Model 3550
¾" Diameter 10-Turn Servo Mount
Wirewound Element

FEATURES

- Shaft supported front and rear by precision ball bearings.
- Outstanding resistance to humidity. Exceeds humidity cycling requirements of MIL-R-12934.
- Housing: high temperature moisture resistant, then-molding plastic.
- Extended temperature performance — 65 to +125°C.
- Special rotor and slider design assures excellent wiper stability.
- SILVERWELD® terminaion eliminates vulnerable single wire termination.
- Performance of the Model 3550 is guaranteed by the Bourns Reliability Program which includes individual inspection to published electrical and physical characteristics.
- Custom design capability is available to satisfy your most demanding and difficult special requirements.

STANDARD RESISTANCES

<table>
<thead>
<tr>
<th>Resistance (ohms)</th>
<th>Part Number**</th>
<th>Resolution (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>3550S-1-050</td>
<td>0.057</td>
</tr>
<tr>
<td>100</td>
<td>3550S-1-101</td>
<td>0.049</td>
</tr>
<tr>
<td>200</td>
<td>3550S-1-201</td>
<td>0.037</td>
</tr>
<tr>
<td>500</td>
<td>3550S-1-500</td>
<td>0.029</td>
</tr>
<tr>
<td>1,000</td>
<td>3550S-1-100</td>
<td>0.024</td>
</tr>
<tr>
<td>2,000</td>
<td>3550S-1-202</td>
<td>0.020</td>
</tr>
<tr>
<td>5,000</td>
<td>3550S-1-502</td>
<td>0.015</td>
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</tbody>
</table>

*Some type bearing inserts are available at reduced cost (Model 3550S-1.04).

<table>
<thead>
<tr>
<th>Resistance (ohms)</th>
<th>Part Number**</th>
<th>Resolution (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,000</td>
<td>3550S-1-123</td>
<td>0.14</td>
</tr>
<tr>
<td>20,000</td>
<td>3550S-1-203</td>
<td>0.015</td>
</tr>
<tr>
<td>50,000</td>
<td>3550S-1-503</td>
<td>0.015</td>
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<tr>
<td>100,000</td>
<td>3550S-1-104</td>
<td>0.023</td>
</tr>
<tr>
<td>200,000</td>
<td>3550S-1-204</td>
<td>0.027</td>
</tr>
<tr>
<td>350,000</td>
<td>3550S-1-354</td>
<td>0.098</td>
</tr>
</tbody>
</table>

**The last three digits of the part number represent the resistance value in standard code.
STANDARD SPECIFICATIONS

The specifications listed below are for the standard model. Modifications of all types (mechanical, electrical, and environmental) can be custom engineered to your specific requirements.

ELECTRICAL CHARACTERISTICS

- Resistance Range: 50 ohms to 100k ohms
- Resistance Tolerance*: ±3%
- Linearity (Independent): ±0.2% maximum
- Resolution: See standard tolerance tables
- Effective Electrical Avail.: 300° (±10°/—0°)
- Absolute Minimum Resistance: 12 or 0.1%, whichever is greater
- Noise*: 1000 EMA maximum
- Power Rating: 2.5 watts
- 125°C: 0 watt
- DISSIPATION: MIL-R-12904
- Base Condition: MIL-R-12904, MIL-R-12904, 465°C
- Wiper Resistance: 0.1 millisecond maximum
- Wiper Shift: 0.2% maximum
- Shock: MIL-R-12904, 1000g
- Wiper Bounce and Wiper Shift: Same as vibration
- Lead Life: MIL-R-12904 4.6.3.2.2, 1,000 hours
- Resistance Shift: 2.0% maximum
- Sand and Dust: MIL-E-5272
- Fumes: MIL-E-5272
- Salt Spray: MIL-R-12904

ENVIRONMENTAL CHARACTERISTICS

- Operating Temperature Range: -65° to +125°C
- Temperature Coefficient of Wire*: 20 ppm/°C maximum
- Humidity: MIL-R-12904, humidity cycling
- Vibration: MIL-R-12904, 50Hz
- Shock: MIL-R-12904, 100g
- Wiper Bounce and Wiper Shift: Same as vibration
- Lead Life: MIL-R-12904 4.6.3.2.2, 1,000 hours
- Resistance Shift: 2.0% maximum
- Sand and Dust: MIL-E-5272
- Fumes: MIL-E-5272
- Salt Spray: MIL-R-12904

MECHANICAL AND PHYSICAL CHARACTERISTICS

- Mechanical Angle: 360° (±10°/—0°)
- Shaft萢atch: 0.001 in. T.I.R.
- Shaft萢atch: 0.003 in. T.I.R.
- Shaft萢atch: 0.002 in. T.I.R.
- Shaft萢atch: 0.001 in. T.I.R.
- Shaft萢atch: 0.003 in. T.I.R.
- Shaft萢atch: 0.002 in. T.I.R.
- Torque*: 0.4 oz-in. maximum (turning)
- (44.7% for each additional cup)
- Relational Life: 500,000 shaft revolutions
- Moment of Inertia: 0.37 gms cm²
- Drop Strength: 90 ac-cu. minimum
- Tapping: 3 rows maximum
- Weight: Approximately 1.4 oz.
- Terminals: Gold plated tinned type
- Marking*: Manufacturer’s name and part number, resistance value and tolerance, linear
- Stability, wiring diagram, and data code.

*INSPECTION NOTE: 100% or statistical sampling inspection performed to insure highest quality.

Contact manufacturer for complete specification details for resistances below 5000.

Specifications are subject to change without notice.

BOURNS® Potentiometer Model 3550

3550
SERVO SIZE

BOURNS INC., TRIMMER PRODUCTS DIVISION
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