

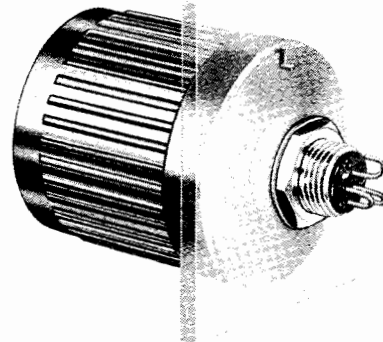
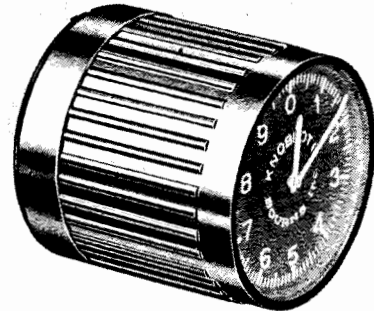


Model 3640
KNOBPOT® Senior Potentiometer
1¼" Diameter 10-Turn Bushing Mount
WIREWOUND ELEMENT

OBSOLETE 2001 Size

FEATURES

- New precision potentiometer concept:
 Potentiometer, knob, and readout dial in one package requiring less front panel space than most dials alone — 1¼" diameter by 1½" long.
 Requires no back panel space.
- Readability, Repeatability, and Phasing:
 New clock face readout provides excellent readability and setting accuracy previously available only in large diameter dials.
 Repeatability within $\pm 0.05\%$ voltage ratio.
 Phasing of dial readout to potentiometer output performed at factory with accuracy of $\pm 0.1\%$.
- Versatility: Customized dial face marking and color combinations available.
- Mounting:
 Only two drill holes required. Simple installation — place unit in drilled panel and secure with lockwasher and nut.
- Constructed and monitored for reliability:
 Bourns exclusive SILVERWELD® multi-wire termination.
 100% contact pressure control insures high mechanical life.
 Self-locking feature provides excellent stability during vibration and shock.
 Sealed to pass MIL-STD-202, Method 103 Humidity.
 Performance guaranteed by Bourns Reliability Assurance Program.



STANDARD RESISTANCES

Resistance (Ohms)	Part Numbers*	Resolution (percent)
100	3640S-1-101	.042
200	3640S-1-201	.035
500	3640S-1-501	.026
1,000	3640S-1-102	.021
2,000	3640S-1-202	.017
5,000	3640S-1-502	.014
10,000	3640S-1-103	.014

Resistance (Ohms)	Part Numbers*	Resolution (percent)
20,000	3640S-1-203	.011
50,000	3640S-1-503	.008
100,000	3640S-1-104	.007
200,000	3640S-1-204	.006
250,000	3640S-1-254	.005
500,000	3640S-1-504	.004

*The last three or four digits of the part number represent the resistance in standard code.

Model 3640 KNOBPOT® Senior Potentiometer

SPECIFICATIONS

ELECTRICAL CHARACTERISTICS

Resistance Range	100 ohms to 500K ohms
Resistance Tolerance*	±3%
Accuracy* (correlation of dial reading to output)	
100 & 200Ω	±0.20% Voltage Ratio
500 to 5KΩ	±0.15% Voltage Ratio
10K to 20KΩ	±0.12% Voltage Ratio
50K to 500KΩ	±0.10% Voltage Ratio
Repeatability	±0.05% Voltage Ratio
Linearity	See Accuracy
Resolution	See standard resistance table
Effective Electrical Angle*	3600° nominal
Absolute Minimum Resistance*	1.0 ohm or 0.1%, whichever is greater
Noise*	100 ohms maximum
Power Rating	
25°C	2.5 watts
85°C	0 watts
Dielectric Strength	MIL-R-12934
Sea Level	1000 volts AC minimum
70,000 feet	250 volts AC minimum
Insulation Resistance, 500 Volts DC*	1000 megohms minimum

ENVIRONMENTAL CHARACTERISTICS

Operating Temperature Range	-65 to +85°C
Temperature Coefficient of Wire	20 ppm/°C maximum

Humidity	MIL-STD-202, Method 103
Vibration	MIL-R-12934, 10G
Wiper Bounce	0.1 millisecond maximum
Wiper Shift	0.2% maximum
Shock	MIL-R-12934, 50G
Wiper Bounce and Wiper Shift	Same as Vibration
Load Life	MIL-R-12934, 1000 hours
Resistance Shift	2.0% maximum
Sand and Dust	MIL-E-5272
Fungus	MIL-E-5272
Salt Spray	MIL-R-12934

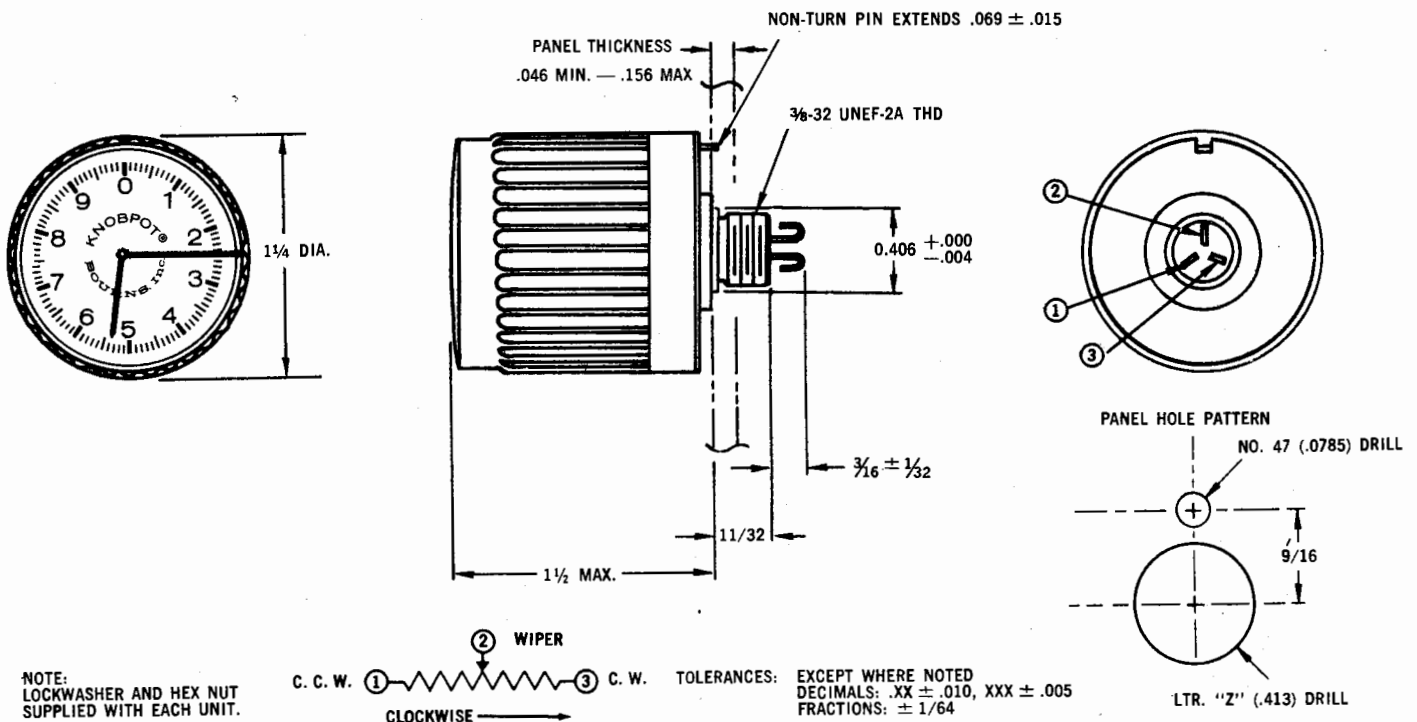
MECHANICAL AND PHYSICAL CHARACTERISTICS

Mechanical Angle*	3600°C (+10°, -0°)
Rotational Life	200,000 shaft revolutions
Stop Strength	48 oz.-in. minimum
Torque*	
Starting	1.0 to 10.0 oz.-in. maximum
Running	10.0 oz.-in. maximum
Weight	Approximately 1.75 oz.
Terminals	Gold-plated Hooks
Marking*	Manufacturer's name, part number, resistance value and date code

NOTES

- * 100% or statistical sampling performed to insure highest quality.
- Specifications are subject to change without notice.

3640



BOURNS

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