BOURNS®

3550/3560/3570 SERIES

7/8" ∅, 3-, 5-, 10-TURN SERVO MOUNT POTENTIOMETERS WIREWOUND ELEMENT

- Shaft supported front and rear by precision ball bearings
- Exceeds humidity cycling requirements of MIL-R-12934
- Special rotor and slider design assures excellent wiper stability
- Housing: high temperature, moisture resistant, thermosetting plastic
- SILVERWELD® termination eliminates vulnerable single wire termination
- Performance guaranteed by the Bourns Reliability Program
- Custom design capability is available to satisfy your most demanding and difficult special requirements

STANDARD SPECIFICATIONS	MODEL 3550 10 Turn	MODEL 3560 3 Turn	MODEL 3570 5 Turn
Electrical Characteristics			
Resistance Range	50 Ω – 200 KΩ	50Ω – 50 KΩ	50Ω – 50 KΩ
Resistance Tolerance		±3%	
Linearity (Independent)	±0.2%	±0.25%	±0.25%
Resolution		See ordering information	
Effective Electrical Angle	3600°+10°−0°	1080°+10°−0°	1800°+10°−0°
Absolute Minimum Resistance		1 Ω or 0.1%, whichever is greater	
Noise		100 Ω ENR max.	
Power Rating 70°C	2.5 W	1.5 W	2.0 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	
Temperature Coefficient of Wire①		20 ppm/°C max.	
Humidity		MIL-R-12934 Humidity Cycling	
Vibration		MIL-R-12934, 20G	
Wiper Bounce		0.1 millisecond max.	
Wiper Shift		0.2% max.	
Shock		MIL-R-12934, 100G	
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°+10°−0°	1080°+10°−0°	1800°+10°−0°
Shaft Runout		0.001 in. T. I. R.	
Lateral Runout		0.003 in. T. I. R.	
Pilot Diameter Runout		0.0015 in. T. I. R.	
Shaft End Play		0.003 in. T. I. R.	
Shaft Radial Play		0.002 in. T. I. R.	
Rotational Life, shaft revolutions	2,000,000	600,000	1,000,000
Stop Strength		96 oz.-in. min.	
Torque Starting/Running		0.4 oz.-in. max. Starting/0.3 oz.-in. max. Running	
Moment of Inertia	0.37 g cm²	0.25 g cm²	0.28 g cm²
Ganging		3 cups max.	

Specifications are subject to change without notice.

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STANDARD SPECIFICATIONS CONT.	MODEL 3550 10 Turn	MODEL 3560 3 Turn	MODEL 3570 5 Turn
Weight	approx. 31 g	approx. 23 g	approx. 25 g
Terminals	Gold plated turret type		
Markings	Manufacturer's name and part number, resistance value and tolerance, linearity tolerance, wiring diagram and date code.		

NOTES: ① Consult Bourns representative for complete specification details for resistances below 500 Ω (Model 3550), 100 Ω (Model 3560), 200 Ω (Model 3570). Available with Hybritron® element.

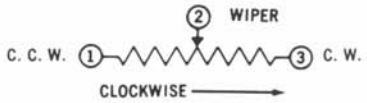
ORDERING INFORMATION

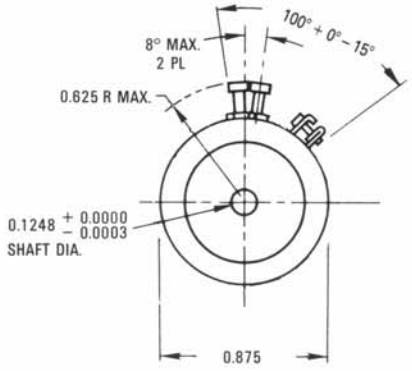
Resistance Ω	Part Number*	Resolution %	Part Number*	Resolution %	Part Number*	Resolution %
50	3550S-1-500	0.062	3560S-1-500	0.149	3570S-1-500	0.105
100	3550S-1-101	0.058	3560S-1-101	0.121	3570S-1-101	0.086
200	3550S-1-201	0.044	3560S-1-201	0.102	3570S-1-201	0.068
500	3550S-1-501	0.038	3560S-1-501	0.076	3570S-1-501	0.053
1,000	● 3550S-1-102	0.030	3560S-1-102	0.065	3570S-1-102	0.043
2,000	3550S-1-202	0.024	3560S-1-202	0.063	3570S-1-202	0.042
5,000	● 3550S-1-502	0.023	● 3560S-1-502	0.047	● 3570S-1-502	0.032
10,000	● 3550S-1-103	0.019	● 3560S-1-103	0.041	● 3570S-1-103	0.029
20,000	3550S-1-203	0.017	3560S-1-203	0.031	3570S-1-203	0.021
50,000	3550S-1-503	0.011	3560S-1-503	0.024	3570S-1-503	0.016
100,000	3550S-1-104	0.009	3560S-1-104	0.019	3570S-1-104	0.013
200,000	3550S-1-204	0.008	—	—	—	—

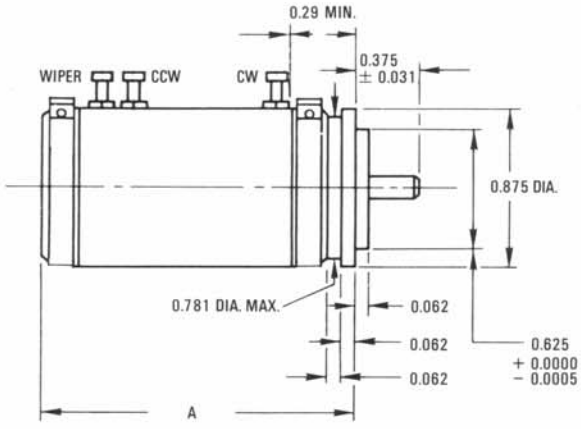
*The last three digits of the part number represent the resistance in standard code. ● Preferred resistance values

DIMENSIONS (INCH)

Model	A	Add for each additional cup
3550	1.580 max.	1.230 max.
3560	1.047 max.	0.725 max.
3570	1.187 max.	0.860 max.







TOLERANCES:
EXCEPT WHERE NOTED
DECIMALS: .XX ± 0.010, .XXX ± 0.005

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