

# Single-Turn Precision Potentiometer

## Model 6370 Series



### Features:

- 1-5/16" diameter
- Conductive plastic technology
- Anodized aluminum housing
- Front and rear ball bearings



## Models Available

|      |                          |
|------|--------------------------|
| 6371 | 1/4" Shaft, 3/8" Bushing |
| 6373 | 1/4" Shaft, Servo        |

## Electrical

|  |   |
|--|---|
| Resistance Range                                       | 1K to 300K Ohms                             |
| Standard Resistance Tolerance                          | ±10%  |
| Minimum Practical Resistance Tolerance                 | ±5%   |
| Independent Linearity <sup>2</sup>                     | ±0.5%                                       |
| Minimum Practical Independent Linearity                | ±0.1%                                       |
| Input Voltage  | 400 VDC maximum, not to exceed power rating |
| Power Rating   | 2.0 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                               | 348° nominal                                |
| Electrical Continuity Travel                           | 350° minimum                                |
| End Voltage  | maximum 0.35% of input voltage              |
| Tap Tolerance  | maximum 0.5% of input voltage               |
| Resolution   | essentially infinite                        |
| Temperature Coefficient of Resistance <sup>3</sup>     | -400 ppm/°C typical                         |
| Temperature Coefficient of Output Voltage <sup>4</sup> | ±10 ppm/°C typical                          |

## Mechanical

|                         |   |
|-------------------------|---|
| Total Mechanical Travel | 360° continuous                                       |
| Number of Gangs         | 1 maximum   |
| Weight                  | 2.0 oz. nominal                                       |
| Shaft Runout            | maximum T.I.R. 0.001"                                 |
| Pilot Diameter Runout   | maximum T.I.R. 0.0015"                                |
| Lateral Runout          | maximum T.I.R. 0.002"                                 |
| Shaft Radial Play       | maximum 0.002"  |
| Start/Run Torque        | maximum 0.7 / 0.5 oz.-in., ES option adds 0.5 oz.-in. |

<sup>1</sup> Specifications subject to change without notice.

<sup>2</sup> Linearity is measured between 1% and 99% of input voltage.

<sup>3</sup> Special TCR available to ±100 ppm/°C.

<sup>4</sup> Measured with 10 VDC CW to CCW and slider at 50% of electrical travel.

### General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

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TT Electronics | BI Technologies  
413 Rood RD, Suite 7  
Calexico, CA 92231  
Ph: +1 714 447 2345  
www.ttelectronics.com/bi-technologies

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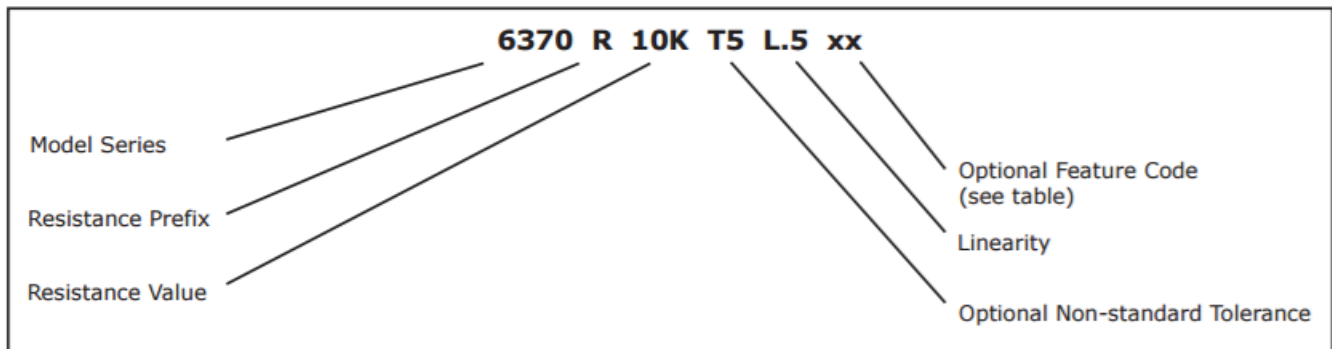
## Model 5311



### Environmental

|                                     |  |
|-------------------------------------|--|
| 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 Load Life                | 5 million shaft revolutions plus 900 hours at 2.0 Watts & 70°C, maximum 10% ΔR |
| Ingress Protection Rating (IP Code) | IP50, IP66 available as option for 6371 (feature code ES)                      |

### Ordering Information

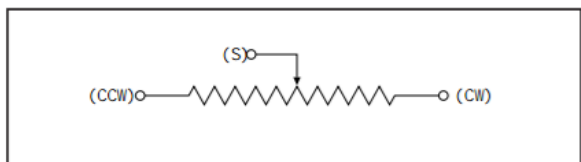


### FEATURE CODES

|                        |    |
|------------------------|----|
| Center Tap             | CT |
| Linearity Tape         | LT |
| Flatted Shaft          | FS |
| Slotted Shaft          | SS |
| Rear Shaft Extension   | RS |
| Shaft Lock, 6371 only  | SL |
| Seal (IP66), 6371 only | ES |

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

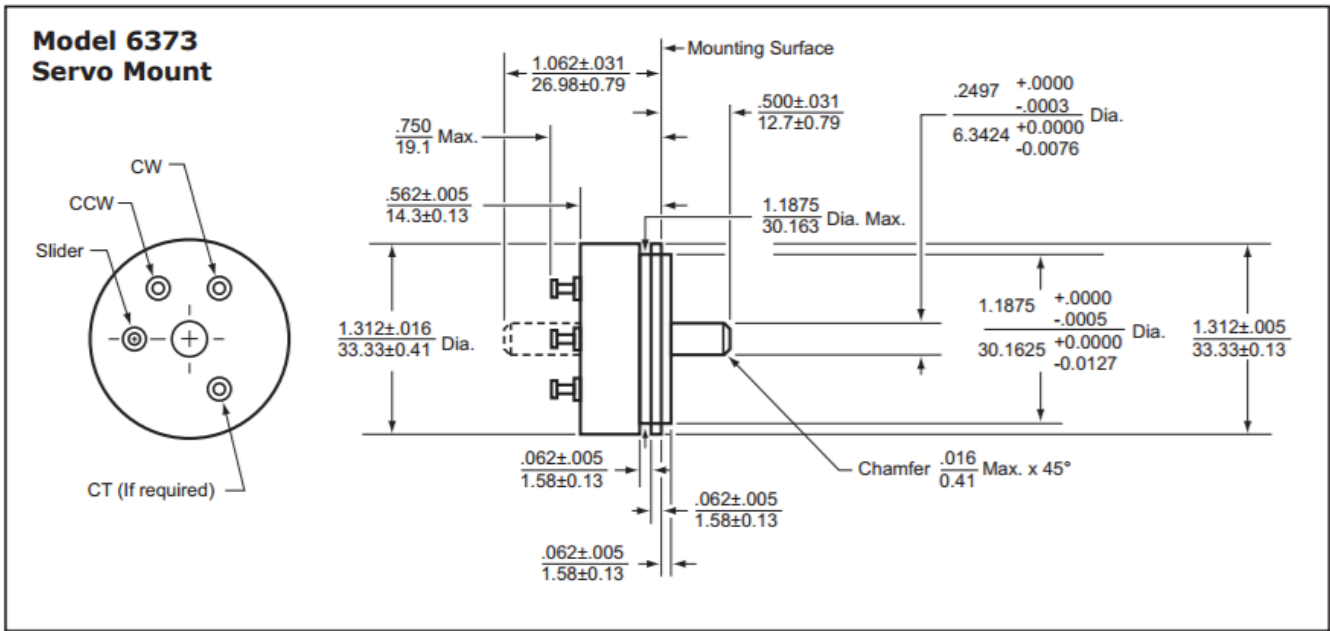
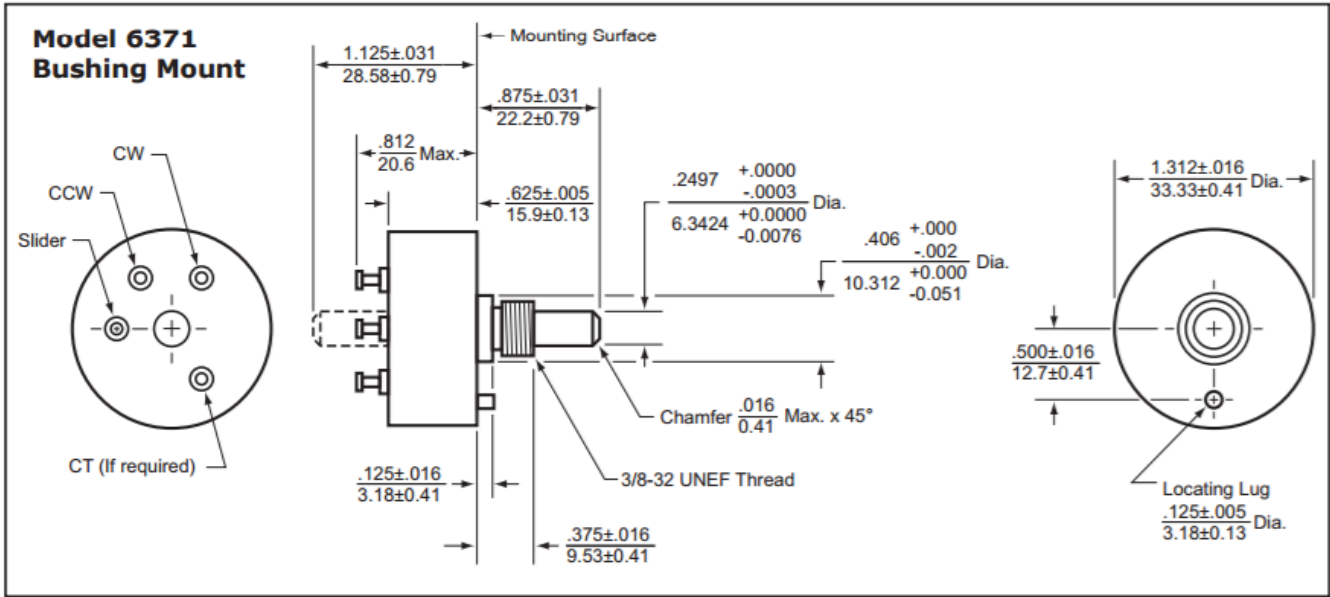
|    |    |    |     |     |     |
|----|----|----|-----|-----|-----|
| 1K | 2K | 5K | 10K | 20K | 50K |
|----|----|----|-----|-----|-----|

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