

# MODEL C

## 1-13/16" Diameter

### 3-Turn

### Wirewound

### Precision Potentiometer



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#### ELECTRICAL

Resistance Range, Ohms	5 to 194.7K
Standard Resistance Tolerance	< 100 Ohms = $\pm 5\%$ , $\geq 100$ Ohms = $\pm 3\%$
Minimum Practical Resistance Tolerance	$\pm 1\%$
Independent Linearity	$\pm 0.50\%$
Minimum Practical Independent Linearity	$\pm 0.5\%$ , $\leq 25$ Ohms $\pm 0.25\%$ , 26-99 Ohms $\pm 0.15\%$ , 100-1K Ohms $\pm 0.10\%$ , $> 1K$ Ohms
Power Rating, Watts	3.0 at 40°C derating to 0 at 85°C
Input Voltage, Maximum	1,000Vdc not to exceed power rating
Dielectric Strength	1,000V rms
Insulation Resistance, Minimum	1,000 Megohms
Noise, Maximum	500 Ohms: $RT \leq 800$ Ohms 250 Ohms: $RT > 800$ Ohms
Actual Electrical Travel	$1080^\circ + 4^\circ - 0^\circ$
Tap Tolerance	$\leq 25$ Ohms = $\pm 2^\circ$ , $< 100$ Ohms = $\pm 1.5^\circ$ $\geq 100$ Ohms = $\pm 1.0^\circ$
End Voltage, Maximum (% of Input Voltage)	$< 100\Omega = 1\%$ , $> 100\Omega = .5\%$

#### ENVIRONMENTAL (MIL-R-12934)

Operating Temperature Range	Static: $-65^\circ\text{C}$ to $+85^\circ\text{C}$ Dynamic: $-40^\circ\text{C}$ to $+85^\circ\text{C}$
Temperature Cycling	5 cycles, $-65^\circ\text{C}$ to $+85^\circ\text{C}$ (5% $\Delta R$ )
Shock, 6ms Sawtooth	100G's (0.1ms discontinuity max.)
Vibration	10G's, 10 to 500 Hz (5% $\Delta RT$ , 0.1ms discontinuity max.)
Moisture Resistance	Ten 24 hour cycles (3% $\Delta R$ )
High Temperature Exposure	1,000 hours at $85^\circ\text{C}$ (5% $\Delta R$ )
Rotational Load Life	2 mil. shaft rev. + 900 hrs. at rated wattage at $40^\circ\text{C}$ (5% $\Delta R$ )

Specifications subject to change without notice.  
Available in a Hybrid version – contact factory for details.

## MECHANICAL

Total Mechanical Travel	1080° + 4° - 0°
Number of Gangs, Maximum	3
Weight, Nominal (Single Gang)	2.5 oz.
Static Stop Strength	350 oz.-in.
Backlash, Maximum	1°
Panel Nut Tightening Torque, Maximum	25 lb.-in.
Shaft End Play, Maximum	.005"
Shaft Runout, T.I.R., Maximum	.0005"
Pilot Diameter Runout, T.I.R., Maximum	.002"
Lateral Runout, T.I.R., Maximum	.003"
Shaft Radial Play, Maximum	.004"
Start/Run Torque, Maximum (per gang)	3.0 oz.-in.

## STANDARD RESISTANCE VALUES, OHMS

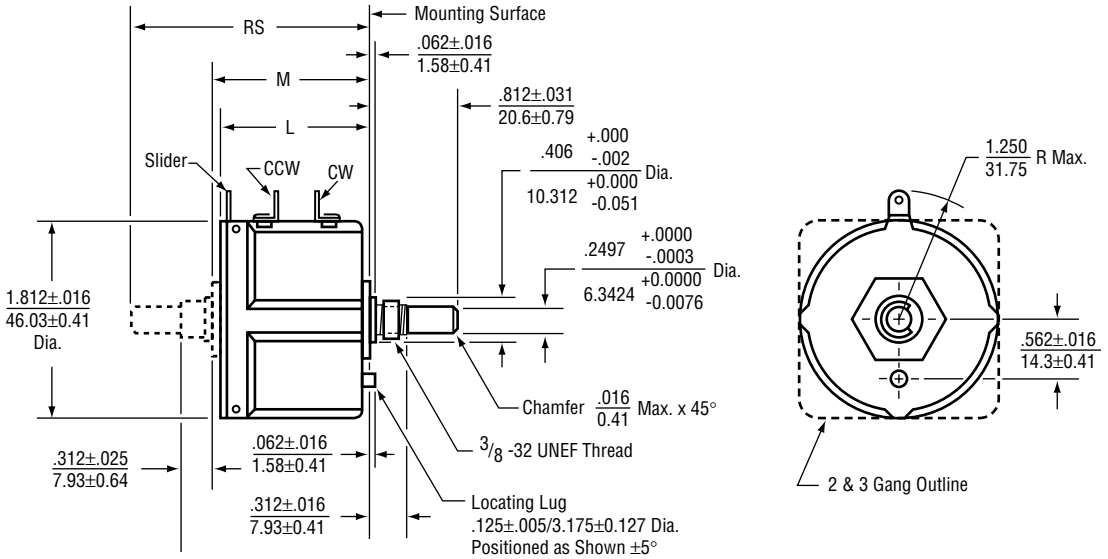
Total Resistance	Theoretical Resolution (% Nominal)	Tempco of Wire
100	0.084	±20 ppm/°C
200	0.074	± 20 ppm/°C
500	0.056	± 20 ppm/°C
1K	0.051	+ 130 ppm/°C *
2K	0.044	+ 130 ppm/°C *
5K	0.032	+ 130 ppm/°C *
10K	0.027	+ 130 ppm/°C *
20K	0.021	± 20 ppm/°C
50K	0.017	± 20 ppm/°C
100K	0.015	±20 ppm/°C

\* Lower tempco available - contact factory for details.

**OUTLINE DIMENSIONS (Inch/mm)**

Dim. "L"	Dim. "M"	Dim. "RS"	No. of Gangs
$\frac{1.141}{28.98}$ Max.	$\frac{1.203}{30.56}$	$\frac{2.016}{51.12}$	1
$\frac{2.494}{63.348}$ Max.	$\frac{2.480}{62.992}$	$\frac{3.297}{83.744}$	2
$\frac{3.534}{89.764}$ Max.	$\frac{3.513}{89.230}$	$\frac{4.328}{109.931}$	3

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**METRIC CONVERSIONS**

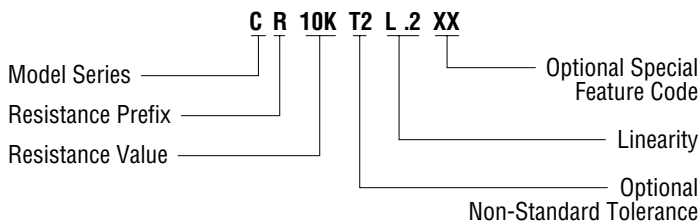
1 in.	25.4mm
1 oz.	28.4 gm

1 oz.-in.	0,007 N-m
1 lb.-in.	0,113 N-m

## SPECIAL FEATURE CODES

Center Tap	CT
Linearity Tape	LT
Rear Shaft Extension	RS
Flatted Shaft	FS
Slotted Shaft	SS
Shaft Lock	SL
Color Coded	CC
Additional Gangs	2G or 3G

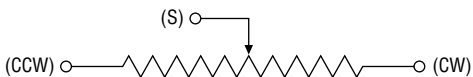
## ORDERING INFORMATION



## MATCHING TURNS COUNTING DIALS

2606, 2606S, 2607, 2607S, 2626, 2627, 2646, 2646S, 2647, 2647S, 2126, RB

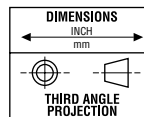
## CIRCUIT DIAGRAM



## 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



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