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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)
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

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

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_{RMS}, 60 Hz
Insulation Resistance	100 MΩ minimum, 500 V_{DC}
Output Smoothness	0.1 %

MECHANICAL SPECIFICATIONS		
PARAMETER		
Weight	0.5 oz. maximum (14 g)	
Rotation	360° (continuous)	
Mount Bearing Type	**BUSHING** Sleeve bearing	**SERVO** 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	B	50K	20 %	C	BO10
MODEL	MOUNTING	OHMIC VALUE	TOLERANCE ON OHMIC VALUE	LINEARITY	PACKAGING
	B = Bushing S = Servo		or 10 % or 5 %	X: ± 2 % A: ± 1 % B: ± 0.5 % C: ± 0.25 %	Box of 10 pieces

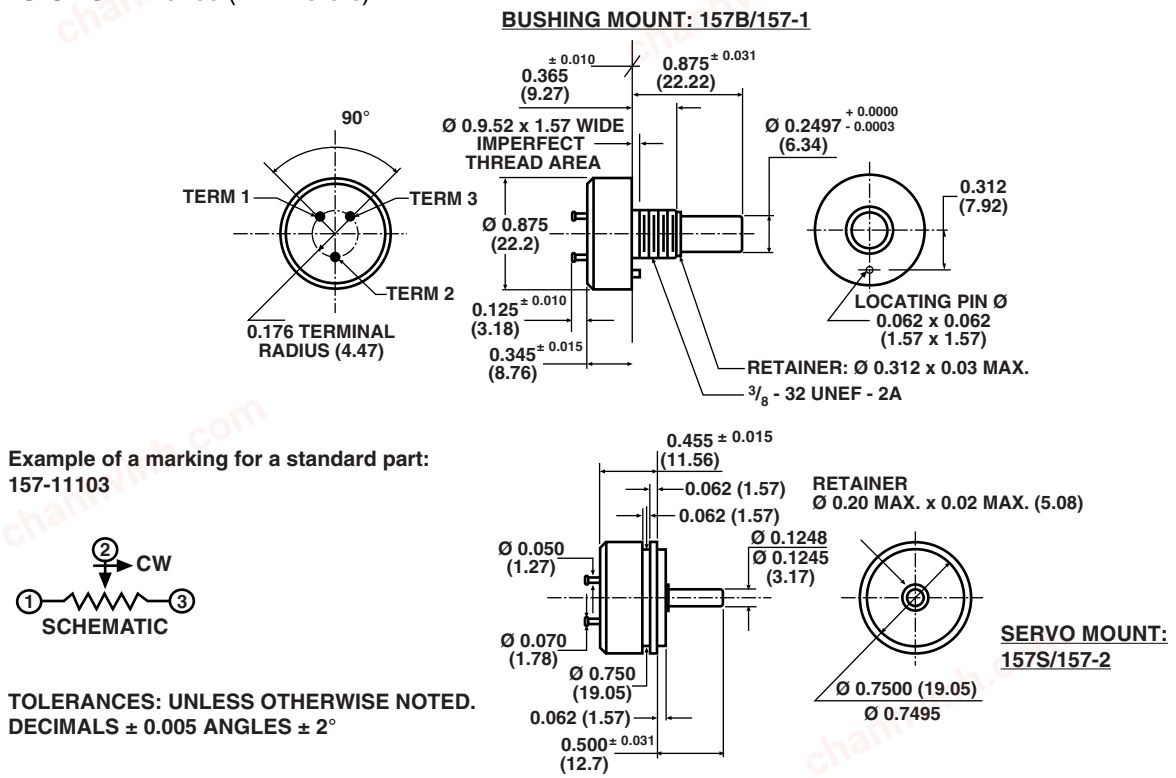
For technical questions, contact: sferprecisionpot@vishay.com

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SAP PART NUMBERING GUIDELINES					
157	**S**	**502**	**M**	**X**	**B10**
MODEL	STYLE	OHMIC VALUE	TOLERANCE ON OHMIC VALUE	LINEARITY	PACKAGING
		502 = 5K	M: ± 20 % K: ± 10 % J: ± 5 %	X: ± 2 % A: ± 1 % B: ± 0.5 % C: ± 0.25 %	Box of 10 pieces

DIMENSIONS in inches (millimeters)



Example of a marking for a standard part:
157-11103

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

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	**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 h	
Load Life	900 h	

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