



## ROTARY MOTION | PRECISION SENSOR

MODELS 2201 / 2301 / 2501 / 2601 / 2701 / 2801



### Features

- Servo Mount / Ball Bearing
- 7/8" TO 3" Diameter Servo Mount
- Hybrid Single-Turn Precision Potentiometers

### SPECIFICATIONS

#### Electrical

	2201	2301	2501	2601	2701	2801
<b>Theoretical Electrical Travel</b>	354°				356°	358°
<b>Normal Resistance Range</b>	500Ω to 7.5K	500Ω to 10K	750Ω to 15K	1K to 17.5K	1K to 25K	1.5KΩ to 40K
<b>Extended Resistance Range <sup>(1)</sup></b>	200Ω to 10K	200Ω to 15K	500Ω to 20K	500Ω to 25K	500Ω to 30K	750Ω to 50K
<b>Resistance Tolerance: Standard %</b>	±5					
<b>Best Practical %</b>	±3					
<b>Power Rating At 70°C, Derating to 0 At 125°C (Watts)</b>	1.25	2.0	3.0	4.0	5.0	7.0
<b>Linearity, Independent, Tolerance, Standard%</b>	±0.5	±0.4	±0.3	±0.25	±0.2	±0.15
<b>Best Practical%</b>	±0.25	±0.2	±0.15	±0.12	±0.01	±0.07
<b>Output Smoothness Max. (% Of Total Applied Voltage)</b>	0.5	0.4	0.3	0.25	0.2	0.15
<b>End Voltage Max. (% Of Total Applied Voltage)</b>	0.25					
<b>Insulation Resistance At 500 VDC, Min. (Megohms)</b>	1000					
<b>Dielectric Withstanding Voltage (Volts RMS)</b>	1000					
<b>Max. Applied Voltage (Volts DC)<sup>(2)</sup></b>	400					
<b>Temperature Coefficient Of Potentiometer, Max. % / C°</b>	±.007					

## Mechanical

	2201	2301	2501	2601	2701	2801
<b>Total Mechanical Travel</b>	360° Continuous					
<b>Mechanical Life, Shaft Revolutions</b>	10 million					
<b>Ganged Cups, Max. (Number)</b>	6		8			
<b>Taps, Max., Excluding End Terminations</b>	9		19	24	26	41
<b>Moment Of Inertia, Per Cup (gm-cm<sup>2</sup>)</b>	0.2		4.0	4.5	5.0	8.5
<b>Weight: Single Cup (oz.)</b>	0.6	0.8	2.2	2.8	3.3	6.5
<b>Each Additional Cup (oz.)</b>	0.2	0.5	0.7	0.9	1.0	1.4
<b>Torque, Max. Per Cup (oz. in)</b>	0.1	0.15	0.6	0.7	0.8	1.0
<b>Pilot Diameter Runout, Max.</b>	.0015					
<b>Lateral Runout, Max.</b>	.0015		.002			.003
<b>Shaft Runout, Max.</b>	.001					
<b>Shaft Radial, Max.</b>	.002					
<b>Shaft End, Max.</b>	.004					
<b>Dimension For Each Additional Cup</b>	.500±.002		.537±.002	.562±.002		

## Environmental

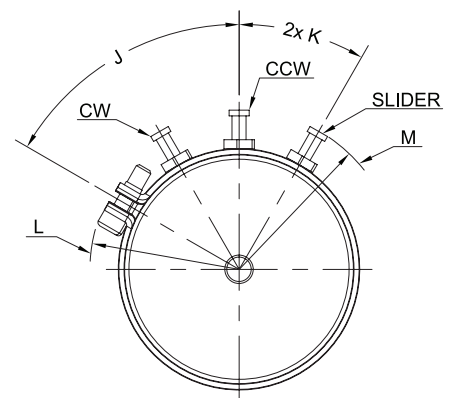
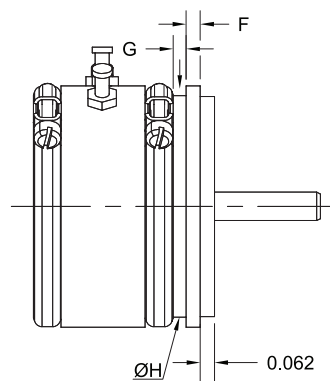
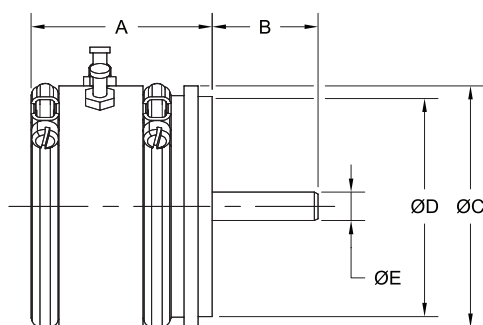
<b>Temperature Range (°C) Standard</b>	-55 to + 125
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ALL MODELS are manufactured to meet or exceed applicable characteristics of MIL-R-12934. For MILITARY-APPROVED (QPL) Listings.



## DIMENSIONS

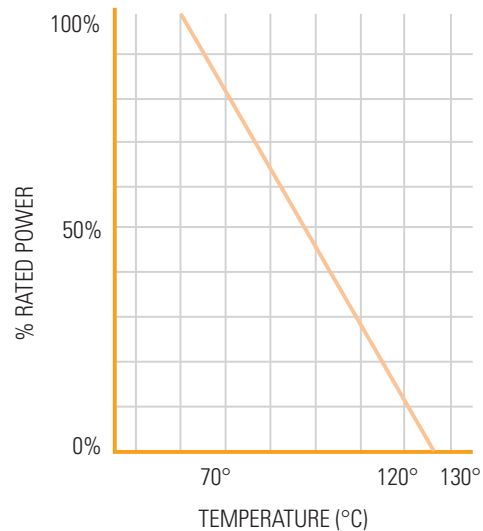
TOLERANCES UNLESS OTHERWISE SPECIFIED:  
 FRACTIONAL: ±1/64" DECIMAL: ±.005" ANGULAR: ±1°  
 Dimensions are in in[mm]



DIM / SERVO MODEL	2201	2301	2501	2601	2701	2801
<b>A</b>	0.747 ± 0.006		0.962 ± 0.008	0.970 ± 0.008		
<b>B</b>	1/2 ± 1/32		5/8 ± 1/32			
<b>C</b>	0.875	1.062	1.437	1.750	2.000	3.000
<b>D</b>	0.750 +0/-0.00050.9688 +0/-0.0005		1.3125 +0/-0.0005	1.562 +0/-0.001	1.875 +0/-0.001	2.875 +0/-0.001
<b>E</b>	0.1248 +0/-0.0003		0.2497 +0/-0.0003			
<b>F</b>	0.062		0.093			
<b>G</b>	0.062		0.073			
<b>H</b>	0.781	0.965	1.285	1.600	1.850	2.850
<b>J</b>	60°±10°		55°±10°	45°±10°		
<b>K</b>	30°		20°	16°	15°	9°
<b>L (Radius MAX)</b>	9/16	43/64	59/64	1-5/64	1-13/64	1-45/64
<b>M (Radius MAX)</b>	5/8	23/32	29/32	1-1/16	1-3/16	1-11/16

## Notes:

- (1) All specifications listed apply to units with a total resistance within the normal resistance range. Higher or lower resistances may require some degradation of listed specifications because of resistance wire composition or size
- (2) Not to exceed specified power rating.



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Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA.

## CONTACT US

### Americas

+1 (800) 350 2727  
sensors@sensata.com

### Europe, Middle East & Africa

+33 (3) 88 20 8080  
position-info.eu@sensata.com

### Asia Pacific

sales.isasia@list.sensata.com  
China +86 (21) 2306 1500  
Japan +81 (45) 277 7117  
Korea +82 (31) 601 2004  
India +91 (80) 67920890  
Rest of Asia +886 (2) 27602006  
ext 2808