



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
Actual Electrical Travel	354°±2°			354°±1°	356°±1°	358°±1°
Normal Resistance Range	100Ω to 25K	100Ω to 30K	100Ω to 50K	100Ω to 60K	100Ω to 75K	100Ω to 100K
Extended Resistance Range ⁽¹⁾	15Ω to 75K	25Ω to 100K	25Ω to 125K	25Ω to 150K	25Ω to 200K	25Ω to 250K
Resistance Tolerance: Standard %	±3					
Best Practical %	±1					
Power Rating At 70°C, Derating to 0 At 125°C (Watts)	1.25	2.0	3.0	4.0	5.0	7.0
Linearity, Independent, Tolerance, Standard %	±0.5	±0.4	±0.3	±0.25	±0.2	±0.15
Best Practical %	±0.2	±0.15	±0.12	±0.09	±0.08	±0.05
Equivalent Noise Resistance (ENR) Max. (Ohms)	100					
End Voltage Max. (% Of Total Applied Voltage)	Within linearity tolerance					
Insulation Resistance At 500 VDC, Min. (Megohms)	1000					
Dielectric Withstanding Voltage (Volts RMS)	1000					
Max. Applied Voltage(Volts DC)⁽²⁾	400					
Temperature Coefficient Of Potentiometer, Max. % / °C	±.007					

Mechanical

	1201	1301	1501	1601	1701	1801
Total Mechanical Travel	360° Continuous					
Mechanical Life, Shaft Revolutions	2 million					
Ganged Cups, Max. (Number)	6		8			
Taps, Max., Excluding End Terminations	9		19	24	26	41
Moment Of Inertia, Per Cup (gm-cm²)	0.2		4.0	4.5	5.0	8.5
Weight: Single Cup (oz.)	0.6	0.8	2.2	2.8	3.3	6.5
Each Additional Cup (oz.)	0.2	0.5	0.7	0.9	1.0	1.4
Torque, Max. Per Cup (oz.-in)	0.1	0.15	0.6	0.7	0.8	1.0
Pilot Diameter Runout, Max.	.0015					
Lateral Runout, Max.	.0015		.002		.003	
Shaft Runout, Max.	.001					
Shaft Radial Play, Max	.002					
Shaft End Play, Max	.004					
Dimension For Each Additional Cup	.500±.002		.537±.002	.562±.002		

Environmental

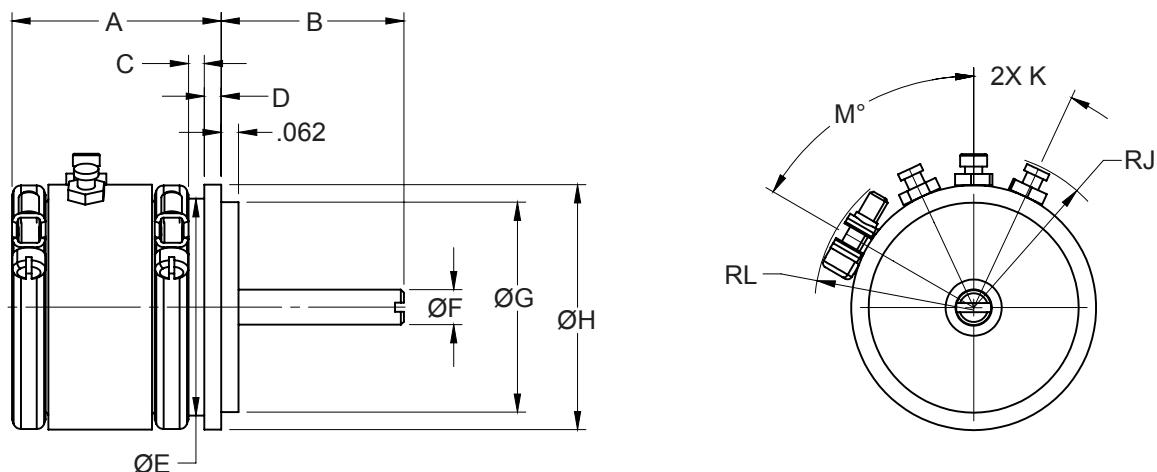
Temperature Range (°C) Standard	-55 to +125
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ALL MODELS are manufactured to meet or exceed applicable characteristics of MIL-R-12934. For MILITARY-APPROVED (QPL) Listings.



DIMENSIONS

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

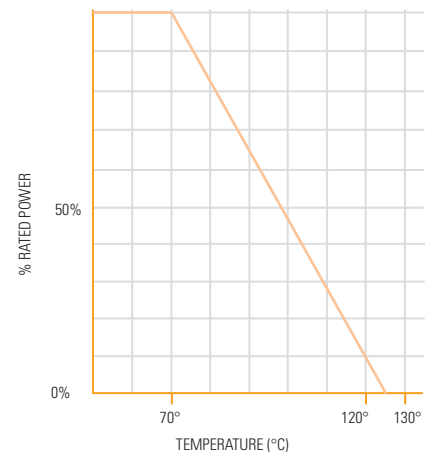


DIM / SERVO MODEL	1201	1301	1501	1601	1701	1801
A	.747 ±.006		.962 ±.008	.970 ±.008		
B	1/2 ±1/32		5/8 ±1/32			
C	.062		.073 MIN.			
D	.062		.093			
E	Ø.781 MAX.	Ø.965 MAX.	Ø1.285	Ø1.600	Ø1.850	Ø2.850
F	Ø.1247 +0/- .0003		Ø.2497 +0/- .0003			
G	Ø.7500 +0/- .0005	Ø.9688 +0/- .0005	Ø1.3125 +0/- .0005	Ø1.562 +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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