

Features

- Bushing mount
- Excellent resolution
- High rotational life
- Non-standard features and specifications available

BOURNS®

6637 - Precision Potentiometer

Electrical Characteristics¹

| | |
|---|-----------------------|
| Standard Resistance Range..... | 1 K to 100 K ohms |
| Total Resistance Tolerance..... | ±10 % |
| Independent Linearity..... | ±1 % |
| Effective Electrical Angle..... | 340 ° ±3 ° |
| End Voltage..... | 0.5 % maximum |
| Output Smoothness..... | 0.1 % maximum |
| Dielectric Withstanding Voltage (MIL-STD-202, Method 301) | |
| Sea Level..... | 750 VAC minimum |
| Power Rating (Voltage Limited By Power Dissipation or 300 VAC, Whichever is Less) | |
| +70 °C..... | 1 watt |
| +125 °C..... | 0 watt |
| Insulation Resistance (500 VDC)..... | 1,000 megohms minimum |
| Resolution..... | Essentially infinite |

Environmental Characteristics¹

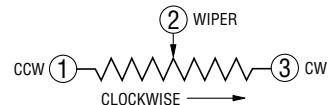
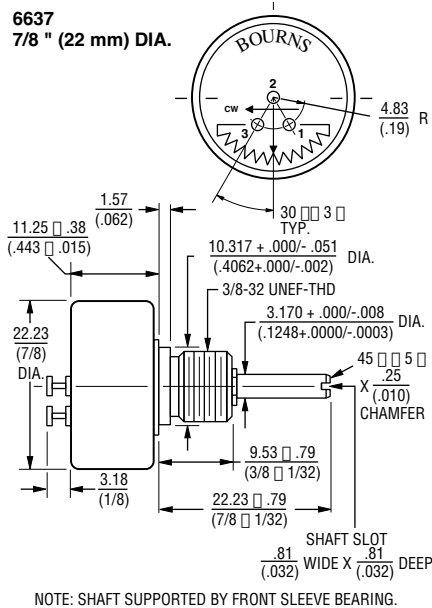
| | |
|---|------------------------------|
| Operating Temperature Range..... | -40 °C to +125 °C |
| Storage Temperature Range..... | -65 °C to +125 °C |
| Temperature Coefficient Over Storage Temperature Range..... | ±500 ppm/°C maximum |
| Vibration..... | 15 G |
| Wiper Bounce..... | 0.1 millisecond maximum |
| Total Resistance Shift..... | ±5 % maximum |
| Voltage Ratio Shift..... | ±0.5 % maximum |
| Shock..... | 50 G |
| Wiper Bounce..... | 0.1 millisecond maximum |
| Total Resistance Shift..... | ±5 % maximum |
| Voltage Ratio Shift..... | ±0.5 % maximum |
| Load Life..... | 1,000 hours, 1 watt |
| Total Resistance Shift..... | ±10 % maximum |
| Rotational Life (No Load)..... | 10,000,000 shaft revolutions |
| Total Resistance Shift..... | ±10 % maximum |
| Moisture Resistance (MIL-STD-202, Method 106) | |
| Total Resistance Shift..... | ±15 % maximum |
| IP Rating..... | IP 40 |

Mechanical Characteristics¹

| | |
|--|--|
| Mechanical Angle..... | Continuous |
| Torque (Starting & Running)..... | 0.40 N-cm (0.5 oz.-in.) maximum |
| Mounting..... | 170-200 N-cm (15-18 lb.-in.) maximum |
| Shaft Runout..... | 0.025 mm (0.001 in.) T.I.R. |
| Shaft End Play..... | 0.13 mm (0.005 in.) T.I.R. |
| Shaft Radial Play..... | 0.13 mm (0.005 in.) T.I.R. |
| Backlash..... | 0.1 ° maximum |
| Weight..... | 16 gm |
| Terminals..... | Rear turret type |
| 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..... | Not recommended |
| Marking..... | Manufacturer's name and part number, resistance value and tolerance, linearity tolerance, wiring diagram, and date code. |
| Ganging (Multiple Section Potentiometers)..... | 1 up maximum |
| Hardware..... | One lockwasher (H-37-2) and one mounting nut (H-38-2) is shipped with each potentiometer. |

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

Product Dimensions



Recommended Part Numbers

| Part Number | Resistance (Ω) |
|--------------------|----------------|
| 6637S-1-102 | 1,000 |
| 6637S-1-502 | 5,000 |
| 6637S-1-103 | 10,000 |

BOLDFACE LISTINGS ARE IN STOCK AND READILY AVAILABLE THROUGH DISTRIBUTION.
FOR SERVO MOUNT VERSION AND OTHER OPTIONS CONSULT FACTORY.

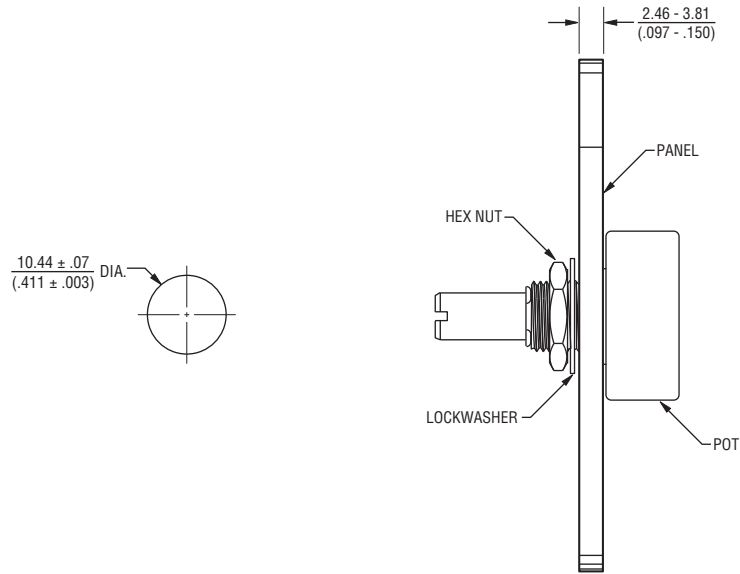
*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011. Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

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Panel Thickness Dimensions



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. 01/15

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