Model 152

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Vishay Spectrol

⁷/₈" (22.2 mm) Single Turn Wirewound, Precision Potentiometer



- Rugged, high-quality, all metal housing
- Short length behind panel ¹¹/₃₂" (8.76 mm)
- Ohmic value range: 5 Ω to 40 k Ω
- Extra taps available
- Bushing and servo mount types
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

Pb
RoHS

COMPLIANT

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

PARAMETER		
Total Resistance Standard Range	5 Ω to 20 kΩ - special to 40 kΩ	
Tolerance 50 Ω and Above: Below 50 Ω	STANDARD ± 3 % ± 5 %	SPECIAL ± 1 % ± 3 %
Linearity (independent) Total Resistance 5Ω to 100 Ω 100 Ω to 500 Ω 500 Ω and Above	STANDARD ± 1.0 % ± 1.0 % ± 0.5 %	BEST PRACTICAL ± 0.75 % ± 0.50 % ± 0.35 %
Noise	100 Ω ENR	
Power Rating (at 40 °C ambient)	2 W derated to zero at 125 °C	
Electrical Angle	340° ± 2°	
Insulation Resistance	1000 M Ω minimum 500 V _{DC}	
Dielectric Strength	1000 V _{RMS} , 60 Hz	
Absolute Minimum Resistance	Not to exceed linearity times total resistance or 0.5 W whichever is greater	
Minimum Voltage	0.5 % max.	
Temperature Coefficient of Resistance	Refer to standard resistance element data	

ORDERING INFORMATIO	N		
1 5 2	B 1	0 3	
MODEL	STYLE	OHMIC VALUE	SPECIAL REQUEST
152	B : bushing	470 = 47 Ω	XXXX
	S: servo	222 = 2.200 Ω 103 = 10 kΩ	
		For ohmic value range see electrical specification	

PART NUMBER DESCRIPTION (for information only)				
152-	1	1	103	хххх
MODEL	STYLE	GANGS	OHMIC VALUE	SPECIAL
	B : 1 S : 2			

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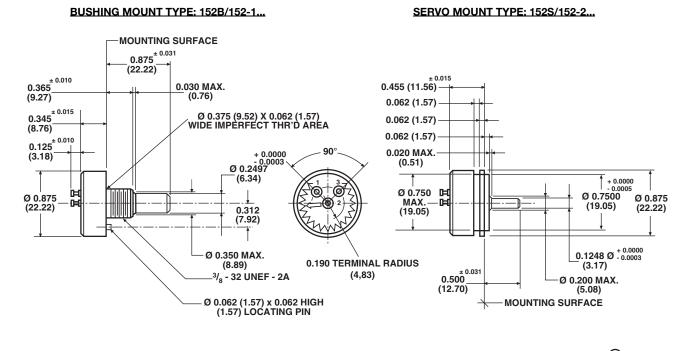
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SCHEMATIC

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DIMENSIONS in inches (millimeters)



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

MECHANICAL SPECIFICATION	IS		
PARAMETER			
Rotation	360° co	ntinuous	
	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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ENVIRONMENTAL SPECIFICATIONS		
Vibration	15 <i>g</i> thru 2000 Hz	
Shock	50) g
Salt Spray	96	3 h
Rotational Life Shaft Revolution:	Bushing 1 million	Servo 2 million
Load Life	90	0 h
Operating Temperature Range	-55 °C to	- +125 °C

Note

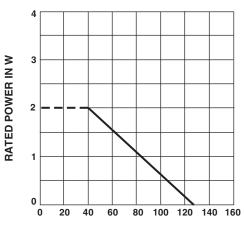
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MARKING		
Unit Identification	Units shall be marked with Vishay Spectrol name, model number, resistance and tolerance, linearity terminal identification and data code. Applicable test procedures: MIL-R-12934 Example of a marking for a standard part: 152-11202	

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	

POWER RATING CHART



AMBIENT TEMPERATURE IN °C





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