

3/4" (19mm) Single Turn Wirewound Precision Potentiometer



FEATURES

- Servo
- 5Ω to 30KΩ

ELECTRICAL SPECIFICATIONS		
PARAMETER	STANDARD	SPECIAL
Total Resistance Tolerance: 20Ω and above Below 20Ω	5Ω to 30KΩ ± 3% ± 5%	- ± 1% ± 3%
Absolute Minimum Resistance	Linearity x total resistance or 0.5Ω, whichever is greater	
End Voltage	Linearity x total applied voltage for total resistance above 20Ω, 2.0% of total applied voltage for 20 and below	
Linearity (Independant) 5Ω to 2KΩ 2KΩ and above	± 1.0% ± 0.5%	
Noise	100Ω ENR	
Rotation	350° ± 2°	
Power Rating: Section 1: 1.5 watts Additional Sections	70°C ambient derated to zero @ 155°C 75% of rating of section 1	
Insulation Resistance	1000MΩ minimum, 500VDC	
Dielectric Strength	1000VRMS, 60Hz	
Taps (Extra)	9 available as special, standard tolerance ± 2°	
Phasing (CCW End Points)	Additional sections phased to section 1 within ± 2°	

MATERIAL SPECIFICATIONS	
Housing and Lids	Aluminum, anodized
Shaft	Stainless steel, non-magnetic non-passivated
Terminals	-

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 Moisture Resistant	- 65°C to + 125°C 120 Hours

MARKING	
Unit Identification	Units shall be marked with Spectrol name, model no and data code, and on each section, resistance, resistance tolerance, linearity and terminal identification

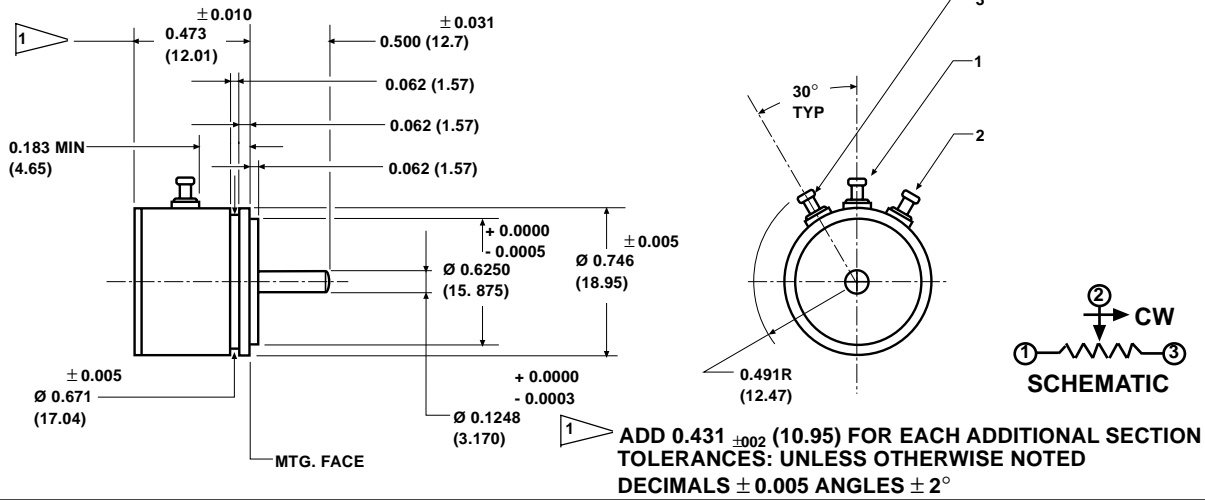
ORDERING INFORMATION		
The Model 182 can be ordered from this data sheet with a variety of alternate characteristics, as shown above. For most rapid service on your order, please state:		
182 MODEL	4 TOTAL RESISTANCE OF EACH SECTION Beginning with the section nearest the mounting end	1 NUMBER OF SECTIONS
Example - Model 182, 10K/10K/30K/100Ω, 4 sections Example - Model 182, 5K, single section Example: 182 - 4 - 1		
Other characteristics will be standard as described on this data sheet. If special characteristics are required, such as: special linearity tolerance, special resistance tolerance, extra taps, non-linear functions, etc., please state these on your order and allow additional lead time for delivery.		

Model 182

Vishay Spectrol

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DIMENSIONS in inches (millimeters)

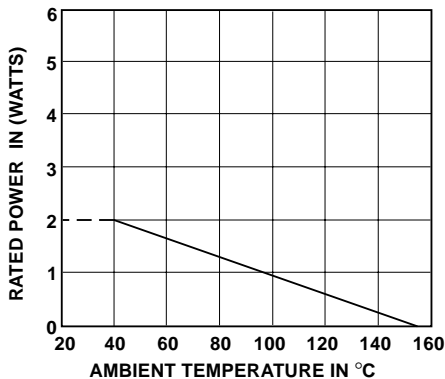


MECHANICAL SPECIFICATIONS		
PARAMETER		
Mechanical Rotation	360° (continuous)	
Bearing Type	Servo Mount: Ball bearing	
Ganging	6 sections maximum Terminal alignment, added sections, within ± 10° of section 1 Terminals	
Torque (Maximums)	STARTING	RUNNING
1 Section	0.07 oz - in (s)	0.07 oz - in (s)
Each Additional Section	0.07 oz - in (s)	0.07 oz - in (s)
Mechanical Runouts (Maximums):		
Shaft Runout (TIR)	0.002 in (0.05cm)	
Pilot Dia. Runout (TIR)	0.002 in (0.05cm)	
Lateral Runout (TIR)	0.002 in (0.05cm)	
Shaft End Play	0.005 in (0.13cm)	
Shaft Radial Play	0.002 in (0.05cm)	
Moment of Inertia	0.12gm - cm ² per section maximum	
Weight:		
Single Section	0.5 oz maximum (14.50 gm)	
Each Additional Section	0.15 oz maximum (4.30 gm)	

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)
5	0.480	0.024	548	2.7	800
10	0.410	0.041	387	3.9	800
20	0.455	0.091	274	5.5	180
50	0.324	0.162	173	8.6	180
100	0.325	0.325	122	12.2	20
200	0.233	0.467	87	17.3	20
500	0.229	1.145	55	27.4	20
1K	0.208	2.087	39	38.7	20
2K	0.138	2.759	27	54.7	20
5K	0.104	5.207	17	86.6	20
10K	0.092	9.236	12	122.5	20
20K	0.080	16.035	9	173.2	20