



## ROTARY MOTION | PRECISION SENSOR

MODELS 1222 / 1322 / 1522 / 1622 / 1722 / 1822



### Features

- Servo Mount / Ball Bearing
- 7/8" TO 3" Diameter Servo Mount
- Conductive Plastic Single-turn Precision Potentiometers

### SPECIFICATIONS

#### Electrical

	1222	1322	1522	1622	1722	1822
<b>Theoretical Electrical Travel</b>	320°		340°		350°	
<b>Normal Resistance Range</b>	400Ω to 25K	500Ω to 35K	700Ω to 45K	900Ω to 60K	1.2K to 75K	2K to 125K
<b>Extended Resistance Range <sup>(1)</sup></b>	400Ω to 75K	500Ω to 100K	500Ω to 125K	500Ω to 150K	600Ω to 200K	750Ω to 300K
<b>Resistance Tolerance: Standard %</b>	±10					
<b>Best Practical %</b>	±5					
<b>Power Rating At 70°C, Derating to 0 At 125°C (Watts)</b>	0.5	0.75	1.0	1.5	2.0	3.0
<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	±0.10	±0.075	±0.06	±0.04
<b>Output Smoothness Max. (% Of Applied Voltage)</b>	0.1					
<b>End Voltage Max. (%Of Total Applied Voltage)</b>	0.5					
<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>	-.07					

## Mechanical

	1222	1322	1522	1622	1722	1822
<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>	0.2		1.3	1.4	1.5	1.7
<b>Pilot Diameter Runout, Max.</b>	.0015					
<b>Lateral Runout, Max.</b>	.002		.003		.004	.005
<b>Shaft Runout, Max.</b>	.001					
<b>Shaft Radial Play, Max.</b>	.003					
<b>Shaft End Play, Max.</b>	.0015					
<b>Dimension For Each Additional Cup</b>	.500±.002		.537±.002	.562±.002		

## Environmental

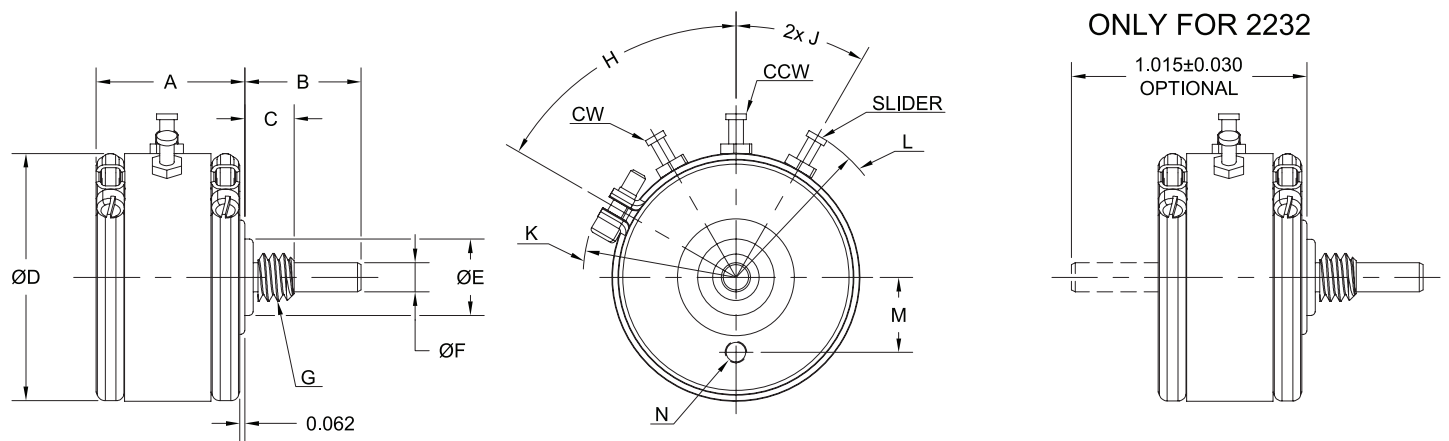
<b>Temperature Range (°C) Standard</b>	-55 to + 125
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THEORETICAL RESOLUTION- For typical coil characteristics by model number and resistance value, see Resolution Tables.  
 ALL MODELS are manufactured to meet or exceed applicable characteristics of MIL-R-39023. For MILITARY-APPROVED (QPL) Listings.



## DIMENSIONS

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

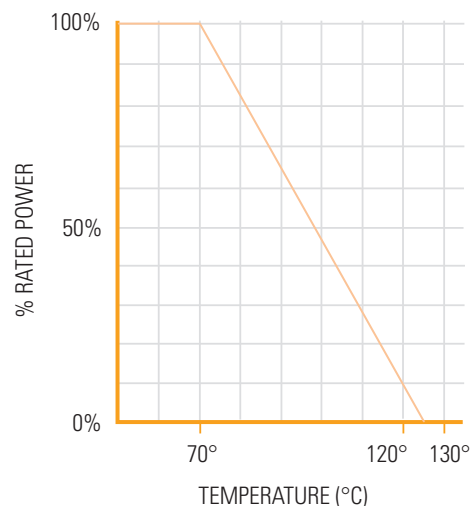


DIM / SERVO MODEL	1222	1322	1522	1622	1722	1822
<b>A</b>	0.640 ± 0.006		0.954 ± 0.008	0.970 ± 0.008		
<b>B</b>	11/16 ± 1/32		7/8 ± 1/32			
<b>C</b>	5/16		3/8			
<b>D</b>	0.875	1.062	1.437	1.750	2.000	3.000
<b>E</b>	0.281 +0/-0.001		0.4062 +0/-0.001			0.5937 +0/0.001
<b>F</b>	0.1248 +0/-0.003		0.2497 +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			
<b>N</b>	N/A		Ø 0.129x0.0625 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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