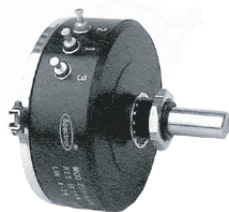


# 1 3/4" (44.5 mm) Single Turn Conductive Plastic Precision Potentiometer



## FEATURES

- Rotational life exceeds 20 million shaft revolutions
- Virtually infinite resolution
- Designed for high reliability applications
- Co-molded track and multi-finger wiper provide low noise signal
- Bushing or servo types available up to 6 sections
- Ohmic value range: 1 kΩ to 50 kΩ
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

## QUICK REFERENCE DATA

Sensor type	ROTATIONAL, conductive plastic
Output type	Output by turrets
Market appliance	Professional
Dimensions	1 3/4" (44.5 mm)

## ELECTRICAL SPECIFICATIONS

PARAMETER	STANDARD	SPECIAL
Total resistance tolerance	1 kΩ to 50 kΩ ± 10 %	- ± 5 %
Linearity (independent)	STANDARD ± 0.3 %	SPECIAL ± 0.1 %
Electrical angle	350° ± 3°	
Power rating: Section 1: Additional sections	1.75 W at 70 °C ambient derated to zero at 125 °C 75 % of the rating of section 1	
Output smoothness	0.1 % maximum	
Insulation resistance	1000 MΩ minimum, 500 V <sub>DC</sub>	
Dielectric strength	1000 V <sub>RMS</sub> , 60 Hz	
Taps (extra)	Extra taps available as special	
Phasing	Points at which output ratio is 0.5 aligned ± 1° (ref. to section 1)	
Temperature coefficient of resistance	± 600 ppm/°C maximum	

## ORDERING INFORMATION/DESCRIPTION

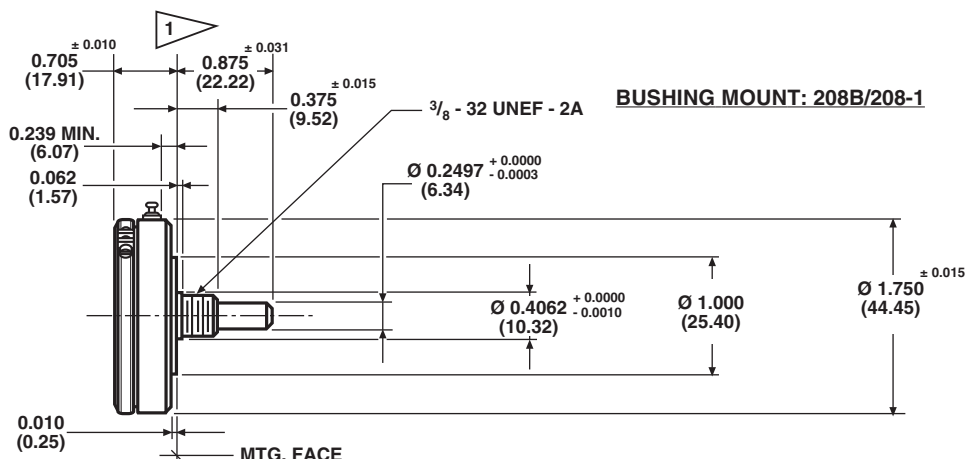
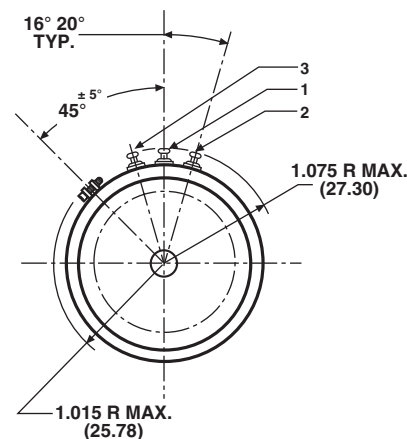
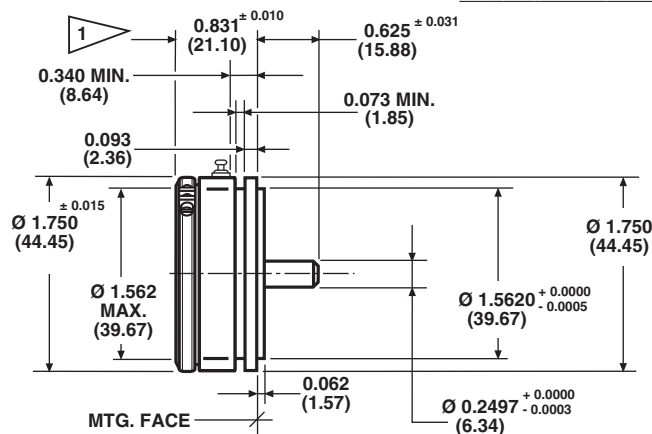
The Model 208 can be ordered from this datasheet with a variety of alternate characteristics, as shown above. For most rapid service on your order, please state:

<b>208</b>	<b>B</b>	<b>1</b>	<b>10K</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 datasheet. 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.

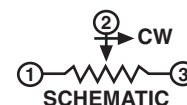
## SAP PART NUMBERING GUIDELINES

<b>208</b>	<b>S</b>	<b>2</b>	<b>103</b>	<b>502</b>	<b>B01</b>
MODEL	STYLE	GANG NUMBERS	OHMIC VALUE GANG N° 1	OHMIC VALUE GANG N° 2	PACKAGING
	<b>B:</b> Bushing <b>S:</b> Servo	From 1 up to 6	10K	5K	

**DIMENSIONS** in inches (millimeters)**SERVO MOUNT: 208S/208-2**

1 ADD 0.500 ± 0.002 (12.70) FOR EACH ADDITIONAL SECTION

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



MECHANICAL SPECIFICATIONS		
PARAMETER		
Rotation	360° continuous	
Bearing type	SERVO MOUNT Ball bearing	BUSHING MOUNT Sleeve bearing
Ganging	6 sections maximum terminal alignment, added sections within ± 10° of section 1 terminals	
Torque (maximums)	<b>STARTING</b> Servo section 1 0.7 oz. - in (50.40 g - cm) Bushing section 1 1.0 oz. - in (72.0 g - cm) Each additional section 0.4 oz. - in (28.80 g - cm)	<b>RUNNING</b> 0.4 oz. - in (28.80 g - cm) 0.7 oz. - in (50.40 g - cm) 0.3 oz. - in (21.60 g - cm)
Mechanical runouts (maximums):	<b>SERVO</b> Shaft (TIR/in) 0.002" (0.05 cm) Pilot dia. (TIR) 0.002" (0.05 cm) Lateral (TIR) 0.003" (0.08 cm) Shaft end play 0.005" (0.13 cm) Shaft radial play 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)
Moment of inertia	1.0 g - cm <sup>2</sup> per section maximum	
Weight:		
Single section	3.0 oz. (85.05 g)	
Each additional section	1.0 oz. (28.35 g)	



### MATERIAL SPECIFICATIONS

Housing and lids	Aluminium, anodized
Shaft and clamp rings	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

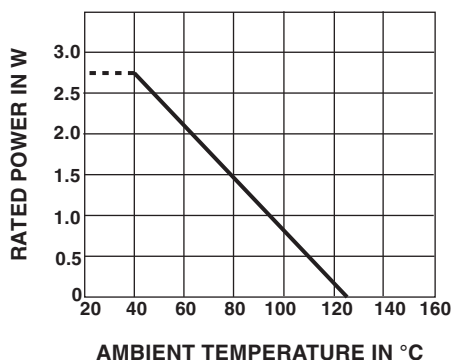
### MARKING

Unit identification	Units shall be marked with Spectrol name, model number and data code on each section, resistance, resistance tolerance, linearity and terminal identification. Example of a marking for a standard part: 208-12502 103
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### POWER RATING CHART

(Ratings for cup No. 1.

Additional cups 75 % of values shown)



### 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
Operating temperature range	-55 °C to +125 °C

#### Note

- Nothing stated herein shall be construed as a guarantee of quality or durability.

### RESISTANCE ELEMENT DATA

RESISTANCE VALUES (Ω)	MAXIMUM VOLTAGE APPLICABLE (V)
1K	42
2K	59
5K	94
10K	132
20K	187
50K	299



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<http://moschip.ru/get-element>

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