

Features

- Bushing mount
- Shaft supported by front sleeve bearing
- Non-standard features and specifications available

6657 - 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 %
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.....	1.5 watts
+125 °C.....	0 watt
Insulation Resistance (500 VDC).....	1,000 megohms minimum
Resolution.....	Essentially infinite

Environmental Characteristics¹

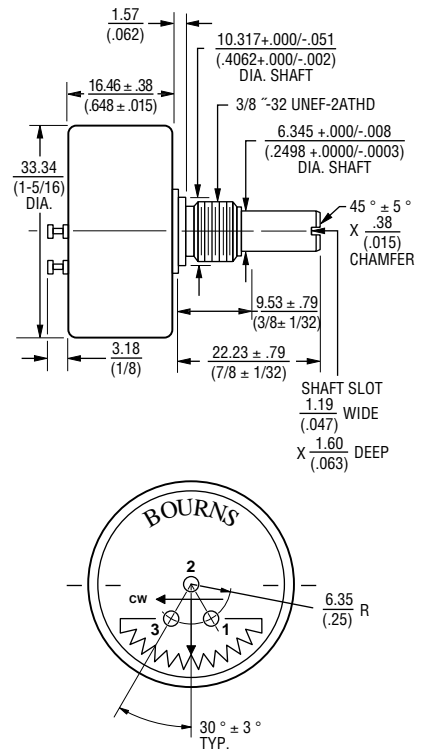
Operating Temperature Range.....	-40 °C to +125 °C
Storage Temperature Range.....	-65 °C to +125 °C
Temperature Coefficient Over Storage Temperature Range.....	±500 ppm/°C maximum
Vibration.....	15 G
Wiper Bounce.....	0.1 millisecond maximum
Total Resistance Shift.....	±5 % maximum
Voltage Ratio Shift.....	±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, 1.5 watts
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

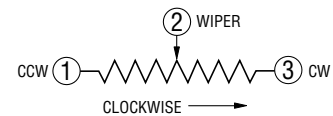
Mechanical Angle.....	Continuous
Torque (Starting & Running).....	0.40 N-cm (0.5 oz.-in.) maximum
Mounting.....	170-200 N-cm (15-18 lb.-in.) maximum
Shaft Runout.....	0.025 mm (0.001 in.) T.I.R.
Shaft End Play.....	0.13 mm (0.005 in.) T.I.R.
Shaft Radial Play.....	0.13 mm (0.005 in.) T.I.R.
Backlash.....	0.1° maximum
Weight.....	32 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 cup 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



TOLERANCES: EXCEPT WHERE NOTED
 DECIMALS: .XX ± $\frac{.51}{.02}$, .XXX ± $\frac{.13}{.005}$
 FRACTIONS: ±1/64
 DIMENSIONS: $\frac{MM}{(IN.)}$



Recommended Part Numbers

Part Number*	Resistance (Ω)
6657S-1-102	1,000
6657S-1-202	2,000
6657S-1-502	5,000
6657S-1-103	10,000

BOLDFACE LISTINGS ARE IN STOCK AND READILY AVAILABLE THROUGH DISTRIBUTION.

FOR OTHER OPTIONS CONSULT FACTORY.



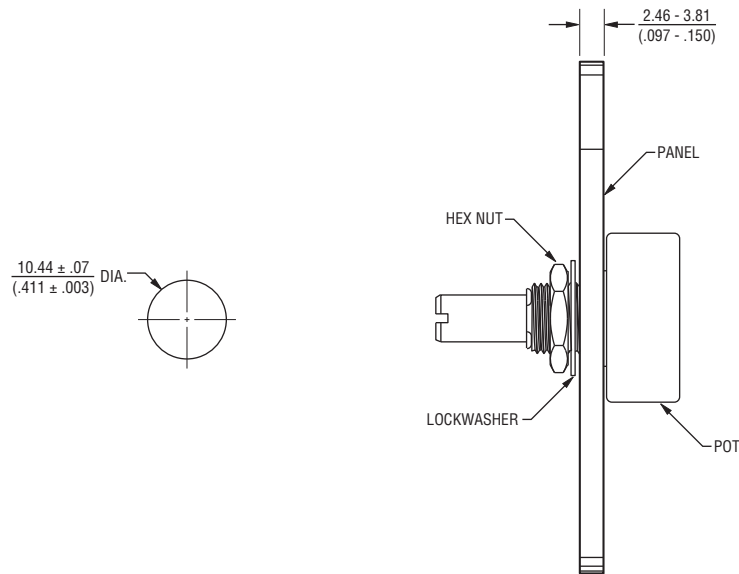
WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*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. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

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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: $\pm \frac{0.127}{(.005)}$

BOURNS®

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REV. 10/19

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Users should verify actual device performance in their specific applications.

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