

## Features

- Conductive plastic
- PC board and bushing mount
- Plastic or metal bushing and plastic shaft
- Withstands typical industrial washing processes
- Compact package saves board and panel space

## 3310 – 9 mm Square Sealed Panel Control

### Electrical Characteristics<sup>1</sup>

|   |  |
|---|--|
| Standard Resistance Range - Linear .....  | 1 K ohms to 1 megohm                         |
| Total Resistance Tolerance - Linear Tapers .....  | ±20 %  |
| Independent Linearity .....   | ±5 %   |
| End Resistance .....  | 2 % or 2 ohms maximum (whichever is greater) |
| Effective Electrical Angle .....  | 270 ° ±15 °                                  |
| Contact Resistance Variation .....  | 1 % or 1 ohm (whichever is greater)          |
| Dielectric Withstanding Voltage (MIL-STD-202 – Method 301)  |  |
| Sea Level .....   | 900 VAC minimum                              |
| 70,000 Feet .....   | 350 VAC minimum                              |
| Insulation Resistance .....   | 1,000 megohms minimum                        |
| Power Rating @ 70 °C (Derate to 0 at 125 °C - Voltage Limited By Power Dissipation or 200 VAC, Whichever is Less) ..... | 0.25 watts                                   |
| Theoretical Resolution .....  | Essentially infinite                         |

### 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) |
| Temperature Coefficient Over Storage Temperature Range ..... | ±1,000 ppm/°C                         |
| Vibration .....  | 30 G                                  |
| Total Resistance Shift .....                                 | ±1 % maximum                          |
| Voltage Ratio Shift .....                                    | ±1 % maximum                          |
| Shock .....  | 100 G                                 |
| Total Resistance Shift .....                                 | ±1 % maximum                          |
| Voltage Ratio Shift .....                                    | ±1 % maximum                          |
| Load Life .....  | 1,000 hours                           |
| Total Resistance Shift .....                                 | ±10 % TRS maximum                     |
| Rotational Life (No Load) .....                              | 50,000 cycles                         |
| Total Resistance Shift .....                                 | ±5 % TRS maximum                      |
| Contact Resistance Variation .....                           | 3 % or 3 ohms (whichever is greater)  |
| Moisture Resistance .....                                    | MIL-STD-202, Method 103, Condition B  |
| Total Resistance Shift .....                                 | ±10 % TRS maximum                     |
| IP Rating .....  | IP67                                  |
| Moisture Sensitivity Level .....                             | 1                                     |
| ESD Classification (HBM) .....                               | N/A                                   |

### Mechanical Characteristics

|                                    |   |
|------------------------------------|---|
| Stop Strength .....                | 5.65 N-cm (8 oz.-in.)   |
| Mechanical Angle .....             | 300 ° nominal   |
| Torque                             |   |
| Starting .....                     | 3.53 N-cm (5.0 oz.-in.) maximum   |
| Running .....                      | 3.53 N-cm (5.0 oz.-in.) maximum   |
| Mounting (Torque on Bushing) ..... | 45 N-cm (4.0 lb.-in.) max [plastic bushing]; 79 N-cm (7.0 lb.-in.) max [metal bushing]  |
| Weight (Single Section) .....      | 4.5 grams   |
| (Each Additional Section) .....    | 2.5 grams   |
| 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, model number, product code, terminal style, resistance code and date code   |
| Ganging .....                      | 2 cups maximum  |
| Hardware .....                     | One lockwasher (H-37-5) and one mounting nut (H-38-1) is shipped with each potentiometer, except bushingless versions                       |
| Flammability .....                 | Conforms to UL94V-0   |
| Epoxy .....                        | Conforms to UL 94V-1  |
| IP Rating .....                    | IP67  |

### Switch Characteristics

|                                     |                 |
|-------------------------------------|-----------------|
| Switch Life .....                   | 10K cycles      |
| Contact Resistance .....            | 2 ohms max.     |
| Dielectric Strength .....           | 350 VDC         |
| Detent Torque .....                 | 0.5 oz-in min.  |
| Power Rating (Resistive Load) ..... | 100 mA @ 16 VDC |

<sup>1</sup>Electrical specifications tested at 60 RPM, at room ambient: +25 °C nominal.



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

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

- Audio taper versions available as special order
- RoHS compliant\*

# 3310 – 9 mm Square Sealed Panel Control

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### Standard Resistance Table

| Resistance (Ohms) | Resistance Code |
|-------------------|-----------------|
| <b>1,000</b>      | <b>102</b>      |
| <b>2,000</b>      | <b>202</b>      |
| <b>5,000</b>      | <b>502</b>      |
| <b>10,000</b>     | <b>103</b>      |
| <b>20,000</b>     | <b>203</b>      |
| 50,000            | 503             |
| 100,000           | 104             |
| 200,000           | 204             |
| 500,000           | 504             |
| 1,000,000         | 105             |

Popular values listed in boldface. Consult factory for special resistances.

### Date Code Description

YY WW M

- M = COUNTRY OF MANUFACTURE (MEXICO)
- WW = WEEK NUMBER
- YY = LAST TWO DIGITS OF YEAR MANUFACTURED

### How To Order

3310 Y - 0 0 1 - 103 L

Model Number Designator \_\_\_\_\_  
 3310 = 9 mm Panel Control

Terminal Style Designator \_\_\_\_\_  
 Single Cup:  
 C = In-line Straight Terminals Side Exit 2.54 mm centers  
 R = In-line Terminals Rear Exit 2.54 mm centers  
 P = 5.08 mm x 2.54 mm Triangular Pattern Rear Exit  
 Y = 5.08 mm x 5.08 mm Triangular Pattern Rear Exit  
 Dual Cup (Pot/Pot or Pot/Switch):  
 H = Dual In-line Straight Terminals Rear Exit 2.54 mm centers

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 Long Plastic Shaft (Bushingless version only)

Bushing Designator \_\_\_\_\_  
 Pot (or Pot/Pot):  
 1 = 6.35 mm x 6.35 mm Plastic  
 2 = 6.35 mm x 6.35 mm Ni Plated Brass  
 5 = Bushingless (Board Level Control)  
 Pot/Switch Bushing Designator (use with "H" terminal style only.)  
 3 = 6.35 mm x 6.35 mm Plastic  
 4 = 6.35 mm x 6.35 mm Ni Plated Brass  
 6 = Bushingless (Board Level)

Resistance Code \_\_\_\_\_  
 (1st 2 digits are significant, 3rd digit is number of 0s to follow)

RoHS Identifier \_\_\_\_\_  
 L = Compliant

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# 3310 – 9 mm Square Sealed Panel Control

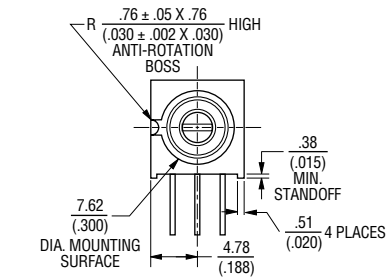
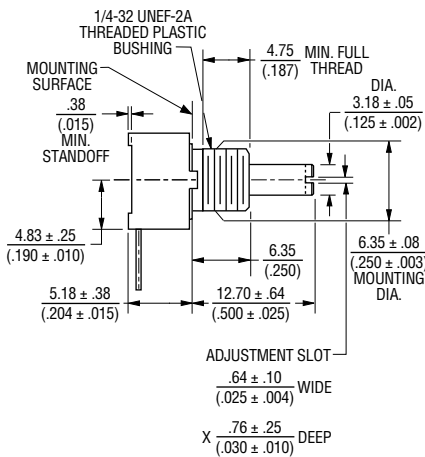
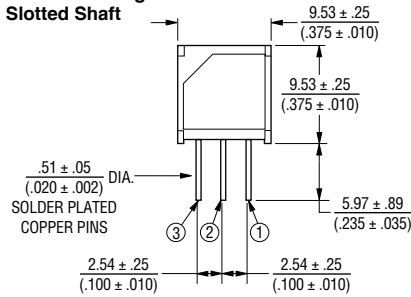
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## Product Dimensions

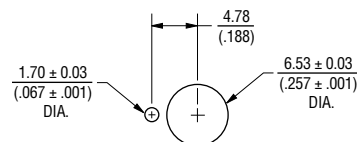
### COMMON DIMENSIONS

#### 3310-001

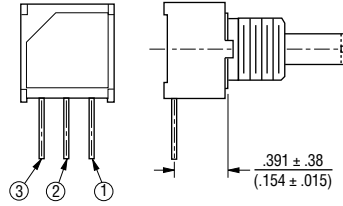
Plastic Bushing  
Slotted Shaft



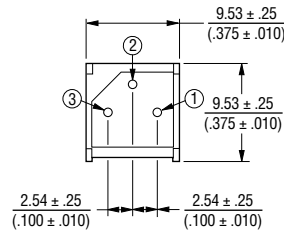
### MOUNTING HOLE PATTERN



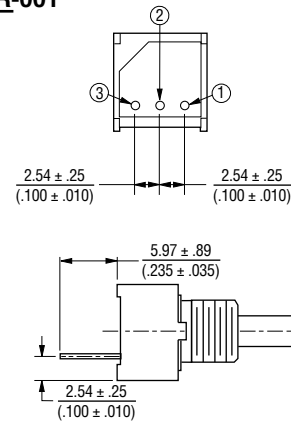
#### 3310C-001



#### 3310P-001

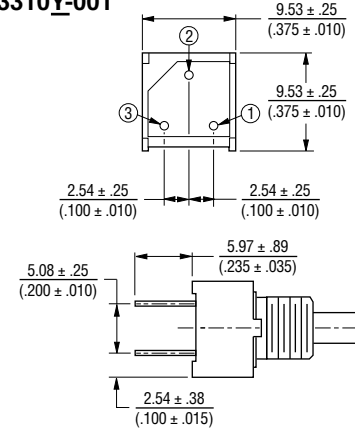


#### 3310R-001



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

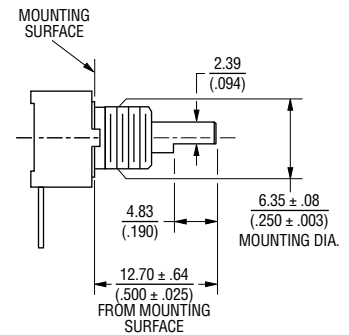
#### 3310Y-001



### COMMON DIMENSIONS

#### 3310C-101

Plastic Flatted Shaft



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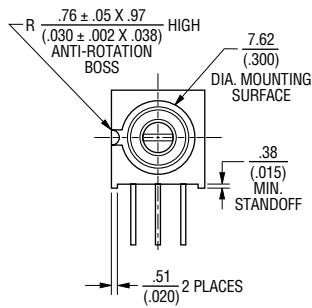
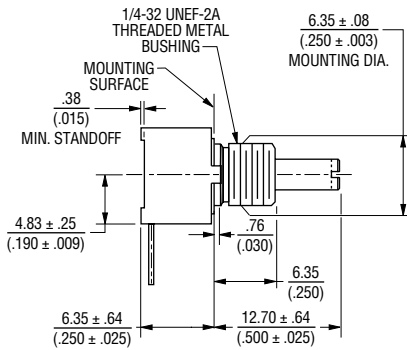
# 3310 – 9 mm Square Sealed Panel Control



## Product Dimensions

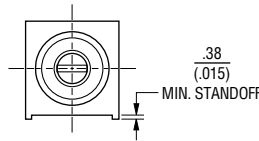
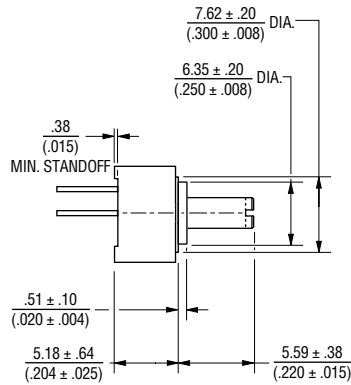
### COMMON DIMENSIONS 3310-002

#### Metal Bushing



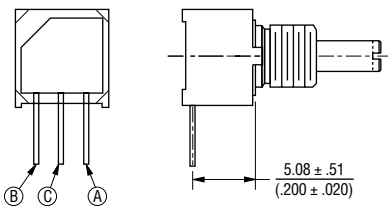
### 3310P-025 \*

#### Bushingless



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

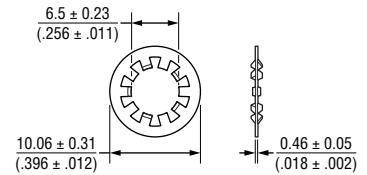
### 3310C-002



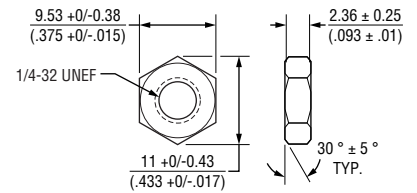
NOTE: \* Only recommended shaft length for bushingless version

## Hardware

### LOCKWASHER H-37-5



### NUT H-38-1



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

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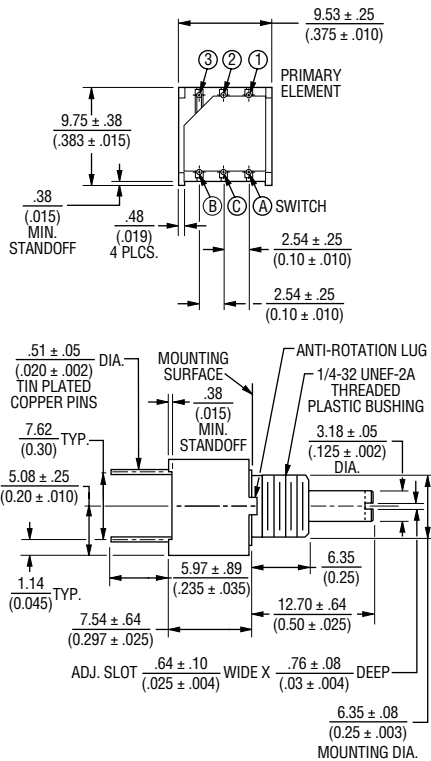
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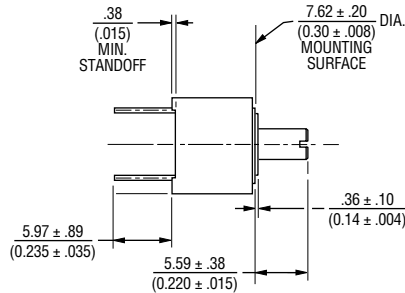
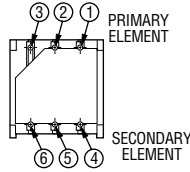
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## Product Dimensions

### COMMON DIMENSIONS 3310H-003 Pot/Switch Dual Cup Plastic Bushing

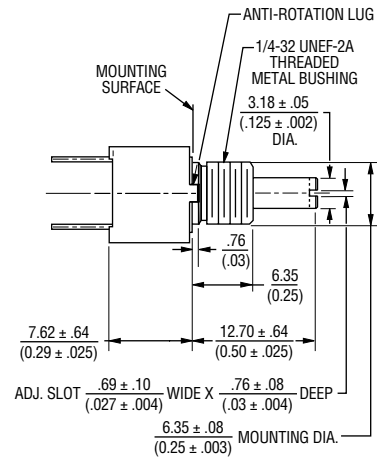
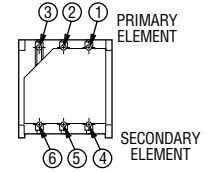


### 3310H-025\* Pot/Pot Dual Cup Bushingless

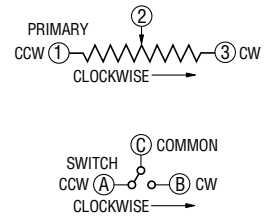
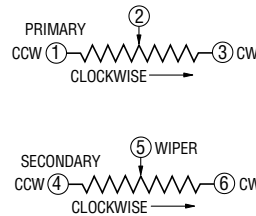


Pot/Pot Dual Cup

### 3310H-002 Pot/Pot Dual Cup Metal Bushing

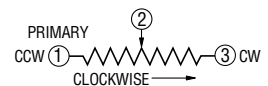


Pot/Switch Dual Cup



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

Pot Single Cup



NOTE: \* Only recommended shaft length for bushingless version

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