

## Features

- 27 mm (1-1/16 ") diameter, single-turn wirewound
- Bushing mount
- Gangable to 8 cups
- Outstanding vibration and shock performance
- Shaft supported front and rear by precision sleeve bearings



Model 3435 is obsolete. Models 6657, 6574 and 6674 are preferred.

- High temperature, moisture resistant, thermosetting plastic housing
- Non-standard features and specifications available

## 3435 - Precision Potentiometer

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

|                                      |                                       |
|--------------------------------------|---------------------------------------|
| Standard Resistance Range.....       | 50 to 20 K ohms                       |
| Total Resistance Tolerance.....      | ±3 %                                  |
| Independent Linearity.....           | ±0.5 %                                |
| Effective Electrical Angle.....      | 350 ° ±2 °                            |
| Noise.....                           | 100 ohms ENR maximum                  |
| Absolute Minimum Resistance.....     | 1 ohm or 0.1 % (whichever is greater) |
| Dielectric Withstanding Voltage      |                                       |
| Sea Level.....                       | 1,000 VAC minimum                     |
| Power Rating                         |                                       |
| +70 °C.....                          | 1.5 watts                             |
| +125 °C.....                         | .0 watt                               |
| Insulation Resistance (500 VDC)..... | 1,000 megohms minimum                 |
| Resolution.....                      | See ordering information              |

### Environmental Characteristics<sup>1</sup>

|   |                              |
|---|------------------------------|
| Operating Temperature Range.....  | +1 °C to 125 °C              |
| Storage Temperature Range.....  | -65 °C to +125 °C            |
| Temperature Coefficient Over Storage Temperature Range <sup>2</sup> ..... | ±20 ppm/°C max.              |
| Vibration (MIL-R-12934).....  | 15 G                         |
| Wiper Bounce.....   | 0.1 millisecond maximum      |
| Total Resistance Shift.....   | ±5 % maximum                 |
| Voltage Ratio Shift.....  | ±1 % maximum                 |
| Shock (MIL-R-12934).....  | 50 G                         |
| Wiper Bounce.....   | 0.1 millisecond maximum      |
| Total Resistance Shift.....   | ±5 % maximum                 |
| Voltage Ratio Shift.....  | ±1 % maximum                 |
| Load Life.....  | 1,000 hours                  |
| Total Resistance Shift.....   | 2.0 % maximum                |
| Rotational Life (No Load).....  | 1,000,000 shaft revolutions  |
| Total Resistance Shift.....   | ±5 % maximum                 |
| Moisture Resistance (MIL-STD-202, Method 106).....                        |                              |
| Total Resistance Shift.....   | ±5 % maximum                 |
| Humidity.....   | MIL-R-12934 humidity cycling |
| Total Resistance Shift.....   | ±5 % maximum                 |
| IP Rating.....  | IP 40                        |

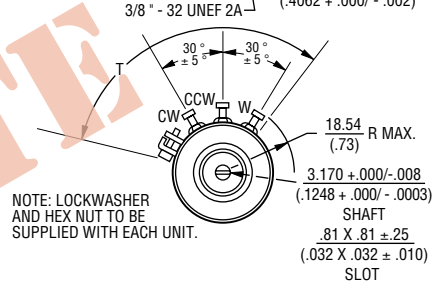
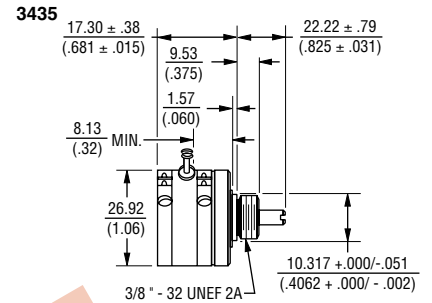
### Mechanical Characteristics<sup>1</sup>

|  |   |
|--|---|
| Mechanical Angle.....                          | Continuous  |
| Torque   |   |
| Starting.....                                  | 0.18 N-cm (0.25 oz.-in.) maximum  |
| Running.....                                   | 0.18 N-cm (0.25 oz.-in.) maximum  |
| Additional Cups.....                           | Add 75 % each   |
| Mounting.....                                  | 170-200 N-cm (15-18 lb.-in.) maximum  |
| Shaft Runout.....                              | 0.025 mm (0.001 in.) T.I.R.   |
| Shaft End Play.....                            | 0.08 mm (0.003 in.) T.I.R.  |
| Shaft Radial Play.....                         | 0.08 mm (0.003 in.) T.I.R.  |
| Backlash.....                                  | 0.25 ° maximum  |
| Weight.....                                    | Approximately 23 gm   |
| Terminals.....                                 | Gold-plated turret type   |
| Soldering Condition                            |   |
| Manual Soldering.....                          | 96.5Sn/3.0Ag/0.5Cu solid wire or no-clean rosin cored wire<br>370 °C (700 °F) max. for 3 seconds                    |
| Wave Soldering.....                            | 96.5Sn/3.0Ag/0.5Cu solder with no-clean flux<br>260 °C (500 °F) max. for 5 seconds                                  |
| Wash processes.....                            | Not recommended   |
| Marking.....                                   | Manufacturer's name and part number, resistance value and tolerance, linearity tolerance, wiring diagram, date code |
| Ganging (Multiple Section Potentiometers)..... | 8 cups maximum  |
| Hardware.....                                  | One lockwasher (H-37-2) and one mounting nut (H-38-2) is shipped with each potentiometer.                           |

<sup>1</sup>At room ambient: +25 °C nominal and 50 % relative humidity nominal, except as noted.

<sup>2</sup>Consult manufacturer for complete specification details.

### Product Dimensions



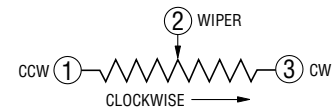
NOTE: LOCKWASHER AND HEX NUT TO BE SUPPLIED WITH EACH UNIT.

TOLERANCES: EXCEPT WHERE NOTED

DECIMALS: XX ± .51  
(.020), .XXX ± .13  
(.005)

FRACTIONS: ±1/64

DIMENSIONS: MM  
(IN.)



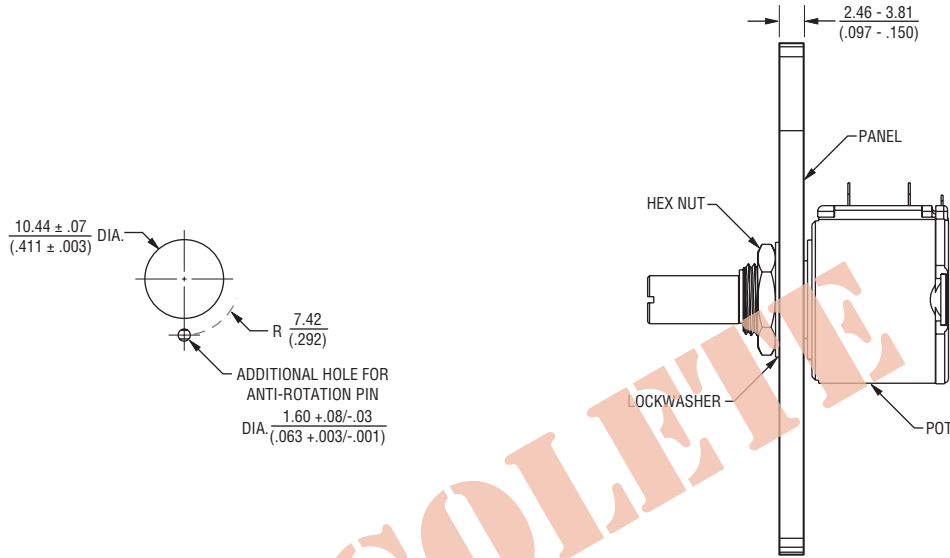
### Recommended Part Numbers

| Part Number | Resistance (Ω) | Resolution (%) |
|-------------|----------------|----------------|
| 3435S-1-102 | 1,000          | .208           |
| 3435S-1-202 | 2,000          | .178           |
| 3435S-1-502 | 5,000          | .135           |
| 3435S-1-103 | 10,000         | .107           |
| 3435S-1-503 | 50,000         | .057           |

# 3435 - Precision Potentiometer

**BOURNS®**

## Panel Thickness Dimensions



Anti-rotation pin hole is shown at six o'clock position for reference only. The actual location is determined by the customer's application. Refer to the front view of the potentiometer to see the location of the optional A/R pin.

Panel thickness and hole diameters are recommended for best fit. However, customers may adjust the dimensions to suit their specific application.

DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$  TOLERANCES:  $\pm \frac{0.127}{(.005)}$

REV. 03/12

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



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- Поставка более 17-ти миллионов наименований электронных компонентов;
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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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