Single-Turn Precision Potentiometer

Model 5311

Features:
- 1-5/16” diameter
- Wirewound

RoHS 2 compliant

Electrical

Resistance Range, Ohms	10 to 44.6K
Standard Resistance Tolerance	±3% (±5% ≤40 Ohms)
Minimum Practical Resistance Tolerance	±1%
Independent Linearity	±0.5% (±1% ≤250 Ohms)
Minimum Practical Independent Linearity	±1.0%, ≤40 Ohms ±0.75%, 41-99 Ohms ±0.5%, 100-249 Ohms ±0.25%, ≥250 Ohms
Input Voltage	400Vdc not to exceed power rating
Power Rating, Watts	2.0 at 40°C derating to 0 at 85°C
Dielectric Strength	1,000V rms
Insulation Resistance, Minimum	1,000 Megohms
Noise, Maximum	100 Ohms (250 Ohms: RT ≤500 Ohms)
Actual Electrical Travel	352° ±2 °Continuous model 350° ±2° Stop model
Tap Tolerance	±1° (±2° <100 Ohms)
End Voltage, Maximum	Linearity x Input Voltage

Environmental

Operating Temperature Range	–25°C to +85°C
Temperature Cycling	5 cycles, -25°C to +85°C (5% ΔR)
Shock, 6ms Sawtooth	100G's (0.1ms discontinuity max.)
Vibration	10G's, 10 to 500 Hz (5% ΔR, 0.1ms discontinuity max.)
Moisture Resistance	Five 24 hour cycles (3% ΔR)
High Temperature Exposure	1,000 hours at 85°C (5% ΔR)
Rotational Load Life	500K shaft rev. at rated wattage at 85°C (5% ΔR)

Specifications subject to change without notice.

TT Electronics | BI Technologies
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Calexico, CA 92231
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www.ttelectronics.com/bi-technologies

Mechanical

Total Mechanical Travel	360° Continuous model 350° ±2° Stop model
Number of Gangs, Maximum	1
Weight, Nominal	1.5 oz.
Static Stop Strength	48 oz.-in.
Shaft End Play, Maximum	.007"
Shaft Runout, T.I.R., Maximum	.0025"
Pilot Diameter Runout, T.I.R., Maximum	.0025"
Lateral Runout, T.I.R., Maximum	.003"
Shaft Radial Play, Maximum	.004"
Starting Torque, Maximum	1.0 oz.-in.
Running Torque, Maximum	0.7 oz.-in.

Standard Resistance Values, Ohms

Total Resistance	Theoretical Resolution (% Nominal)	Tempco of Wire
10	0.491	± 20 ppm/°C
100	0.233	± 20 ppm/°C
500	0.187	± 20 ppm/°C
1K	0.150	± 20 ppm/°C
2K	0.117	± 20 ppm/°C
5K	0.090	± 20 ppm/°C
10K	0.073	± 20 ppm/°C
20K	0.066	± 20 ppm/°C
30K	0.060	± 20 ppm/°C

METRIC CONVERSIONS

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

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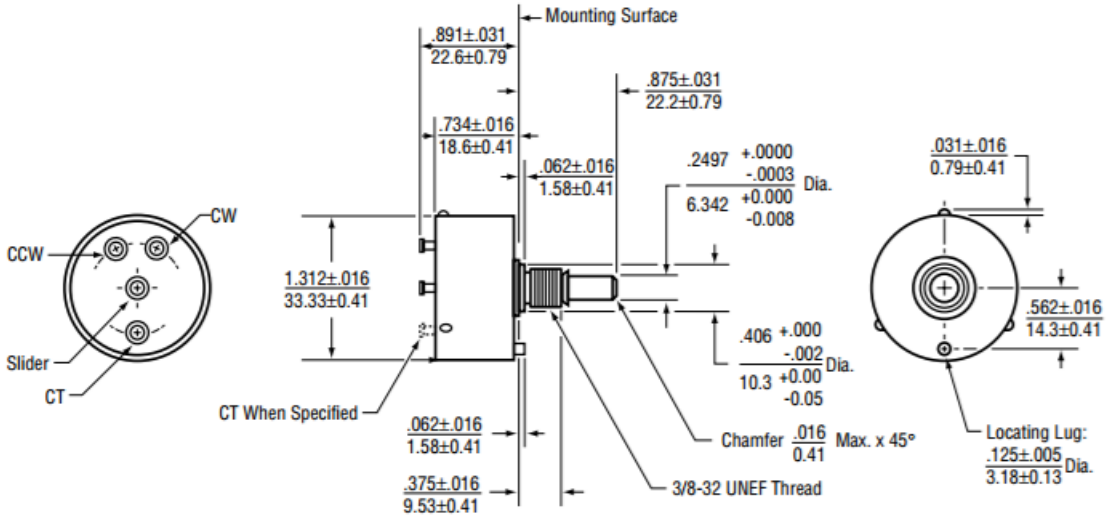


SPECIAL FEATURES

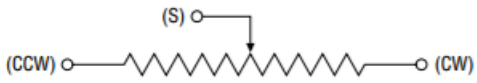
Center Tap	CT
Linearity Tape	LT
Flatted Shaft	FS
Slotted Shaft	SS
Shaft Lock	SL
Stop	ST

ORDERING INFORMATION

5311 R 10K T2 L .50 XX

- Model Series
- Resistance Prefix
- Resistance Value
- Optional Non-Standard Tolerance
- Linearity
- Optional Special Feature Code

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 = ± .01 inches (.25mm)
Angular = ± 2 degrees

DIMENSIONS INCH mm
THIRD ANGLE PROJECTION

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