



BOURNS®

Features

- Servo mount
- Shaft support by front and rear precision ball bearings
- Non-standard features and specifications available
- Gangable up to 10 cups

6534 - 7/8 " (22 mm) Precision Potentiometer

Electrical Characteristics¹

| | |
|---|--|
| Standard Resistance Range..... | 1 K to 100 K ohms |
| Total Resistance Tolerance | ±10 % |
| Independent Linearity | ±0.5 % |
| Effective Electrical Angle | 320 ° ±3 ° |
| End Voltage..... | 0.1 % maximum (0.25 at 2 K ohms, 0.4 % at 1 K ohm) |
| 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 350 VAC, Whichever is Less) | |
| +70 °C..... | 1 watt |
| +125 °C..... | 0 watt |
| Insulation Resistance (500 VDC)..... | 1,000 megohms minimum |
| Resolution | Essentially infinite |

Environmental Characteristics¹

| | |
|---|------------------------------|
| Operating Temperature Range..... | +1 °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 | ±2 % maximum |
| Shock | 50 G |
| Wiper Bounce | 0.1 millisecond maximum |
| Rotational Life (No Load)..... | 25,000,000 shaft revolutions |
| Total Resistance Shift | ±10 % maximum |
| Moisture Resistance (MIL-STD-202, Method 103, Condition B) | |
| Total Resistance Shift | ±10 % maximum |
| IP Rating | IP 40 |

Mechanical Characteristics¹

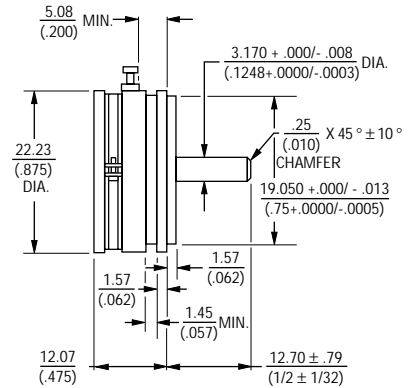
| | |
|----------------------------------|---|
| Mechanical Angle | Continuous |
| Torque (Starting & Running)..... | 0.18 N-cm (0.25 oz.-in.) maximum |
| Shaft Runout..... | 0.025 mm (0.001 in.) T.I.R. |
| Lateral Runout | 0.05 mm (0.002 in.) T.I.R. |
| Shaft End Play | 0.08 mm (0.003 in.) T.I.R. |
| Shaft Radial Play | 0.08 mm (0.003 in.) T.I.R. |
| Pilot Diameter Runout..... | 0.025 mm (0.001 in.) T.I.R. |
| Backlash | 0.1 ° maximum |
| Weight | 18 grams |
| Terminals..... | Side exit turret style |
| Soldering Condition..... | Recommended hand soldering using Sn95/Ag5 no clean solder, 0.025 " wire diameter. Maximum temperature 399 °C (750 °F) for 3 seconds. No wash process to be used with no clean flux. |
| Marking | Manufacturer's name and part number, resistance value and tolerance, linearity tolerance, wiring diagram, and date code. |
| Ganging..... | 10 cups maximum |

¹At room ambient: +25 °C nominal and 50 % relative humidity nominal, except as noted.

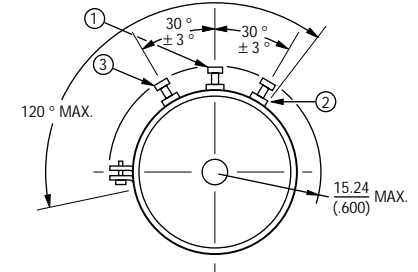
Recommended Part Numbers

| Part Number* | Resistance (Ω) |
|--------------|----------------|
| 6534S-1-102 | 1,000 |
| 6534S-1-202 | 2,000 |
| 6534S-1-502 | 5,000 |
| 6534S-1-103 | 10,000 |
| 6534S-1-203 | 20,000 |
| 6534S-1-503 | 50,000 |
| 6534S-1-104 | 100,000 |

Product Dimensions



ADD $\frac{5.08}{(200)}$ FOR EACH ADDITIONAL CUP.



TOLERANCES: EXCEPT WHERE NOTED

DECIMALS: .XX ± $\frac{.51}{(02)}$, .XXX ± $\frac{.13}{(005)}$

FRACTIONS: ±1/64

DIMENSIONS: $\frac{MM}{(IN.)}$

