



### 7/8" $\phi$ , 3-, 5-, 10-TURN BUSHING MOUNT POTENTIOMETERS WIREWOUND ELEMENT

- SILVERWELD® termination eliminates vulnerable single wire termination
- High temperature performance
- Outstanding resistance to humidity. Exceeds humidity cycling requirements of MIL-R-12934
- Housing: high temperature, moisture resistant, thermosetting plastic
- 100% contact pressure control assures low noise and long rotational life
- Performance guaranteed by Bourns Reliability Assurance Program which includes individual inspection to published electrical and physical characteristics

STANDARD SPECIFICATIONS	MODEL 3500 10 Turn	MODEL 3510 3 Turn	MODEL 3520 5 Turn
<b>Electrical Characteristics</b>			
Resistance Range	50 $\Omega$ – 200 K $\Omega$	50 $\Omega$ – 50 K $\Omega$	50 $\Omega$ – 50 K $\Omega$
Resistance Tolerance		$\pm 3\%$	
Linearity (Independent)	$\pm 0.2\%$	$\pm 0.3\%$	$\pm 0.3\%$
Resolution	See ordering information		
Effective Electrical Angle	3600°+10°–0°	1080°+10°–0°	1800°+10°–0°
Absolute Minimum Resistance	1 $\Omega$ or 0.1%, whichever is greater		
Noise	100 $\Omega$ ENR max.		
Power Rating	70°C 125°C	2.0 W	1.0 W 1.5 W 0 W
<b>Dielectric Strength MIL-R-12934</b>			
Sea Level		1500 V ~ min.	
80,000 feet		400 V ~ min.	
Insulation Resistance 500 V =		1000 Meg. $\Omega$ min.	
<b>Environmental Characteristics</b>			
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		0.1% 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	
<b>Mechanical and Physical Characteristics</b>			
Mechanical Angle	3600°+10°–0°	1080°+10°–0°	1800°+10°–0°
Shaft Runout		0.002 in. T. I. R.	
Lateral Runout		0.005 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		0.003 in. T. I. R.	
Rotational Life, shaft revolutions	2,000,000	600,000	1,000,000
Stop Strength	96 oz.-in. min.	48 oz.-in. min.	48 oz.-in. min.
Torque Starting/Running		0.6 oz.-in. max.	
Backlash		1.0° max.	
Ganging		2 cups max.	

Specifications are subject to change without notice.

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STANDARD SPECIFICATIONS CONT.	MODEL 3500 10 Turn	MODEL 3510 3 Turn	MODEL 3520 5 Turn
Weight	approx. 28 g	approx. 20 g	approx. 20 g
Terminals	Gold-plated solder lugs		
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 200 Ω and above 50 KΩ (3510), 125 KΩ (3500), 75 KΩ (3520).  
Available with Hybritron® element.

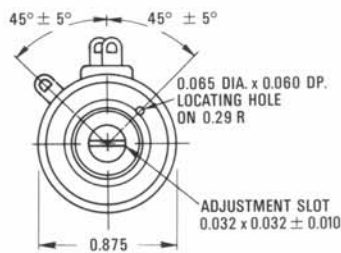
ORDERING INFORMATION						
Resistance Ω	Part Number*	Resolution %	Part Number*	Resolution %	Part Number*	Resolution %
50	3500S-2-500	0.058	3510S-1-500	0.140	3520S-1-500	0.08
100	3500S-2-101	0.053	3510S-1-101	0.113	3520S-1-101	0.08
200	3500S-2-201	0.044	3510S-1-201	0.092	3520S-1-201	0.07
500	3500S-2-501	0.033	3510S-1-501	0.071	3520S-1-501	0.05
1,000	● 3500S-2-102	0.030	● 3510S-1-102	0.059	● 3520S-1-102	0.04
2,000	3500S-2-202	0.024	3510S-1-202	0.059	3520S-1-202	0.05
5,000	● 3500S-2-502	0.018	● 3510S-1-502	0.047	● 3520S-1-502	0.035
10,000	● 3500S-2-103	0.016	● 3510S-1-103	0.037	● 3520S-1-103	0.03
20,000	3500S-2-203	0.015	3510S-1-203	0.028	3520S-1-203	0.025
50,000	3500S-2-503	0.011	3510S-1-503	0.022	3520S-1-503	0.02
100,000	3500S-2-104	0.008	—	—	—	—
200,000	3500S-2-204	0.007	—	—	—	—

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

● Preferred resistance values

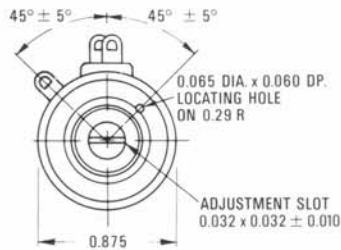
## DIMENSIONS (INCH)

3500



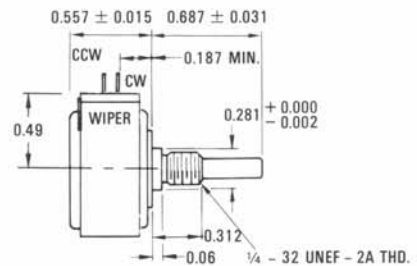
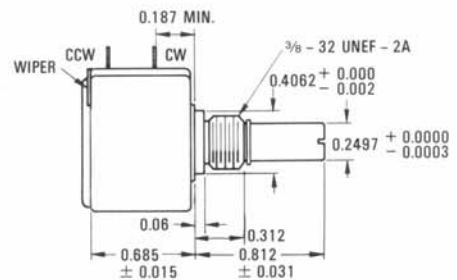
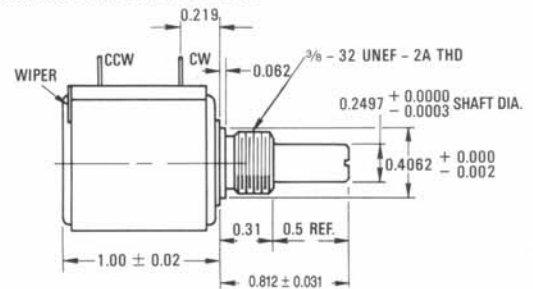
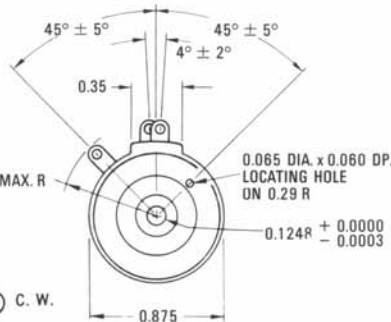
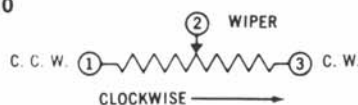
LOCKWASHER AND MOUNTING NUT SUPPLIED WITH EACH UNIT

3520



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

3510



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