

Series 62

## 2 Watt Multi-turn, Wirewound Potentiometer



### Description

A precise 10-turn potentiometer offering electrical operating characteristics comparable to units costing far more, Series 62 was designed specifically for the industrial instrumentation market. Series 62 opens new application areas for the inherent advantages of multi-turn potentiometer design. Based upon the setability and resolution of a quality ten-turn potentiometer, Series 62 includes better instrument control and settings for all types of electronic equipment.

### Features

- **Setability - 10 turns of resolution**
- **Stability - Temperature Coefficient of  $\pm 20$  ppm/ $^{\circ}\text{C}$**
- **Linearity range of  $\pm 0.25$  -  $\pm 0.50\%$**
- **Long life - 100,000 shaft rotations**

### Series 62 Electrical Specifications

#### Working Voltage

450 Volts maximum (power not to exceed rating)

#### Resistance Range

100 $\Omega$  to 100K $\Omega$ , standard

#### Resistance Tolerance

$\pm 5\%$  standard;  $\pm 3\%$ , special

#### Linearity-Absolute

100K $\Omega$  to 500 $\Omega$   $\pm 0.25\%$ , standard.

Less than 500 $\Omega$   $\pm 0.5\%$ . (% of total applied voltage)

#### Absolute Minimum Resistance

0.25% maximum or 0.5 whichever is greater

#### End Resistance

0.3% of total resistance or 1 $\Omega$  whichever is greater

#### Power Rating (Watts)

2 @ 25 $^{\circ}\text{C}$  derated to 0 @ 85 $^{\circ}\text{C}$

#### Electrical Rotation

3600 $^{\circ}$  +10 $^{\circ}$  -0 $^{\circ}$ , standard

Less than 10 turns, in 1 turn increments, special

#### Effective Rotation

3600 $^{\circ}$  nominal, standard

Less than 10 turns in 1 turn increments, special

#### Over-Travel

10 $^{\circ}$  maximum each end, standard

#### Noise

100 $\Omega$  maximum

#### Dielectric Withstanding Voltage

1000 Vac for 60 seconds @ ATM

#### Insulation Resistance

1000 Megohms minimum

#### Rated Temperature Coefficient

$\pm 20$  PPM/ $^{\circ}\text{C}$  wire for standard range of resistance values and linear outputs

### Series 62 Mechanical Specifications

#### Mechanical Rotation

3600 $^{\circ}$  +10 $^{\circ}$  -0 $^{\circ}$ , standard

Less than 10 turns in 1 turn increments, special

#### Stop Torque

3 lb. in. maximum

#### Maximum Speed of Rotation

60 RPM

#### Shaft End Play

0.015 in. (0.381mm) maximum

*Mechanical Specifications continued, next page*

**Bearings**

Sleeve bearings

**Housing**

Molded plastic

**Hardware**

Must be ordered separately.

- (a) Hex mounting nut, 3/8 in. (9.53mm)x 32 thread, 1/2 in. (12.7mm) across flats, 3/32 in. (2.38) thick.
- (b) Internal tooth lockwasher 11/16 in. (17.46mm) O.D. x .022 in. (.56mm) thick.

**Wiper**

Precious metal materials

**Shafts**

Brass, nickel-plated, standard  
Stainless-steel, special

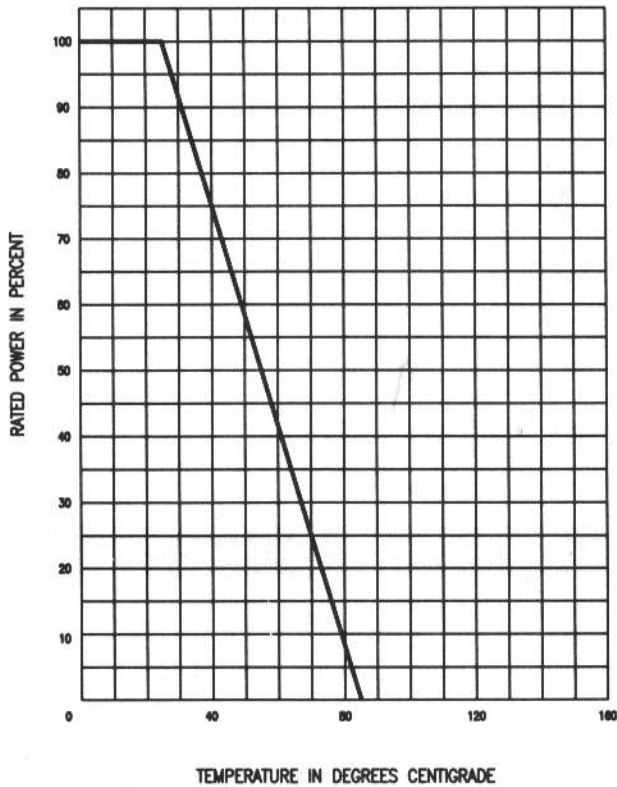
**Marking**

Unless otherwise specified, marking will be as follows; total resistance value, Customer's part number or Clarostat part number, EIA source and date code.

Figure 1

**Chart A**

**Power Derating Graph**



**Series 62 Operational Specifications**

**Operating Temperature Range**

-55° to 85°C

**Rotational Life**

100,000 shaft rotations

**Weight**

1.34 oz.

NOTE: SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Figure 2

**Chart B**

**Total Resolution In Ohms**

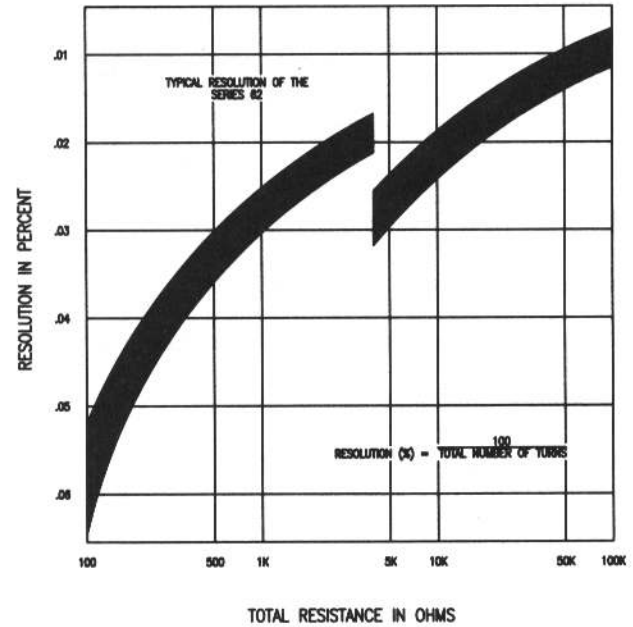
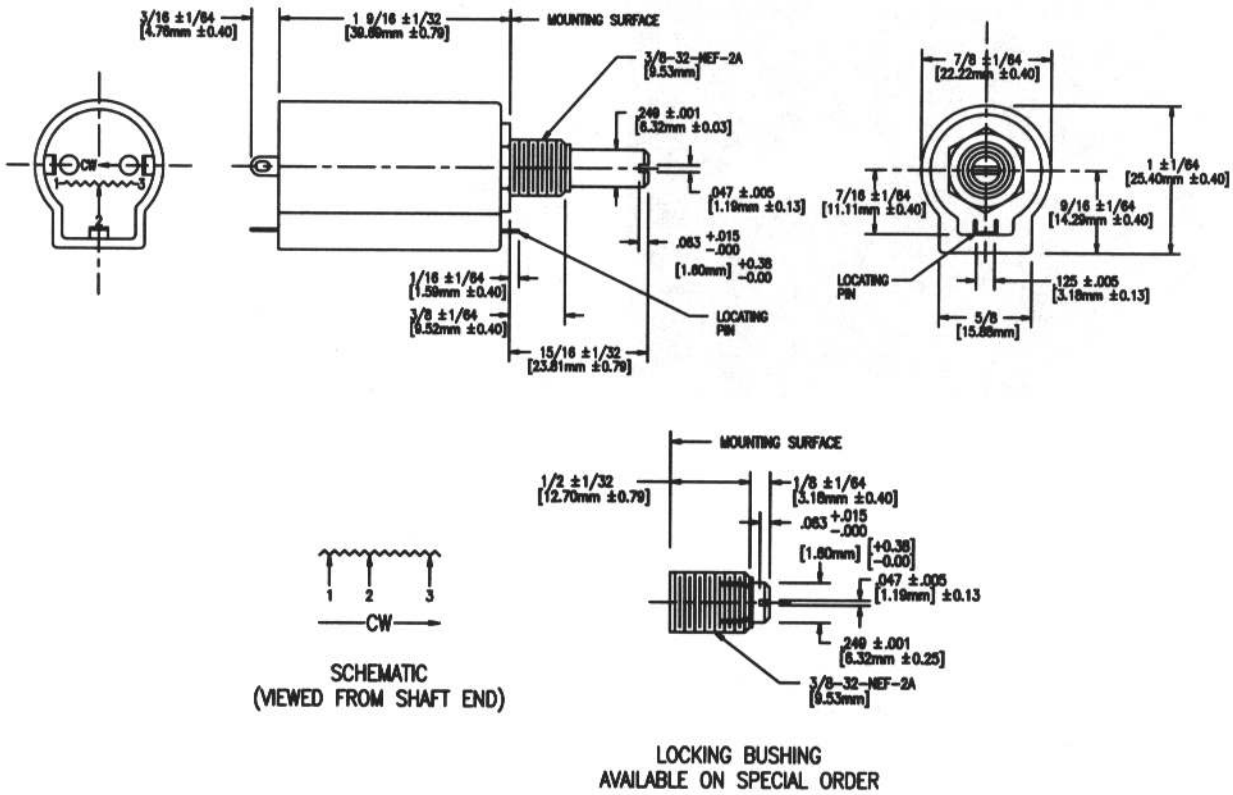


Figure 3  
Series 62 Dimensions



**Series 62 Standard Resistance Values**

Stock Values	Resolution %	Stock Values	Resolution %
100000	0.012	2500	0.022
50000	0.013	2000	0.023
30000	0.016	1000	0.030
25000	0.017	500	0.036
20000	0.019	250	0.038
10000	0.024	200	0.048
5000	0.026	100	0.062

**Series 62 How To Order**

Example: **62JA-100**

