

Vishay Spectrol

⁷/₈" (22.2 mm) Ten Turn Wirewound Precision Potentiometer with a Plastic Shaft



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Plastic shaft

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- Rugged integrated construction0.25 % linearity
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912
- QUICK REFERENCE DATA

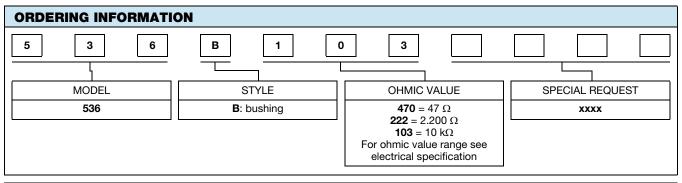
 Sensor type
 ROTATIONAL, multi turn wirewound

 Output type
 Output by turrets

 Market appliance
 Industrial

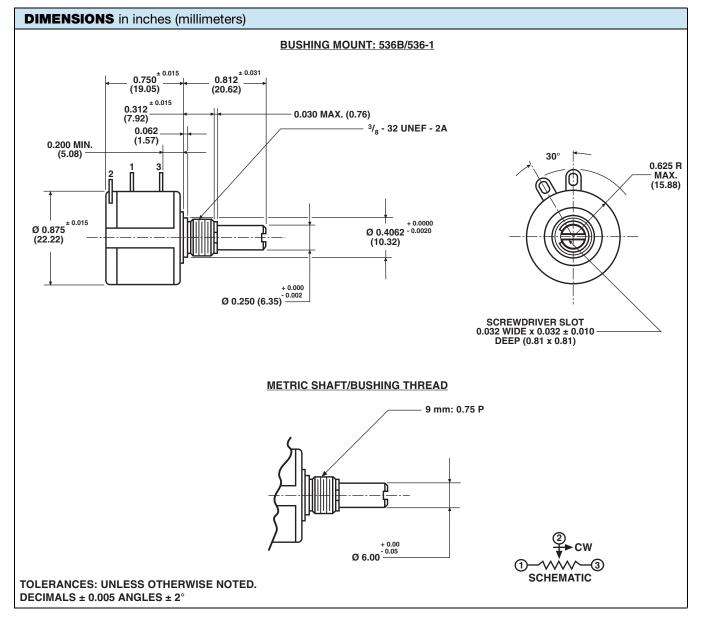
 Dimensions
 ⁷/₈" (22.2 mm)

ELECTRICAL SPECIFICATIONS		
PARAMETER		
Total resistance	Range 100 Ω to 100 k Ω , tolerance ± 5 %	
Linearity (independent)	± 0.25 %	
Noise	100 Ω ENR maximum	
Electrical angle	3600° +10° - 0°	
Power rating	2.0 W at 70 °C derated to zero at 125 °C	
Insulation resistance	1000 M Ω minimum, 500 V $_{DC}$	
Dielectric strength	1000 V _{RMS} , 60 Hz	
Absolute minimum resistance	Not to exceed 0.10 % of total resistance or 1 Ω , whichever is greater	
Temperature coefficient	20 ppm/°C (wire only)	
End voltage	0.25 % of total applied voltage maximum	



PART NUMBER DESCRIPTION (for information only)				
536-	1-	103	xxxx	
MODEL	STYLE	OHMIC VALUE	SPECIAL	
	B : 1			





MECHANICAL SPECIFICATIONS		
PARAMETER		
Rotation	3600°	+10° - 0°
Torque (maximums)	STARTING 0.5 oz in (36.00 g - cm)	RUNNING 0.4 oz in (28.80 g - cm)
Mechanical runouts Shaft (TIR) Pilot dia. (TIR) Lateral runout (TIR) Shaft end play Shaft radial play	0.005" ((0.003" ((0.005" ((0.010" ((0.005" ((0.08 cm) 0.13 cm) 0.25 cm)
Weight (maximum)	0.75 oz.	(21.26 g)
Stop strength	75 oz in (stati	ic) (5.4 kg - cm)



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Vishay Spectrol

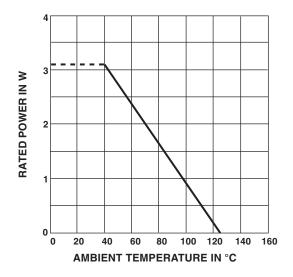
MATERIAL SPECIFICATIONS		
Front lid	Stainless steel and nickel plated brass bushing	
Housing	Thermoplastic nylon glass filled	
Rear lid	Thermo-glass filled	
Shaft	Thermo-glass filled	
Terminals	Brass plated for solderability	
Mounting hardware Lockwasher internal tooth: Panel nut:	Steel nickel plated Brass, nickel plated	

ENVIRONMENTAL SPECIFICATIONS		
Vibration	15 g thru 2000 Hz	
Shock	50 <i>g</i>	
Rotational life	1 million shaft revolutions	
Load life	900 h	
Operating temperature range	-55 °C to +125 °C	

Note

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

POWER RATING CHART



RESISTANCE ELEMENT DATA				
STANDARD RESISTANCE VALUES (Ω)	RESOLUTION (%)	OHMS PER TURN	MAXIMUM CURRENT AT 70 °C AMBIENT (mA)	MAXIMUM VOLTAGE ACROSS COIL (V)
100	0.060	0.0603	141.0	14.1
200	0.037	0.0746	100.0	20.0
500	0.031	0.1520	63.2	31.6
1K	0.025	0.2459	44.7	44.7
2K	0.021	0.4113	31.6	63.2
5K	0.016	0.8206	20.0	100.0
10K	0.017	1.7230	14.1	141.0
20K	0.015	3.0160	10.0	200.0
50K	0.009	4.6690	6.32	316.0
100K	0.007	7.4560	4.47	447.0

MARKING		
Unit identification	Units shall be marked with Vishay Spectrol name and model no, resistance, resistance tolerance, linearity, terminal identification and date code. Example of a marking for a standard part: 536-1-1-502	



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