



## Features

- Lower profile than Model 6639
- Essentially infinite resolution
- Excellent rotational life
- High quality, rugged construction
- Recommended for HMI applications
- Cost and space saving

- Optional anti-rotation lug
- Optional mechanical stop

## 6630 - Precision Potentiometer

### Electrical Characteristics<sup>1</sup>

Standard Resistance Range.....	1K to 20K ohms
Total Resistance Tolerance.....	±15 %
Independent Linearity.....	±2.0 %
Effective Electrical Angle.....	340 ° +3 °
End Voltage.....	0.5 % maximum
Output Smoothness.....	0.1 %
Dielectric Withstanding Voltage (MIL-STD-202, Method 301)	
Sea Level.....	750 VAC minimum
Power Rating (Voltage Limited By Power Dissipation or 300 VAC, Whichever is Less)	
+70 °C.....	1.0 watt
+125 °C.....	0 watt
Insulation Resistance (500 VDC).....	10 megohms minimum
Resolution.....	Essentially infinite

### Environmental Characteristics<sup>1</sup>

Operating Temperature Range.....	-40 °C to +125 °C
Storage Temperature Range.....	-65 °C to +125 °C
Temperature Coefficient.....	±500 ppm/°C maximum
Vibration.....	15 G
Wiper Bounce.....	0.1 millisecond maximum
Total Resistance Shift.....	±5 %
Voltage Ratio Shift.....	±0.5 %
Shock.....	50 G
Wiper Bounce.....	0.1 millisecond maximum
Total Resistance Shift.....	±5 %
Voltage Ratio Shift.....	±0.5 %
Load Life.....	1,000 hours, 1 watt
Total Resistance Shift.....	±10 %
Rotational Life (No Load).....	5,000,000 shaft revolutions
Total Resistance Shift.....	±10 % maximum
Moisture Resistance (MIL-STD-202, Method 106)	
Total Resistance Shift.....	±15 %
IP Rating.....	IP 40

### Mechanical Characteristics<sup>1</sup>

Mechanical Angle.....	Continuous, Stops (340 ° +8 °, -0 °) available
Torque (Starting & Running) <sup>2</sup> .....	0.40 N-cm (0.5 oz.-in.) max.
Mounting.....	170-200 N-cm (15-18 lb.-in.) maximum
Shaft Runout.....	0.13 mm (0.005 in.) T.I.R.
Shaft End Play.....	0.13 mm (0.005 in.) T.I.R.
Shaft Radial Play.....	0.13 mm (0.005 in.) T.I.R.
Backlash.....	0.1 ° maximum
Weight.....	18 gm (6639 Servo Mount), 24 gm (6639 Bushing Mount)
Terminals.....	Axial and radial solder lugs
Soldering Condition.....	Recommended hand soldering using Sn95/Ag5 no clean solder, 0.025" wire diameter. Maximum temperature 399°C (750 °F) for 3 seconds. No wash process to be used with no clean flux.
Marking.....	Manufacturer's name and part number, resistance value and tolerance, linearity tolerance, wiring diagram, and date code.
Ganging (Multiple Section Pots).....	1 cup maximum
Hardware.....	One lockwasher (H-37-2) and one mounting nut (H-38-2) is shipped with potentiometer.

<sup>1</sup> At room ambient: +25 °C nominal and 50 % relative humidity, except as noted.

<sup>2</sup> 2.82 N-cm (4.0 oz.-in.) max. at -40 °C.

### Product Dimensions

#### Axial Leaded



#### Radial Leaded



#### Flatted Shaft



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$



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## Panel Thickness Dimensions



Anti-rotation pin hole is shown at six o'clock position for reference only. The actual location is determined by the customer's application. Refer to the front view of the potentiometer to see the location of the optional A/R pin.

Panel thickness and hole diameters are recommended for best fit. However, customers may adjust the dimensions to suit their specific application.

DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$  TOLERANCES:  $\pm \frac{0.127}{(.005)}$

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## How To Order

6 6 3 0 S 0 D - B 2 8 - A 1 0 2

MODEL DESIGNATOR	
Code	Description
6630	Precision Potentiometer

BUSHING DESIGNATOR	
Code	Description
S	3/8 " D x 3/8 " L Threaded

MECHANICAL STOPS	
Code	Description
0	Without
1	With

ANTI-ROTATION LUG	
Code	Description
A	A/R Lug
D	None

SHAFT STYLE	
Code	Description
B	1/4 " Dia. Slotted End
C	1/4 " Dia. Flatted End

RESISTANCE CODE	
Code	Value in Ohms
102	1,000
202	2,000
502	5,000
103	10,000
203	20,000

TERMINAL CONFIGURATION	
Code	Description
A	Axial, Solder Lug
R	Radial, Solder Lug

SHAFT LENGTH DESIGNATOR	
Code	Description
28	7/8 " FMS Long