



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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*ROHS COMPLIANT



BOURNS®

Features

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

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 Range ² | ±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 revolutions ² | 10,000,000 shaft revolutions ² |
| 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 | |
| Soldering Condition | |
| Manual Soldering..... | 96.5Sn/3.0Ag/0.5Cu solid wire or no-clean rosin cored wire 370 °C (700 °F) max. for 3 seconds |
| Wave Soldering..... | 96.5Sn/3.0Ag/0.5Cu solder with no-clean flux 260 °C (500 °F) max. for 5 seconds |
| Wash processes..... | Not recommended |
| 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 |

BOLDFACE LISTINGS ARE IN STOCK AND READILY AVAILABLE THROUGH DISTRIBUTION.

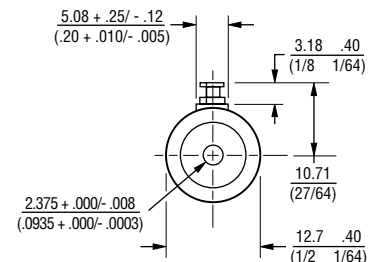
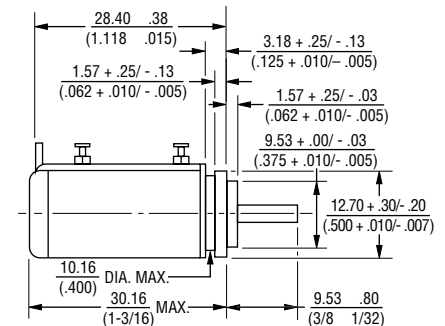
FOR OTHER OPTIONS CONSULT FACTORY.

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

ROHS IDENTIFIER:
L = COMPLIANT*

Product Dimensions

3750/3751

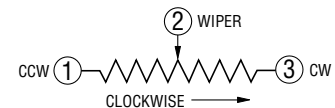


TOLERANCES: EXCEPT WHERE NOTED

DECIMALS: XX $\frac{.25}{(.010)}$.XXX $\frac{.13}{(.005)}$

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

FRACTIONS: 1/64



REV. 06/12

"Hybritron" is a registered trademark of Bourns, Inc.

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

Customers should verify actual device performance in their specific applications.