



## ROTARY MOTION | PRECISION SENSOR

MODELS 3202 / 3203 / 3205 / 3206 / 3208 / 3209 / 3702 / 3705

INDUSTRIAL MODELS 3232 / 3233 / 3602 / 3605



### Features

- Bushing Mount / Sleeve Bearing
- 7/8" to 1-3/4" Diameter Bushing Mount
- Wirewound 3, 5 and 10-Turn Precision Potentiometers

## SPECIFICATIONS

### Electrical

	3205 / 3206	3705	3208 / 3209	3202 / 3203	3702	3605	3232 / 3233	3602
<b>Actual Electrical Travel</b>	1080°+4°-0°	1080° +1°-0°	1800°+4°-0°	3600° +4°-0°	3600° +1°-0°	1080° +4°-0°	3600°+10°-0°	3600° +4°-0°
<b>Normal Resistance Range</b>	50 Ω to 30K	50Ω to 100K	50 Ω to 50K	100 Ω to 100K	100 Ω to 300K	50Ω to 100K	100Ω to 100K	100Ω to 300K
<b>Extended Resistance Range <sup>(1)</sup></b>	3Ω to 75K	5Ω to 250K	5Ω to 125K	10Ω to 250K	10Ω to 830K	5Ω to 180K	10Ω to 200K	10Ω to 600K
<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>	1.5	5.0	2.0	2.5	7.0	5.0 <sup>(9)</sup>	2.5	7.0
<b>Linearity, Independent, Tolerance, Standard%</b>	±0.5	±0.2	±0.35	±0.25	±0.1	±0.35	±0.25	
<b>Best Practical%</b>	±0.10	±0.04	±0.07	±0.05	±0.02	±0.1		±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>	1000							
<b>Temperature Coefficient Of Potentiometer, Max. % / C°</b>	±.007							
<b>Tap Spacing Minimum</b>	30°	13°	30°		13°		30°	13°

## Mechanical

	3205 / 3206	3705	3208 / 3209	3202 / 3203	3702	3605	3232 / 3233	3602
<b>Total Mechanical Travel</b>	1080° +4°-0°			3600° +4°-0°		1080° +4°-0°	3600° +4°-0°	
<b>Mechanical Life Shaft Revolutions</b>	2 million							
<b>Ganged Cups, Max. (Number)</b>	3			2		3	2	
<b>Taps, Max., Excluding End Terminations</b>	10	52	22	46	135	52	46	135
<b>Moment Of Inertia, Per Cup (gm-cm<sup>2</sup>)</b>	0.25	7	0.3	0.4	12	7	0.4	12
<b>Weight: Single Cup (oz.)</b>	0.9	3.3	1.0	1.3	4.5	2.5	1.3	3.7
<b>Each Additional Cup(oz.)</b>	0.7	1.6	0.8	1.0	2.7	1.6	1.0	2.5
<b>Torque, Max. Per Cup (oz.-in)</b>	0.5	1.5	0.5		1.5		0.6	1.5
<b>Pilot Diameter Runout, Max.</b>	.0015					.002		
<b>Lateral Runout, Max.</b>	.003	.0025	.003		.0025	.003	.005	.003
<b>Shaft Runout, Max.</b>	.001						.002	.001
<b>Shaft Radial, Max.</b>	.003	.002	.003		.002	.004	.003	
<b>Shaft End, Max.</b>	.005						.010	.005
<b>Dimension For Each Additional Cup</b>	.823±.002	.943±.002	.966±.002	1.323±.002	1.720±.002	.943±.005	1.323±.002	1.720±.005
<b>Stop Strength Static (oz.-in)</b>	128	1000	128		1000	750	100	750

## Environmental

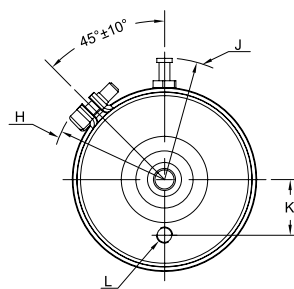
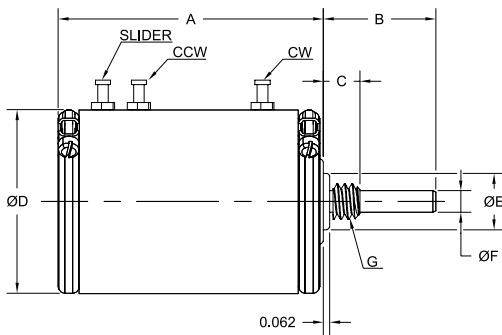
<b>Temperature Range (°C) Standard</b>	-55 to + 125
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THEORETICAL RESOLUTION- For typical coil characteristics by model number and resistance value, see Resolution Tables.  
 ALL MODELS are manufactured to meet or exceed applicable characteristics of MIL-R-12934. For MILITARY-APPROVED (QPL) Listings.

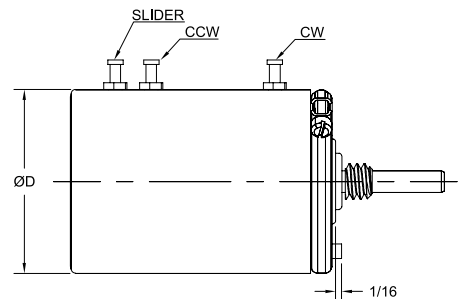


## DIMENSIONS

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



ONLY FOR 3602 / 3605 / 3702 / 3705



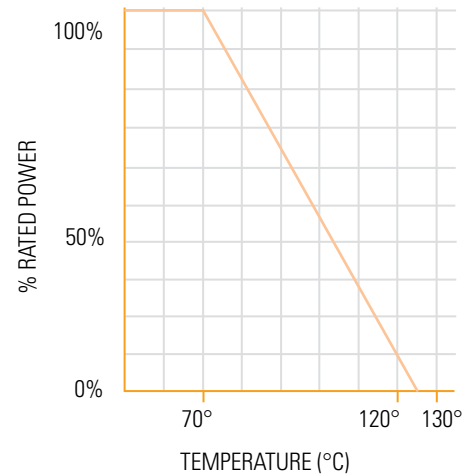
DIM / SERVO MODEL	3202	3203	3205	3206	3208	3209	3232	3233	3602	3605	3702	3705
<b>A</b>	1.460 ± 0.006		0.960 ± 0.006		1.103 ± 0.006		1.460 ± 0.006		1.925 ± 0.007	1.148 ± 0.007	1.925 ± 0.007	1.148 ± 0.007
<b>B</b>	11/16 ± 1/32	13/16 ± 1/16	11/16 ± 1/32	13/16 ± 1/16	11/16 ± 1/32	13/16 ± 1/16	11/16 ± 1/32	13/16 ± 1/16				
<b>C</b>	5/16											
<b>D</b>	0.875								1.750			
<b>E</b>	0.281 ± 0.001	0.4062 ± 0.001	0.281 ± 0.001	0.4062 ± 0.001	0.281 ± 0.001	0.4062 ± 0.001	0.281 ± 0.001	0.4062 ± 0.001				
<b>F</b>	0.1248 +0/- 0.0003	0.2497 +0/- 0.0003	0.1248 +0/- 0.0003	0.2497 +0/- 0.0003	0.1248 +0/- 0.0003	0.2497 +0/- 0.0003	0.1248 +0/- 0.0003	0.2497 +0/-0.0003				
<b>G</b>	1/4-32 NEF-2A THD	3/8-32 UNEF-2A THD	1/4-32 NEF-2A THD	3/8-32 UNEF-2A THD	1/4-32 NEF-2A THD	3/8-32 UNEF-2A THD	1/4-32 NEF-2A THD	3/8-32 UNEF-2A THD				
<b>H (Radius MAX)</b>	9/16								1-5/64			
<b>J (Radius MAX)</b>	5/8								1-1/16			
<b>K</b>	N/A								0.562			
<b>L</b>	N/A								0.125			

## 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.



Specifications subject to change without notice.



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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