### Electrical Characteristics

**6537**

- **Standard Resistance Range**: 1 K to 100 K ohms
- **Total Resistance Tolerance**: ±10 %
- **Independent Linearity**: ±1 %
- **Effective Electrical Angle**: 340 ° ±3 °
- **Soldering Temperature**: 195 °C for 5 seconds
- **Output Smoothness**: 0.1 %
- **Dielectric Withstanding Voltage (MIL-STD-202, Method 301)**: 750 VAC minimum
- **Sea Level**: 750 VAC minimum
- **Output Smoothness**: 0.1 %
- **End Voltage**: ±0.5 % maximum
- **Independent Linearity**: ±1 %
- **Backlash**: 0.1 ° maximum
- **Shaft Radial Play**: 0.13 mm (0.005 in.) T.I.R.
- **Shaft End Play**: 0.13 mm (0.005 in.) T.I.R.
- **Shaft Runout**: 0.025 mm (0.001 in.) T.I.R.
- **Mechanical Angle**: Continuous
- **IP Rating**: IP 40
- **Moisture Resistance (MIL-STD-202, Method 106)**: IP 50
- **Rotational Life (No Load)**: 10,000,000 shaft revolutions
- **Load Life**: 1,000 hours, 1 watt
- **Voltage Ratio Shift**: ±0.5 % maximum
- **Shock**: 50 G
- **Resolution**: Essentially infinite
- **Total Resistance Tolerance**: ±10 %
- **Standard Resistance Range**: 1 K to 100 K ohms
- **Over Storage Temperature Range**: -50 °C to +125 °C

**6538**

- **Standard Resistance Range**: 1 K to 100 K ohms
- **Total Resistance Tolerance**: ±10 %
- **Independent Linearity**: ±1 %
- **Effective Electrical Angle**: 340 ° ±3 °
- **Soldering Temperature**: 195 °C for 5 seconds
- **Output Smoothness**: 0.1 %
- **Dielectric Withstanding Voltage (MIL-STD-202, Method 301)**: 750 VAC minimum
- **Sea Level**: 750 VAC minimum
- **Output Smoothness**: 0.1 %
- **End Voltage**: ±0.5 % maximum
- **Independent Linearity**: ±1 %
- **Backlash**: 0.1 ° maximum
- **Shaft Radial Play**: 0.08 mm (0.003 in.) T.I.R.
- **Shaft End Play**: 0.13 mm (0.005 in.) T.I.R.
- **Shaft Runout**: 0.025 mm (0.001 in.) T.I.R.
- **Mechanical Angle**: Continuous
- **IP Rating**: IP 50
- **Moisture Resistance (MIL-STD-202, Method 106)**: IP 50
- **Rotational Life (No Load)**: 20,000,000 shaft revolutions
- **Load Life**: 1,000 hours, 1 watt
- **Voltage Ratio Shift**: ±0.5 % maximum
- **Shock**: 50 G
- **Resolution**: Essentially infinite
- **Total Resistance Tolerance**: ±10 %
- **Standard Resistance Range**: 1 K to 100 K ohms
- **Over Storage Temperature Range**: -50 °C to +125 °C

### Mechanical Characteristics

- **Mechanical Angle**: Continuous
- **Torque (Starting & Running)**: 0.40 N-cm (0.5 oz.-in.) max. for 85 °C (185 °F) max.
- **Shaft Runout**: 0.025 mm (0.001 in.) T.I.R.
- **Shaft Radial Play**: 0.08 mm (0.003 in.) T.I.R.
- **Shaft End Play**: 0.13 mm (0.005 in.) T.I.R.
- **Pilot Diameter Runout**: 0.06 mm (0.0025 in.) T.I.R.
- **Backlash**: ±0.1 ° maximum
- **Weight**: 18 gm
- **Terminals**: Molded-in rear turret type

### Recommended Part Numbers

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<th>Part Number</th>
<th>Resistance (Ω)</th>
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<tr>
<td>6537S-1-102</td>
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<tr>
<td>6537S-1-103</td>
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<tr>
<th>Part Number</th>
<th>Resistance (Ω)</th>
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<tbody>
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<td>6538S-1-162</td>
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<tr>
<td>6538S-1-103</td>
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</tbody>
</table>

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