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

6657 - Precision Potentiometer

Electrical Characteristics
- 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): 1,000 megohms minimum
- 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 megoohms minimum
- Resolution: Continuous
- Total Resistance Tolerance: ±10%
- Total Resistance Shift: ±15%
- Rotational Life (No Load): 10,000,000 shaft revolutions
- Voltage Ratio Shift: ±0.5%
- Wiper Bounce: 0.1 millisecond maximum
- Voltage Ratio Shift: ±0.5%
- Shock: 50 G
- Voltage Ratio Shift: ±0.5%
- Mechanical Angle: Continuous
- Torque (Starting & Running): 0.40 N-cm (0.5 oz.-in.) maximum
- Shaft Runout: 0.025 mm (0.001 in.) T.I.R.
- Shaft End Play: 0.013 mm (0.0005 in.) T.I.R.
- Shaft Radial Play: 0.013 mm (0.0005 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.

Environmental Characteristics
- 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
- Temperature Coeffi cient Over Storage Temperature Range: ±500 ppm/°C maximum
- Storage Temperature Range: -65°C to +125°C
- Operating Temperature Range: -40°C to +125°C
- Total Resistance Shift: ±15% maximum
- Total Resistance Shift: ±10% maximum
- Rotational Life (No Load): 10,000,000 shaft revolutions

Mechanical Characteristics
- 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: 0.013 mm (0.0005 in.) T.I.R.
- Shaft Radial Play: 0.013 mm (0.0005 in.) T.I.R.
- Backlash: 0.1° maximum
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Recommended Part Numbers

<table>
<thead>
<tr>
<th>Part Number*</th>
<th>Resistance (Ω)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6657S-1-102</td>
<td>1,000</td>
</tr>
<tr>
<td>6657S-1-202</td>
<td>2,000</td>
</tr>
<tr>
<td>6657S-1-502</td>
<td>5,000</td>
</tr>
<tr>
<td>6657S-1-103</td>
<td>10,000</td>
</tr>
</tbody>
</table>

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.

1At room ambient: +25°C nominal and 50% relative humidity nominal, except as noted.
Panel thickness and hole diameters are recommended for best fit. However, customers may adjust the dimensions to suit their specific application.

<table>
<thead>
<tr>
<th>DIMENSIONS</th>
<th>MM (INCHES)</th>
<th>TOLERANCES: ± 0.127 (±005)</th>
</tr>
</thead>
</table>

Panel Thickness Dimensions