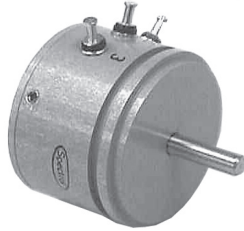


## 1 1/16" (27 mm) Single Turn Conductive Plastic Precision Potentiometer



### FEATURES

- 1 1/16" round
- Bushing mount and servo mount types
- Designed for high reliability applications
- Ohmic value range: 500 Ω to 50 kΩ
- Rotational life exceeds 20 million shaft revolutions
- Virtually infinite resolution
- Up to 6 sections available
- Co-molded track and multi-finger wiper provide low noise signal



**RoHS**  
COMPLIANT

ELECTRICAL SPECIFICATIONS		
PARAMETER	STANDARD	SPECIAL
Total Resistance:	500 Ω to 50 kΩ	
Tolerance	± 10 %	± 5 %
Linearity (Independent)	± 0.5 %	± 0.15 %
Electrical Angle	345° ± 4°	
Power Rating	1.25 W at 70 °C ambient, derated to zero at 125 °C ambient	
Section 1:	1.25 W at 70 °C ambient, derated to zero at 125 °C ambient	
Additional Section:	75 % of the rating of section 1	
Output Smoothness	0.1 % maximum	
Insulation Resistance	1000 MΩ min, 500 V <sub>DC</sub>	
Dielectric Strength	1000 V <sub>RMS</sub> , 60 Hz	
Phasing (CCW End Points)	Points at which output ratio is 0.5 aligned ± 1° (ref. section 1)	
Temperature Coefficient of Resistance	± 400 ppm/°C maximum	
Taps (Extra)	Extra taps available as special	

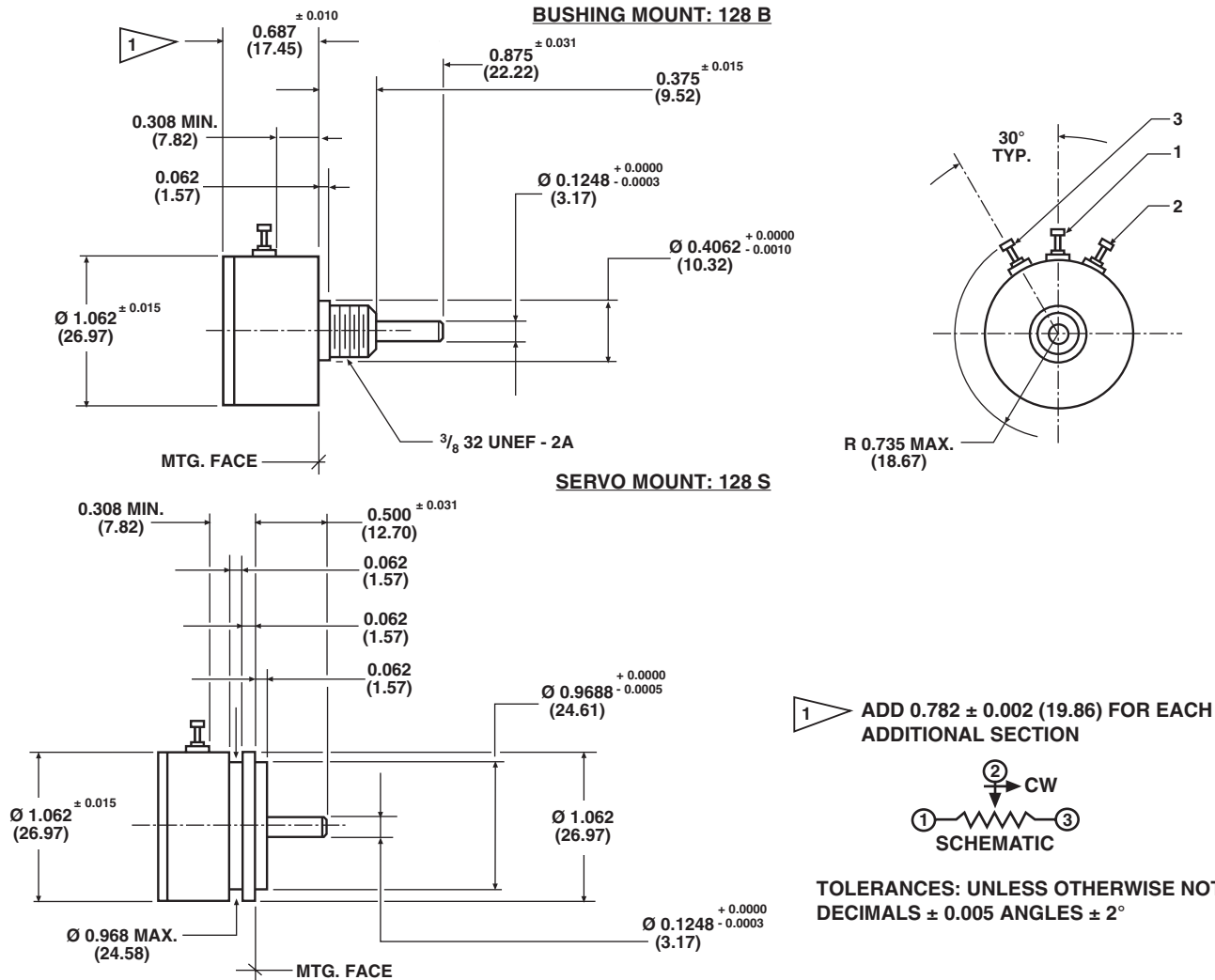
ORDERING INFORMATION/DESCRIPTION				
The Model 128 can be ordered from this data sheet with a variety of alternate characteristics, as shown above. For most rapid service on your order, please state:				
<b>128</b>	<b>S</b>	<b>1</b>	<b>1K</b>	<b>B01</b>
MODEL	MOUNTING	NUMBER OF SECTIONS	TOTAL RESISTANCE OF EACH SECTION	PACKAGING
	<b>B:</b> Bushing <b>S:</b> Servo	Up to 6	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>128</b>	<b>S</b>	<b>3</b>	<b>103</b>	<b>102</b>	<b>203</b>	<b>B01</b>
MODEL	STYLE	GANGS	OHMIC VALUE GANG N° 1	OHMIC VALUE GANG N° 2	OHMIC VALUE GANG N° 3	PACKAGING
	<b>B:</b> Bushing <b>S:</b> Servo	From 1 up to 6	10K	1K	20K	Box of 1 piece

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

Vishay Spectrol

### DIMENSIONS in inches (millimeters)



MECHANICAL SPECIFICATIONS		
PARAMETER		
Rotation	360° continuous	
Bearing Type	<b>SERVO MOUNT</b> Ball bearing	<b>BUSHING MOUNT</b> Sleeve bearing
Torque (Maximum) 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 (Maximum) Shaft Runout (TIR/in) Pilot Dia. Runout (TIR/in) Lateral Runout (TIR) Shaft End Play Shaft Radial Play	<b>SERVO</b> 0.002" (0.05 mm) 0.002" (0.05 mm) 0.002" (0.05 mm) 0.005" (0.13 mm) 0.002" (0.05 mm)	<b>BUSHING</b> 0.002" (0.05 mm) 0.002" (0.05 mm) 0.005" (0.13 mm) 0.005" (0.13 mm) 0.003" (0.08 mm)
Weight (Maximum): 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 $\pm 10^\circ$ of section 1 terminals	
Moment of Inertia	0.12 g - cm <sup>2</sup> per section maximum	

# Model 128



Vishay Spectrol

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

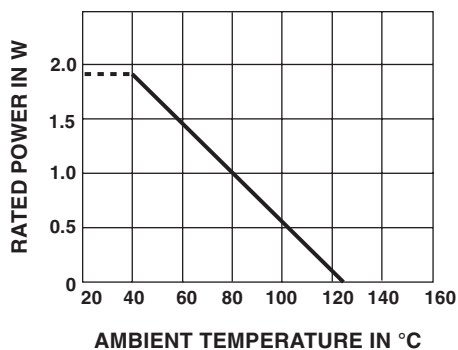
MATERIAL SPECIFICATIONS	
Housing and Lids	Aluminum, anodized
Shaft	Stainless steel, non-magnetic non-passivated
Terminals	Brass plated for solderability
Bushing Mount Hardware Lockwasher Internal Tooth, Panel Nut:	Steel, nickel plated Brass, nickel plated

ENVIRONMENTAL SPECIFICATIONS	
Vibration	15 g thru 2000 Hz
Shock	50 g
Salt Spray	96 h
Rotational Life	Servo: 20 million shaft revolutions Bushing: 5 million shaft revolutions
Load Life	900 h
Temperature Range	- 55 °C to + 125 °C

MECHANICAL SPECIFICATIONS	
Unit Identification	Units shall be marked with Vishay Spectrol name, model number and data code on each section, resistance, resistance tolerance, linearity and terminal identification

## POWER RATING CHART

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



RESISTANCE ELEMENT DATA	
RESISTANCE VALUES (Ω)	MAXIMUM VOLTAGE APPLICABLE (V)
500	25
1K	35
2K	50
5K	79
10K	112
20K	158
50K	250



## Disclaimer

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