# **Multi-Turn Precision Potentiometer**

## Model 7246

#### Features:

- 7/8" diameter
- 10-turn
- Wirewound





#### **Electrical**

| Resistance Range, Ohms                    | 10 to 125K                        |
|---|-----------------------------------|
| Standard Resistance Tolerance             | ±5%                               |
| Minimum Practical Resistance Tolerance    | ±3%                               |
| Independent Linearity                     | ±0.25%                            |
| Minimum Practical Independent Linearity   | ±0.25%, <100 Ohms                 |
|   | ±0.15%, ≥ 100 Ohms                |
| Power Rating, Watts                       | 2.0 at 25°C derating to 0 at 85°C |
| Dielectric Strength                       | 1,000V rms                        |
| Insulation Resistance, Minimum            | 1,000 Megohms                     |
| Noise, Maximum                            | 100 Ohms                          |
| Actual Electrical Travel                  | 3600° + 10° - 0°                  |
| Tap Tolerance                             | ±5°, ≤20 Ohms                     |
|   | ±3°, 21-50 Ohms                   |
|   | ±2°, >50 Ohms                     |
| End Voltage, Maximum (% of input voltage) | 0.5%, <100 Ohms                   |
|   | 0.25%, ≥100 Ohms                  |

#### Environmental

| Operating Temperature Range | –25°C to +85°C   |
|-----------------------------|--|
| Temperature Cycling         | 5 cycles, -25°C to +85°C (10% ΔR)                              |
| Shock, 6ms Sawtooth         | 50G's (0.1ms discontinuity max.)                               |
| Vibration                   | 10G's, 10 to 500 Hz (2% $\Delta R$ , 0.1ms discontinuity max.) |
| Moisture Resistance         | Five 24 hour cycles (25% ΔR)                                   |
| High Temperature Exposure   | Mechanical Operation at 85°C (0.5% ΔR)                         |
| Rotational Load Life        | 1 mil. shaft rev. (10% ΔR)                                     |

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

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.

# **Multi-Turn Precision Potentiometer**

# Model 7246



### Mechanical

| Total Mechanical Travel              | 3600° + 10° - 0° |
|--------------------------------------|------------------|
| Number of Gangs, Maximum             | 1                |
| Weight, Nominal                      | 1.25 oz.         |
| Static Stop Strength                 | 60 ozin.         |
| Backlash, Maximum                    | 2°               |
| Panel Nut Tightening Torque, Maximum | 25 lbin.         |
| Shaft End Play, Maximum              | .015"            |
| Shaft Radial Play, Maximum           | .005"            |
| Start/Run Torque, Maximum            | 0.8 / 0.6 ozin.  |

### **Standard Resistance Values, Ohms**

| Theoretical<br>Total Resolution Tempco |  |  |  |
|--|--|--|--|
| Resolution                             | Tempco   |  |  |
| (% Nominal)                            | of Wire  |  |  |
| 0.083                                  | + 800 ppm/°C *   |  |  |
| 0.048                                  | + 800 ppm/°C *   |  |  |
| 0.040                                  | + 800 ppm/°C *   |  |  |
| 0.033                                  | + 800 ppm/°C *   |  |  |
| 0.031                                  | ±20 ppm/°C   |  |  |
| 0.028                                  | ±20 ppm/°C   |  |  |
| 0.025                                  | ±20 ppm/°C   |  |  |
| 0.020                                  | ±130 ppm/°C *  |  |  |
| 0.018                                  | ±130 ppm/°C *  |  |  |
| 0.016                                  | ±130 ppm/°C *  |  |  |
| 0.012                                  | ±20 ppm/°C   |  |  |
| 0.011                                  | ±20 ppm/°C   |  |  |
|  | Resolution           (% Nominal)           0.083           0.048           0.040           0.033           0.031           0.028           0.025           0.020           0.018           0.016           0.012 |  |  |

\* Lower tempco available as a special model.

### **Special Features**

| Center Tap     | CT |
|----------------|----|
| Linearity Tape | LT |
| Flatted Shaft  | FS |
| Shaft Lock     | SL |

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.

# **Multi-Turn Precision Potentiometer**

# Model 7246





#### MATCHING TURNS COUNTING DIALS

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

 CIRCUIT DIAGRAM
 NOTES

 (S) o
 (S) o

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.

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