



## ROTARY MOTION | PRECISION SENSOR

MODELS 2202 / 2302 / 2502 / 2602 / 2702 / 2802

INDUSTRIAL MODELS 2232 / 2632



### Features

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

### SPECIFICATIONS

#### Electrical

	2202	2302	2502	2602	2702	2802	2232	2632
<b>Theoretical Electrical Travel</b>	354°				356°	358°	354°	
<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	500Ω to 7.5K	1KΩ to 17.5K
<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	200Ω to 10K	500Ω to 25K
<b>Resistance Tolerance: Standard %</b>	±5						±10	
<b>Best Practical %</b>	±3						±5	
<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	1.25	4.0
<b>Linearity, Independent, Tolerance, Standard%</b>	±0.5	±0.4	±0.3	±0.25	±0.2	±0.15	±0.5	
<b>Best Practical%</b>	±0.25	±0.2	±0.15	±0.12	±0.1	±0.07	±0.3	±0.2
<b>Output Smoothness Max. (% Of Total Applied Voltage)</b>	0.5	0.4	0.3	0.25	0.2	0.15	0.5	
<b>End Voltage Max. (% Of Total Applied Voltage)</b>	0.25							
<b>Insulation Resistance At 500 VDC, Min. (Megohms)</b>	1000							
<b>Dialectric 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

	2202	2302	2502	2602	2702	2802	2232	2632
<b>Total Mechanical Travel</b>	360° Continuous							
<b>Mechanical Life Shaft Revolutions</b>	2 million							
<b>Ganged Cups, Max. (Number)</b>	6		8				6	
<b>Taps, Max., Excluding End Terminations</b>	9		19		24		26	
<b>Moment Of Inertia, Per Cup (gm-cm<sup>2</sup>)</b>	0.2		4.0		4.5		5.0	
<b>Weight: Single Cup (oz.)</b>	0.6		0.8		2.2		2.8	
<b>Each Additional Cup (oz.)</b>	0.2		0.5		0.7		0.9	
<b>Torque, Max. Per Cup (oz. in)</b>	0.2		1.3		1.4		1.5	
<b>Pilot Diameter Runout, Max.</b>	.0015						.002	
<b>Lateral Runout, Max.</b>	.002		.003		.004		.005	
<b>Shaft Runout, Max.</b>	.001						.002	
<b>Shaft Radial, Max.</b>	.003						.004	
<b>Shaft End, Max.</b>	.005						.007	
<b>Dimension For Each Additional Cup</b>	.500±.002		.537±.002		.562±.002		.500±.002 .562±.002	

## Environmental

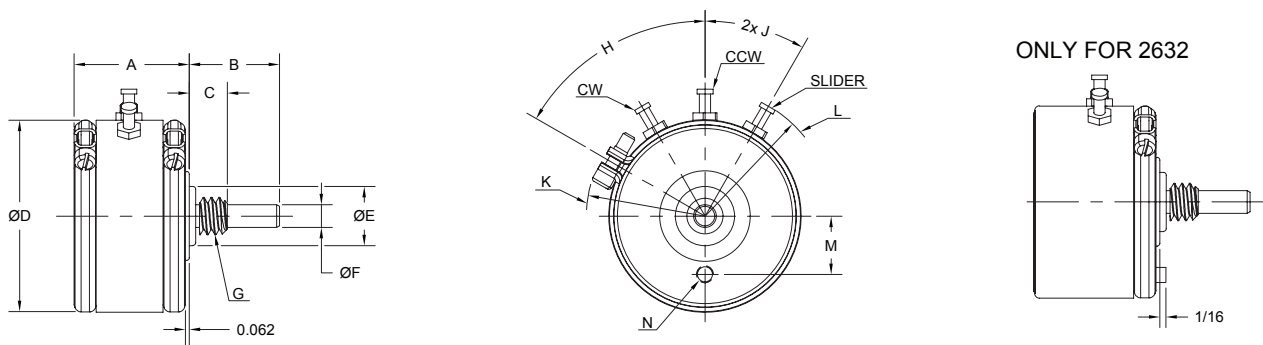
<b>Temperature Range (°C) Standard</b>	-55 to + 125
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ALL MODELS are manufactured to meet or exceed applicable characteristics of MIL-R-12934. For MILITARY-APPROVED (QPL) Listings.



## DIMENSIONS

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



DIM / SERVO MODEL	2202	2232	2302	2502	2602	2632	2702	2802	
<b>A</b>	0.640 ± 0.006			0.954 ± 0.008	0.970 ± 0.008	0.920 ± 0.008	0.970 ± 0.008		
<b>B</b>	11/16 ± 1/32			7/8 ± 1/32					
<b>C</b>	5/16			3/8		5/16	3/8		
<b>D</b>	0.875		1.062	1.437	1.750		2.000	3.000	
<b>E</b>	0.281 +0/-0.001			0.406 +0/-0.001				0.5937 +0/0.001	
<b>F</b>	0.1248 +0/-0.0003			0.2497 +0/0.0003					
<b>G</b>	1/4-32 NEF-2A THREAD			3/8-32 NEF-2A THREAD				1/2-32 NEF-2A THREAD	
<b>H</b>	60° ± 10°			55° ± 10°	45° ± 10°				
<b>J</b>	30°			20°	16°		15°	9°	
<b>K (Radius MAX)</b>	9/16		43/64	59/64	1-5/64		1-13/64	1-45/64	
<b>L (Radius MAX)</b>	5/8		23/32	29/32	1-1/16		1-3/16	1-11/16	
<b>M</b>	N/A			17/32		0.562	17/32		
<b>N</b>	N/A			Ø 0.129x1/16 DEEP		0.125 (LUG)	Ø 0.129x1/16 DEEP		

## Notes:

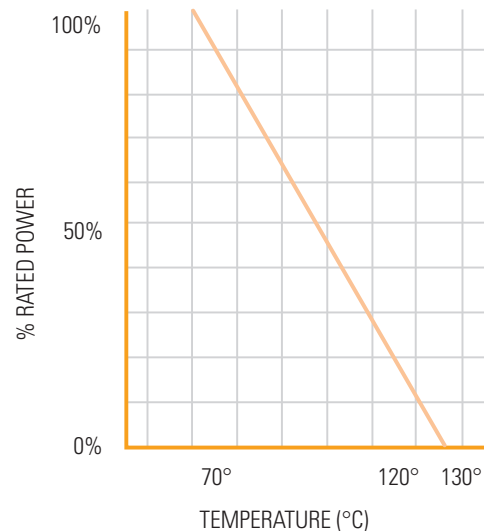
(1) All specifications listed apply to units with a total resistance within the normal resistance range. Higher or lower resistances may require some degradation of listed specifications because of resistance wire composition or size

(2) Not to exceed specified power rating.



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