### Vishay Spectrol



# <sup>7</sup>/<sub>8</sub>" (22.2 mm) Ten Turn WirewoundPrecision Potentiometer with a Plastic Shaft



#### **FEATURES**





Document Number: 57066

Revision: 17-May-10

- Plastic shaft
- Rugged integrated construction
- 0.25 % linearity
- Compliant to RoHS directive 2002/95/EC

ELECTRICAL SPECIFICATIONS		
PARAMETER		
Total Resistance	Range 100 $\Omega$ to 100 k $\Omega$ , tolerance ± 5 $\%$	
Linearity (Independent)	± 0.25 %	
Noise	100 $\Omega$ ENR maximum	
Electrical Angle	3600° + 10° - 0°	
Power Rating	2.0 W at 70 °C derated to zero at 125 °C	
Insulation Resistance	1000 $M\Omega$ minimum, 500 $V_{DC}$	
Dielectric Strength	1000 V <sub>RMS</sub> , 60 Hz	
Absolute Minimum Resistance	Not to exceed 0.10 % of total resistance or 1 $\Omega$ whichever is greater	
Temperature Coefficient	20 ppm/°C (wire only)	
End Voltage	0.25 % of total applied voltage maximum	

ORDERING INFORMATION/DESCRIPTION				
536	В	10K	BO10	e4
MODEL	MOUNTING	OHMIC VALUE	PACKAGING	LEAD FINISH
	<b>B</b> : Bushing		Box of 10 pieces	

SAP PART NUMBERING GUIDELINES				
536	В	103	B10	
MODEL	STYLE	OHMIC VALUE	PACKAGING	

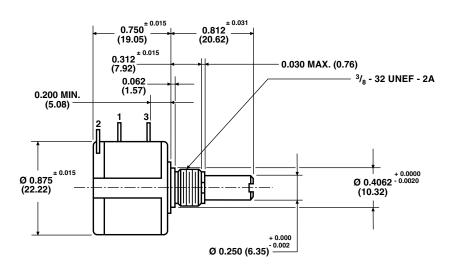


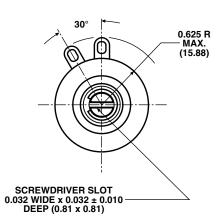
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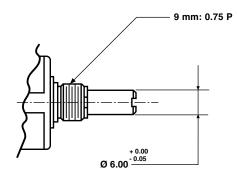
#### **DIMENSIONS** in inches (millimeters)

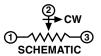
#### **BUSHING MOUNT**





#### **METRIC SHAFT/BUSHING THREAD**





TOLERANCES: UNLESS OTHERWISE NOTED. DECIMALS  $\pm$  0.005 ANGLES  $\pm$  2°

MECHANICAL SPECIFICATIONS		
PARAMETER		
Rotation	3600°	+ 10° - 0°
Torque (Maximums)	<b>STARTING</b> 0.5 oz in (36.00 g - cm)	<b>RUNNING</b> 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. 0.003" (0. 0.005" (0. 0.010" (0. 0.005" (0.	.08 cm) .13 cm) .25 cm)
Weight (Maximum)	0.75 oz. (2	21.26 g)
Stop Strength	75 oz in (static	(5.4 kg - cm)

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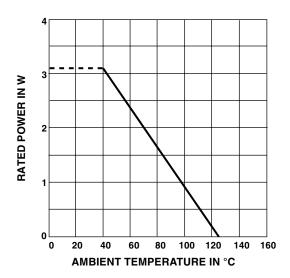
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MATERIAL SPECIF	ICATIONS
Front Lid	Stainless steel and nickel plated brass bushing
Housing	Thermoplastic nylon glass filled
Rear Lid	Thermo-glass filled
Shaft	Thermo-glass filled
Terminals	Brass plated for solderability
Mounting Hardware Lockwasher Internal Tooth: Panel Nut:	Steel nickel plated Brass, nickel plated

ENVIRONMENTAL SPECIFICATIONS	
Vibration	15 g thru 2000 Hz
Shock	50 g
Rotational Life	1 million shaft revolutions
Load Life	900 h
Operating Temperature Range	- 55 °C to + 125 °C

#### **POWER RATING CHART**



RESISTANCE ELEMENT DATA				
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	

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