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Vishay Spectrol

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



FEATURES

- Bushing and servo mount designs available
- 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>

Note

 The color of this product may either be black (US market) or blue (other regions)

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

ELECTRICAL SPECIFICATIONS									
PARAMETER	MODEL 533	MODEL 534	MODEL 535						
Resistance range - standard values	50 Ω to 20 kΩ	100 Ω to 100 kΩ	50 Ω to 50 kΩ						
Capability range	5 Ω to 60 k Ω	10 Ω to 200 k Ω	5 Ω to 100 kΩ						
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°	3600° + 10°	1800° + 10°						
Hotation (electrical and mechanical)	- 0°	- 0°	- 0°						
Power rating (at 70 °C)	1.0 W	2.0 w	1.5 W						
Insulation resistance	1000 M Ω 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, 100 535 (Ω) 50, 100, 200, 500, 1K, 2K, 5K, 10K, 20K, 50K 									

ORDERING INFORMATION/DESCRIPTION

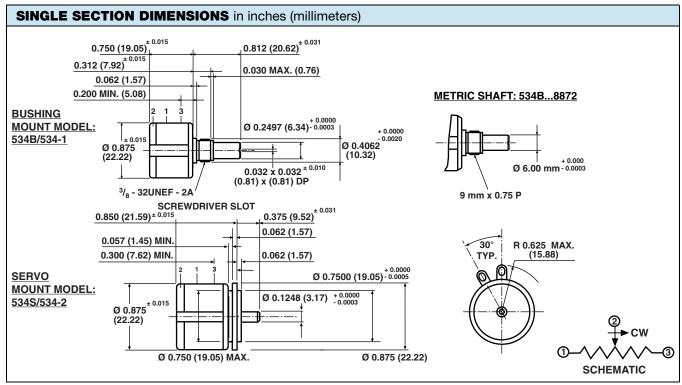
The Models 533 (3 turns), 534 (10 turns) and 535 (5 turns) can be ordered by stating
534 B 2 10K 20K 5 %

В 534 10K 20K 5 % С **BO10** e4 NUMBER OF **OHMIC VALUE** OHMIC VALUE TOLERANCE ON LEAD **PACKAGING MODEL** MOUNTING LINEARITY SECTION SECTION Nº 1 SECTION Nº 2 OHMIC VALUE **FINISH** B: Bushing ± 0.25 % (STD) Box of S: Servo 10 pieces

SAP PART	SAP PART NUMBERING GUIDELINES											
534	В	2	103	203	J	С	В					
MODEL	STYLE	NUMBER OF SECTION	OHMIC VALUE SECTION Nº 1	OHMIC VALUE SECTION Nº 2	TOLERANCE ON OHMIC VALUE	LINEARITY	PACKAGING					
	B: Bushing S: Servo		103 = 10K	203 = 20K	J: ± 5 % F: ± 1 %	C: ± 0.25 % CUSTOM: L: ± 0.20 % D: ± 0.1 %	Box of 10 pieces					

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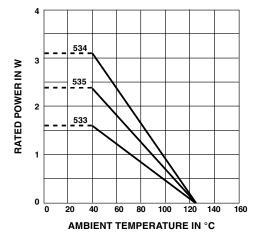




Mounting hardware, washer and panel nut, nickel plated

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



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RESI	RESISTANCE ELEMENT DATA													
RESISTANCE VALUE (Ω)		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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