



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

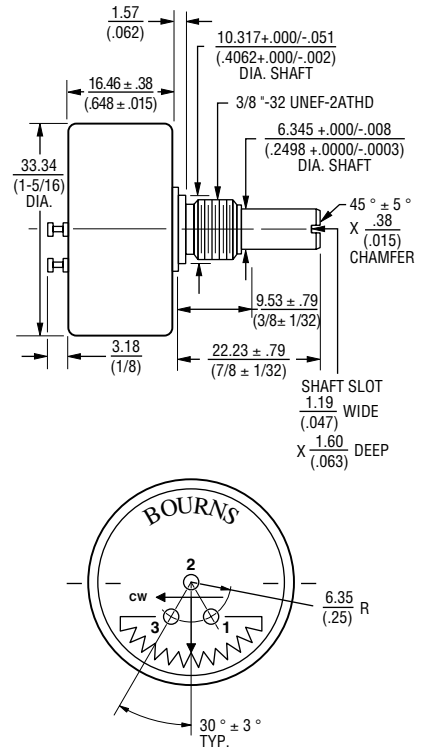
| | |
|---|------------------------------|
| Operating Temperature Range..... | -40 °C to +125 °C |
| Storage Temperature Range..... | -65 °C to +125 °C |
| Temperature Coefficient Over Storage Temperature Range..... | ±500 ppm/°C maximum |
| Vibration..... | 15 G |
| Wiper Bounce..... | 0.1 millisecond 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

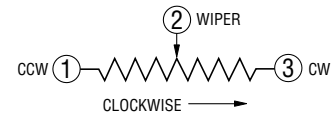
| | |
|--|--|
| Mechanical Angle..... | Continuous |
| Torque (Starting & Running)..... | 0.40 N-cm (0.5 oz.-in.) maximum |
| Mounting..... | 170-200 N-cm (15-18 lb.-in.) maximum |
| Shaft Runout..... | 0.025 mm (0.001 in.) T.I.R. |
| Shaft End Play..... | 0.13 mm (0.005 in.) T.I.R. |
| Shaft Radial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

ROHS IDENTIFIER:

L = COMPLIANT

BLANK = NON-COMPLIANT

*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

6657 - Precision Potentiometer

BOURNS®

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. 10/11

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