

Series 48
1 1/8 in. Diameter, 2 Watt
Wirewound Potentiometers



Description

Series 48

1 1/8 in. dia., 2 watt, wirewound potentiometers

Also Available...

Series RA20

Military version of the 48 series meeting strict military standard MIL-R-19

Series A48

Pick-A-Shaft version of the 48 series

Series 50

4 watt power rating version of the 48 series

Features

- *Economical*
- *Versatile - various mounts, terminal & shaft configurations*
- *High torque available*
- *Shaft & mounting seals available*
- *Multiple gangs available*
- *Concentric shafts available*
- *Printed circuit terminals*
- *High voltage standoffs*
- *Non-metallic shaft*
- *Backlash construction*

Series 48 Electrical Specifications

Resistance Range

1 ohms to 50Kohm. Linear taper standard - log, reverse log available

Resistance Tolerance

+/-10% standard; +/-5% and +/-1% available

Power Rating

Single section: 2Watts @ 40°C; 0 @ 105°C
Additional sections: 1.5Watts @40°C; 0 @ 105°C

Watts/Degree

.0071 watt per degree of effective rotation maximum

Effective Rotation

280° +/-5° without switch; less than 280°, special;
260° +/- with switch

Electrical Rotation

300° +/-5° with or without switch

Tapers

90 ohms per degree maximum

Independent Linearity

+/-5% standard; +/-1 available

End Resistance

1 to 50 ohms - 0.3 ohms; 51 to 100 ohms - 0.5 ohms.
Over 100 ohms - 0.2% of total or 1 ohm, whichever is greater.

Dielectric Withstanding Voltage

1000 Vac for 60 seconds @ ATM.
450 Vac for 60 seconds @ 3.4 in. Hg.

Working Voltage (Max.)

310 Volts maximum

Switches

S.P.S.T., S.P.D.T., D.P.S.T. rotary

Location of tap and Tolerance

One available any position of effective rotation; tap tolerance +/- of total resistance. Specify electrical or angular position and limits.

Insulation Resistance

100 Megohms minimum

Operating Temperature Range

-55 °C to 105 °C

Mechanical Specifications on next page

Series 48 Mechanical Specifications

Mechanical Rotation

300° +/-5° with or without switch; 360° available

Stop Torque

8 lbs. in. maximum

Torque Range

0.5 to 6 oz in.; 15 oz. in. increase for switch actuation.

Locking type bushing: 25 oz. in. minimum with jam nut tightened to 10 lb. in.

Maximum Number of Sections

Two recommended, three available.

Weight

Single .077 lb. without switch.

Additional section 0.041 lb.; 0.87 lb with switch.

Hardware

- (a) Hex mounting nut, 3/8 in. (9.53mm) x 32 thread
1/2 in(12.7mm) across flats, 3/32 in (2.38mm) thick.
- (b) Internal tooth lockwasher 11/16 in. (17.46mm) O.D.
x 0.22 in (0.56mm) thick.
- (c) Jam hex nut 1/2 in. (12.7mm) across flats, 7/32 in.
(5.56mm) thick, supplied on locking type bushing.

Marking

Will appear on rear surface without switch. On periphery when switch is used. Unless otherwise specified, marking will consist of

- (a) Customer part number or State Electronics part number
- (b) EIA source and date code

Switch Options

Switch Type	Switch	Variations	Term Position	Torque Oz. In.
B-10	SPST	1A, 250V; 3A125V (ac or dc)	1-2	12
B-13	SPST	15A. 10Vdc	1-4	16
B-20	DPST	1A, 250V, 3A125V (ac or dc)	1-2-3-4	16
B-21	DP	1 pole on, 1 pole off 1A, 250V, 3A125V	1-2-3-4	16
B-23	DPST	15A. 10V (dc only)	1-2-3-4	16
B-30	SPDT	1A, 250V; 3A125V (ac or dc)	2-3-4	16

Figure 1. Power Derating Graph for Series 48

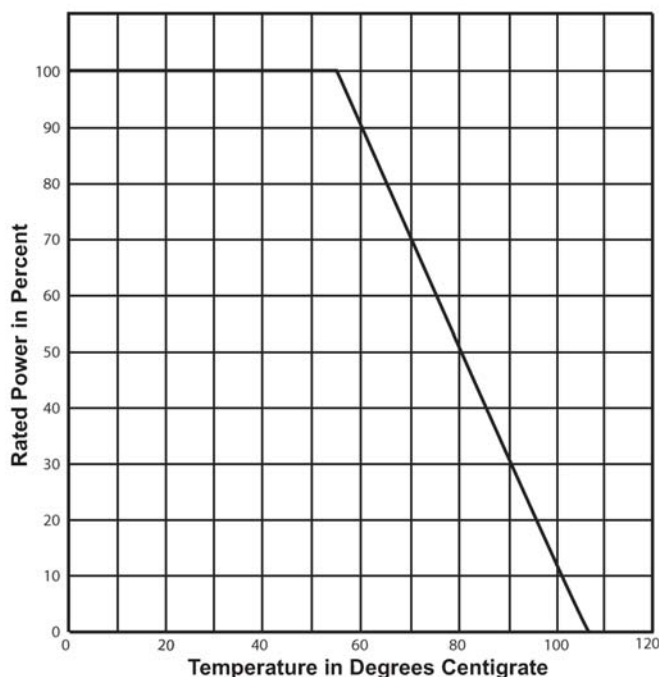
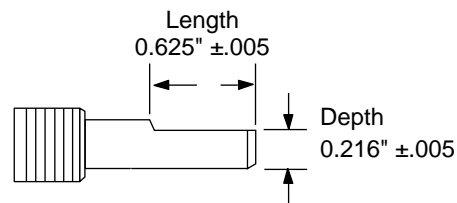


Figure 2. Resolution Graph

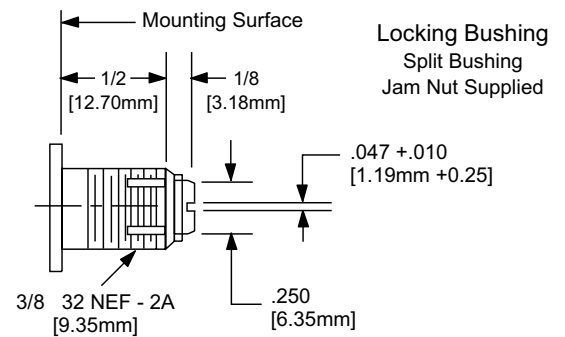
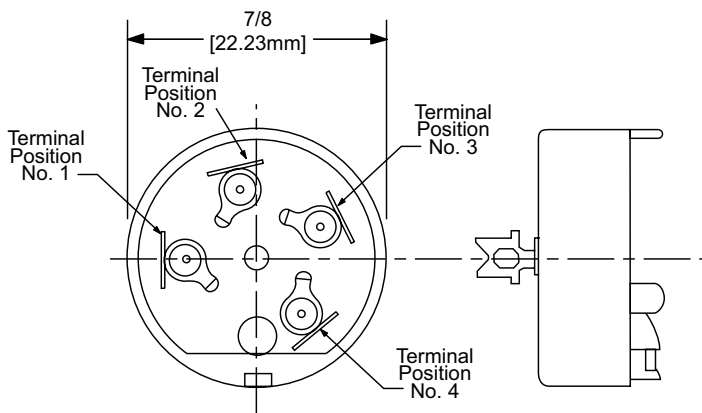
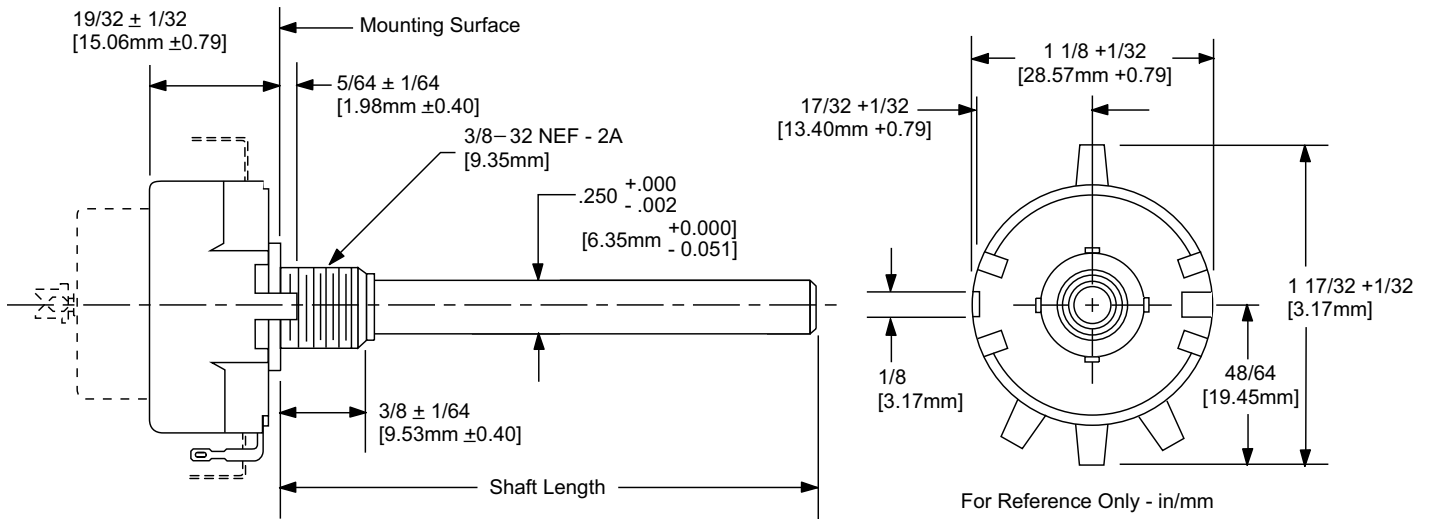


Figure 3. Flatted Shaft Option



Notes:

1. Flatted Shaft is not available with Locking or Shaft Seal Options
2. Flat will extend to within 0.031 (0.79) of mounting bushing where shaft length will not permit standard flat.



Series 48 - How to Order

Part Number Example: **WW48-N-B10-S040-503A**

WW48	N	A	S	XXX	XXX	A
Series		Switch	Shaft Style	Shaft Length From Mounting Surface (FMS)	Resistance	Shaft Style
		A = None B10 = SPST 1A, 250V B13 = SPST 15A, 10V B20 = DPST 1A, 250V B21 = DP B23 = DPST 15A, 10V B30 = SPDT 1A, 250V	S = Slotted F = Flatted P = Plain Round X = Custom	032 = 1/2" 040 = 5/8" 056 = 7/8" 100 = 1" 108 = 1 1/8" 132 = 1 1/2" 148 = 1 3/4" 200 = 2"	1-50K ohms	A = Linear C = Log E = Rev. Log
Shaft & Bushing						
N = Standard						
L = Locking						
S = Panel and shaft seal (Standard)						
T = Panel and shaft seal (Locking)						



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