Vishay Spectrol

# <sup>7</sup>/<sub>8</sub>" (22.2 mm) Precision Industrial Potentiometer, Bushing And Servo Mount Versions, Conductive Plastic



QUICK REFERENCE DATA			
Sensor type	ROTATIONAL, conductive plastic		
Output type	Output by turrets		
Market appliance	Industrial		
Dimensions	<sup>7</sup> / <sub>8</sub> " (22.2 mm)		

#### **FEATURES**

· High quality





RoHS

- Long rotational life
- Wide operating temperature range
- Linearities down to ± 0.25 % special
- Optional sealed construction (bushing mount only)
- Material categorization: For definitions of compliance please see <u>www.vishay.com/doc?99912</u>

ELECTRICAL SPECIFICATIONS			
PARAMETER	MIL-PRF-39023 TEST PROCEDURES APPLY		
Resistance	1 kΩ to 100 kΩ		
Resistance Tolerance Special to	± 20 % ± 10 %		
Linearity Special to	± 2.0 % ± 0.25 %		
Temperature Coefficient of Resistance	± 600 ppm/°C		
Power Rating Derated to	1.0 W at 40 °C ambient 0 W at 125 °C		
Electrical Angle	340° ± 4°		
End Voltage	0.5 % maximum		
Dielectric Withstanding	1000 V <sub>RMS</sub> , 60 Hz		
Insulation Resistance	100 M $\Omega$ minimum, 500 V <sub>DC</sub>		
Output Smoothness	0.1 %		

MECHANICAL SPECIFICATIONS				
PARAMETER				
Weight	0.5 oz. maximum (14 g)			
Rotation	360° (continuous)			
Mount Bearing Type	<b>BUSHING</b> Sleeve bearing	<b>SERVO</b> Ball bearing		
Operating Torque Starting Running	0.30 oz in (21.6 g - cm) 0.25 oz in (18 g - cm)	0.25 oz in (18 g - cm) 0.15 oz in (10.8 g - cm)		
Mechanical Tolerance (in/mm) (maximum)				
Shaft Runout (TIR)	0.002" (0.05 mm)	0.002" (0.05 mm)		
Pilot Dia Runout (TIR)	-	0.002" (0.05 mm)		
Lateral Runout (TIR)	0.005" (0.13 mm)	0.002" (0.05 mm)		
Shaft End Play	0.006" (0.15 mm)	0.005" (0.13 mm)		
Shaft Radial Play	0.003" (0.08 mm)	0.002" (0.05 mm)		

ORDERING INFORMATION/DESCRIPTION					
157	В	50K	20 %	С	BO10
MODEL	MOUNTING	OHMIC VALUE	TOLERANCE ON OHMIC VALUE	LINEARITY	PACKAGING
	<b>B</b> = Bushing			C: ± 0.25 %	Box of 10 pieces
	<b>S</b> = Servo				

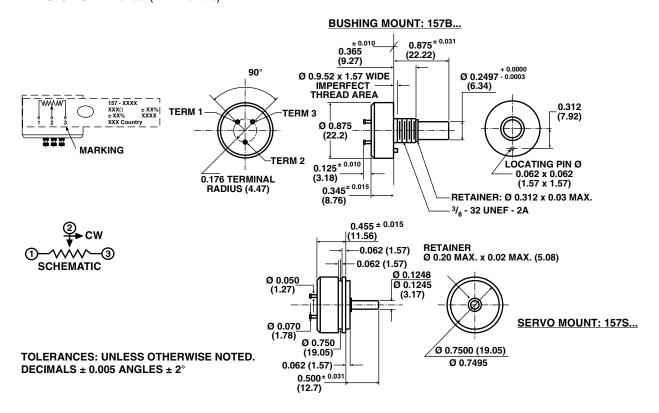


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SAP PART NUMBERING GUIDELINES					
157	S	502	М	Х	B10
MODEL	STYLE	OHMIC VALUE	TOLERANCE ON OHMIC VALUE	LINEARITY	PACKAGING
		502 = 5K	M: ± 20 %	X: ± 2 %	Box of 10 pieces

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



MATERIAL SPECIFICATIONS		
Housing/Bushing	Aluminum, anodized	
Rear Lid	Ceramic	
Shaft	Stainless steel	
Terminals	Solderable	
Bushing Mount Hardware	Lockwasher, internal tooth steel, nickel plated	
Panel Nut	Brass, nickel plated	

ENVIRONMENTAL SPECIFICATIONS			
Temperature	- 55 °C + 125 °C		
Rotational Life	<b>BUSHING</b> 5 million shaft revolutions	SERVO 10 million shaft revolutions	
Moisture Resistant	Yes		
Vibration	15 g 10 to 2000 Hz		
Shock	50 g		
Salt Spray	96 h		
Load Life	900 h		



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