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Vishay Spectrol

⁷/₈" (22.2 mm) Multi Turn Wirewound Potentiometer - 533: 3 Turns / 534: 10 Turns / 535: 5 Turns



DESIGN SUPPORT TOOLS

click logo to get started



QUICK REFERENCE DATA						
Sensor type ROTATIONAL, multi turn wirewound						
Output type	Output by turrets					
Market appliance	Industrial					
Dimensions	⁷ / ₈ " (22.2 mm)					

FEATURES

- Bushing and servo mount designs available
- Linearity ± 0.25 %, down to 0.05 % on request



- Special resistance tolerances to 1 %
- · Rear shaft extensions and support bearing
- Metric shaft available
- Dual gang configuration and concentric shafts
- High torque, center tap, slipping clutch on request
- Special markings and front shaft extensions
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

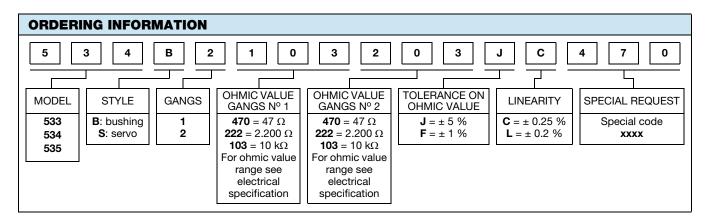
ELECTRICAL SPECIFICATIONS									
PARAMETER	MODEL 533	MODEL 534	MODEL 535						
Resistance range - standard values	50 Ω to 20 k Ω	100 Ω to 100 kΩ	50 Ω to 50 k Ω						
Capability range	5 Ω to 60 kΩ	10 Ω to 200 kΩ	5 Ω to 100 k Ω						
Standard tolerance	± 5 %	± 5 %	± 5 %						
Linearity (independent)	± 0.25 %	± 0.25 %	± 0.25 %						
Noise	100 Ω ENR	100 Ω ENR	100 Ω ENR						
Rotation (electrical and mechanical)	1080° +10° -0°	3600° +10° -0°	1800° +10° -0°						
Power rating (at 70 °C)	1.0 W	2.0 W	1.5 W						
Insulation resistance	1000 MΩ minimum 500 V _{DC}								
Dielectric strength	1000 V _{RMS} minimum 60 Hz								
Absolute minimum resistance	Not to exceed linearity x total resistance or 1 Ω , whichever is greater								
Temperature coefficient	20 ppm/°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								

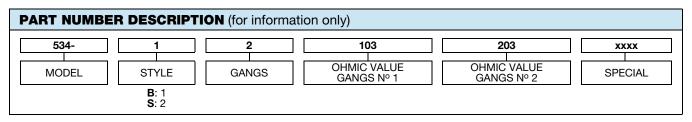
MARKING									
Unit identification	Manufacturer's name and model number, resistance value and tolerance, linearity specification date code and terminal identification. Example of a marking for a standard part: 534-11103								

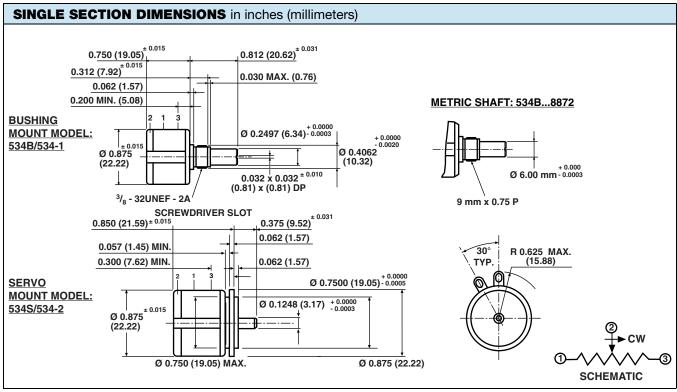
RESIS	RESISTANCE VALUES								
533 (Ω)	50, 100, 200, 500, 1K, 2K, 5K, 10K, 20K								
534 (Ω)	100, 200, 500, 1K, 2K, 5K, 10K, 20K, 50K, 100K								
535 (Ω)	50, 100, 200, 500, 1K, 2K, 5K, 10K, 20K, 50K								

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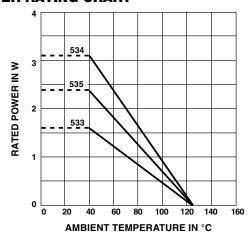


Mounting hardware, washer and panel nut, nickel plated

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MECHANICAL SPECIFICATIONS					
PARAMETER					
Bearing type	Bushing: sleeve bearing	Servo: ball bearing			
Torque (maximums): starting Section 1 Section 2	534 0.5 ozin (36 g-cm) 0.9 ozin (65 g-cm)	533/535 0.7 ozin (50 g-cm) 1.1 ozin (79 g-cm)			
Torque (maximums): running Section 1 Section 2	534 0.4 ozin (28.80 g-cm) 0.7 ozin (50.40 g-cm)	533/535 0.6 ozin (43.20 g-cm) 0.9 ozin (64.8 g-cm)			
Weight (maximums) Section1 Section 2	0.75 oz. (21.26 g) 1.25 oz. (35.44 g)				
Stop strength	75 ozin (static) (5.4 kg-cm)				
Ganging	2 sections maximum				

POWER RATING CHART



ENVIRONMENTAL SPECIFICATIONS									
Vibration	15 g thru 2000 Hz								
Shock	50 g								
Rotational life (shaft revolution) 533 534 534 (servo) 535	300 000 1 000 000 > 1 000 000 500 000								
Load life	900 h								
Temperature range	-55 °C to +125 °C								

Note

 Nothing stated herein shall be construed as a guarantee of quality or durability

RESISTANCE ELEMENT DATA														
RESIS	RESISTANCE VALUE RESOLUTION (%)		OHMS PER TURN		MAXIMUM CURRENT AT 70 °C AMBIENT (mA)			MAXIMUM 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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