



## ROTARY MOTION | PRECISION SENSOR

MODELS 1201 / 1301 / 1501 / 1601 / 1701 / 1801



### Features

- Servo Model / Ball Bearing
- 7/8" to 3" Diameter Servo Mount
- Wirewound Single-Turn Precision Potentiometers

## SPECIFICATIONS

### Electrical

	1201	1301	1501	1601	1701	1801
<b>Actual Electrical Travel</b>	354°±2°			354°±1°	356°±1°	358°±1°
<b>Normal Resistance Range</b>	100Ω to 25K	100Ω to 30K	100Ω to 50K	100Ω to 60K	100Ω to 75K	100Ω to 100K
<b>Extended Resistance Range <sup>(1)</sup></b>	15Ω to 75K	25Ω to 100K	25Ω to 125K	25Ω to 150K	25Ω to 200K	25Ω to 250K
<b>Resistance Tolerance: Standard %</b>	±3					
<b>Best Practical %</b>	±1					
<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>	±0.2	±0.15	±0.12	±0.09	±0.08	±0.05
<b>Equivalent Noise Resistance (ENR) Max. (Ohms)</b>	100					
<b>End Voltage Max. (% Of Total Applied Voltage)</b>	Within linearity tolerance					
<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

	1201	1301	1501	1601	1701	1801
<b>Total Mechanical Travel</b>	360° Continuous					
<b>Mechanical Life, Shaft Revolutions</b>	2 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 Play, Max</b>	.002					
<b>Shaft End Play, Max</b>	.004					
<b>Dimension For Each Additional Cup</b>	.500±.002		.537±.002	.562±.002		

## Environmental

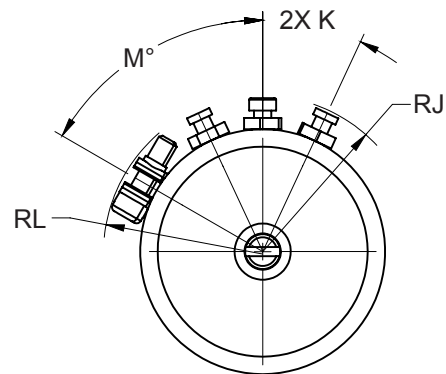
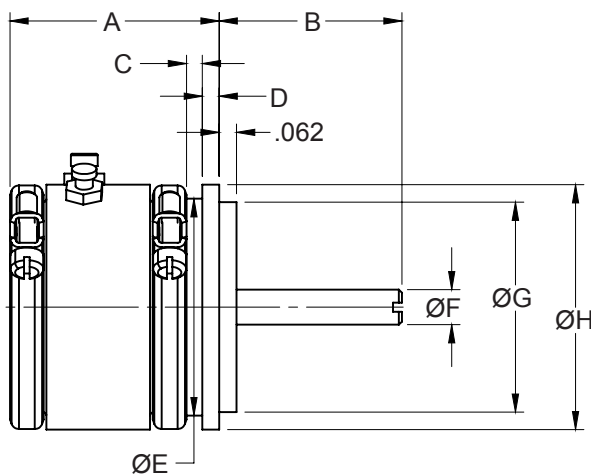
<b>Temperature Range (°C) Standard</b>	-55 to +125
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ALL MODELS are manufactured to meet or exceed applicable characteristics of MIL-R-12934. For MILITARY-APPROVED (QPL) Listings.



## DIMENSIONS

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

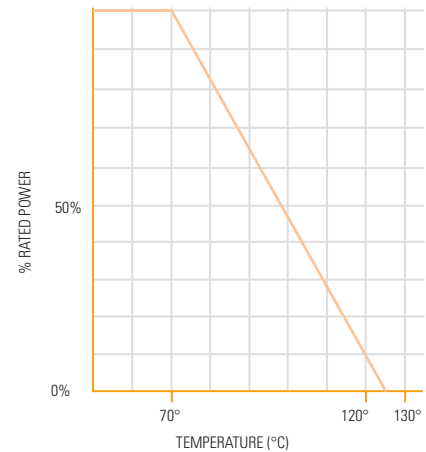
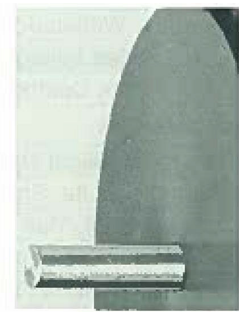


DIM / SERVO MODEL	1201	1301	1501	1601	1701	1801
A	.747 ±.006		.962 ±.008	.970 ±.008		
B	1/2 ±1/32		5/8 ±1/32			
C	.062		.073 MIN.			
D	.062		.093			
E	Ø.781 MAX.	Ø.965 MAX.	Ø1.285	Ø1.600	Ø1.850	Ø2.850
F	Ø.1247 +0/- .0003		Ø.2497 +0/- .0003			
G	Ø.7500 +0/- .0005	Ø.9688 +0/- .0005	Ø1.3125 +0/- .0005	Ø1.562 +0/- .001	Ø1.875 +0/- .001	Ø2.875 +0/- .001
H	Ø.875	Ø1.062	Ø1.437 +0/- .005	Ø1.750	Ø2.000	Ø3.000
J	R5/8 MAX	R23/32 MAX	R29/32 MAX	R1-1/16 MAX	R1-3/16 MAX	R1-11/16 MAX
K	30°		20°	16°	15°	9°
L	R9/16 MAX	R43/64 MAX	R59/64 MAX	R1-5/64 MAX	R1-13/64 MAX	R1-45/64 MAX
RM	60° ±10°		55° ±10°	45° ±10°		

## 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