

Model 3381

1 - 5/16" Diameter Single Turn Conductive Plastic Precision Potentiometer / Position Sensor



ELECTRICAL¹

Resistance Range	1K to 300K Ohms
Standard Resistance Tolerance	±10%
Minimum Practical Resistance Tolerance	±5%
Independent Linearity ²	±0.5%
Minimum Practical Independent Linearity	±0.25%
Input Voltage	400 VDC maximum, not to exceed power rating
Power Rating	2.0 Watts at 70°C, derating to 0 at 105°C
Dielectric Strength	1,000 V rms
Insulation Resistance	1,000 Megohms minimum
Output smoothness	0.1% maximum
Actual Electrical Travel	348° nominal
Electrical Continuity Travel	350° minimum
End Voltage	maximum 0.5% of input voltage
Tap Tolerance	maximum 0.5% of input voltage
Resolution	essentially infinite
Temperature Coefficient of Resistance ³	-400 ppm/°C typical
Temperature Coefficient of Output Voltage ⁴	±10 ppm/°C typical

MECHANICAL

Total Mechanical Travel	360° Continuous (350° ±2° with stop feature)
Number of Gangs	1 maximum
Weight	1.5 oz. nominal
Shaft Runout	0.0025" maximum T.I.R.
Pilot Diameter Runout	0.0025" maximum T.I.R.
Lateral Runout	0.003" maximum T.I.R.
Shaft Radial Play	0.004" maximum
Start/Run Torque	1.0 oz.-in. maximum, ES option adds 0.5 oz.-in.

¹ Specifications subject to change without notice.

² Linearity is measured between 1% and 99% of input voltage.

³ Special TCR available to ±100 ppm/°C.

⁴ Measured with 10 VDC CW to CCW and slider at 50% of electrical travel

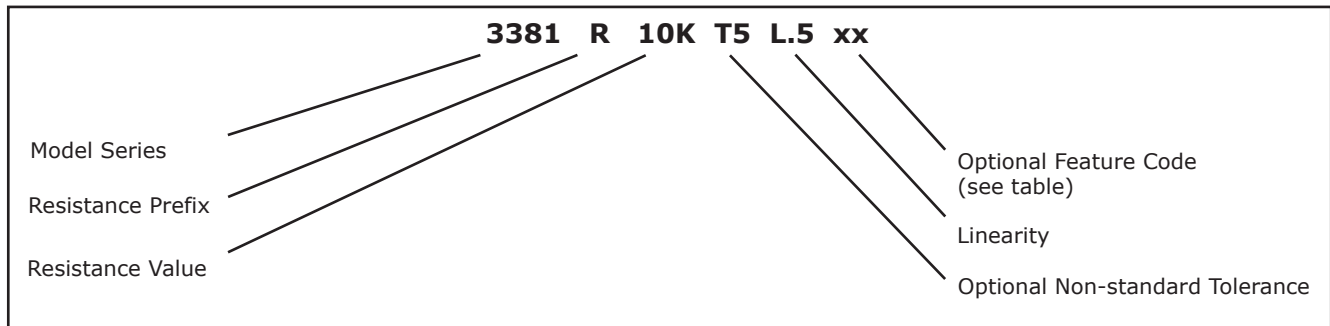


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ENVIRONMENTAL (MIL-PRF-39023)

Operating Temperature Range	-40°C to +125°C dynamic, -65°C to +125°C static
Temperature Cycling	5 cycles, -65°C to +125°C, maximum 10% ΔR
Shock	6 ms sawtooth, 100 G's, 0.1 ms maximum discontinuity
Vibration	10 G's, 10 to 500 Hz, maximum 2% ΔR, 0.1 ms maximum discontinuity
Moisture Resistance	five 24 hour cycles, maximum 25% ΔR
High Temperature Exposure	1,000 hours at 125°C, maximum 0.5% ΔR
Rotational Life	10 million shaft revolutions
Rotational Load Life	10 million shaft revolutions, maximum 10% ΔR
Ingress Protection Rating (IP Code)	IP50, IP66 available as option (feature code ES)

ORDERING INFORMATION

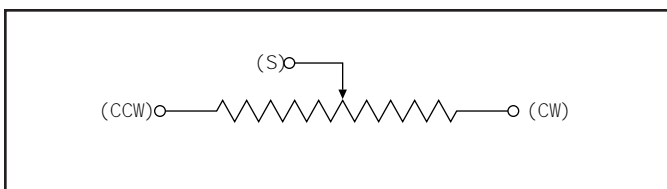


FEATURE CODES

Center Tap	CT
Linearity Tape	LT
Flatted Shaft	FS
Slotted Shaft	SS
Shaft Lock	SL
Stop	ST
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).

CIRCUIT DIAGRAM



STANDARD RESISTANCE VALUES

1K	5K	20K	100K
2K	10K	50K	

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OUTLINE DRAWING

