



1 13/16", 2" Ø, 10-TURN, BUSHING- OR SERVO MOUNT POTENTIOMETERS WIREWOUND ELEMENT

- Outstanding resistance to humidity.
- Housing: high temperature, moisture resistant, thermo-setting plastic.
- SILVERWELD® termination eliminates vulnerable single wire termination.
- Special rotor and slider block design assures excellent slider stability.
- Model 3400, Shaft supported front and rear by sleeve bearings. Model 3450, front and rear by precision ball bearings.
- Performance guaranteed by BOURNS Reliability Program.
- Custom design capability available to satisfy most demanding and difficult special requirements.

STANDARD SPECIFICATIONS	MODEL 3400 1 13/16" Ø Bushing Mount	MODEL 3450 2.0" Ø Servo Mount
Electrical Characteristics		
Resistance Range	100 Ω – 500 KΩ	1 KΩ – 500 KΩ
Resistance Tolerance	± 3%	
Linearity (Independent)	± 0.15%	
Resolution	See ordering information	
Effective Electrical Angle	3600° + 4° – 0°	3600° + 3° – 0°
Absolute Minimum Resistance	1 Ω or 0.15%, whichever is greater	1 Ω or 0.1%, whichever is greater
Noise	100Ω ENR max.	
Power Rating	5.0 W (40°C) 0 W (105°C)	5.0 W (70°C) 0 W (125°C)
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 +105°C	– 65°C to +125°C
Temperature Coefficient of Wire①	20 ppm/°C max.	
Humidity	MIL-R-12934 Humidity Cycling	
Vibration	MIL-R-12934, 10G	
Wiper Bounce	0.1 millisecond max.	
Wiper Shift	0.1% max.	0.2% max.
Shock	MIL-R-12934, 50G	
Wiper Bounce and Wiper Shift	Same as Vibration	
Load Life MIL-R-12934	1000 hours	
Resistance Shift	2.0% max.	
Sand, Dust, Fungus	MIL-E-5272	
Salt Spray	MIL-R-12934	
Mechanical and Physical Characteristics		
Mechanical Angle	3600° + 4° – 0°	3600° + 10° – 0°
Shaft Runout	0.002 in. T. I. R.	0.001 in. T. I. R.
Lateral Runout	0.005 in. T. I. R.	0.002 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	0.0025 in. T. I. R.	0.001 in. T. I. R.
Rotational Life, shaft revolutions	2,000,000	
Stop Strength	550 oz.-in. min.	800 oz.-in. min.
Torque Starting	2.0 oz.-in. max.	1.2 oz.-in. max.
Torque Running	2.0 oz.-in. max.	0.8 oz.-in. max.
Moment of Inertia	26.0 g cm ²	

Specifications are subject to change without notice.

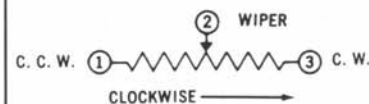
BOURNS®

STANDARD SPECIFICATIONS CONT.	MODEL 3400 1 ¹³ / ₁₆ " ϕ	MODEL 3450 2.0" ϕ
Ganging	2 cups max.	3 cups max.
Terminals	Gold-plated solder lugs	Gold-plated turrets
Weight	approx. 110 g	approx. 110 g
Markings	Manufacturer's name and part number, resistance value and tolerance, linearity tolerance, wiring diagram and date code.	

NOTES: ① (3400) Consult Bourns representative for specification details for resistances below 500 Ω and above 100 K Ω . Available with Hybritron® element.

ORDERING INFORMATION

Resistance Ω	Part Number*	Resolution %	Part Number*	Resolution %
100	3400S-1-101	0.045	—	—
200	3400S-1-201	0.034	—	—
500	3400S-1-501	0.032	—	—
1,000	● 3400S-1-102	0.020	3450S-1-102	0.015
2,000	3400S-1-202	0.016	3450S-1-202	0.012
5,000	● 3400S-1-502	0.013	3450S-1-502	0.009
10,000	● 3400S-1-103	0.010	● 3450S-1-103	0.007
20,000	3400S-1-203	0.009	3450S-1-203	0.008
50,000	3400S-1-503	0.008	3450S-1-503	0.006
100,000	3400S-1-104	0.006	3450S-1-104	0.005
200,000	3400S-1-204	0.005	3450S-1-204	0.004
500,000	3400S-1-504	0.005	3450S-1-504	0.003



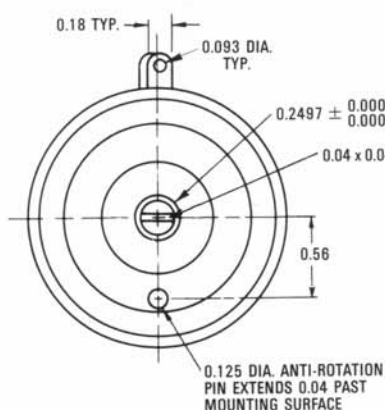
*The last three digits of the part number represent the resistance in standard code.

● Preferred resistance values

DIMENSIONS (INCH)

3400

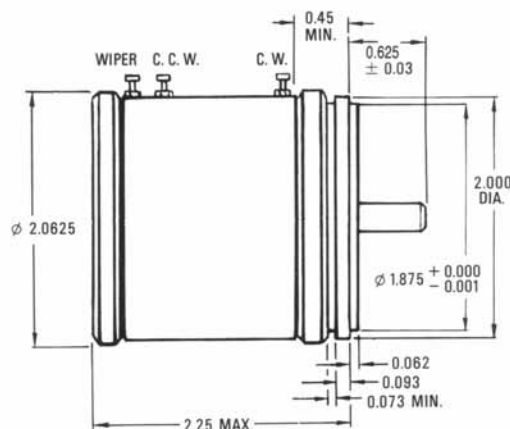
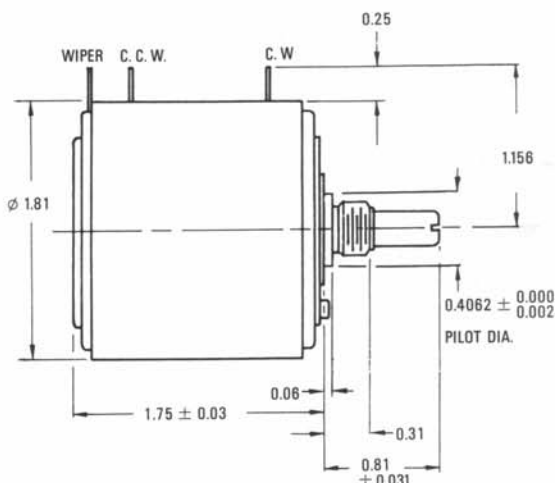
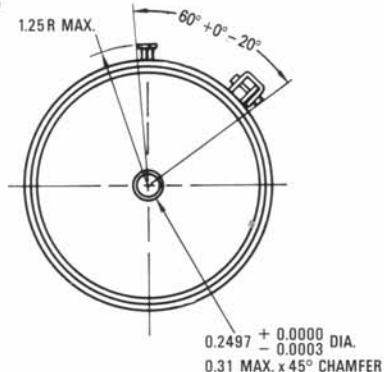
LOCKWASHER AND MOUNTING NUT SUPPLIED WITH EACH UNIT.



TOLERANCES EXCEPT AS SHOWN:
DECIMAL .XX = 0.010 .XXX = 0.005

3450

NOTE:
ADD. 1.75 MAX. TO DIM. 2.25 FOR EACH ADDITIONAL CUP.



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