

MODEL 7600 SERIES

1-13/16" Diameter

10-Turn

Wirewound

Precision Potentiometer



MODEL STYLES

7601	1/4" Shaft, 3/8" Bushing
7603	1/4" Shaft, Servo

ELECTRICAL

Resistance Range, Ohms	1K to 650K
Standard Resistance Tolerance	±5%
Minimum Practical Resistance Tolerance	±1%
Independent Linearity	±0.15%
Minimum Practical Independent Linearity	±0.1%, < 500 Ohms ±0.05%, 500-4,999 Ohms *±0.025%, ≥ 5K Ohms
Power Rating, Watts	5.0 at 70°C derating to 0 at 125°C
Input Voltage, Maximum	1,000Vdc Not to Exceed Power Rating
Dielectric Strength	1,000V RMS
Insulation Resistance, Minimum	1,000 Megohms
Noise, Maximum	100 Ohms
Actual Electrical Travel	3,600° + 3° -0°, ≤ 300 Ohms 3,600° + 2° -0°, 301-2,500 Ohms 3,600° + 1° -0°, > 2,500 Ohms
Electrical Continuity Over Travel	+90° ±5° at each end
Tap Tolerance	±2°, ≤ 300 Ohms ±1°, 301-2,500 Ohms ±0.5°, ≥ 2,500 Ohms
End Voltage, Maximum	Within Std. Linearity Tolerance

Specifications subject to change without notice.

*May require external pads.

ENVIRONMENTAL (MIL-R-12934)

Operating Temperature Range	Static: -65°C to +125°C Dynamic: -40°C to +125°C
Temperature Cycling	5 cycles, -65°C to +125°C (5% ΔR)
Shock, 6ms Sawtooth	100G's (0.1ms discontinuity max.)
Vibration	5G's, 10 to 2,000 Hz (5% ΔR, 0.1ms discontinuity max.)
Moisture	Ten 24 hour cycles (3% ΔR)
High Temperature Exposure	1,000 hours at 125°C (5% ΔR)
Rotational Load Life	2 mil. shaft rev. plus 900 hrs. at rated wattage at 70°C (5% ΔR)

MECHANICAL

Total Mechanical Travel	3,780° ± 5°
Number of Cups, Maximum	2
Weight, Nominal (per gang)	5.5 oz.
Static Stop Strength	600 oz.-in.
Backlash, Maximum	Essentially zero
Shaft End Play, Maximum	.005"
Shaft Runout, T.I.R., Maximum	.0005"
Pilot Diameter Runout, T.I.R., Maximum	.001"
Lateral Runout, T.I.R., Maximum	.0015"
Starting Torque, Maximum	1.3 oz.-in.
Running Torque, Maximum	0.9 oz.-in.
	7601 7603
Panel Nut Tightening Torque, Maximum	25 lb.-in. N/A
Shaft Radial Play, Maximum	0.002" 0.001"

STANDARD RESISTANCE VALUES, OHMS

Total Resistance	Theoretical Resolution (% Nominal)	Tempco of Wire
1K	0.019	±20 ppm/°C
5K	0.011	±20 ppm/°C
10K	0.012	±20 ppm/°C
20K	0.009	±20 ppm/°C
50K	0.007	±20 ppm/°C
100K	0.006	±20 ppm/°C

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Technical drawing of a circular part with the following dimensions and tolerances:

- Top edge: 60° Max.
- Top edge: 1.203 ± 0.005 R. Max.
- Top edge: $.562 \pm .016$
- Top edge: 14.3 ± 0.41
- Locating Hole: $.129 \pm .005 / 3.277 \pm 0.127$ Dia.
- Locating Hole: $\times .094 \pm .016 / 2.388 \pm 0.406$
- Positioned as shown.

Technical drawing of a circular part with the following dimensions and tolerances:

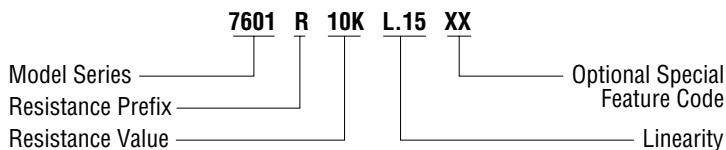
- Top view:
 - 60° Max. (angle of a feature)
 - 1.203 R. Max. (radius of a feature)
- Side view (left):
 - 1.875 $\begin{smallmatrix} +.000 \\ -.001 \end{smallmatrix}$ Dia. (diameter of a hole)
 - 47.63 $\begin{smallmatrix} +0.00 \\ -0.03 \end{smallmatrix}$ (dimension)
 - 2.000 $\begin{smallmatrix} +.005 \\ -.010 \end{smallmatrix}$ Dia. (diameter of a hole)
 - 50.80 $\begin{smallmatrix} +0.13 \\ -0.25 \end{smallmatrix}$ (dimension)

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

SPECIAL FEATURES

Center Tap	CT
Linearity Tape	LT
Rear Shaft Extension	RS
Flatted Shaft	FS
Slotted Shaft	SS
Shaft Lock (7601 only)	SL

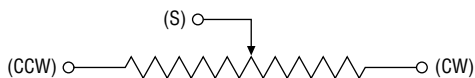
ORDERING INFORMATION



MATCHING TURNS COUNTING DIALS

7601: 2606, 2607, 2626, 2627, 2646, 2647, 2126, 2606S, 2607S, 2646S, 2647S, 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 = $\pm .01$ inches
 (.25mm)
 Angular = ± 2 degrees

