# Vishay Spectrol



# 7/8" (22.2mm) Ten Turn Wirewound Precision Potentiometer



#### **FEATURES**

- 10 Standard Resistance Values
- · Plastic or Metal Shaft
- · Rugged Integrated Construction
- · 0.25% Linearity

ELECTRICAL SPECIFICATIONS		
PARAMETER		
Total Resistance	Range 100 $\Omega$ to 100K, tolerance $\pm$ 5%	
Linearity (Independent)	± 0.25%	
Noise	100Ω ENR maximum	
Rotation	3600 + 10° 0°	
Power Rating	2.0 watts @ 70°C Derated to zero at 125°C	
Insulation Resistance	1000MΩ minimum 500 VDC	
Dielectric Strength	1000V <sub>RMS</sub> 60Hz	
Absolute Minimum Resistance	Not to exceed 0.10% of total resistance or 1 $\Omega$ whichever is greater	
Тетрсо	20ppm/°C (wire only)	
End Voltage	0.25% of total applied voltage maximum	

#### **ORDERING INFORMATION**

This part number consists of four groups of digits. The first group is the Spectrol model number. The second digit describes the mechanical options available. The third digit describes the other optional features which can be supplied. The fourth group is the standard EIA resistance code

536 1 1 1 103

MODEL MECHANICAL OPTIONS OPTIONAL FEATURES RESISTANCE CODE

0.250 dia. plastic shaft
 Single section
 First significant figure
 Second significant figure

3. Number of zeros following

Example:

Part number 536-1-1-103 describes a Model 536 with 0.250 dia. plastic shaft single section and a total resistance pf  $10K\Omega$ 

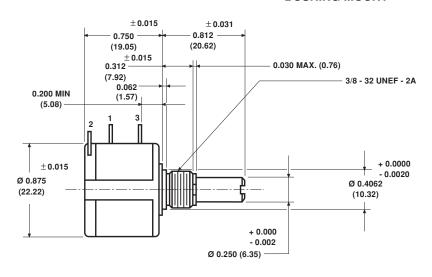
Example: 536 - 1 - 1 - 103

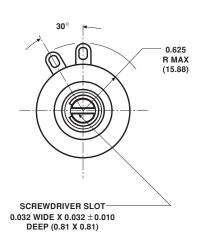
### 7/8" (22.2mm) Ten Turn Wirewound Precision Potentiometer

Vishay Spectrol

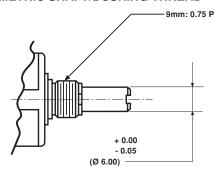
#### **DIMENSIONS** in inches (millimeters)

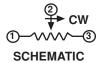
#### **BUSHING MOUNT**





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





TOLERANCES: UNLESS OTHERWISE NOTED DECIMALS ± 0.005 ANGLES ± 2°

MECHANICAL SPECIFICATIONS			
PARAMETER			
Rotation	3600° + 10°	° - 0°	
Torque (Maximums)	<b>STARTING</b> 0.5 oz - in (36.00gm - cm)	<b>RUNNING</b> 0.4 oz - in (28.80gm - cm)	
Mechanical Runouts Shaft (TIR) Pilot dia (TIR) Lateral Runout (TIR) Shaft End Play Shaft Radial Play	0.005 in (0.1 0.003 in (0.0 0.005 in (0.1 0.010 in (0.2 0.005 in (0.1	08cm) 13cm) 25cm)	
Weight (Maximum) Stop Strength	0.75 oz (21.2 75 oz - in (static) (5	,	

# Vishay Spectrol

# 7/8" (22.2mm)Ten Turn Wirewound Precision Potentiometer

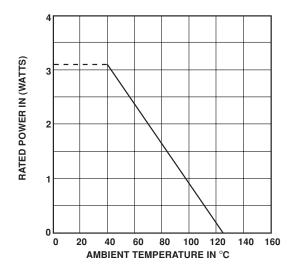


MATERIAL SPECIFICATIONS		
Front Lid	Stainless steel and nickel plated brass bushing	
Housing	Molded glass filled thermoset plastic	
Rear Lid	Thermo-glass filled	
Shaft	Thermo-glass filled or plated metal	
Terminals	Brass plated for solderability	
Mounting Hardware Lockwasher Internal tooth: Panel nut:	Steel nickel plated Brass, nickel plated	

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

#### **POWER RATING CHART**

(Ratings for cup No. 1. Additional cups 75% of values shown)



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 Spectrol name and model no, resistance, resistance tolerance, linearity, terminal identification and date code

# **Legal Disclaimer Notice**



Vishay

## **Notice**

Specifications of the products displayed herein are subject to change without notice. Vishay Intertechnology, Inc., or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Vishay's terms and conditions of sale for such products, Vishay assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of Vishay products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Vishay for any damages resulting from such improper use or sale.

www.vishay.com Revision: 08-Apr-05