

# 1 - 7/16" (36.5mm) Single Turn Wirewound Precision Potentiometer



## FEATURES

- Military
- Servo
- Style RR1300 per MIL-R-12934
- 100Ω to 40KΩ

ELECTRICAL SPECIFICATIONS		
PARAMETER		
Total Resistance Standard range	100Ω to 40KΩ	
Tolerance	± 3% and ± 1%	
Absolute Minimum Resistance	Linearity x total resistance or 0.5Ω, whichever is greater	
End Voltage	0.5% of total applied voltage maximum	
Linearity (Independent)	<b>LINEARITY</b> ± 1.0% ± 0.5% ± 0.25%	<b>MINIMUM TOTAL RESISTANCE</b> 100Ω 100Ω 2KΩ
Noise	100Ω ENR	
Electrical Rotation	350° ± 2°	
Power Rating: Section 1: 125°C Unit Section 1: 150°C Unit Additional Sections	2.0 watts @ 70°C derated to zero at 125°C 2.0 watts @ 85°C derated to zero at 150°C 75% of rating of sections 1 (1.5 watts)	
Insulation Resistance	1000MΩ minimum, 500VDC	
Dielectric Strength	1000V <sub>RMS</sub> , 60Hz	
Taps (Extra)	<b>STANDARD</b> ± 1°	<b>SPECIAL</b> 15
Phasing (CCW End Points)	Additional sections phased to section 1 within ± 1°	

MATERIAL SPECIFICATIONS	
Housing and Lids	Aluminum, anodized
Shaft and Clamp Rings	Stainless steel, non-magnetic non-passivated
Terminals	Brass, plated for solderability

ENVIRONMENTAL SPECIFICATIONS	
Vibration	15g thru 2000CPS
Shock	50g
Salt Spray	96 Hours
Rotational Life	1 million shaft revolutions
Load Life	900 Hours
Temperature Range	125°C unit: - 65°C to + 125°C 150°C unit: - 65°C to + 150°C
Humidity Cycling	-

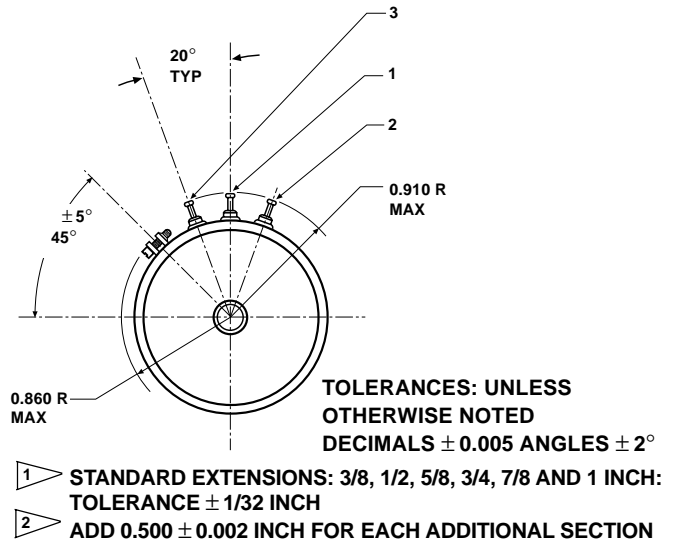
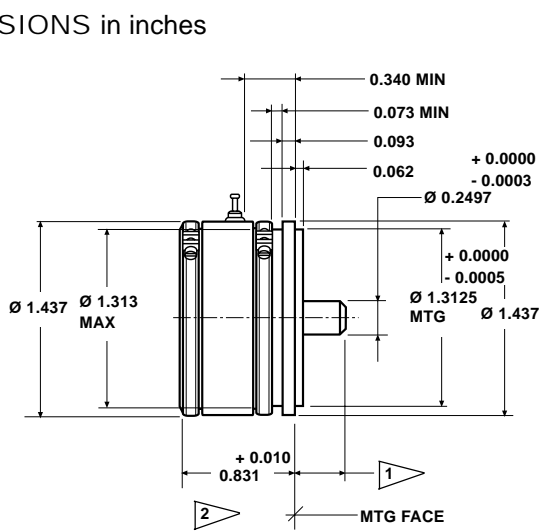
MARKING	
<b>Unit Identification</b>	Each section shall be marked with Spectrol name, Spectrol model no. type designation and terminal identification

ORDERING INFORMATION
Please order Model 171, Style RR1300, in accordance with the type designations as outlined in MIL-R-12934

# Model 171

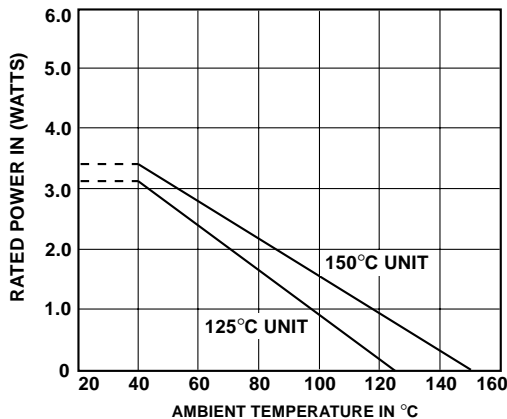
## Spectrol 1 - 7/16" (36.5mm) Single Turn Wirewound Precision Potentiometer

DIMENSIONS in inches



MECHANICAL SPECIFICATIONS		
PARAMETER		
Mechanical Rotation	360° (continuous)	
Bearing Type	Ball bearing	
Ganging	3 sections maximum terminal alignment, added sections, within $\pm 10^\circ$ of section 1 terminals	
Torque (Maximums)	<b>STARTING</b>	<b>RUNNING</b>
1 Section	0.6 oz - in	0.4 oz - in
Each Additional Section	0.4 oz - in	0.3 oz - in
Mechanical Runouts (Maximums):		
Shaft Runout, Housing Fixed (TIR/in)	0.002 in	
Pilot Dia. Runout, Shaft Fixed (TIR)	0.001 in	
Lateral Runout, Shaft Fixed (TIR)	0.0014 in	
Shaft End Play	0.005 in	
Shaft Radial Play	0.002 in	
Moment of Inertia	2.0gm - cm <sup>2</sup> per section maximum	
Weight:		
Single Section	1.5 oz maximum	
Each Additional Section	1.0 oz maximum	

### POWER RATING CHART



RESISTANCE ELEMENT DATA		
RESISTANCE VALUES ( $\Omega$ )	RESOLUTION (%)	WIRE TEMP. COEF. (PPM/ $^\circ$ C)
100	0.230	20
200	0.195	20
500	0.147	20
1K	0.141	20
2K	0.112	20
5K	0.087	20
10K	0.072	20
20K	0.064	20
40K	0.062	20