



# 7/8" (22mm) Precision Wirewound Potentiometer



### ADDITIONAL FEATURES

- Special Resistance Tolerances to 1%
- Rear Shaft Extensions and Support Bearing
- Non Turn Lug
- Dual Gang Configuration and Concentric Shafts
- High Torque and Center Tap
- Special Markings and Front Shaft Extensions
- Servo Unit available and Slipping Clutch

**Note:** The color of this product is changing to blue, during the internal period you may receive either black or blue.

ELECTRICAL SPECIFICATIONS			
PARAMETER	MODEL 533	MODEL 534	MODEL 535
Resistance Range Standard Values	50Ω to 20KΩ	100Ω to 100KΩ	50Ω to 50KΩ
Capability Range	5Ω to 60KΩ	10Ω to 200KΩ	5Ω to 100KΩ
Standard Tol	± 5%	± 5%	± 5%
Linearity (Independent)	± 0.25%	0.20%	± 0.25%
Noise	100Ω ENR	100Ω ENR	100Ω ENR
Rotation (Electrical & Mechanical)	1080° + 10%	3600° + 10%	1800° ± 10°
Power Rating (@ 70°C)	1.0 watts	2.0 watts	1.5 watts
Insulation Resistance	1000MΩ minimum 500VDC		
Dielectric Strength	1000V <sub>RMS</sub> minimum 60Hz		
Absolute Minimum Resistance	Not to exceed linearity x total resistance or 1Ω, whichever is greater		
Tempco	20ppm/°C (standard values, wire only)		
End Voltage	0.25% of total applied voltage, maximum		
Phasing	CCW end points - section 2 phased to section 1 within ± 2°		
Taps	Center tap only		

MARKING	
Unit Identification	Manufacturer's name and model number, resistance value and tolerance, linearity specification date code and terminal identification

RESISTANCE VALUES	
Ohms	
533:	50R, 100R, 200R, 500R, 1K, 2K, 5K, 10K, 20K
534:	100R, 200R, 500R, 1K, 2K, 5K, 10K, 20K, 50K, 100K
535:	50R, 100R, 200R, 500R, 1K, 2K, 5K, 10K, 20K, 50K

ORDERING INFORMATION			
The Models 533 (3 turn), 534 (10 turn) and 535 (5 turn) can be ordered by stating			
<b>534</b>	<b>1</b>	<b>2</b>	<b>XXX</b>
MODEL	MOUNTING	NUMBER OF SECTIONS	RESISTANCE EIA CODE
	1. Bushing 2. Servo	1. Single section 2. Dual section	

# Model 533, 534, 535

Vishay Spectrol

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Wirewound Potentiometer



## SINGLE SECTION DIMENSIONS in millimeters



### METRIC



Mounting hardware, washer and panel nut, nickel plated

## MECHANICAL SPECIFICATIONS

PARAMETER		
Bearing Type	Bushing: Sleeve bearing Servo: Ball	
Torque (maximums): starting	<b>534</b>	<b>533/535</b>
Section 1	0.5 oz - in (36gm - cms)	0.7 oz - in (50gm - cms)
Section 2	0.9 oz - in (65gm - cms)	1.1 oz - in (79gm - cms)
Torque (maximums): running	<b>534</b>	<b>533/535</b>
Section 1	0.4 oz - in (28.80gm - cms)	0.6 oz - in (43.20gm - cms)
Section 2	0.7 oz - in (50.40gm - cms)	0.9 oz - in (64.8gm - cms)
Weight (maximums)	0.75 oz (21.26gm)	
Section 1	1.25 oz (35.44gm)	
Section 2		
Stop Strength	75 oz - in (static) (5.4Kg - cm)	
Ganging	2 sections maximum	

## POWER RATING CHART



## ENVIRONMENTAL SPECIFICATIONS

Vibration	15g thru 2000Hz
Shock	50g
Rotational Life (Shaft Revolution)	
533	300,000
534	1,000,000
534 (Servo)	> 1,000,000
535	500,000
Load Life	900 Hours
Temperature Range	- 55°C to + 125°C



<b>RESISTANCE ELEMENT DATA</b>														
RESISTANCE VALUE (Ω)			RESOLUTION %			OHMS PER TURN			MAX CURRENT AT 70°C AMBIENT (mA)			MAX VOLTAGE ACROSS COIL (V)		
533	534	535	533	534	535	533	534	535	533	534	535	533	534	535
50	–	50	0.149	–	0.120	0.0746	–	0.0603	141.0	–	173.0	7.07	–	8.66
100	100	100	0.111	0.060	0.075	0.1114	0.0603	0.0746	100.0	141.0	122.0	10.0	14.1	12.2
200	200	200	0.097	0.037	0.061	0.1954	0.0746	0.1220	70.7	100.0	86.6	14.1	20.0	17.3
500	500	500	0.069	0.031	0.049	0.3424	0.1520	0.2459	44.7	63.2	54.7	22.4	31.6	27.4
1K	1K	1K	0.063	0.025	0.041	0.6331	0.2459	0.4113	31.6	44.7	38.7	31.6	44.7	38.7
2K	2K	2K	0.041	0.021	0.031	0.8206	0.4113	0.6331	22.4	31.6	27.4	44.7	63.2	54.8
5K	5K	5K	0.044	0.016	0.034	2.2330	0.8206	1.7230	14.1	20.0	17.3	70.7	100.0	86.6
10K	10K	10K	0.034	0.017	0.030	3.4510	1.7230	3.0160	10.0	14.1	12.2	100.0	141.0	122.0
20K	20K	20K	0.031	0.015	0.020	6.1790	3.0160	3.9910	7.07	10.0	8.66	141.0	200.0	173.0
–	50K	50K	–	0.009	0.015	–	4.6690	7.4560	–	6.32	5.47	–	316.0	274.0
–	100K	–	–	0.007	–	–	7.4560	–	–	4.47	–	–	447.0	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–



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