

MODEL 6670 SERIES

2" Diameter

Single Turn

Conductive Plastic

Precision Potentiometer /
Position Sensor



2

MODEL STYLES

6671	1/4" Shaft, 3/8" Bushing
6673	1/4" Shaft, Servo

ELECTRICAL

Resistance Range, Ohms	1K to 300K
Standard Resistance Tolerance*	±10%
Minimum Practical Resistance Tolerance	±3%
Independent Linearity**	±0.25%
Minimum Practical Independent Linearity	±0.1%
Input Voltage, Maximum	400Vdc not to exceed power rating
Power Rating, Watts	3.5 at 70°C derating to 0 at 125°C
Dielectric Strength	1,000V rms
Insulation Resistance, Minimum	1,000 Megohms
Output Smoothness, Maximum	0.1%
Actual Electrical Travel, Nominal	350°
Electrical Continuity Travel, Minimum	354°
Tap Tolerance	0.5% of input voltage
End Voltage, Maximum	Within standard linearity tolerance, not less than .25%
Resolution	Essentially infinite
Temperature Coefficient***	-800 ppm/°C

Specifications subject to change without notice.

* Tighter tolerances available.

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

*** Special tempco available to ±100ppm/°C.

ENVIRONMENTAL (MIL-R-39023)

Operating Temperature Range	Static: -65°C to +125°C Dynamic: -40°C to +125°C
Temperature Cycling	5 cycles, -65°C to +125°C (10% ΔR)
Shock, 6ms Sawtooth	100G's (0.1ms discontinuity max.)
Vibration	15G's, 10 to 2,000 Hz (2% ΔR, 0.1ms discontinuity max.)
Moisture Resistance	Ten 24 hour cycles (10% ΔR)
High Temperature Exposure	1,000 hours at 125°C (0.5% ΔR)
Rotational Life	25 mil. shaft rev.
Rotational Load Life	5 mil. shaft rev. + 900 hrs. at rated wattage at 70°C (10% ΔR)

MECHANICAL

Total Mechanical Travel	360° continuous
Number of Gangs, Maximum	4
Weight, Nominal	4.0 oz. Single gang 1.5 oz. Each added gang
Shaft Runout, T.I.R., Maximum	.001"
Pilot Diameter Runout, T.I.R., Maximum	.0015"
Lateral Runout, T.I.R., Maximum	.005"
Shaft Radial Play, Maximum	.002"
Start/Run Torque, Maximum (per Gang)	1.5 / 1.0 oz.-in.

STANDARD RESISTANCE VALUES, OHMS

1K	2K	5K	10K	20K	50K
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SPECIAL FEATURES

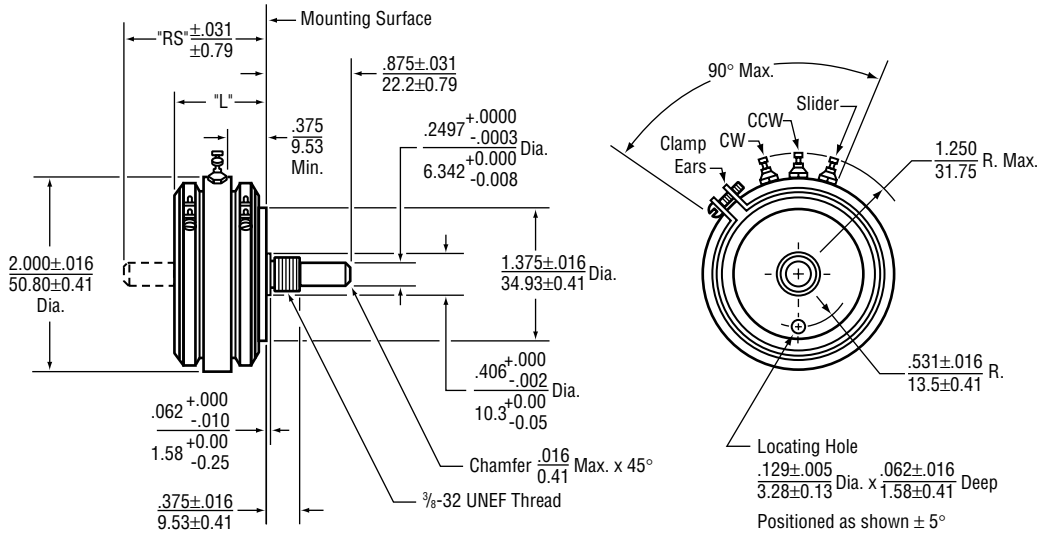
Center Tap	CT
Linearity Tape	LT
Rear Shaft Extension	RS
Flatted Shaft	FS
Slotted Shaft	SS
Shaft Lock (6671 only)	SL
Additional Gangs	2G or 3G or 4G

METRIC CONVERSIONS

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

OUTLINE DIMENSIONS (Inch/mm)

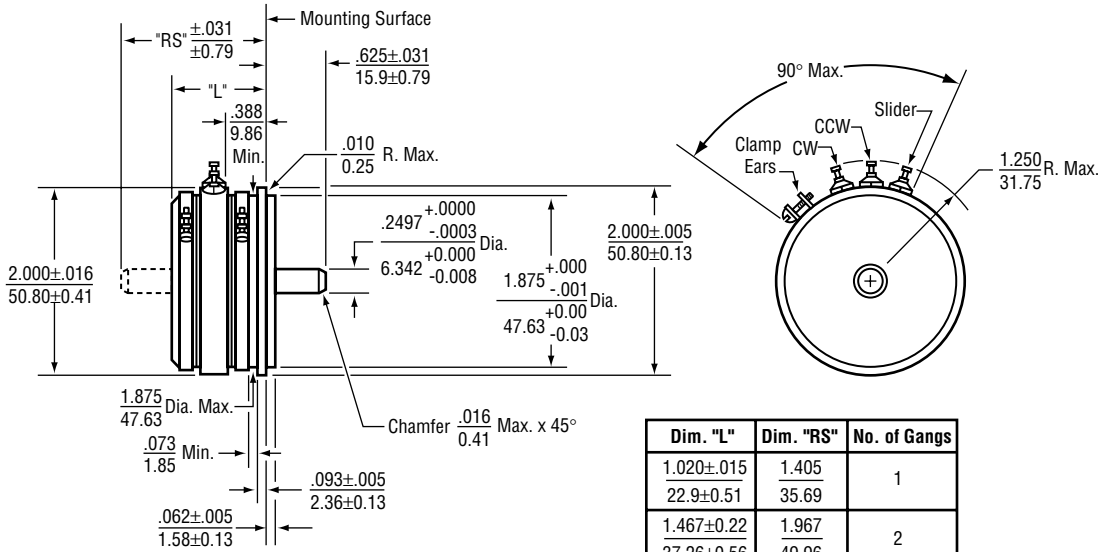
**Model 6671
Bushings Mount with Ball Bearing**



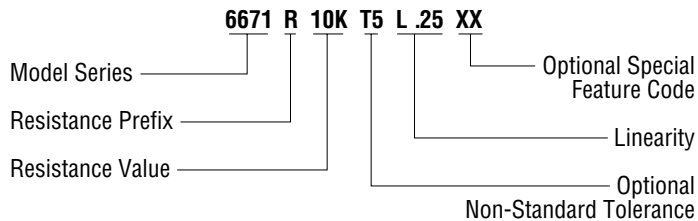
Dim. "L"	Dim. "RS"	No. of Gangs
.905 ±0.020 22.9 ±0.51	1.405 35.69	1
1.467 ±0.22 37.26 ±0.56	1.967 49.96	2
2.029 ±0.24 51.54 ±0.61	2.529 64.24	3
2.591 ±0.26 65.81 ±0.66	3.091 78.51	4

OUTLINE DIMENSIONS (Inch/mm)

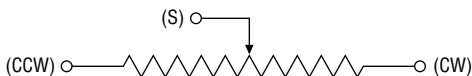
Model 6673 Servo Mount with Ball Bearing



ORDERING INFORMATION



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

