



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

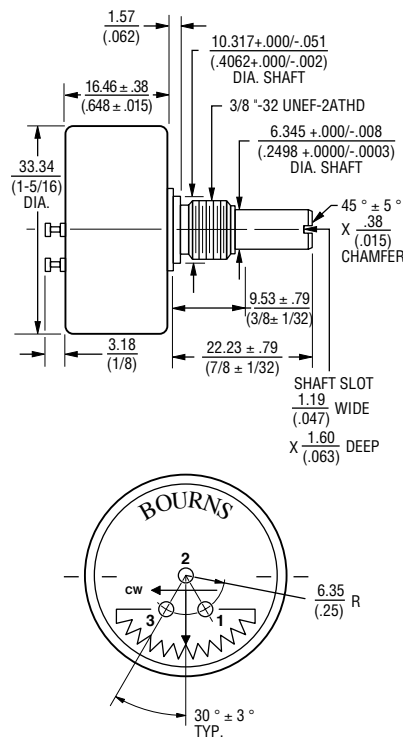
Operating Temperature Range	-40 °C to +125 °C
Storage Temperature Range.....	-65 °C to +125 °C
Temperature Coefficient Over Storage Temperature Range.....	±500 ppm/°C maximum
Vibration	15 G
Wiper Bounce.....	0.1 millisecond maximum
Total Resistance Shift	±5 % maximum
Voltage Ratio Shift	±0.5 % maximum
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

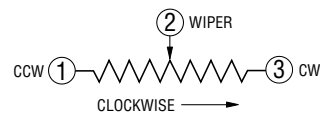
Mechanical Angle.....	Continuous
Torque (Starting & Running).....	0.40 N-cm (0.5 oz.-in.) maximum
Mounting.....	170-200 N-cm (15-18 lb.-in.) maximum
Shaft Runout.....	0.025 mm (0.001 in.) T.I.R.
Shaft End Play.....	0.13 mm (0.005 in.) T.I.R.
Shaft Radial Play	0.13 mm (0.005 in.) T.I.R.
Backlash	0.1 °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

Product Dimensions



TOLERANCES: EXCEPT WHERE NOTED
 DECIMALS: .XX ± .51 (.02), .XXX ± .13 (.005)
 FRACTIONS: ±1/64
 DIMENSIONS: 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.

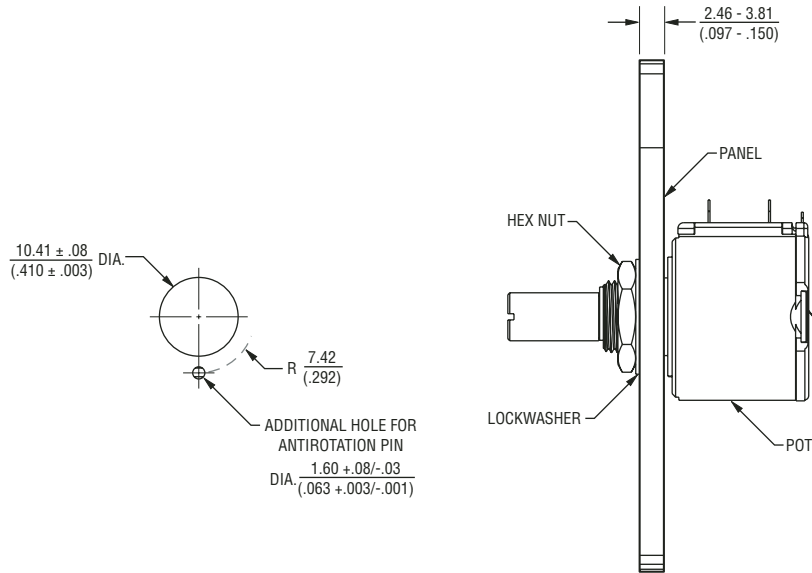
FOR OTHER OPTIONS CONSULT FACTORY.

*RoHS Directive 2002/95/EC Jan 27 2003 including Annex Specifications are subject to change without notice. Customers should verify actual device performance in their specific applications.

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BOURNS®

Panel Thickness Dimensions



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

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