

7/8" (22.2 mm) Precision Industrial Potentiometer Bushing and Servo Mount Versions, Conductive Plastic



FEATURES

- High Quality
- Rugged One Piece Metal Housing
- Long Rotational Life
- Wide Operating Temperature Range
- Linearities down to ± 0.25 % Special
- Optional Sealed Construction (Bushing Mount Only)



ELECTRICAL SPECIFICATIONS	
PARAMETER	MIL-PRF-39023 TEST PROCEDURES APPLY
Resistance	1 k Ω to 100 k Ω
Resistance Tolerance	± 20 %
Special to	± 10 %
Linearity	± 2.0 %
Special to	± 0.25 %
Temperature Coefficient of Resistance	± 600 ppm/ $^{\circ}$ C
Power Rating	1.0 W at 40 $^{\circ}$ C Ambient
derated to	0 W at 125 $^{\circ}$ C
Electrical Angle	340 $^{\circ}$ $\pm$ 4 $^{\circ}$
End Voltage	0.5 % maximum
Dielectric Withstanding	1000 V _{RMS} , 60 Hz
Insulation Resistance	100 M Ω minimum, 500 V _{DC}
Output Smoothness	0.1 %

MECHANICAL SPECIFICATIONS		
PARAMETER		
Weight	0.5 oz maximum (14 g)	
Rotation	360 $^{\circ}$ (Continuous)	
Mount Bearing Type	BUSHING Sleeve Bearing	SERVO Ball Bearing
Operating Torque		
Starting	0.30 oz - in (21.6 g - cm)	0.25 oz - in (18 g - cm)
Running	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 in (0.05 mm)	0.002 in (0.05 mm)
Pilot Dia Runout (TIR)	-	0.002 in (0.05 mm)
Lateral Runout (TIR)	0.005 in (0.13 mm)	0.002 in (0.05 mm)
Shaft End Play	0.006 in (0.15 mm)	0.005 in (0.13 mm)
Shaft Radial Play	0.003 in (0.08 mm)	0.002 in (0.05 mm)

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



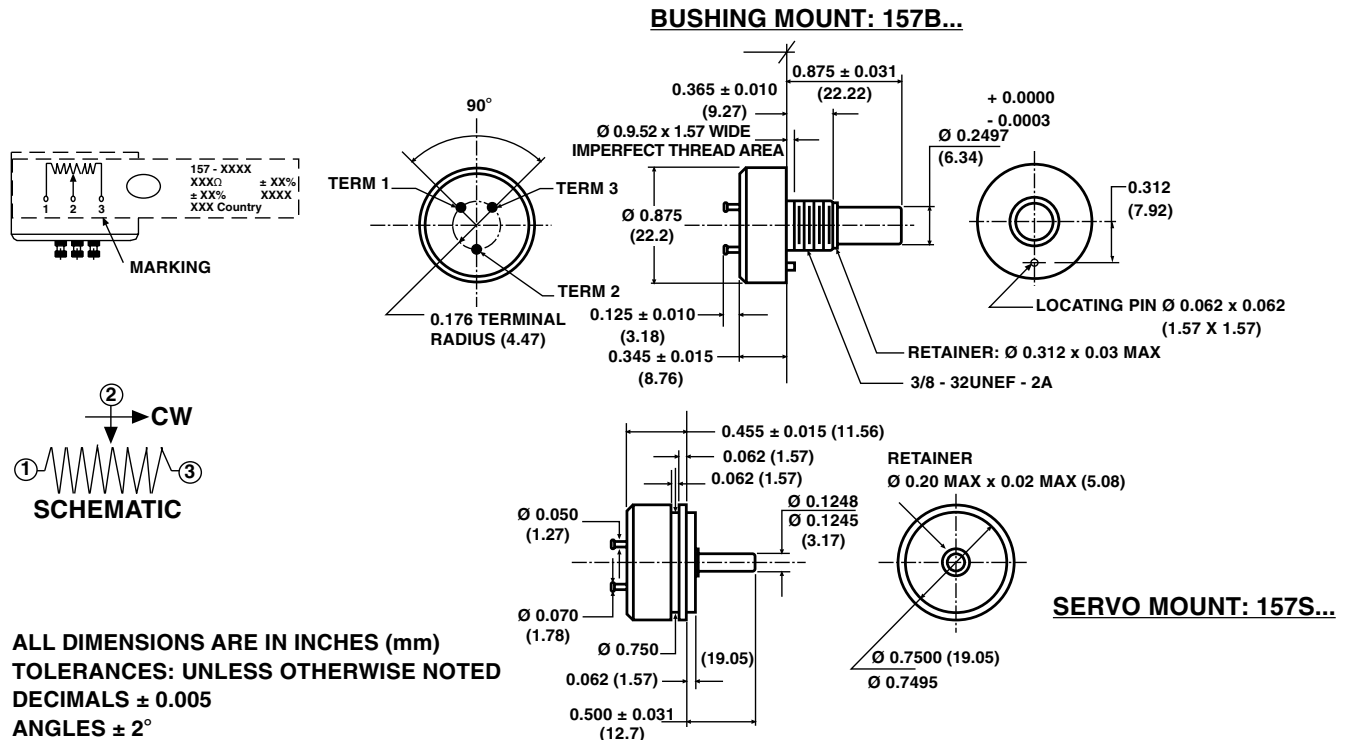
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Vishay Spectrol

SAP PART NUMBERING GUIDELINES

157	S	502	M	X	B10
MODEL	STYLE	OHMIC VALUE	TOLERANCE ON OHMIC VALUE	LINEARITY	PACKAGING
		502 = 5K	M: $\pm 20\%$	X: $\pm 2\%$	Box of 10 pieces

DIMENSIONS in inches (millimeters)



ALL DIMENSIONS ARE IN INCHES (mm)
TOLERANCES: UNLESS OTHERWISE NOTED
DECIMALS ± 0.005
ANGLES $\pm 2^\circ$

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	$-55^\circ\text{C} + 125^\circ\text{C}$	
Rotational Life	BUSHING 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 hours	
Load Life	900 hours	



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