



Model 708

Vishay Spectrol

7/8" (22.2 mm) Single Turn Conductive Plastic Precision Potentiometer



FEATURES

- Virtually infinite resolution
- Bushing mount and servo mount types available
- Rotational life exceeds 20 million shaft revolutions
- Co-molded track and multi-finger wiper provide low noise signal
- Ohmic value range: 500 Ω to 50 kΩ



RoHS COMPLIANT

ELECTRICAL SPECIFICATIONS		
PARAMETER		
Total Resistance Standard Range:	500 Ω to 50 kΩ	
Tolerance:	STANDARD ± 10 %	SPECIAL ± 5 %
Linearity (Independent)	STANDARD ± 0.5 %	SPECIAL ± 0.2 %
Electrical Angle	340° ± 5°	
Power Rating Section 1: Additional Sections:	1.0 W at 70° 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 from Terminals to shaft	
Taps (Extra)	Extra taps available as special	
Phasing	Points at which output is 0.5 aligned ± 1° (ref. to section 1)	
Temperature Coefficient of Resistance	± 400 ppm/°C maximum	

ORDERING INFORMATION/DESCRIPTION				
The Model 708 can be ordered from this data sheet with a variety of alternate characteristics, as shown. For most rapid service on your order, please state:				
708	B	1	10K	BO1
MODEL	MOUNTING	NUMBER OF SECTIONS	TOTAL RESISTANCE OF EACH SECTION	PACKAGING
	B: Bushing S: 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					
708	S	2	102	103	B01
MODEL	STYLE	GANGS	OHMIC VALUE GANG N° 1	OHMIC VALUE GANG N° 2	PACKAGING
	B: Bushing S: Servo	From 1 up to 6	1K	10K	



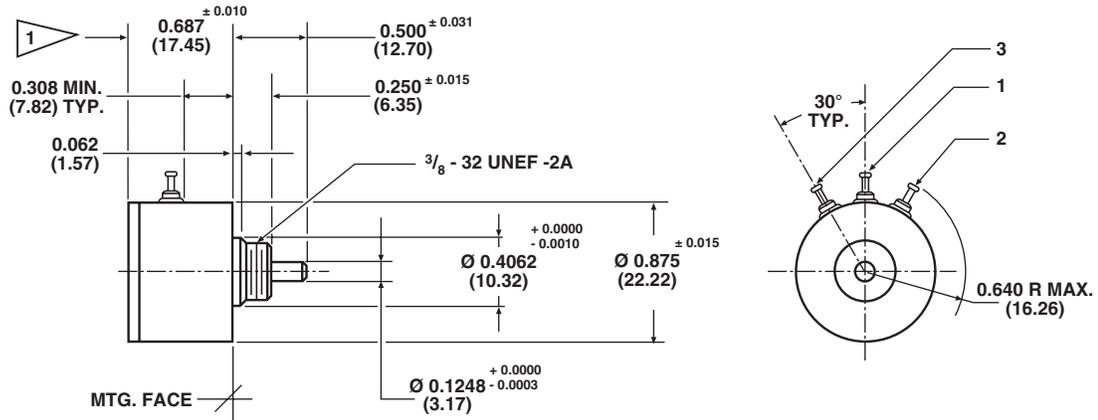
Model 708



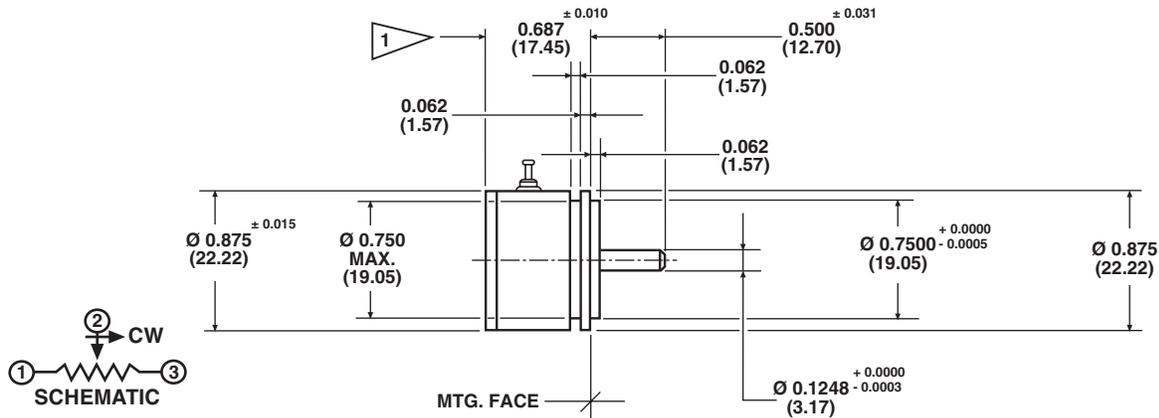
Vishay Spectrol $\frac{7}{8}$ " (22.2 mm) Single Turn Conductive Plastic Precision Potentiometer

DIMENSIONS in inches (millimeters)

BUSHING MOUNT: 708 B



SERVO MOUNT: 708 S



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

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

MECHANICAL SPECIFICATIONS		
PARAMETER		
Rotation	360° continuous	
Bearing Type Servo Mount: Bushing Mount:	Ball bearing Sleeve bearing	
Torque (Maximum) Servo, 1 Section Bushing, 1 Section Each Additional Section	STARTING 0.10 oz. - in (7.20 g - cm) 0.25 oz. - in (18.00 g - cm) 0.10 oz. - in (7.20 g - cm)	RUNNING 0.085 oz. - in (6.12 g - cm) 0.20 oz. - in (14.40 g - cm) 0.075 oz. - in (5.40 g - cm)
Runouts (Maximum) 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) 0.004" (0.10 cm)
Weight (Maximum) Single Section: Each Additional Section:	0.6 oz. (17.0 g) 0.2 oz. (5.67 g)	
Ganging	6 sections max, terminal alignment, added sections within $\pm 10^\circ$ of section 1 terminals	
Moment of Inertia	0.12 g - cm ² per section maximum	



Model 708

7/8" (22.2 mm) Single Turn Conductive Plastic Precision Potentiometer

Vishay Spectrol

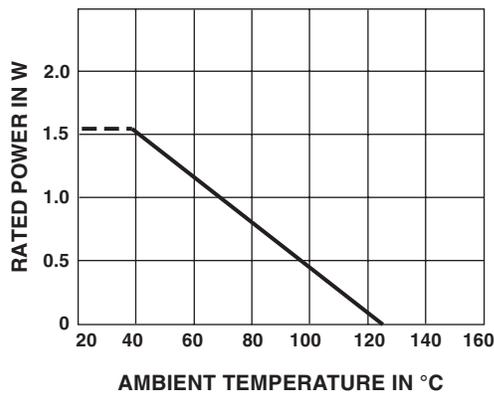
MATERIAL SPECIFICATIONS	
Housing and Lids	Aluminum, anodized
Shaft	Stainless steel, non-magnetic non-passivated
Terminals	Brass plated for solderability
Bushing Mount Hardware Lockwasher Internal tooth: Panel Nut:	Steel, nickel plated Brass, nickel plated

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

MARKING	
Unit Identification	Units shall be marked with Spectrol name, model no, and data code, and 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	22
1K	32
2K	45
5K	71
10K	100
20K	141
50K	224



Disclaimer

All product specifications and data are subject to change without notice.

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 herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

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.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.