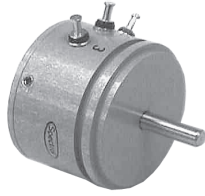


## 1 1/16" (27 mm) Single Turn Wirewound Precision Potentiometer



### FEATURES

- Gangable up to 6 sections
- Extra taps on request
- Bushing or servo mount types available
- Ohmic value range: 5 Ω up to 100 kΩ



**RoHS**  
COMPLIANT

ELECTRICAL SPECIFICATIONS		
PARAMETER		
Total Resistance Tolerance: 20 Ω and Above Below 20 Ω	<b>STANDARD</b> 5 Ω to 20 kΩ ± 3 % ± 5 %	<b>SPECIAL</b> to 100 kΩ ± 1 % ± 3 %
Linearity (Independent): 5 Ω to 200 Ω 200 Ω to 2 kΩ 2 kΩ to 10 kΩ 10 kΩ and Above	<b>STANDARD</b> ± 1.0 % ± 0.5 % ± 0.5 % ± 0.5 %	<b>BEST PRACTICAL</b> ± 0.50 % ± 0.35 % ± 0.25 % ± 0.20 %
Noise	100 Ω ENR	
Electrical Angle	350° ± 2°	
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 MΩ minimum 500 V <sub>DC</sub>	
Dielectric Strength	1000 V <sub>RMS</sub> 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 ± 1°	
Taps (Extra)	9 available as special standard tolerance ± 1°	

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:				
<b>122</b>	<b>B</b>	<b>1</b>	<b>5K</b>	<b>BO1</b>
MODEL	MOUNTING TYPE	NUMBER OF SECTIONS	TOTAL RESISTANCE OF EACH SECTION	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					
<b>122</b>	<b>S</b>	<b>2</b>	<b>103</b>	<b>203</b>	<b>B01</b>
MODEL	MOUNTING TYPE	NUMBER OF SECTIONS	OHMIC VALUE	OHMIC VALUE	PACKAGING
	Servo	2	Section N° 1 103 = 10K	Section N° 2 203 = 20K	Box of 1 piece

# Model 122

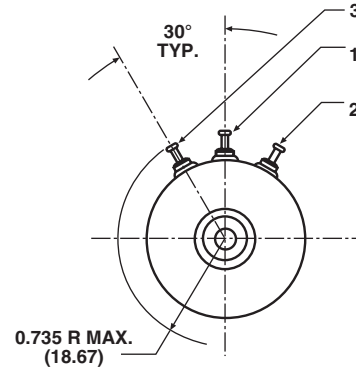
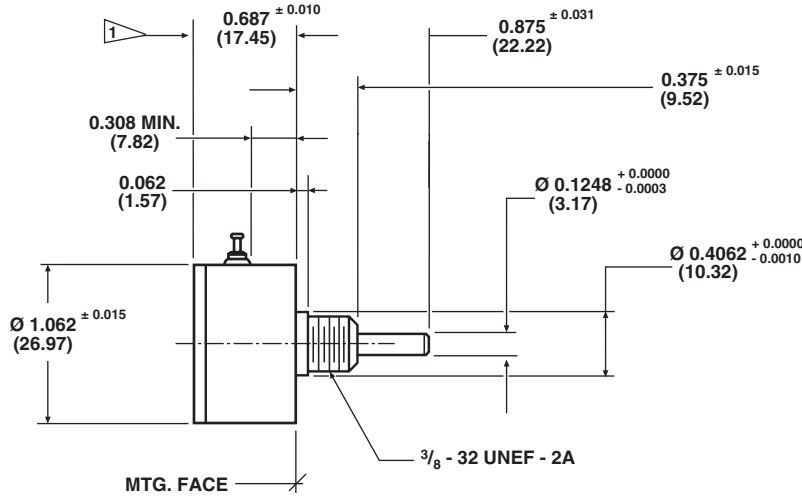


Vishay Spectrol

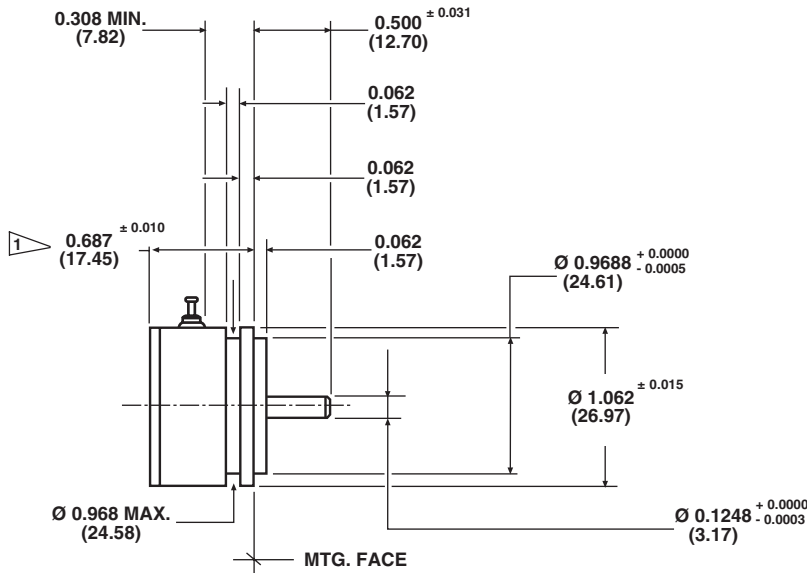
1 1/16" (27 mm) Single Turn Wirewound Precision Potentiometer

## DIMENSIONS in inches (millimeters)

### BUSHING MOUNT: 122B...

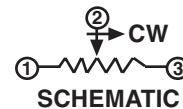


### SERVO MOUNT: 122S...



ADD 0.500 ± 0.002 (12.70) FOR EACH ADDITIONAL SECTION

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



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

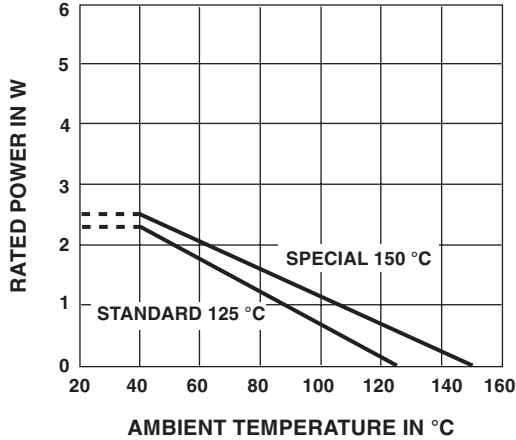
ENVIRONMENTAL SPECIFICATIONS	
Vibration	15 g thru 2000 CPS
Shock	50 g
Salt Spray	96 h
Rotational Life	1 million shaft revolutions
Load Life	900 h
Temperature Range	- 55 °C to + 125 °C

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	<b>STARTING</b> 0.25 oz. - in (18.0 g - cm) 0.30 oz. - in (21.6 g - cm) 0.20 oz. - in (14.4 g - cm)	<b>RUNNING</b> 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	<b>SERVO</b> 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)	<b>BUSHING</b> 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 <sup>2</sup> per section maximum	



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