

Model 405
Linear Actuation, Low Cost
Conductive Plastic
Precision Potentiometer / Position Sensor
RoHS 2 Compliant



For more information about this product, visit our website at: www.potentiometers.com



Model Styles

Model #	Body Style	Termination Style	Weight (grams)
405	Round - 1/8" plain shaft	Wire Leads	28 + (16 x mechanical travel)

Electrical Specifications¹

Resistance Range, Ohms	1K to 900K (See Table 1)
Standard Resistance Tolerance	±20%
Minimum Practical Resistance Tolerance	±10%
Independent Linearity ²	±1.0% to ±1.5% (See Table 1)
Minimum Practical Independent Linearity	0.75 to 1.0 (See Table 1)
Input Voltage, Maximum	400Vdc, but not to exceed power rating
Power Rating, Watts	0.75 to 1.5 (See Table 1)
Dielectric Strength	1,000V rms
Insulation Resistance, Minimum	1,000 Megohms at 500 VDC
Output Smoothness, Maximum	0.1% at 10" to 18" per Minute
Actual Electrical Travel, Nominal	1" to 3" (See Table 1)
Electrical Continuity Travel	Within Mechanical Travel
End Voltage	maximum 0.5% of input voltage
Resolution	Essentially infinite
Temperature Coefficient of Resistance ³	-400 +/-400 ppm/°C typical
Temperature Coefficient of Output Voltage ⁴	±10 ppm/°C typical

¹ Specifications subject to change without notice.
² Linearity is measured between 1% and 99% of input voltage.
³ Special hybrid TCR available to ±100 ppm/°C for narrower range of resistance.
⁴ Measured with 10 VDC CW to CCW and slider at 50% of electrical travel.



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Mechanical Specifications

Total Mechanical Travel	See Table 1
Actuating Force, Maximum	10 oz.
Shaft Rotation	Continuous
Backlash, Maximum	.003"
Static Stop Strength , Minimum	10 lb.

Environmental (MIL-PRF-39023)

Operating Temperature Range	Dynamic: -40°C to +125°C; Static: -55°C to +125°C
Load Life	5 million shaft actuations at rated power & 70°C, maximum 10% ΔR

Ordering Information

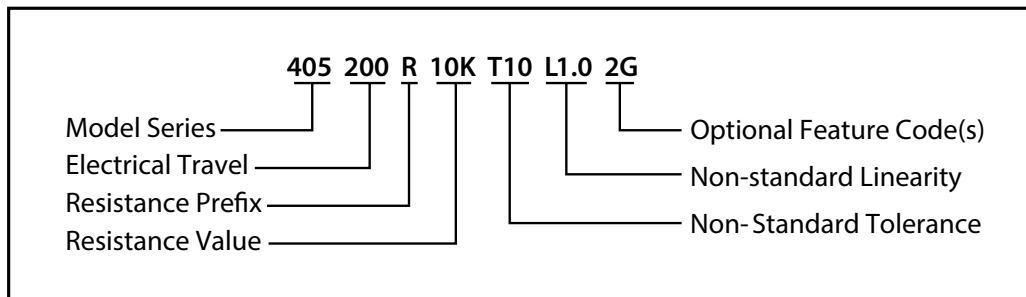
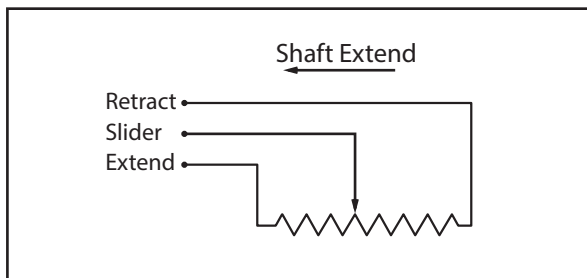


Table 1

Electrical Travel, Inches (Ordering #)	1" 100	2" 200	3" 300
Standard Resistance Range, Ohms	1K to 300K	2K to 600K	3K to 900K
Hybrid (10% TCR) Resistance Range, Ohms	400 to 30K	700 to 60K	1K to 90K
Standard Independent Linearity	±1.5%	±1.5%	±1.0%
Minimum Practical Independent Linearity	1.0%	1.0%	0.75%
Power Rating, Watts	0.75	1.0	1.5
Mechanical Travel, Inches	1.060"	2.060"	3.060"

Circuit Diagram

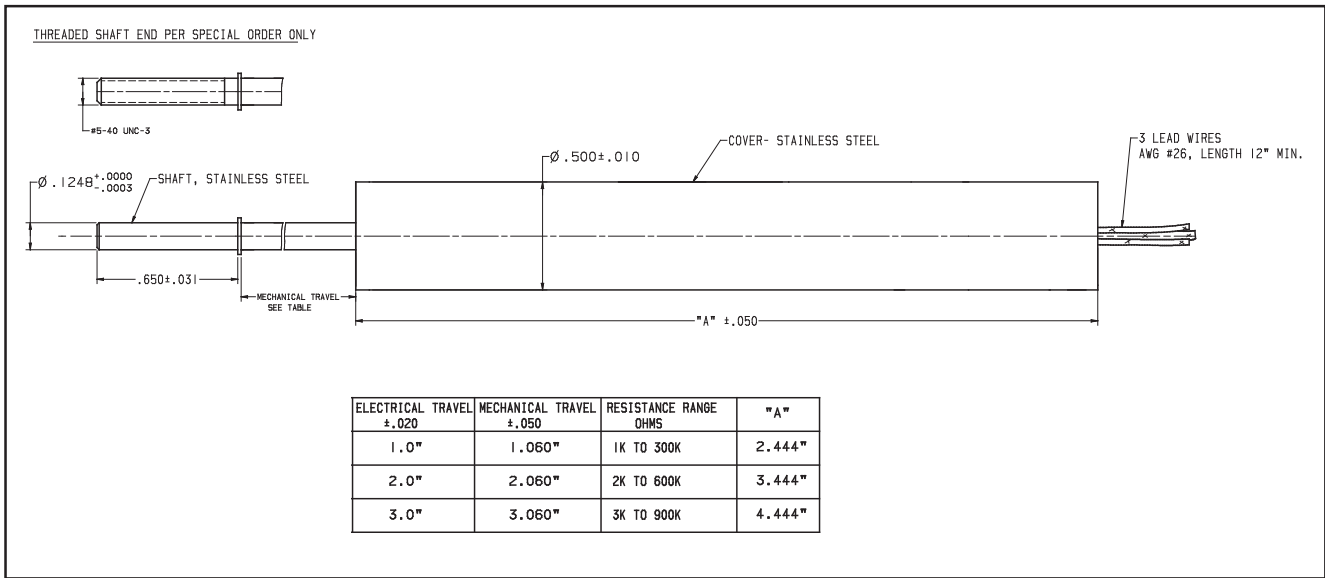


Feature Codes

Linearity Tape	LT
Two Gangs (Dual Section)	2G
Threaded shaft (5-40 UNC-3A)	TS

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Outline Dimensions (Inch)



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