



1/2" Ø 10-TURN SERVO MOUNT POTENTIOMETERS WIREWOUND/HYBRITRON® ELEMENT

- Miniature size
- Outstanding resistance to humidity
- Housing: high temperature, moisture resistant, thermo-setting plastic.
- SILVERWELD® termination eliminates vulnerable single-wire termination
- Front and rear ball bearings
- HYBRITRON® element provides essentially infinite resolution
- Performance is guaranteed by Bourns Reliability Program

STANDARD SPECIFICATIONS	MODEL 3750 Wirewound Element	MODEL 3751 Hybritron® Element
Electrical Characteristics		
Resistance Range	100 Ω – 100 KΩ	1 Ω – 50 KΩ
Resistance Tolerance	± 5%	± 10%
Linearity (Independent)	± 0.25%	
Resolution	See ordering information	Essentially infinite
Effective Electrical Angle	3600° +10° –0°	3600° +10° –4°
Absolute Minimum Resistance/Voltage	1 Ω or 0.1 % max.	0.2 % VR max.
Noise/Output Smoothness	100 Ω ENR max.	0.1 % VR max.
Power Rating	70°C	1.0 W
	125°C	0 W
Dielectric Strength MIL-R-12934		
Sea Level	1000 V ~ min.	
80,000 feet	300 V ~ min.	
Insulation Resistance 500 V =	1000 Meg. Ω min.	
Environmental Characteristics		
Operating Temperature Range	–65°C to +125°C	–55°C to +125°C
Temperature Coefficient of Wire ①	20 ppm/°C max.	100 ppm/°C max.
Humidity	MIL-R-12934, Humidity Cycling	
Vibration	MIL-R-12934, 20 G	
Wiper Bounce	0.1 millisecond max.	
Wiper Shift	0.5 % max.	
Shock	MIL-R-12934, 100 G	
Wiper Bounce and Wiper Shift	Same as Vibration	
Load Life MIL-R-12934	1000 hours	
Resistance Shift	2.0 % max.	5.0 % max.
Sand, Dust, Fungus	MIL-E-5272	
Salt Spray	MIL-R-12934	
Mechanical and Physical Characteristics		
Mechanical Angle	3600° +20° –0°	
Shaft Runout	0.003 in. T.I.R.	
Lateral Runout	0.003 in. T.I.R.	
Pilot Diameter Runout	0.002 in. T.I.R.	
Shaft End Play	0.005 in. T.I.R.	
Shaft Radial Play	0.002 in. T.I.R.	
Rotational Life, shaft revolutions	1.000.000	10.000.000
Stop Strength	20 oz.-in. max.	
Torque Starting/Running	0.5 oz.-in. max.	
Moment of Inertia	0.06 g cm²	

Specifications are subject to change without notice.

STANDARD SPECIFICATIONS CONT.

Terminals	Gold-plated turrets
Weight	approx. 28 g
Markings	Manufacturer's name and part number, resistance value and tolerance, linearity tolerance, wiring diagram and date code.

ORDERING INFORMATION

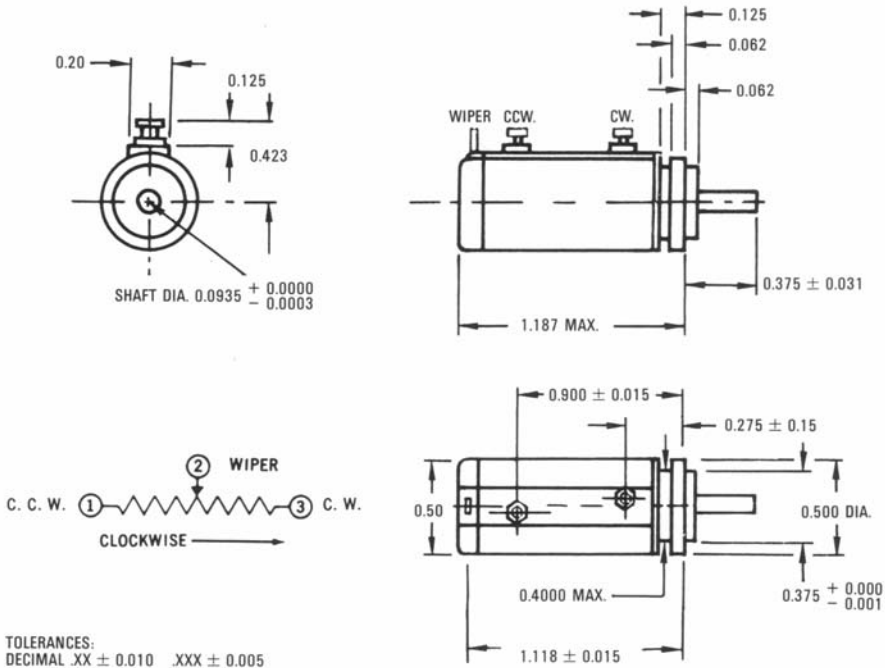
Resistance Ω	Part Number*
1,000	3751H-1-102
2,000	3751H-1-202
5,000	● 3751H-1-502
10,000	● 3751H-1-103
20,000	3751H-1-203
50,000	3751H-1-503

● Preferred resistance values

Part Number*	Resolution%
3750S-1-101	0.090
3750S-1-201	0.075
3750S-1-501	0.060
3750S-1-102	0.050
3750S-1-202	0.040
● 3750S-1-502	0.040
● 3750S-1-103	0.035
3750S-1-203	0.025
3750S-1-503	0.020
3750S-1-104	0.020

*The last three digits of the part number represent the resistance value in standard code.

DIMENSIONS (INCH)



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