

Model 801

Spectrol

Military, 1-13/16" (46mm) Ten Turn Wirewound Precision Potentiometer



FEATURES

- 200Ω to 250KΩ
- Servo Mount Only
- Approved to MIL-R-12934 Style RR2100

ELECTRICAL SPECIFICATIONS	
PARAMETER	STANDARD
Total Resistance Tolerance:	200Ω to 250KΩ ± 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) 200Ω TO 5KΩ 5KΩ and above	± 1.0%, ± 0.5%, ± 0.25%, ± 0.1% and ± 0.05% ± 1.0%, ± 0.5%, ± 0.25%, ± 0.1%, ± 0.05% and ± 0.025%
Noise	100Ω ENR
Rotation	3600° + 4°, - 0°
Power Rating Section1 Section 2	5.00 watts at 70°C ambient derated to zero at 125°C 75% of the rating of section 1 (3.8 watts at 70°C)
Insulation Resistance	1000MΩ minimum 500V _{DC}
Dielectric Strength	1000V _{RMS} , 60Hz
Taps (Extra)	108 available as special standard tolerance ± 1°
Phasing (CCW End Points)	Section 2 phased to section1 within ± 1°

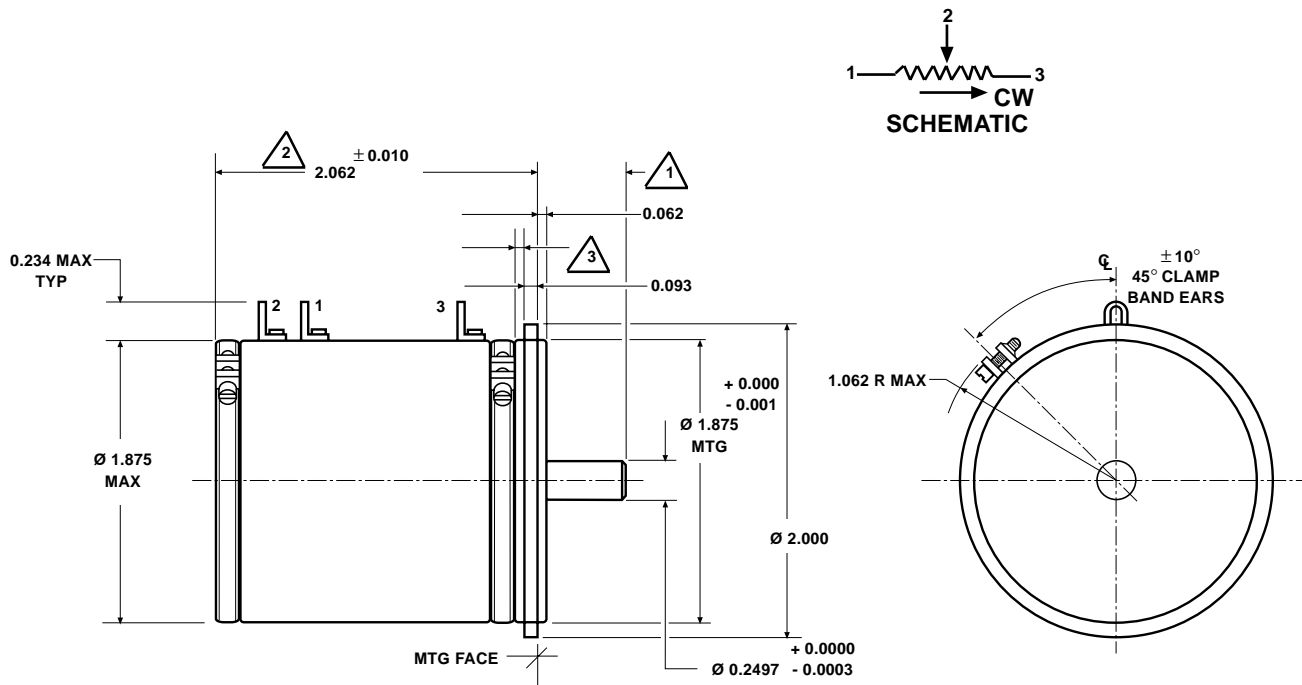
ORDERING INFORMATION

Please order Model 801, style RR2100, in accordance with the type designations outlined in MIL-R-12934

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DIMENSIONS in inches



1 STANDARD EXTENSIONS 3/8, 1/2, 5/8, 3/4, 7/8, AND 1 INCH TOLERANCE ± 1/32

2 ADD 1.7770^{±0.010} FOR SECTION 2

3 0.073 MIN CLAMP BAND EAR SETBACK

TOLERANCES UNLESS SPECIFIED

DECIMAL ± 0.005

FRACTIONAL ± 1/64

MECHANICAL SPECIFICATIONS		
PARAMETER		
Rotation	3600° + 10° - 0°	
Bearing Type	Ball Bearing	
Ganging	2 sections maximum Terminal alignment, added sections within ± 1.0° of section 1 terminals	
Torque (Maximums)	STARTING	RUNNING
Section 1	1.20 oz - in	0.80 oz - in
Section 2	0.80 oz - in	0.60 oz - in
Stop Strength	600-0.2 (static)	
Mechanical Runouts (Maximums):	SERVO	
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	15gm - cm ² per section maximum	
Weight:		
Single Section	5.5 oz maximum	
Additional Section	3.7 oz maximum	

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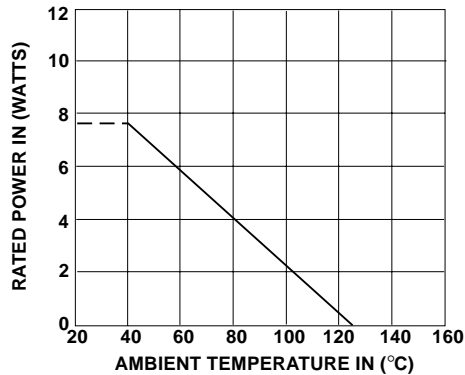
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MATERIAL SPECIFICATIONS	
Housing	Diallyl phthalate
Lids	Aluminum, anodized
Shaft	Stainless steel, non-magnetic, non-passivated
Terminals	Brass, plated for solderability
Clamp Rings	Stainless steel

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

ENVIRONMENTAL SPECIFICATIONS	
Vibration	15g thru 2000 CPS
Shock	50g
Salt Spray	96 Hours
Rotational Life	2 million shaft revolutions
Load Life	900 Hours
Operating Temperature Range	- 65°C to + 125°C
Moisture Resistant	-

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)
200	0.028	0.056	158	31.6	180
500	0.023	0.115	100	50.0	20
1K	0.018	0.182	70.7	70.7	20
2K	0.020	0.402	50.0	100	110
5K	0.015	0.754	31.6	158	20
10K	0.013	1.229	22.4	224	20
20K	0.010	1.970	15.8	316	20
50K	0.007	3.686	10.0	500	20
100K	0.007	6.507	7.07	707	20
250K	0.005	12.029	4.46	1,119	20