

# MODELS B, D & E

## 3-5/16" Diameter

### Multiturn

### Wirewound

### Precision Potentiometer



ELECTRICAL	B / BSP	D / DSP	E / ESP
	15 TURN	25 TURN	40 TURN
Resistance Range, Ohms	40 to 2 Meg	60 to 3.3 Meg	125 to 5.3 Meg
Standard Resistance Tolerance	±5%	±5%	±5%
Minimum Practical Resistance Tolerance	±1%	±1%	±1%
Independent Linearity	±0.50%	±0.50%	±0.50%
Input Voltage, Maximum (Not to Exceed Power Rating)	1,000Vdc	1,000Vdc	1,000Vdc
Power Rating, Watts (Derating to 0 at 85°C)	10 at 40°C	15 at 40°C	20 at 40°C
Dielectric Strength	1,000V rms	1,000V rms	1,000V rms
Insulation Resistance, Minimum	100 Megohms	100 Megohms	100 Megohms
Actual Electrical Travel, Nominal	5,400° +4° -0°	9,000° +4° -0°	14,400° +4° -0°
End Voltage, Maximum	<0.50% of Input Voltage	<0.50% of Input Voltage	<0.50% of Input Voltage
Minimum Practical Independent Linearity:			
<100 Ohms	±0.10%	±0.05%	±0.05%
100 Ohms to 999 Ohms	±0.05%	±0.05%	±0.05%
≥1K Ohms	±0.035%	±0.035%	±0.035%
Noise: 500 Ohms, Maximum, RT =	≤8K	≤13K	≤30K
250 Ohms, Maximum, RT =	>8K	>13K	>30K
Tap Tolerance: ±1.5°, RT =	<70 Ohms	<100 Ohms	<150 Ohms
±1.0°, RT =	≥70 Ohms	≥100 Ohms	≥150 Ohms
Temperature Coefficient: 800ppm/°C, RT =	40 Ohms to 265 Ohms	60 Ohms to 440 Ohms	125 Ohms to 700 Ohms
20ppm/°C, RT =	300 Ohms to 8K, >142K	500 Ohms to 13.5K, >230K	800 Ohms to 30K, >340K
130ppm/°C, RT =	8.6K to 128K	14K to 213K	34K to 340K

ENVIRONMENTAL (MIL-R-12934)	B / BSP	D / DSP	E / ESP
	15 TURN	25 TURN	40 TURN
Temperature Cycling, -65° to +85°C	5% ΔR	5% ΔR	5% ΔR
Low Temperature Exposure, 24 hrs. at -65°C	5% ΔR	5% ΔR	5% ΔR

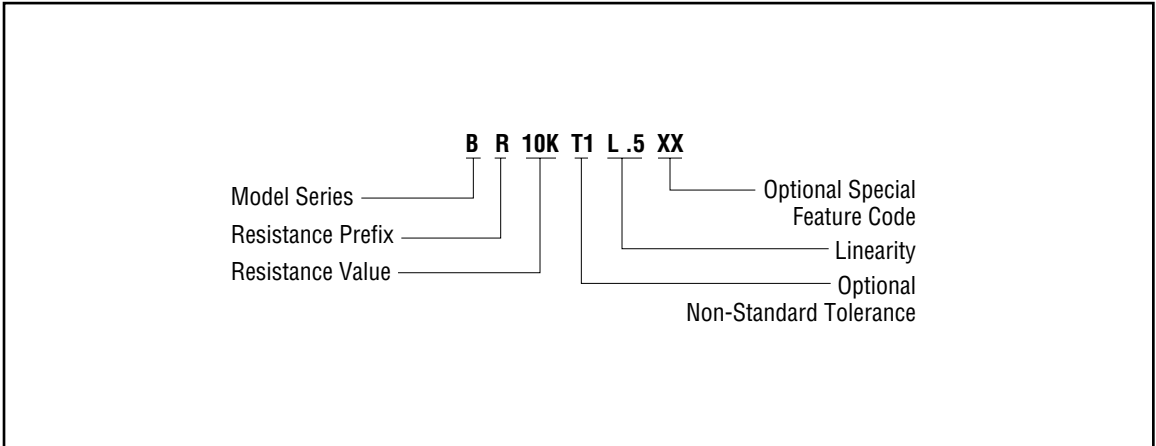
Specifications subject to change without notice.

MECHANICAL	B / BSP	D / DSP	E / ESP
	15 TURN	25 TURN	40 TURN
	Total Mechanical Travel	5,400° +4° -0°	9,000° +4° -0°
Number of Gangs, Maximum	3	1	1
Weight, Nominal Per Gang	13 oz.	17 oz.	21 oz.
Static Stop Strength	1.150 oz.-in.	730 oz.-in.	730 oz.-in.
Backlash, Maximum	0.2°	0.2°	0.2°
Shaft End Play, Maximum	0.007" / 0.005"	0.016" / 0.007"	0.016" / 0.007"
Shaft Runout, T.I.R., Maximum	0.0005" / 0.001"	0.002"	0.002"
Pilot Diameter Runout, T.I.R., Maximum	0.002" / 0.0015"	0.002"	0.002"
Lateral Runout, T.I.R., Maximum	0.003" / 0.0065"	0.003" / 0.004"	0.003" / 0.004"
Start/Run Torque, Maximum	2.7 / 2.0 oz.-in.	3.5 / 2.5 oz.-in.	3.5 / 2.5 oz.-in.

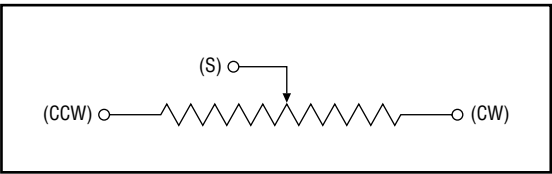
**SPECIAL FEATURE CODES**

Center Tap	CT
Linearity Tape	LT
Rear Shaft Extension	RS
Flatted Shaft	FS
Slotted Shaft	SS

**ORDERING INFORMATION**



**CIRCUIT DIAGRAM**



**NOTES**

Metric equivalents, based on 1 inch = 25.4mm are rounded to the same number of significant figures as in the original English units and are provided for general information only.

Tolerances unless otherwise specified:  
Linear = ± .01 inches (.25mm)  
Angular = ± 2 degrees

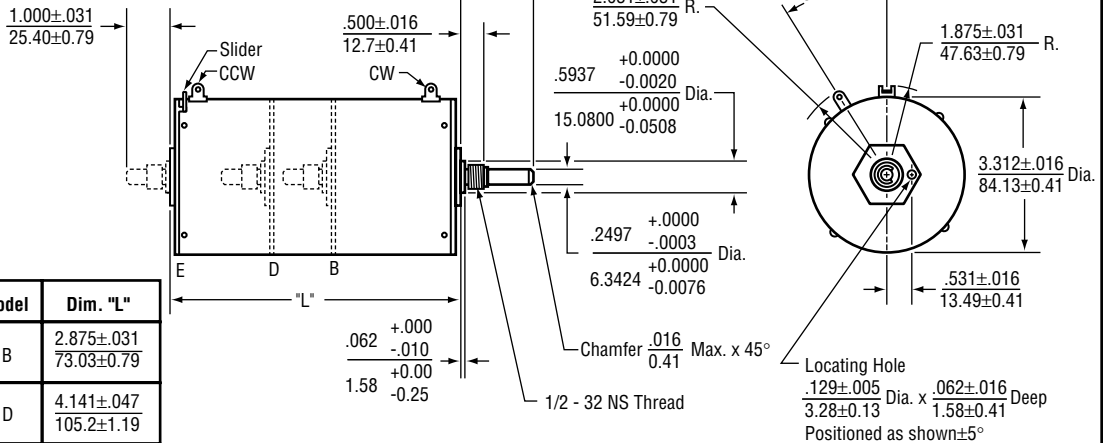
**DIMENSIONS**

INCH  
mm

**THIRD ANGLE PROJECTION**

## OUTLINE DIMENSIONS (Inch/mm)

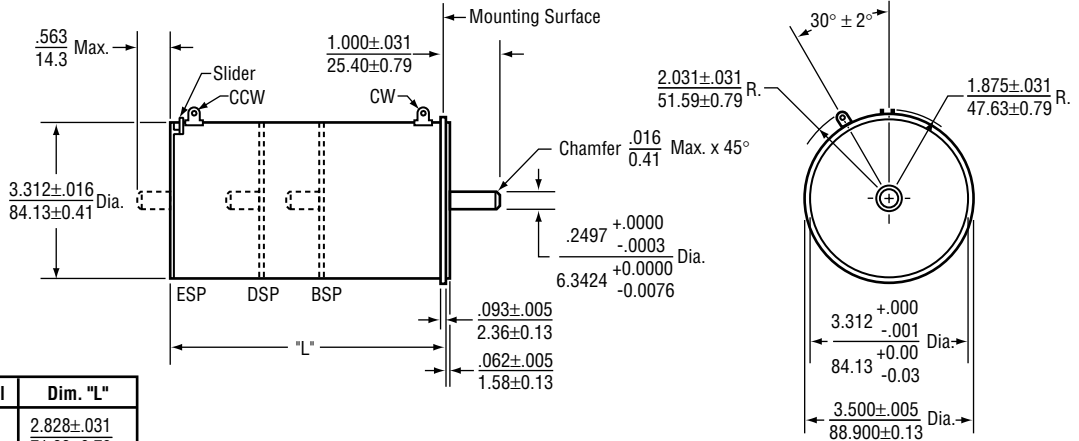
### Models B, D & E Bushing Mount with Sleeve Bearing



Model	Dim. "L"
B	2.875±.031 73.03±0.79
D	4.141±.047 105.2±1.19
E	6.016±.047 152.8±1.19

## OUTLINE DIMENSIONS (Inch/mm)

### Models BSP, DSP & ESP Servo Mount with Ball Bearing



Model	Dim. "L"
BSP	2.828±.031 71.83±0.79
DSP	4.062 103.2 Max.
ESP	5.937 150.8 Max.