

MODEL 6173
7/8" Diameter
Single Turn, Conductive Plastic
Precision Potentiometer / Position Sensor



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



Electrical Specifications

Resistance Range, Ohms	1K to 100K
Standard Resistance Tolerance	±10%
Minimum Practical Resistance Tolerance	±5%
Independent Linearity*	±0.5%
Minimum Practical Independent Linearity	±0.25%
Input Voltage, Maximum	400Vdc not to exceed power rating
Power Rating, Watts	1.0 at 70°C derating to 0 at 125°C
Dielectric Strength	1,000V rms
Insulation Resistance, Minimum	1,000 Megohms
Output Smoothness, Maximum	0.1%
Actual Electrical Travel, Nominal	335°
Electrical Continuity Travel, Minimum	346°
Tap Tolerance	0.5% of input voltage
End Voltage, Maximum	0.5% of Input Voltage
Resolution Essentially	infinite
Temperature Coefficient**	-800 ppm/°C

* Linearity is measured between 1% and 99% of input voltage.

** Special tempco available to ±100ppm/°C...

Environmental (MIL-R-39023)

Operating Temperature Range	Static: -65°C to +125°C Dynamic: -40°C to +125°C
Temperature Cycling	5 cycles, -65°C to +125°C (10% ΔR)
Shock, 6ms Sawtooth	100G's (0.1ms discontinuity max.)
Vibration	15G's, 10 to 500 Hz (2% ΔR, 0.1ms discontinuity max.)
Moisture Resistance	Ten 24 hour cycles (10% ΔR)
High Temperature Exposure	1,000 hours at 125°C (0.5% ΔR)
Rotational Life	25 mil. shaft rev.
Rotational Load Life	5 mil. shaft rev. + 900 hrs. at rated wattage at 70°C (10% ΔR)

MODEL 6173

Mechanical Specifications

Total Mechanical Travel	360° continuous
Number of Gangs, Maximum	4
Weight, Nominal	0.92 oz. Single gang 0.6 oz. Each added gang
Shaft Runout, T.I.R., Maximum	.001"
Pilot Diameter Runout, T.I.R., Maximum	.001"
Lateral Runout, T.I.R., Maximum	.002"
Shaft Radial Play, Maximum	.001"
Start/Run Torque, Maximum (per gang)	0.5 oz.-in.

Standard Resistance Values, Ohms

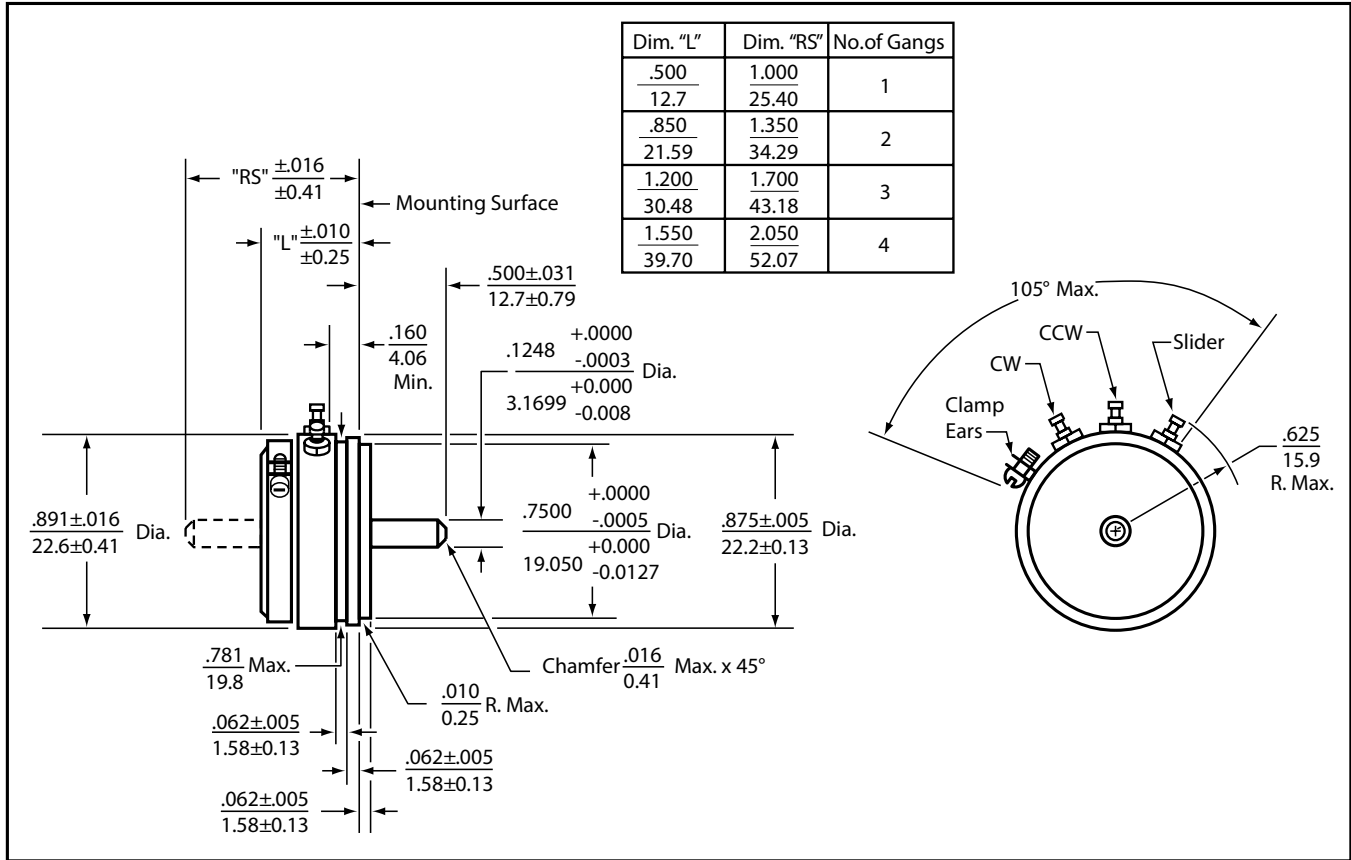
1K	2K	5K	10K	20K	50K
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Metric Conversions

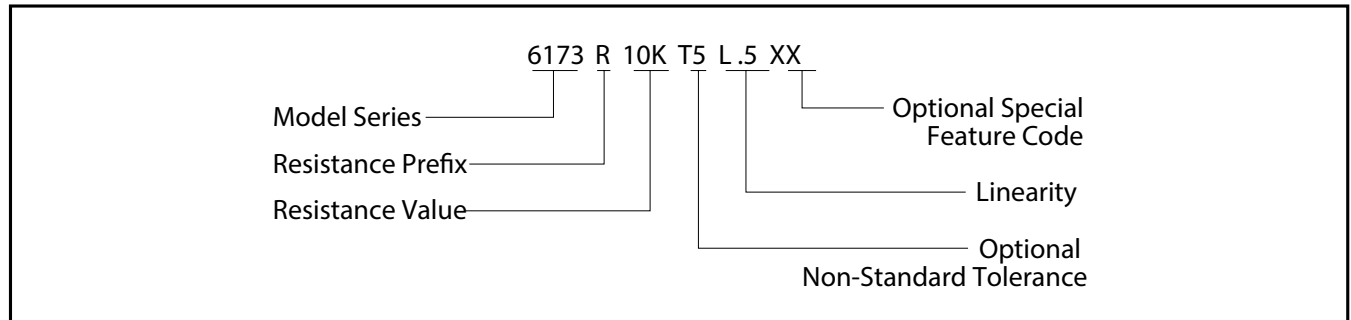
1 in.	25.4mm	1 oz.-in.	0,007 N-m
1 oz.	28.4gm	lb.-in.	0,113 N-m

MODEL 6173

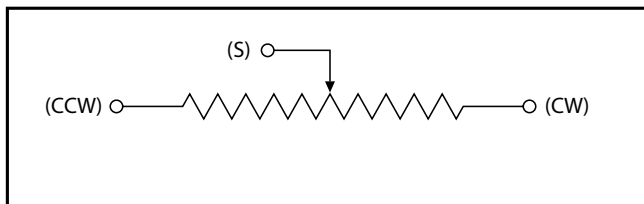
Outline Dimensions (Inch/mm)



Ordering Information



Circuit Diagram



Notes

Metric equivalents, based on 1 inch = 25.4mm are rounded to the same number of significant figures as in the original English units and are provided for general information only.

Tolerances unless otherwise specified:
 Linear = $\pm .01$ inches (.25mm)
 Angular = ± 2 degrees

DIMENSIONS
 INCH
 mm
 THIRD ANGLE PROJECTION

