



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

- Space saving size: extends 3/4" behind panel only
  - High performance at low cost
  - $\pm 0.1\%$  linearity
  - Front and rear shaft extensions
  - Anti rotation lug
  - Two sections with common or concentric shafts
- OPTIONAL FEATURES
- High shaft torque
  - $\pm 1\%$  resistance tolerance

STANDARD SPECIFICATIONS	MODEL 3540 10 Turn	MODEL 3543 3 Turn	MODEL 3545 5 Turn
<b>Electrical Characteristics</b>			
Resistance Range	100 $\Omega$ – 100K $\Omega$	20 $\Omega$ – 50K $\Omega$	50 $\Omega$ – 50K $\Omega$
Resistance Tolerance	$\pm 5\%$		
Linearity (Independent)	$\pm 0.25\%$		
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	2.0 W	1.0 W	1.5 W
125°C		0 W	
Second Section (-135 or -468) 70°C	1.5 W	0.75 W	1.0 W
<b>Dielectric Strength MIL-R-12934</b>			
Sea Level	1000 V ~ min.		
Insulation Resistance 500 V =	1000 Meg. $\Omega$ min.		
<b>Environmental Characteristics</b>			
Operating Temperature Range	–55°C to +125°C		
Temperature Coefficient of Wire	20 ppm/°C max.		
Vibration	MIL-R-12934, 15G		
Wiper Bounce	0.1 millisecond max.		
Shock	MIL-R-12934, 50G		
Wiper Bounce	0.1 millisecond max.		
Load Life MIL-R-12934	1000 hours		
Resistance Shift	2.0% max.		
<b>Mechanical and Physical Characteristics</b>			
Mechanical Angle	3600°+10°–0°	1080°+10°–0°	1800°+10°–0°
Shaft Runout	0.003 in. T. I. R.		
Lateral Runout	0.005 in. T. I. R.		
Pilot Diameter Runout	0.003 in. T. I. R.		
Shaft End Play	0.010 in. T. I. R.		
Shaft Radial Play	0.003 in. T. I. R.		
Rotational Life, shaft revolutions	1,000,000	300,000	500,000
Stop Strength	75 oz.-in. min.		
Torque, Starting and Running	0.5 oz.-in. max.		
Weight	approx. 21 g		
Terminals	Gold-plated solder lugs		

NOTES: Consult Bourns representative for complete specification details for resistance below 200  $\Omega$ .

Specifications are subject to change without notice.

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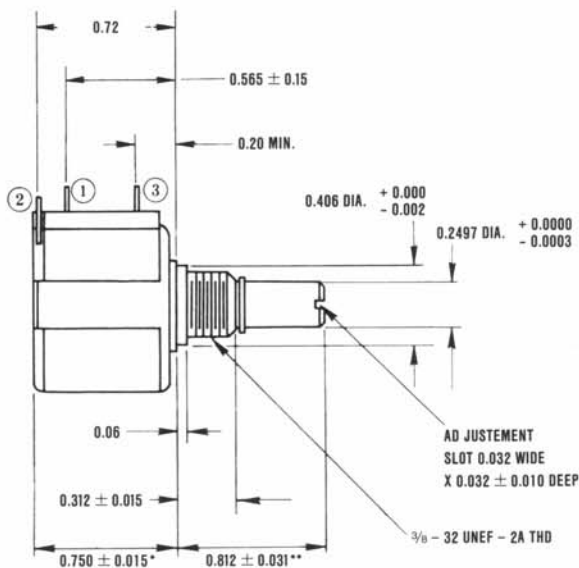
ORDERING INFORMATION						
Resistance $\Omega$	Part Number*	Resolution %	Part Number*	Resolution %	Part Number*	Resolution %
20	—	—	3543S-1-200	0.169	—	—
50	—	—	3543S-1-500	0.148	3545S-1-500	0.110
100	● 3540S-1-101	0.055	3543S-1-101	0.127	3545S-1-101	0.084
200	● 3540S-1-201	0.042	3543S-1-201	0.110	3545S-1-201	0.069
500	● 3540S-1-501	0.031	3543S-1-501	0.077	3545S-1-501	0.054
1,000	● 3540S-1-102	0.027	● 3543S-1-102	0.077	● 3545S-1-102	0.043
2,000	● 3540S-1-202	0.021	3543S-1-202	0.062	3545S-1-202	0.044
5,000	● 3540S-1-502	0.021	● 3543S-1-502	0.047	● 3545S-1-502	0.038
10,000	● 3540S-1-103	0.019	● 3543S-1-103	0.040	● 3545S-1-103	0.029
20,000	● 3540S-1-203	0.014	3543S-1-203	0.031	3545S-1-203	0.023
50,000	● 3540S-1-503	0.011	3543S-1-503	0.024	3545S-1-503	0.017
100,000	● 3540S-1-104	0.008	—	—	—	—

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

● Preferred resistance values

NOTES: Available with Hybritron® element

## DIMENSIONS (INCH)

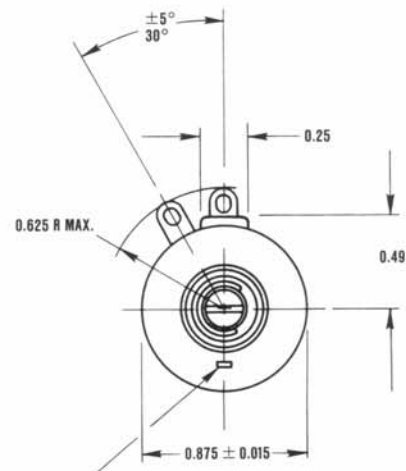


\*ADD 0.745" FOR SECOND SECTION (3540-135 or 3540-468)

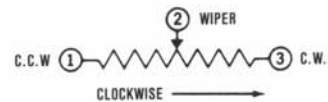
\*\*ADD 0.5" FOR 0.1248" DIA. INNER (REAR SECTION) CONCENTRIC SHAFT (3540-468)

NOTE:  
LOCKWASHER & HEX NUT TO BE  
SUPPLIED WITH UNIT.

TOLERANCES: XX =  $\pm 0.01$   
.XXX =  $\pm 0.005$  EXCEPT  
WHERE NOTED



OPTIONAL  
ANTI-ROTATION LUG (-91)  
0.056 x 0.02 ON  
0.29 RADIUS,  
LENGTH 0.05  
FROM MOUNTING  
SURFACE  
(SUGGESTED PANEL HOLE 0.063 DIA.)



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