Model 6273

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



ELECTRICAL[1]

Resistance Range	1K to 900K Ohms
Standard Resistance Tolerance	±10%
Minimum Practical Resistance Tolerance	±5%
Independent Linearity[2]	±0.5%
Minimum Practical Independent Linearity	±0.15%
Input Voltage	400 VDC maximum, not to exceed power rating
Power Rating	1.5 Watts at 70°C, derating to 0 at 125°C
Dielectric Strength	1,000 V rms
Insulation Resistance	1,000 Megohms minimum
Output smoothness	0.1% maximum
Actual Electrical Travel	340° nominal
Electrical Continuity Travel	346° minimum
Tap Tolerance	maximum 0.5% of input voltage
End Voltage	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
Number of Gangs	4 maximum
Weight	1.0 oz. single gang nominal, 0.7 oz. each added gang
Shaft Runout	maximum T.I.R. 0.001”
Pilot Diameter Runout	maximum T.I.R. 0.001”
Lateral Runout	maximum T.I.R. 0.002”
Shaft Radial Play	maximum 0.001”
Start/Run Torque	maximum 0.5 oz.-in. per gang

[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.

RoHS 2 compliant

BI Technologies Corporation
4200 Bonita Place, Fullerton, CA 92835 USA
Phone: 714 447 2345 Website: www.bitechnologies.com
October 31, 2014

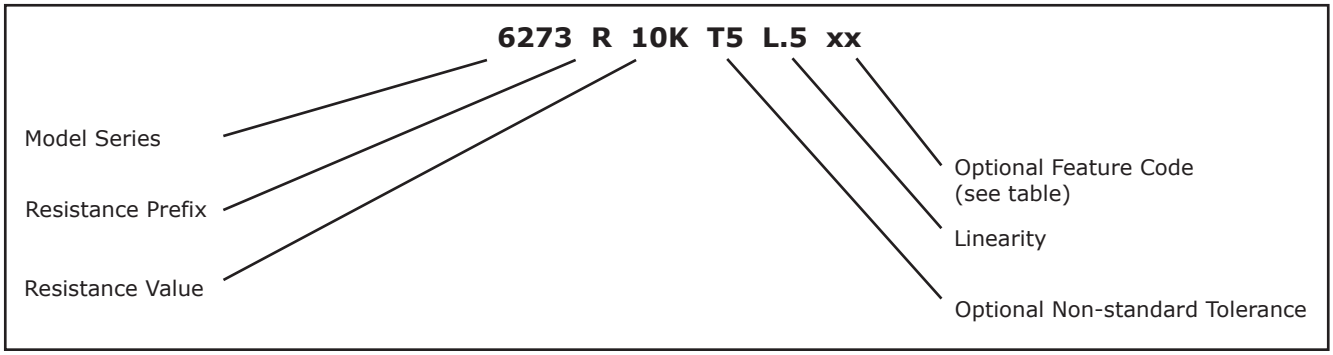
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Model 6273

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 Saw-tooth, 100 G's, 0.1 ms maximum discontinuity
Vibration	15 G's, 10 to 2,000 Hz, maximum 2% ΔR, 0.1 ms maximum discontinuity
Moisture Resistance	ten 24 hour cycles, maximum 10% ΔR
High Temperature Exposure	1,000 hours at 125°C, maximum 0.5% ΔR
Rotational Life	25 million shaft revolutions
Rotational Load Life	5 million shaft revolutions at 1.5 Watts & 70°C, maximum 10% ΔR
Ingress Protection Rating (IP Code)	IP50

ORDERING INFORMATION

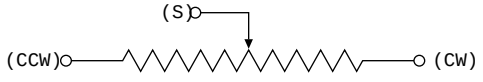


FEATURE CODES

Center Tap	CT
Linearity Tape	LT
Flatted Shaft	FS
Slotted Shaft	SS
Rear Shaft Extension	RS
Additional Gangs	2G, 3G, or 4G

When multiple 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

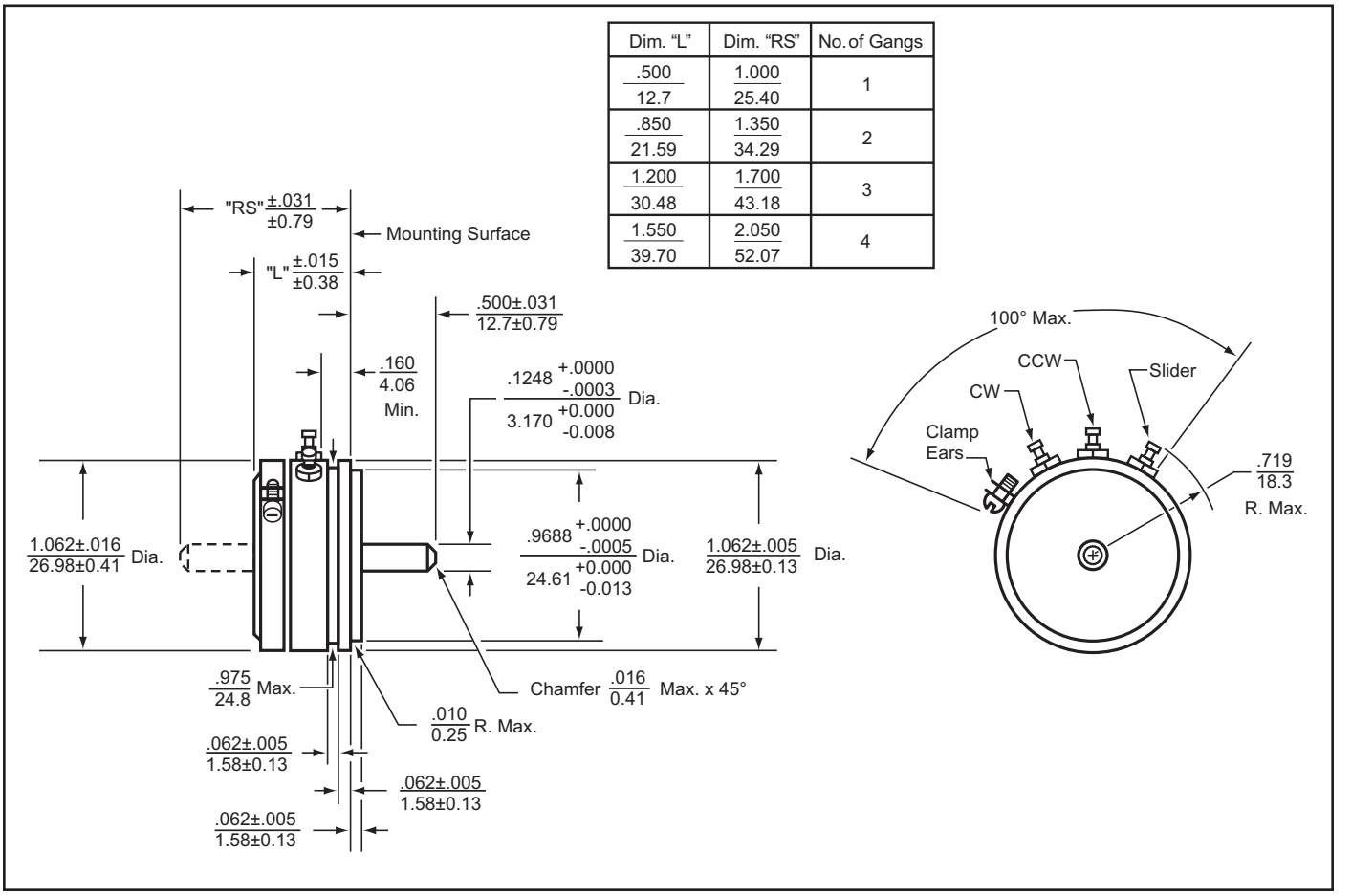
1K	2K	5K	10K	20K	50K

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OUTLINE DRAWING

Dim. "L"	Dim. "RS"	No. of Gangs
.500 / 12.7	1.000 / 25.40	1
.850 / 21.59	1.350 / 34.29	2
1.200 / 30.48	1.700 / 43.18	3
1.550 / 39.70	2.050 / 52.07	4



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