

Military 2" (50.8mm) Single Turn Wirewound Precision Potentiometer



FEATURES

- Style RR2000 per MIL-R-12934
- 100Ω to 60K
- Servo Mount Only

ELECTRICAL SPECIFICATIONS		
PARAMETER		
Total Resistance Standard Range: Tolerance:	100Ω to 60KΩ ± 3% and ± 1%	
Absolute Minimum Resistance	Linearity x total resistance or 0.5Ω, whichever is greater	
End Voltage	0.5% of total applied voltage	
Linearity (Independent)	TOTAL RESISTANCE 100Ω to 10KΩ 10KΩ and above	LINEARITY ± 1.0%, ± 0.5% and ± 0.25% ± 1.0%, ± 0.5%, ± 0.25% and ± 0.1%
Noise	100Ω ENR	
Electrical Rotation	350° ± 2°	
Power Rating Section 1: 125°C unit Section 1: 150°C unit Additional Sections:	4.0 watts at 70°C derated to zero at 125°C 4.0 watts at 85°C derated to zero at 150°C 75% of the rating of section 1, (3.0 watts)	
Insulation Resistance	1000MΩ minimum, 500 VDC	
Dielectric Strength	1000V _{RMS} , 60Hz	
Taps (extra)	21 available as special, standard tolerance ± 1°	
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
Operating Temperature Range	125°C unit - 65°C to + 125°C 150°C unit - 65°C to + 150°C
Humidity Cycling	-

MARKING	
Unit Identification	Each section shall be marked with Spectrol, Spectrol model no., type designation and terminal identification

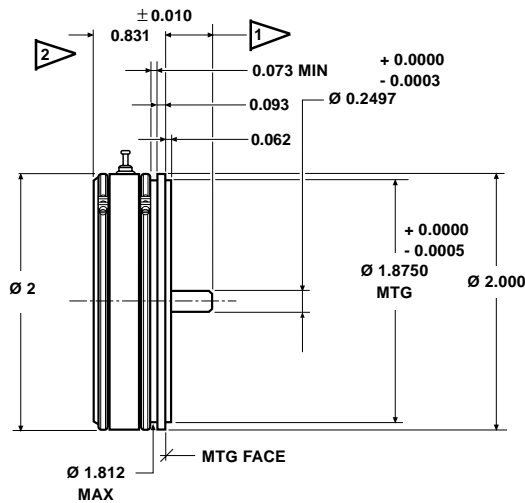
ORDERING INFORMATION
How to order the model 301 Please order Model 301, Style RR2000, in accordance with the type designations as outlined in MIL-R-12934

Model 301

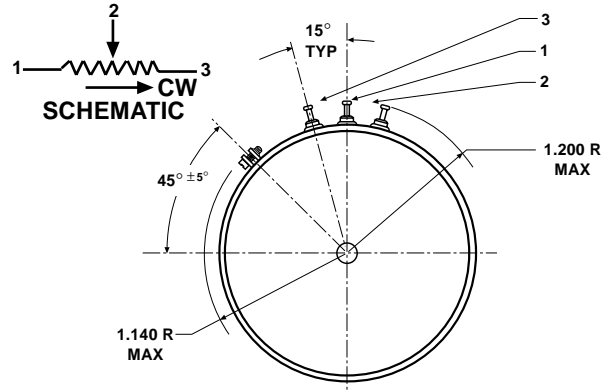
Spectrol

Military, 2 Inch Single Turn Wirewound Precision Potentiometer

DIMENSIONS in inches



TOLERANCES: UNLESS SPECIFIED :
 DECIMALS ± 0.005
 FRACTIONAL $\pm 1/64$



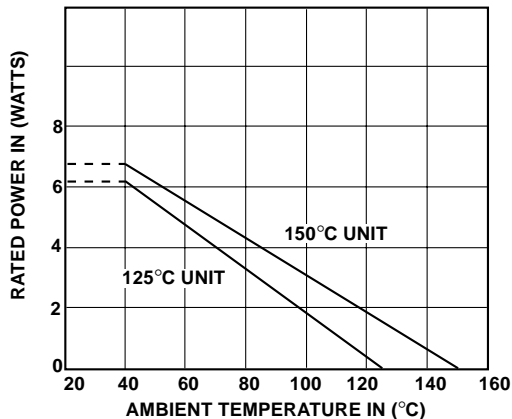
1 STANDARD EXTENSIONS OF 3/8, 1/2, 5/8, 3/4, 7/8, AND 1 INCH. TOLERANCE $\pm 1/32$
 2 ADD 0.500 ± 0.002 FOR EACH ADDITIONAL SECTION

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 (Mounting)	MAX STARTING	MAX RUNNING
1 Section:	1.0 oz - in	0.5 oz - in
Each additional section:	0.6 oz - in	0.4 oz - in
Mechanical Runouts (maximums)		
Shaft Runout (housing fixed) (TIR)	0.002 in	
Pilot dia Runout (shaft fixed) (TIR)	0.001 in	
Lateral Runout (shaft fixed) (TIR)	0.002 in	
Shaft End Play	0.005 in	
Shaft Radial Play	0.002 in	
Moment of Inertia	2.0gm - cm ² per section maximum	
Weight		
Single Section:	4.5 oz maximum	
Each additional section	1.2 oz maximum	

POWER RATING CHART

(Ratings for cup No. 1.

Additional cups 75% of values shown)



RESISTANCE ELEMENT DATA

STANDARD RESISTANCE VALUES (Ω)	RESOLUTION (%)	OHMS PER TURN	MAXIMUM CURRENT AT 70°C AMBIENT (mA)	MAXIMUM VOLTAGE ACROSS COIL (V)	WIRE TEMP. COEF. (ppm/°C)
100	0.151	0.151	200	20.0	20
200	0.126	0.252	141	28.4	20
500	0.115	0.573	89.4	44.7	20
1K	0.098	0.981	63.3	63.2	20
2K	0.085	1.70	44.7	89.5	20
5K	0.059	2.93	28.3	141	20
10K	0.051	5.16	20.0	200	20
20K	0.043	8.55	14.1	284	20
50K	0.032	15.80	8.94	447	20
60K	0.033	19.99	8.17	490	20