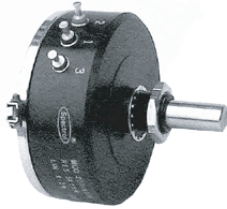


1 3/4" (44.5 mm) Single Turn Conductive Plastic Precision Potentiometer


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


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)

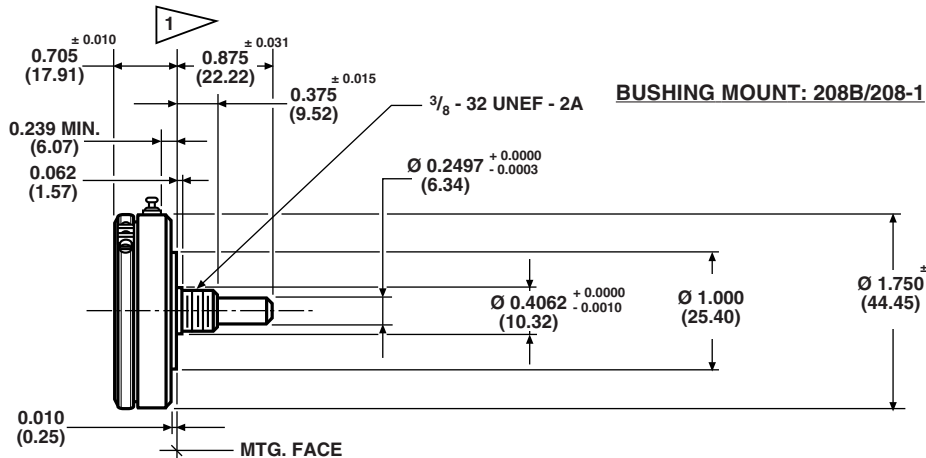
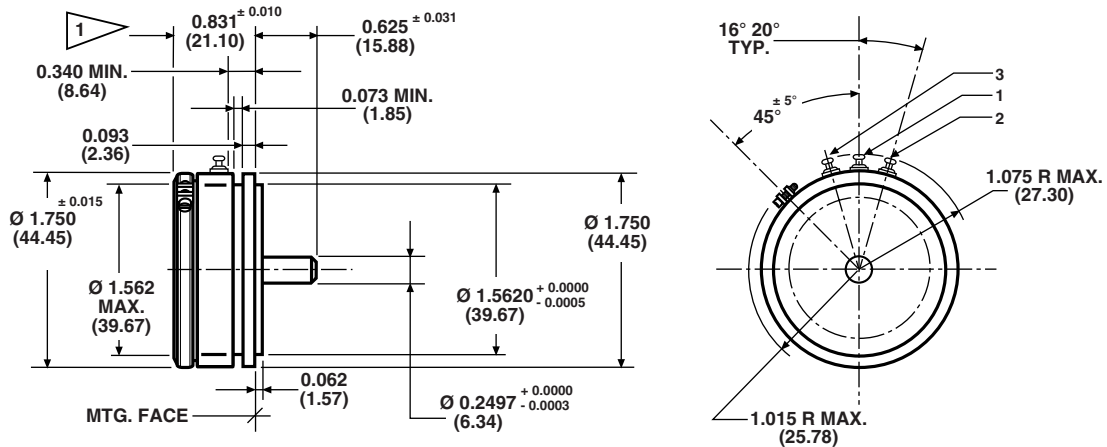
ELECTRICAL SPECIFICATIONS		
PARAMETER	STANDARD	SPECIAL
Total resistance tolerance	1 kΩ to 50 kΩ ± 10 %	- ± 5 %
Linearity (independent)	STANDARD ± 0.3 %	SPECIAL ± 0.1 %
Electrical angle	350° ± 3°	
Power rating: Section 1: Additional sections	1.75 W at 70 °C ambient derated to zero at 125 °C 75 % of the rating of section 1	
Output smoothness	0.1 % maximum	
Insulation resistance	1000 MΩ minimum, 500 V _{DC}	
Dielectric strength	1000 V _{RMS} , 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														
2	0	8	B	1	2	0	3	2	0	3	X	X	X	X
MODEL			STYLE		GANGS		OHMIC VALUE GANGS N° 1		OHMIC VALUE GANGS N° 2		SPECIAL REQUEST			
208			B: bushing S: servo		1 2		470 = 47 Ω 222 = 2,200 Ω 103 = 10 kΩ For ohmic value range see electrical specification		470 = 47 Ω 222 = 2,200 Ω 103 = 10 kΩ For ohmic value range see electrical specification		xxxx			

PART NUMBER DESCRIPTION (for information only)					
208-	2	1	502	203	xxxx
MODEL	STYLE	GANGS	OHMIC VALUE GANGS N° 1	OHMIC VALUE GANGS N° 2	SPECIAL
	B: 1 S: 2				

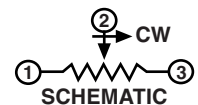
DIMENSIONS in inches (millimeters)

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)	STARTING	RUNNING
Servo section 1	0.7 oz. - in (50.40 g - cm)	0.4 oz. - in (28.80 g - cm)
Bushing section 1	1.0 oz. - in (72.0 g - cm)	0.7 oz. - in (50.40 g - cm)
Each additional section	0.4 oz. - in (28.80 g - cm)	0.3 oz. - in (21.60 g - cm)
Mechanical runouts (maximums):	SERVO	BUSHING
Shaft (TIR/in)	0.002" (0.05 cm)	0.002" (0.05 cm)
Pilot dia. (TIR)	0.002" (0.05 cm)	0.002" (0.05 cm)
Lateral (TIR)	0.003" (0.08 cm)	0.005" (0.13 cm)
Shaft end play	0.005" (0.13 cm)	0.005" (0.13 cm)
Shaft radial play	0.002" (0.05 cm)	0.003" (0.08 cm)
Moment of inertia	1.0 g - cm ² per section maximum	
Weight:		
Single section	3.0 oz. (85.05 g)	
Each additional section	1.0 oz. (28.35 g)	

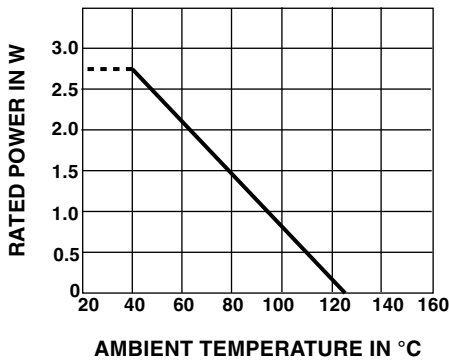


MATERIAL SPECIFICATIONS	
Housing and lids	Aluminum, anodized
Shaft and clamp rings	Stainless steel, non-magnetic non-passivated
Terminals	Brass, plated for solderability
Bushing mount hardware Lockwasher internal tooth: Panel nut:	Steel, nickel plated Brass, nickel plated

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

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



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.