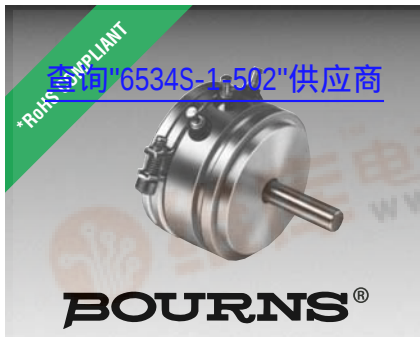




## Features

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



Model 6534 is currently available, although not recommended for new designs. **Model 6538** is preferred.

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

### Electrical Characteristics<sup>1</sup>

|                                                                                   |                                                    |
|-----------------------------------------------------------------------------------|----------------------------------------------------|
| 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 Characteristics<sup>1</sup>

|                                                             |                              |
|-------------------------------------------------------------|------------------------------|
| 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 Characteristics<sup>1</sup>

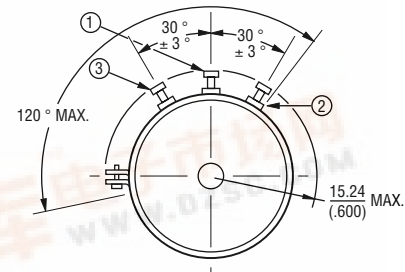
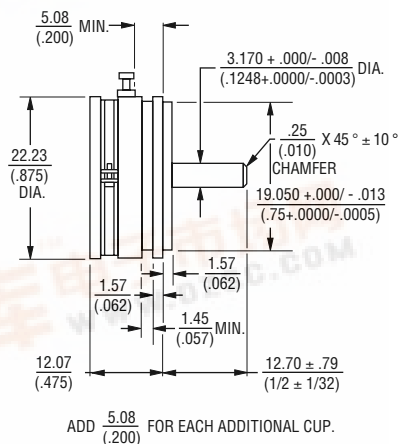
|                                  |                                                                                                                                                                                    |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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                                                                                                                                                                    |

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

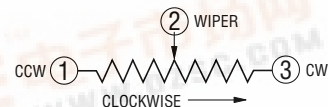
### Recommended Part Numbers

| 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



TOLERANCES: EXCEPT WHERE NOTED  
 DECIMALS: .XX ± .51 (.02), .XXX ± .13 (.005)  
 FRACTIONS: ±1/64  
 DIMENSIONS: MM (IN.)



REV. 06/06

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.