



Features

- Essentially infinite resolution
- Excellent rotational life
- High quality, rugged construction
- General purpose applications
- Non-standard features available
- Cost and space saving

6539/6639 - Precision Potentiometer

	6539 Servo Mount	6639 Bushing Mount
Electrical Characteristics¹		
Standard Resistance Range.....	1K to 100K ohms	1K to 100K ohms
Resistance Tolerance		
Standard	±15%	±15%
Independent Linearity		
Standard	±2.0%	±2.0%
Resolution	Essentially infinite	Essentially infinite
Effective Electrical Angle	340° +3°	340° +3°
End Voltage	0.5% maximum	0.5% maximum
Output Smoothness	0.1%	0.1%
Power Rating (Voltage Limited By Power Dissipation or 300 VAC, Whichever is Less)		
+70°C.....	1.0 watt	1.0 watt
+125°C.....	0 watt	0 watt
Dielectric Withstanding Voltage	MIL-STD-202, Method 301	MIL-STD-202, Method 301
Sea Level	750 VAC minimum	750 VAC minimum
Insulation Resistance (500 VDC).....	500 megohms minimum	500 megohms minimum

Environmental Characteristics¹		
Operating Temperature		
Static Operation Temp Range	-65°C to +125°C	-65°C to +125°C
Dynamic Temp Range	+1°C to +125°C	+1°C to +125°C
Vibration		
Wiper Bounce	0.1 millisecond maximum	0.1 millisecond maximum
Shock		
Wiper Bounce	0.1 millisecond maximum	0.1 millisecond maximum
Rotational Life (No Load)		
.....	10,000,000 shaft revolutions	10,000,000 shaft revolutions
Total Resistance Shift		
.....	±10% maximum	±10% maximum

Mechanical Characteristics¹		
Mechanical Angle.....		
.....	Continuous, Stops (340° +8°, -0°) available	Continuous, Stops (340° +8° -0°) available
Backlash.....		
.....	0.1° maximum	0.1° maximum
Shaft Runout		
.....	0.005 in. (0.13mm) T.I.R.	0.005 in. (0.13mm) T.I.R.
Shaft End Play		
.....	0.005 in. (0.13mm) T.I.R.	0.005 in. (0.13mm) T.I.R.
Shaft Radial Play		
.....	0.005 in. (0.13mm) T.I.R.	0.005 in. (0.13mm) T.I.R.
Pilot Diameter		
Runout	0.0025 in. (0.06mm) T.I.R.	
Lateral Runout	0.003 in. (0.08mm) T.I.R.	
Torque (Starting & Running)		
.....	0.5 oz.-in. (0.40 Ncm) max.	0.5 oz.-in. (0.40 Ncm) max.
Terminals		
.....	Rear Turret Type	Rear Turret Type
Bearing Type.....		
.....	Brass Sleeve	Nickel Plated Brass
Markings.....		
.....	Manufacturer's name, part number, resistance value and tolerance, linearity tolerance, wiring diagram and date code.	Manufacturer's name, part number, resistance value and tolerance, linearity tolerance, wiring diagram and date code.

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

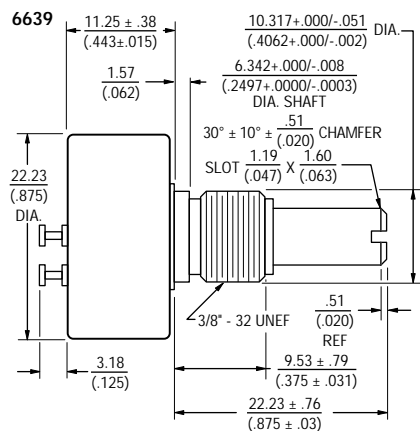
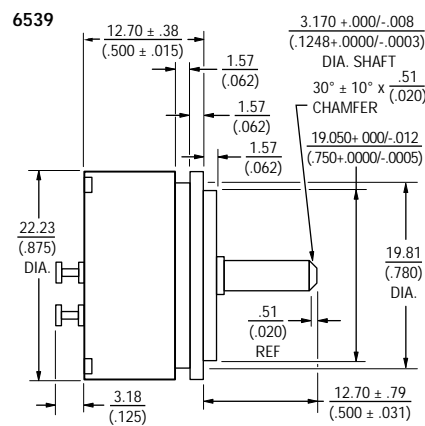
Recommended Part Numbers

Part Number	Resistance (Ω)
6539S-1-102	1,000
6539S-1-502	5,000
6539S-1-103	10,000

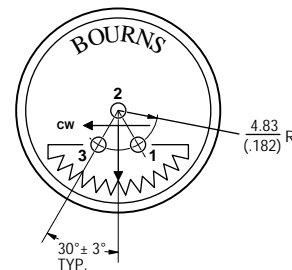
Part Numbers		Resistance (Ω)
Bushing Mount	Mechanical Stops	
6639S-1-102	6639S-301-102	1,000
6639S-1-202	6639S-301-202	2,000
6639S-1-502	6639S-301-502	5,000
6639S-1-103	6639S-301-103	10,000
6639S-1-203		20,000

BOLD-FACE LISTINGS ARE IN STOCK AND READILY AVAILABLE THROUGH DISTRIBUTION.

FOR OTHER OPTIONS CONSULT FACTORY.



65/6639



TOLERANCES: EXCEPT WHERE NOTED

DECIMALS: .XX ± .38 / (.015) XXX ± .13 / (.005)

FRACTIONS: ±1/64

DIMENSIONS: MM / (IN.)

