



BOURNS®

Features

- Snap-in or bushing mount options
- Standard resistance values available
- Digital dial provides excellent readability

3610 - 10-Turn Precision Knobpot®

Electrical Characteristics¹

| | |
|---|---|
| Standard Resistance Range..... | 100 to 100 K ohms |
| Total Resistance Tolerance..... | ±5 % |
| Effective Electrical Angle..... | 3600 ° nominal |
| Absolute Minimum Resistance..... | 1 ohm or 0.1 % maximum (whichever is greater) |
| Noise | 100 ohms ENR maximum |
| Dielectric Withstanding Voltage (MIL-STD-202, Method 301) | |
| Sea Level | 1,000 VAC minimum |
| 70,000 Feet..... | 400 VAC minimum |
| Power Rating (Voltage Limited By Power Dissipation or 385 VAC, Whichever is Less) | |
| +25 °C..... | 1.5 watts |
| +85 °C..... | 0 watt |
| Insulation Resistance (500 VDC)..... | 1,000 megohms minimum |
| Resolution | See recommended part numbers |
| Accuracy (Correlation of Dial Readout to Voltage Ratio Output) | ±0.5 % voltage ratio |
| Repeatability of Dial Readout..... | ±0.1 % voltage ratio |

Environmental Characteristics¹

| | |
|---|--------------------------|
| Operating Temperature Range | +1 °C to +85 °C |
| Storage Temperature Range | -25 °C to +85 °C |
| Temperature Coefficient Over Storage Temperature Range2 | ±50 ppm/°C maximum/wire |
| Vibration | 10 G |
| Wiper Bounce..... | 0.1 millisecond maximum |
| Total Resistance Shift | ±2 % maximum |
| Voltage Ratio Shift | ±0.2 % maximum |
| Shock | 50 G |
| Wiper Bounce..... | 0.1 millisecond maximum |
| Total Resistance Shift | ±2 % maximum |
| Voltage Ratio Shift | ±0.2 % maximum |
| Load Life..... | 1,000 hours, 1.5 watts |
| Total Resistance Shift | ±2 % maximum |
| Rotational Life (No Load) | 50,000 shaft revolutions |
| Total Resistance Shift | ±2 % maximum |
| Moisture Resistance (MIL-STD-202, Method 103, Condition B) | |
| Total Resistance Shift | ±2 % maximum |
| IP Rating..... | IP 60 |

Mechanical Characteristics¹

| | |
|-------------------------|--|
| Stop Strength | 14 N-cm (20 oz.-in.) minimum |
| Mechanical Angle..... | 3600 ° +20 °, -0 ° |
| Torque (Starting) | 0.71 to 4.94 N-cm (1.0 to 7.0 oz.-in.) maximum |
| Torque (Running) | 4.94 N-cm (7.0 oz.-in.) maximum |
| Variation..... | 0.71 N-cm (1.0 oz.-in.) maximum |
| Backlash..... | 1.0 ° maximum |
| Weight | Approximately 20 gm |
| Terminals | Gold-plated J-Hooks |
| Soldering Condition | |
| Manual Soldering | 96.5Sn/3.0Ag/0.5Cu solid wire or no-clean rosin cored wire; 370 °C (700 °F) max. for 3 seconds |
| Wave Soldering..... | 96.5Sn/3.0Ag/0.5Cu solder with no-clean flux; 260 °C (500 °F) max. for 5 seconds |
| Wash processes | Not recommended |
| Markings..... | Manufacturer's name and part number, resistance value and tolerance, wiring diagram, and date code |

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

Recommended Part Numbers

| Part Number | Resistance (Ω) | Resolution (%) |
|--------------------|----------------|----------------|
| 3610S-1-102 | 1,000 | .035 |
| 3610S-1-502 | 5,000 | .027 |
| 3610S-1-103 | 10,000 | .022 |

| Part Number | Resistance (Ω) | Resolution (%) |
|--------------------|----------------|----------------|
| 3610S-2-102 | 1,000 | .035 |
| 3610S-2-502 | 5,000 | .027 |
| 3610S-2-103 | 10,000 | .022 |

BOLDFACE LISTINGS ARE IN STOCK AND READILY AVAILABLE THROUGH DISTRIBUTION.

FOR OTHER OPTIONS AND RESISTANCE VALUES, PLEASE CONSULT THE FACTORY.

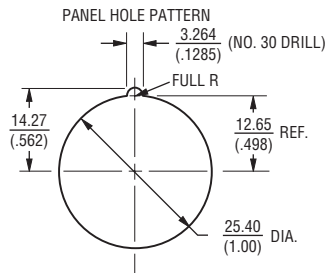
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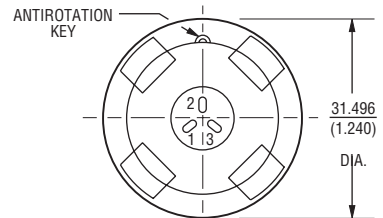
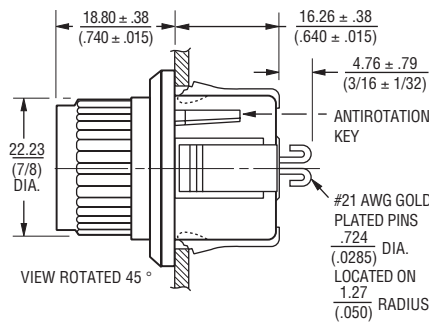
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Product Dimensions

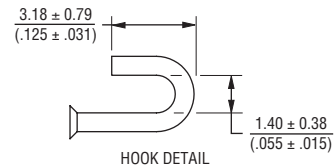
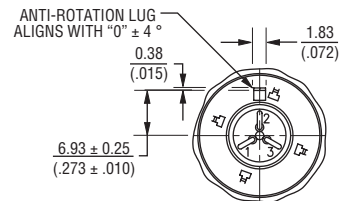
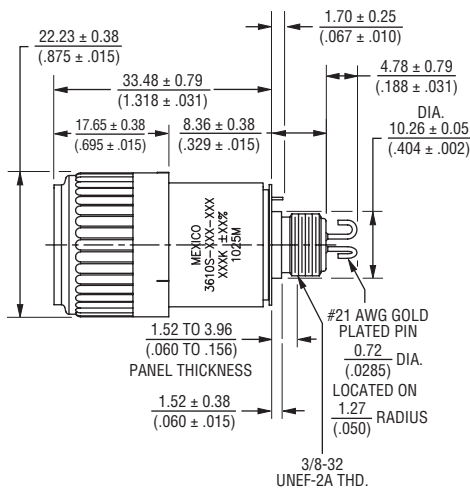
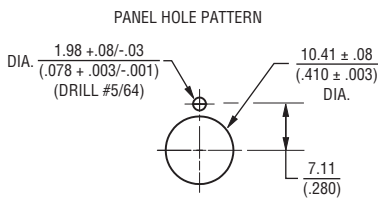
3610S-1



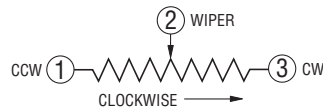
- NOTES:
 1. SNAP-IN MOUNTING CUP ACCOMMODATES PANEL THICKNESS
 $\frac{.64}{.025}$ THRU $\frac{1.98}{.078}$ (NO. 22GA)
 $\frac{3.18}{.125}$ THRU NO. 14GA AND



3610S-2



TOLERANCES: EXCEPT WHERE NOTED
 DECIMALS: .XX ± $\frac{.25}{.010}$, .XXX ± $\frac{.13}{.005}$
 FRACTIONS: ±1/64
 DIMENSIONS: $\frac{MM}{(IN.)}$



REV. 08/10

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