

MODEL 3381
1-15/16" 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 300K
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	2.0 at 70°C derating to 0 at 105°C
Dielectric Strength	1,000V rms
Insulation Resistance	1,000 Megohms minimum
Output Smoothness	0.1% maximum
Actual Electrical Travel	348° nominal
Electrical Continuity Travel	350° minimum
End Voltage	0.5% of Input Voltage maximum
Tap Tolerance	0.5% of Input Voltage maximum
Resolution	Essentially infinite
Temperature Coefficient of Resistance**	-400 ppm/°C typical
Temperature Coefficient of Output Voltage***	±10 ppm/°C typical

Environmental (MIL-R-39023)

Operating Temperature Range	Dynamic: - 40°C to +125°C; Static: -65°C to +125°C
Temperature Cycling	5 cycles, -65°C to +125°C (10% ΔR max.)
Shock	6ms Sawtooth 100G's (0.1ms discontinuity max.)
Vibration	10G's, 10 to 500 Hz (2% ΔR, 0.1ms discontinuity max.)
Moisture Resistance	Five 24 hour cycles (25% ΔR)
High Temperature Exposure	Mechanical operation at 125°C (0.5% ΔR)
Rotational Life	10 mil. shaft revolutions
Rotational Load Life	10 mil. shaft rev. (10% ΔR)
Ingress Protection Rating (IP Code)	IP50, IP66 available as option (feature code ES)

Specifications subject to change without notice.

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

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

*** Measured with 10 VDC CW to CCW and slider at 50% of electrical travel..



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Mechanical Specifications

Total Mechanical Travel	360° continuous (350° ±2° with stop feature)
Number of Gangs	1 maximum
Weight	1.5 oz. nominal
Shaft Runout	.0025" maximum T.I.R.
Pilot Diameter Runout	.0025" maximum T.I.R.
Lateral Runout	.003" maximum T.I.R.
Shaft Radial Play	.004" maximum
Start/Run Torque	1.0 oz.-in maximum, ES option adds 0.5 oz.-in..

Special Features

Center Tap	CT
Linearity Tape	LT
Flatted Shaft	FS
Slotted Shaft	SS
Stop	ST
Shaft Lock	SL
Seal (IP66)	ES

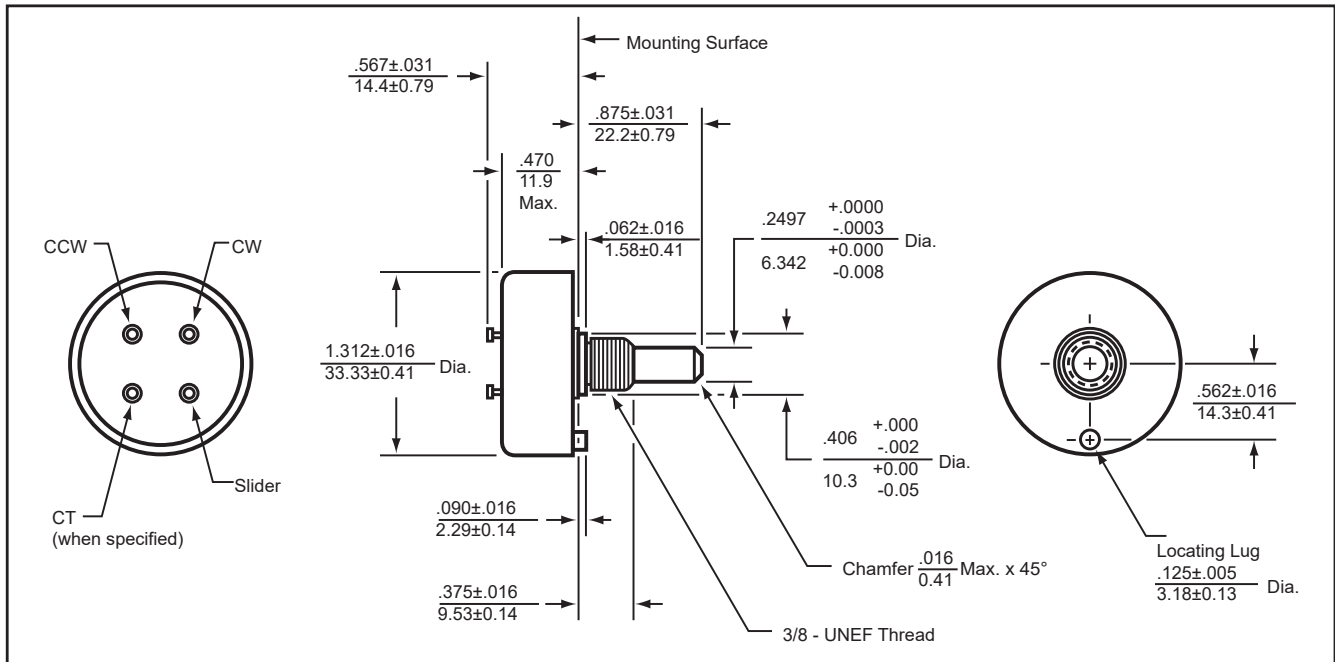
When multiple Optional Feature codes are used the P/N shall be in the same sequence as listed in this table (top to bottom).

Standard Resistance

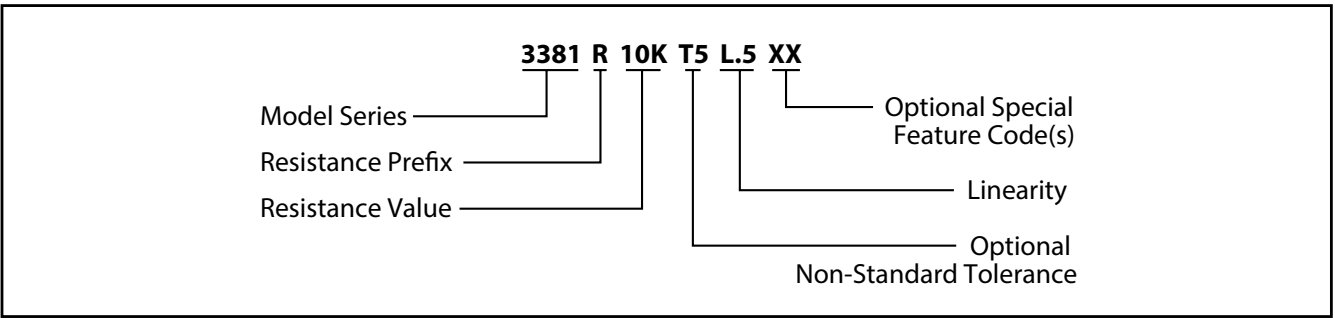
1K	2K	5K	10K	20K	50K	100K
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MODEL 3381 SERIES

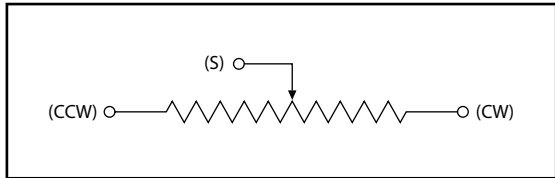
Outline Dimensions (Inch/mm)



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

For more information about this product,
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www.potentiometers.com



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