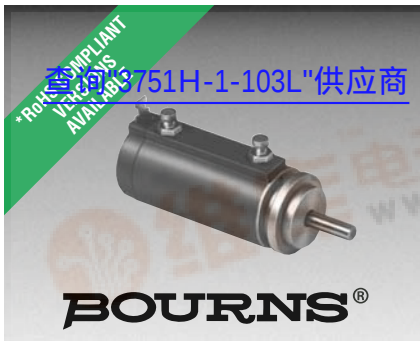




Features

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



Models 3750 and 3751 are currently available, although not recommended for new designs.

3750/3751 - Precision Potentiometer

Electrical Characteristics¹ 3750 Wirewound Element 3751 Hybritron® Element

Standard Resistance Range	100 to 100 K ohms	1 K to 100 K ohms
Total Resistance Tolerance	±5 %	±10 %
Independent Linearity	±0.25 %	±0.25 %
Effective Electrical Angle	3600° +10°, -0°	3600° +10°, -4°
Absolute Minimum Resistance/	1 ohm or 0.1 % maximum	Minimum voltage
Minimum Voltage	(whichever is greater)	0.2 % maximum
Noise	500 ohms ENR maximum	Output smoothness 0.15 % maximum

Dielectric Withstanding Voltage (MIL-STD-202, Method 301)

Sea Level 1,000 VAC minimum 1,000 VAC minimum

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

Insulation Resistance (500 VDC) 1,000 megohms minimum 1,000 megohms minimum

Resolution See recommended part nos. Essentially infinite

Environmental Characteristics¹

Operating Temperature Range +1 °C to +125 °C +1 °C to +105 °C

Storage Temperature Range -65 °C to +125 °C -55 °C to +105 °C

Temperature Coefficient Over

Storage Temperature Range² ±50 ppm/°C maximum/unit ±100 ppm/°C maximum/unit

Vibration 20 G 20 G

Wiper Bounce 0.1 millisecond maximum 0.1 millisecond maximum

Shock 100 G 100 G

Wiper Bounce 0.1 millisecond maximum 0.1 millisecond 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 revolutions² 10,000,000 shaft revolutions²

Total Resistance Shift ±5 % maximum ±5 % maximum

Moisture Resistance (MIL-STD-202, Method 103, Condition B)

Total Resistance Shift ±2 % maximum ±5 % maximum

IP Rating IP 40 IP 40

Mechanical Characteristics¹

Stop Strength 14 N-cm (20 oz-in.) minimum

Mechanical Angle 3600° +20°, -0°

Torque

Starting 0.35 N-cm (0.5 oz-in.) max.

Running 0.21 N-cm (0.3 oz-in.) max.

Shaft Runout 0.08 mm (0.003 in.) T.I.R.

Lateral Runout 0.08 mm (0.003 in.) T.I.R.

Shaft End Play 0.13 mm (0.005 in.) T.I.R.

Shaft Radial Play 0.05 mm (0.002 in.) T.I.R.

Pilot Diameter Runout 0.05 mm (0.002 in.) T.I.R.

Backlash 1.0° maximum

Weight Approximately 8.5 G

Terminals Gold-plated turret lugs

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 (Multiple Section Pots.) 1 cup maximum

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

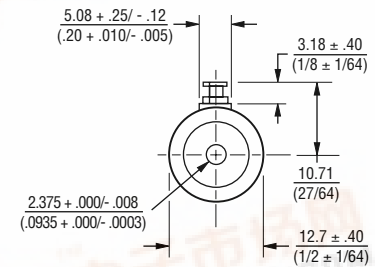
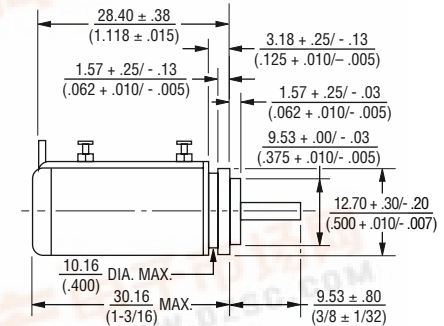
²Consult manufacturer for complete specification details.

Recommended Part Numbers

Part Number	Resistance (Ω)	Resolution
3750S-1-102L	1,000	0.05
3750S-1-202L	2,000	0.04
3750S-1-502L	5,000	0.04
3750S-1-103L	10,000	0.02

Part Number	Resistance (Ω)
3751H-1-102L	1,000
3751H-1-202L	2,000
3751H-1-502L	5,000
3751H-1-103L	10,000

3750/3751

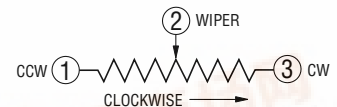


TOLERANCES: EXCEPT WHERE NOTED

DECIMALS: .XX ± (.010) .XXX ± (.005)

DIMENSIONS: MM
(IN)

FRACTIONS: ±1/64



BOLDFACE LISTINGS ARE IN STOCK AND READILY AVAILABLE THROUGH DISTRIBUTION.

FOR OTHER OPTIONS CONSULT FACTORY.

TERMINALS:

L = RoHS COMPLIANT

BLANK = STANDARD

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.

