

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 ± 20 ppm/ $^{\circ}$ C**
- **Linearity range of ± 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 Ω to 100K Ω , standard

Resistance Tolerance

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

Linearity-Absolute

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

Less than 500 Ω $\pm 0.5\%$. (% 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 Ω whichever is greater

Power Rating (Watts)

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

Dielectric Withstanding Voltage

1000 Vac for 60 seconds @ ATM

Insulation Resistance

1000 Megohms minimum

Rated Temperature Coefficient

± 20 PPM/ $^{\circ}$ 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

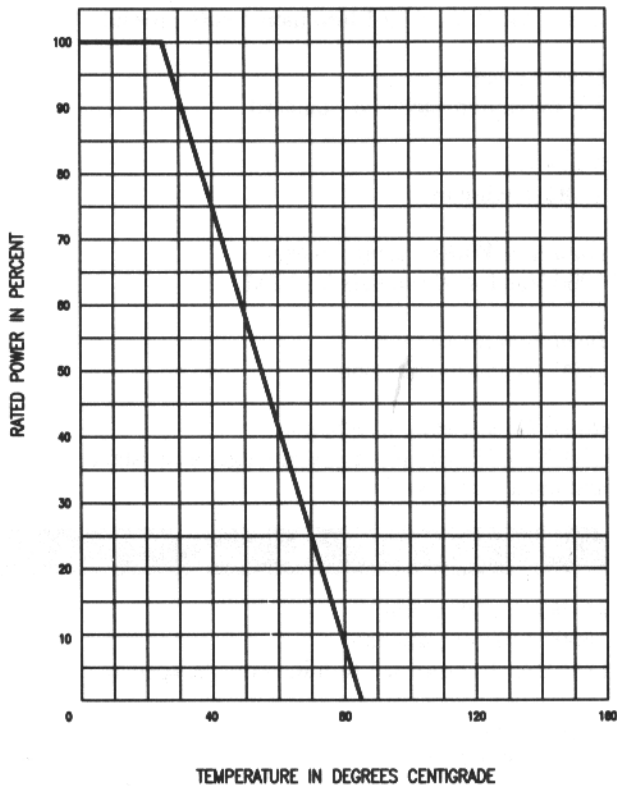
Marking

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

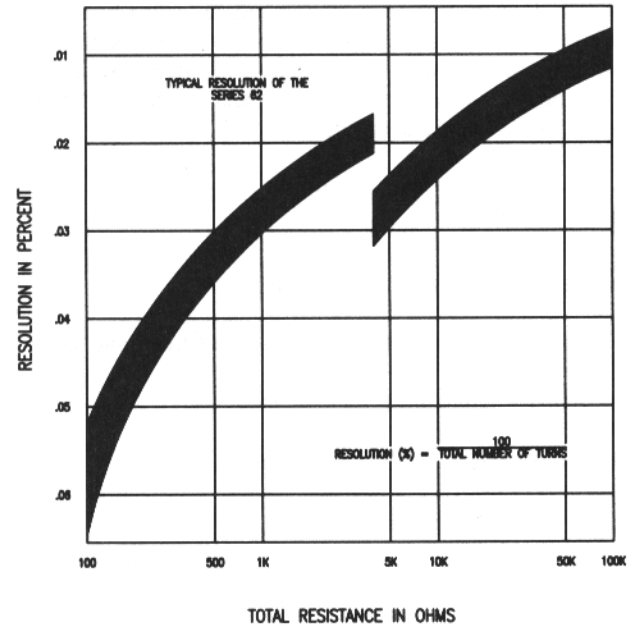
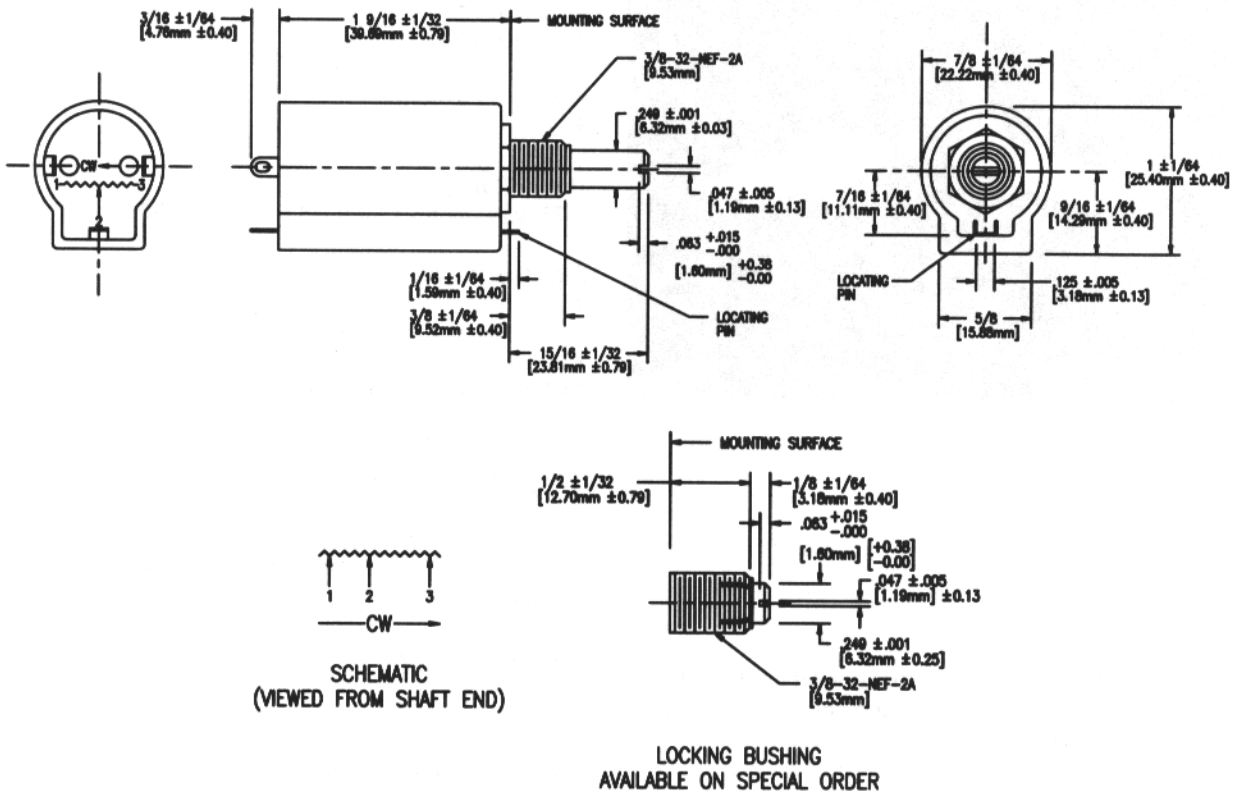


Figure 3
Series 62 Dimensions



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**

