3315Y-001



COMMON DIMENSIONS 3315C-101

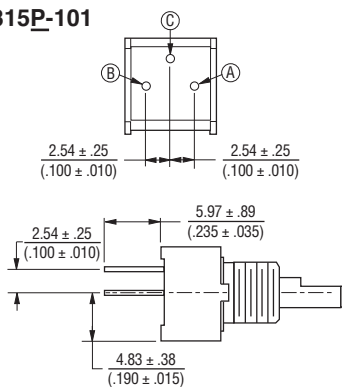
Plastic Flatted Shaft



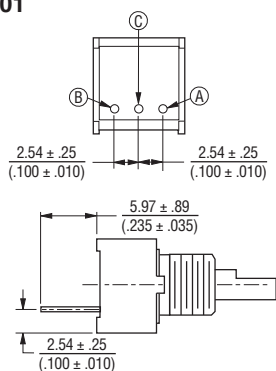
DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

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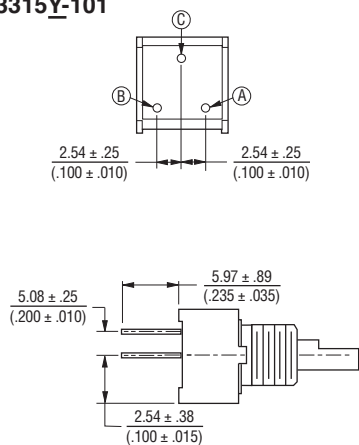
3315P-101



3315R-101

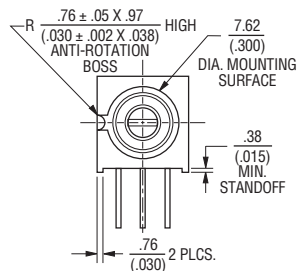
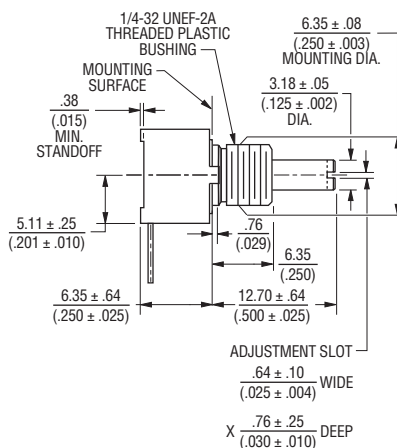


3315Y-101

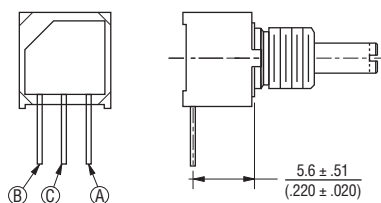


Technical drawing of a component with dimensions and callouts:

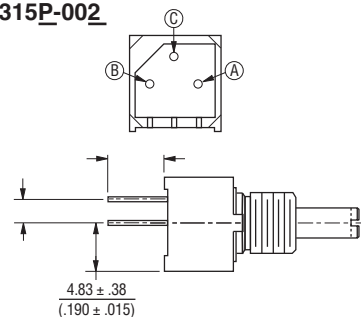
- Top horizontal dimension: $9.53 \pm .25$ ($.375 \pm .010$)
- Top vertical dimension: $9.53 \pm .38$ ($.375 \pm .015$)
- Bottom horizontal dimension: $2.54 \pm .25$ ($.100 \pm .010$)
- Bottom vertical dimension: $5.97 \pm .89$ ($.235 \pm .035$)
- Left vertical dimension: $.51 \pm .05$ ($.020 \pm .002$)
- Callouts:
 - ③: SOLDER PLATED COPPER PINS
 - ②: SOLDER PLATED COPPER PINS
 - ①: SOLDER PLATED COPPER PINS



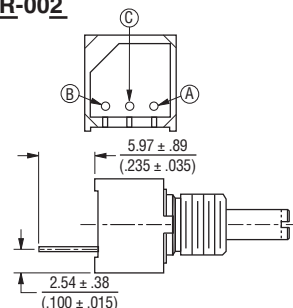
3315C-002



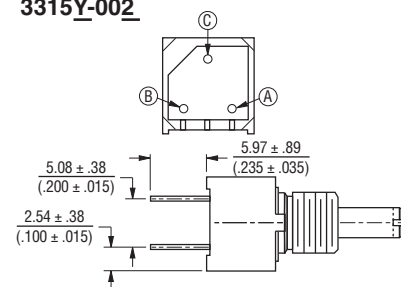
3315P-002



3315R-002



3315Y-002



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

Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.

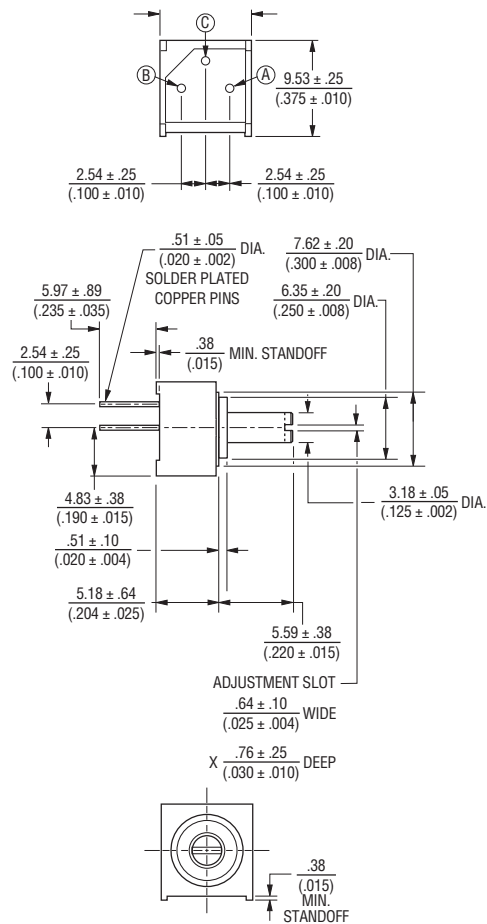
3315 - 9 mm Square Sealed Incremental Encoder

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Product Dimensions

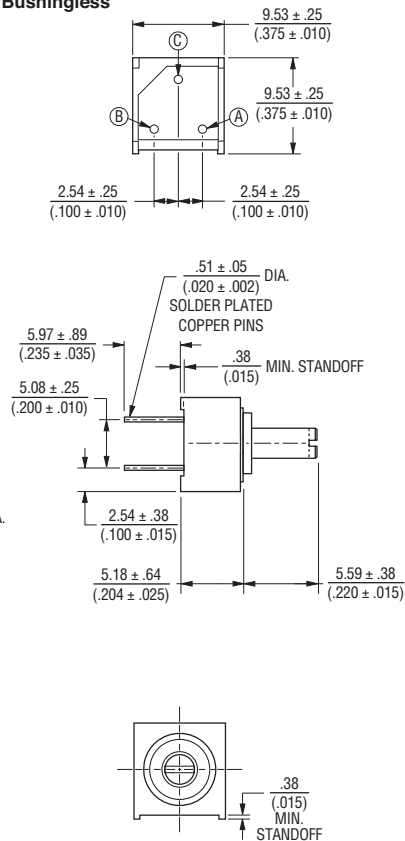
3315P-025

Bushingless



3315Y-025

Bushingless



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

REV. 10/12

Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.

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[3315P-125-016](#) [3315P-025-016](#) [3315R-111-016](#) [3315R-011-016](#) [3315C-012-016](#) [3315C-112-016](#) [3315Y-11-016](#)
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