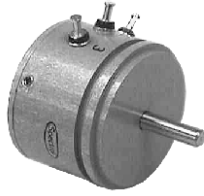


1 1/16" (27 mm) Single Turn Wirewound Precision Potentiometer



FEATURES

- Gangable up to 6 sections
- Extra taps on request
- Bushing or servo mount types available
- Ohmic value range: 5 Ω up to 100 k Ω
- Compliant to RoHS directive 2002/95/EC



RoHS
COMPLIANT

ELECTRICAL SPECIFICATIONS

PARAMETER	STANDARD	SPECIAL
Total Resistance Tolerance: 20 Ω and Above Below 20 Ω	5 Ω to 20 k Ω $\pm 3\%$ $\pm 5\%$	to 30 k Ω $\pm 1\%$ $\pm 3\%$
Linearity (Independent): 5 Ω to 200 Ω 200 Ω to 2 k Ω 2 k Ω to 10 k Ω 10 k Ω and Above	STANDARD $\pm 1.0\%$ $\pm 0.5\%$ $\pm 0.5\%$ $\pm 0.5\%$	BEST PRACTICAL $\pm 0.50\%$ $\pm 0.35\%$ $\pm 0.25\%$ $\pm 0.20\%$
Noise	100 Ω ENR	
Electrical Angle	350° $\pm 2^\circ$	
Power Rating Section 1: Additional Sections:	1.50 W at 70 °C ambient, derated to zero at 125 °C 75 % of the rating of section 1 (1.125 W at 70 °C)	
Insulation Resistance	1000 M Ω minimum, 500 V _{DC}	
Dielectric Strength	1000 V _{RMS} 60 Hz	
Absolute Minimum Resistance	Linearity x total resistance or 0.5 Ω , whichever is greater	
End Voltage	Linearity x total applied voltage for total resistance above 20 Ω , 2.0 % of total applied voltage for 20 Ω and below	
Phasing (CCW End Points)	Additional sections phased to section 1 within $\pm 1^\circ$	
Taps (Extra)	9 available as special standard tolerance $\pm 1^\circ$	

ORDERING INFORMATION/DESCRIPTION

The Model 122 can be ordered from this data sheet with a variety of alternate characteristics, as shown. For most rapid service on your order, please state:

122 MODEL	B MOUNTING TYPE	1 NUMBER OF SECTIONS	5K TOTAL RESISTANCE OF EACH SECTION	BO1 PACKAGING
	B: Bushing S: Servo	Up to 6 sections	Beginning with the section nearest the mounting end	Box of 1 piece

Other characteristics will be standard as described on this data sheet. If special characteristics are required, such as: special linearity tolerance, special resistance tolerance, extra taps, non-linear functions, etc., please state these on your order and allow additional lead time for delivery.

SAP PART NUMBERING GUIDELINES

122 MODEL	S MOUNTING TYPE	2 NUMBER OF SECTIONS	103 OHMIC VALUE	203 OHMIC VALUE	B01 PACKAGING
	Servo	2	Section N ^o 1 103 = 10K	Section N ^o 2 203 = 20K	Box of 1 piece

Model 122

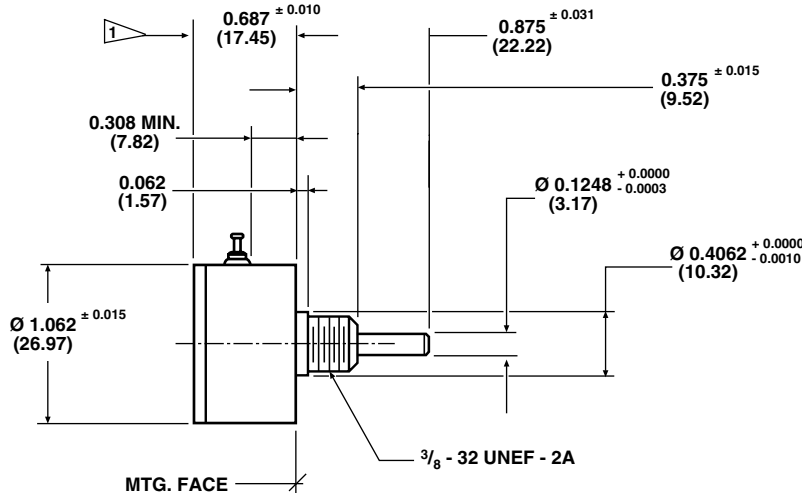


Vishay Spectrol

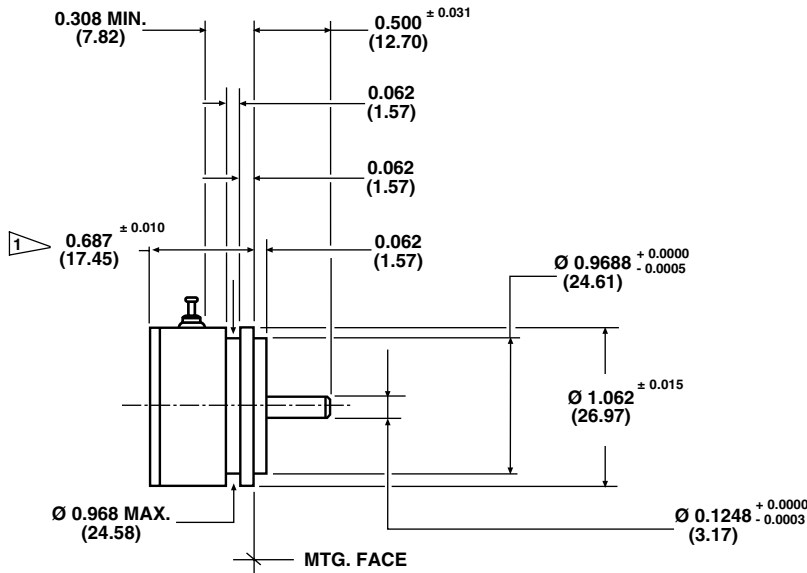
1 1/16" (27 mm) Single Turn Wirewound Precision Potentiometer

DIMENSIONS in inches (millimeters)

BUSHING MOUNT: 122B...

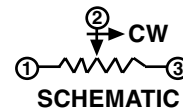


SERVO MOUNT: 122S...



\triangle ADD 0.500 ± 0.002 (12.70) FOR EACH ADDITIONAL SECTION

TOLERANCES: UNLESS OTHERWISE NOTED.
DECIMALS ± 0.005 ANGLES $\pm 2^\circ$



MATERIAL SPECIFICATIONS	
Housing and Lids	Aluminum, anodized
Shaft	Stainless steel, non-magnetic non-passivated
Terminals	Brass, plated for solderability
Bushing Mount Hardware Lockwasher Internal Tooth: Panel Nut:	Steel, nickel plated Brass, nickel plated

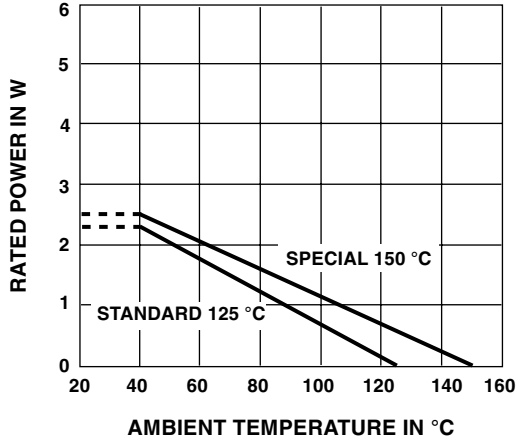
ENVIRONMENTAL SPECIFICATIONS	
Vibration	15 g thru 2000 CPS
Shock	50 g
Salt Spray	96 h
Rotational Life	1 million shaft revolutions
Load Life	900 h
Temperature Range	- 55 °C to + 125 °C

MARKING	
Unit Identification	Units shall be marked with Vishay Spectrol name and model number resistance and resistance tolerance, linearity, terminal identification and data code



POWER RATING CHART

(Ratings for cup No.1.
Additional cups 75 % of values shown)



RESISTANCE ELEMENT DATA

RESISTANCE VALUES (Ω)	RESOLUTION (%)	OHMS PER TURN	MAXIMUM CURRENT AT 70 °C AMBIENT (mA)	MAXIMUM VOLTAGE ACROSS COIL (V)	WIRE TEMP. COEF. (ppm/°C)
5	0.364	0.018	548	2.74	800
10	0.311	0.031	387	3.87	800
20	0.250	0.050	274	5.48	180
50	0.232	0.116	173	8.65	180
100	0.232	0.231	122	12.2	20
200	0.194	0.389	86.6	17.3	20
500	0.168	0.841	54.8	27.4	20
1K	0.156	1.557	38.7	38.7	20
2K	0.109	2.178	27.4	54.8	20
5K	0.088	4.382	17.3	86.5	20
10K	0.076	7.644	12.2	122	20
20K	0.071	14.235	8.66	173	20
50K	0.062	30.921	5.48	274	20
100K	0.052	51.983	3.87	387	20

MECHANICAL SPECIFICATIONS

PARAMETER		
Rotation	360° continuous	
Bearing Type	Servo mount: Ball bearing Bushing mount: Sleeve bearing	
Torque (Maximums) Servo, 1 Section Bushing, 1 Section Each Additional Section	STARTING 0.25 oz. - in (18.0 g - cm) 0.30 oz. - in (21.6 g - cm) 0.20 oz. - in (14.4 g - cm)	RUNNING 0.15 oz. - in (10.8 g - cm) 0.25 oz. - in (18.0 g - cm) 0.15 oz. - in (10.8 g - cm)
Mechanical Runouts (Maximums): Shaft Runout (TIR/in) Pilot Dia. Runout (TIR) Lateral Runout (TIR) Shaft End Play Shaft Radial Play	SERVO 0.002" (0.05 cm) 0.002" (0.05 cm) 0.002" (0.05 cm) 0.005" (0.13 cm) 0.002" (0.05 cm)	BUSHING 0.002" (0.05 cm) 0.002" (0.05 cm) 0.005" (0.13 cm) 0.005" (0.13 cm) 0.003" (0.08 cm)
Weight (Maximums): Single Section Each Additional Section	0.8 oz. (22.7 g) 0.4 oz. (11.3 g)	
Ganging	6 sections maximum, terminal alignment, added sections within ± 10° of section 1 terminals	
Moment of Inertia	0.12 g - cm ² per section maximum	



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