# Model 159

**Vishay Spectrol** 



## <sup>7</sup>/<sub>8</sub>" (22.2 mm) Single Turn Cermet Precision Potentiometer

### FEATURES

- Rugged, high-quality, all metal housing
- Short length behind panel (11/32"/8.73 mm)
- High ohmic values up to: 2  $M\Omega$
- Extra taps AVAILABLE





This Model 159 is only for maintenance purposes. It is not recommended for new designs and will be obsolete in a near future.

ELECTRICAL SPECIFICATIONS			
PARAMETER			
Standard Ohmic Values Range	500 Ω	500 Ω to 2 MΩ	
Tolerance	Standard: ± 20 %	Special: ± 5 %	
Linearity (Independent)	STANDARD	BEST PRACTICAL	
	± 0.5 %	± 0.25 %	
Output Smoothness	0.1 % maximum		
Power Rating (at 40 °C Ambient)	3.5 W derated to zero at 150 °C		
Electrical Angle	$340^{\circ} \pm 4^{\circ}$		
Insulation Resistance	1000 M $\Omega$ minimum 500 V <sub>DC</sub>		
Dielectric Strength	1000 V <sub>RMS</sub> , 60 Hz		
Minimum Voltage	0.5 % max.		
Temperature Coefficient of Resistance	± 100 ppm/°C		

#### **ORDERING INFORMATION/DESCRIPTION**

159 MODEL

The Models 159 can be ordered from this data sheet with a variety of alternate characteristics, as shown. For most rapid service on your order, please state:

В	10K	BO10
MOUNTING	OHMIC VALUE	PACKAGING
<b>B</b> = Bushing <b>S</b> = Servo		Box of 10 pieces

Other characteristics will be standard as described on this data sheet. If special characteristics are required, such as: special linearity tolerance, special resistance tolerance, high torque, 1/8 shaft - 1/4 - 32 bushing, stops, non - linear functions, etc., state these on your order

SAP PART NUMBERING GUIDELINES			
159	S	205	B10
MODEL	STYLE	OHMIC VALUE	PACKAGING
	Servo	2 ΜΩ	Box of 10 pieces

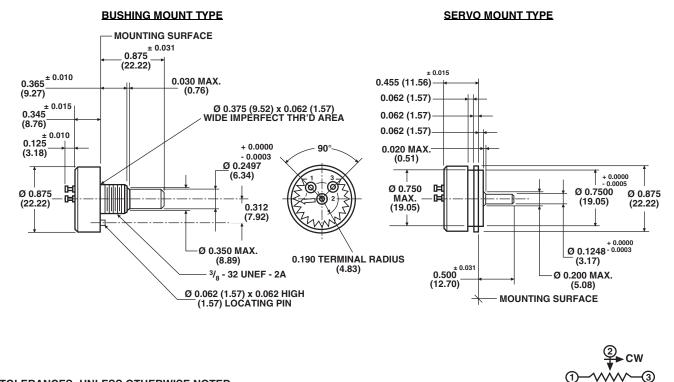


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SCHEMATIC

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



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

MECHANICAL SPECIFICATIONS			
PARAMETER			
Rotation	360° continuous		
Peoring Type	Servo mount: ball bearing		
Bearing Type	Bushing mount: sleeve bearing		
Torque (Maximums)	STARTING	RUNNING	
Servo	0.25 oz in (18.00 g - cm)	0.15 oz in (10.80 g - cm)	
Bushing	0.30 oz in (21.60 g - cm)	0.25 oz in (18.00 g - cm)	
Mechanical Runouts (Maximums)	BUSHING	SERVO	
Shaft Runout	0.002" (0.05 cm)	0.002" (0.05 cm)	
Pilot Dia. Runout	-	0.002" (0.05 cm)	
Lateral Runout	0.005" (0.13 cm)	0.002" (0.05 cm)	
Shaft End Play	0.006" (0.15 cm)	0.005" (0.13 cm)	
Shaft Radial Play	0.003" (0.08 cm)	0.002" (0.05 cm)	
Weight	0.5 oz. maximum (14.18 g)		

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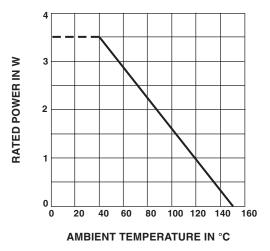
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MATERIAL SPECIFICATIONS	
Housing	Aluminum, anodized
Shaft	Stainless steel, non-magnetic non-passivated
Rear Lid	Molded glass filled phenolic
Terminals	Brass, plated for solderability
Bushing Mount Hardware Lockwasher Internal Tooth: Panel Nut:	Steel, nickel plated Brass, nickel plated

ENVIRONMENTAL SPECIFICATIONS		
Vibration	15 g thru	2000 Hz
Shock	50	g
Salt Spray	96 h	
Rotational Life Shaft Revolution:	Bushing 2 million	<b>Servo</b> 5 million
Load Life	900 h	
Operating Temperature Range	- 55 °C to - + 150 °C	

### POWER RATING CHART



MARKING	
Unit Identification	Units shall be marked with Spectrol name, model number, resistance and tolerance, linearity terminal identification and data code. Applicable test procedures: MIL-R-39023





Vishay

## Disclaimer

All product specifications and data are subject to change without notice.

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