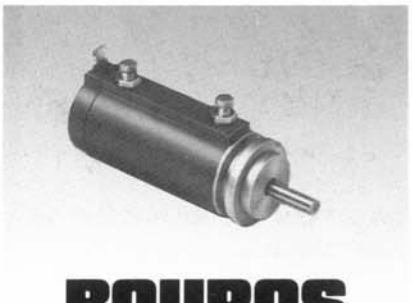


1/2'' DIAMETER / 10-TURN / WIREWOUND AND HYBRITRON® ELEMENT

- Servo mount
- Excellent resolution
- Non-standard features and specifications available
- Small diameter
- High rotational life

BOURNS

FOR ORDERING INFORMATION SEE PAGE 44 .

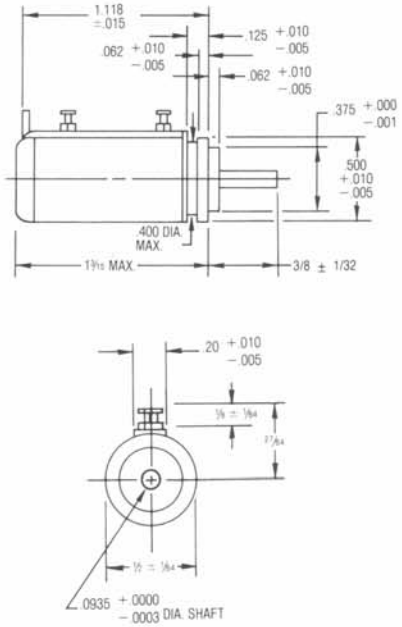
Models 3750/3751

Bourns® Precision Potentiometers

	3750 Wirewound Element	3751 Hybritron® Element
Electrical Characteristics[1]		
Standard Resistance Range	100 to 100KΩ	1K to 100KΩ
Resistance Tolerance	±5%	±10%
Independent Linearity	±0.25%	±0.25%
Resolution	See table page 108	Essentially infinite
Effective Electrical Angle	3600° +10°, −0°	3600° +10°, −4°
Absolute Minimum Resistance/ Minimum Voltage	1Ω or 0.1% maximum (whichever is greater)	Minimum voltage 0.2% maximum
Noise	100Ω ENR maximum	Output smoothness 0.1% maximum
Power Rating (Voltage Limited By Power Dissipation or 315 VAC, Whichever is Less)		
+70°C	1 watt	1 watt
+125°C	0 watt	0 watt
Dielectric Withstanding Voltage	MIL-STD-202, Method 301	MIL-STD-202, Method 301
Sea Level	1,000 VAC minimum	1,000 VAC minimum
80,000 Feet	300 VAC minimum	
70,000 Feet		300 VAC minimum
Insulation Resistance (500 VDC)	1,000 megohms minimum	1,000 megohms minimum
Environmental Characteristics[1]		
Operating Temperature		
Static Operation Temp Range	−65°C to +125°C	−55°C to +105°C
Dynamic Temp Range	+1°C to +125°C	+1°C to +105°C
Temperature Coefficient[2]	±50ppm/°C maximum/unit	±100ppm/°C maximum/unit
Vibration	20G	20G
Wiper Bounce	0.1 millisecond maximum	0.1 millisecond maximum
Total Resistance Shift	±2% maximum	±2% maximum
Voltage Ratio Shift	±0.2% maximum	0.2% maximum
Shock	100G	100G
Wiper Bounce	0.1 millisecond maximum	0.1 millisecond maximum
Total Resistance Shift	±2% maximum	±2% maximum
Voltage Ratio Shift	±0.2% maximum	±0.2% maximum
Load Life	1,000 hours, 1 watt	1,000 hours, 1 watt
Total Resistance Shift	±2% maximum	±5% maximum
Rotational Life (No Load)	1,000,000 shaft revolutions	10,000,000 shaft revolutions
Total Resistance Shift	±5% maximum	±5% maximum
Moisture Resistance	MIL-STD-202, Method 103, Condition B	MIL-STD-202, Method 103, Condition B
Total Resistance Shift	±2% maximum	±5% maximum
Mechanical Characteristics[1]		
Mechanical Angle	3600° +20°, −0°	3600° +20°, −0°
Shaft Runout	0.003 in. T.I.R.	0.003 in. T.I.R.
Lateral Runout	0.003 in. T.I.R.	0.003 in T.I.R.
Pilot Diameter Runout	0.002 in. T.I.R.	0.002 in. T.I.R.
Shaft End Play	0.005 in. T.I.R.	0.005 in. T.I.R.
Shaft Radial Play	0.002 in. T.I.R.	0.002 in. T.I.R.
Stop Strength	20 oz-in. minimum	20 oz-in. minimum
Torque, Starting	0.5 oz-in. maximum	0.5 oz-in. maximum
Torque, Running	0.3 oz-in. maximum	0.5 oz-in. maximum
Backlash	1.0° maximum	1.0° maximum
Weight	Approximately 0.3 oz.	Approximately 0.3 oz.
Terminals	Gold-plated turrets	Gold-plated turrets

[1]At room ambient: +25°C nominal and 50% relative humidity nominal, except as noted.
[2]Consult factory for complete specification details.
Specifications are subject to change without notice.

3750/3751



TOLERANCES: EXCEPT WHERE NOTED
DECIMALS: .XX ± .010 , .XXX ± .005
FRACTIONS: ± 1/64 DIMENSIONS: IN.