

Position Measurement Sensor  
F78S, F78C, F78B, F78E

## Standard Precision MKV Potentiometers



Our line of Standard Precision MKV Potentiometers offer a cost effective way of obtaining high accuracy, long life position feedback. New England Instrument has many years of experience in successfully providing high reliability/high performance products to the military and aerospace industries and continues to expand that technical capability to the low cost/high performance industrial and commercial markets.

### APPLICATIONS

Value Positioning  
Panel Controls  
Instrumentation  
Missile Controls

### INDUSTRY

Aerospace  
Military  
Commercial  
Industrial



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Sensor Systems

# Position Measurement Sensor F78S, F78C, F78B, F78E

## Standard Precision MKV Potentiometers

### SPECIFICATIONS

#### MECHANICAL

Mechanical Travel:	360°
Mounting Type:	Bushing, Servo
Bearing Type:	Sleeve, Ball
Mounting Thread:	3/8-32NEF, 1/4-32NEF
Stop Strength (nominal):	n/a
Weight (max):	16 grams
Life Expectancy (cycles):	10mm - sleeve, 30mm - ball bearing
Torque (oz-in max):	0.5 - ball, 1.0 - sleeve
End Play (max):	0.005
Shaft Diameter (inches):	1/8 or 1/4

#### ELECTRICAL

Independent	
Linearity-Standard:	±1.0%, ±0.5%, ±0.25%*
Total Resistance (ohms) (Including Specials):	500 to 200k
Resistance	
Tolerance-Standard:	±10%
Theoretical Electrical Travel:	340°
Power Rating @ 70°C (watts):	1.0
Output Smoothness per MIL-R-39023:	0.5%, 0.25%, 0.15%
End Voltage (max) (% of total applied voltage):	1.0%
Dielectric Withstanding Voltage (RMS):	750
Insulation Resistance (min):	1000 megohms
Resolution (virtually infinite):	yes

#### ENVIRONMENTAL

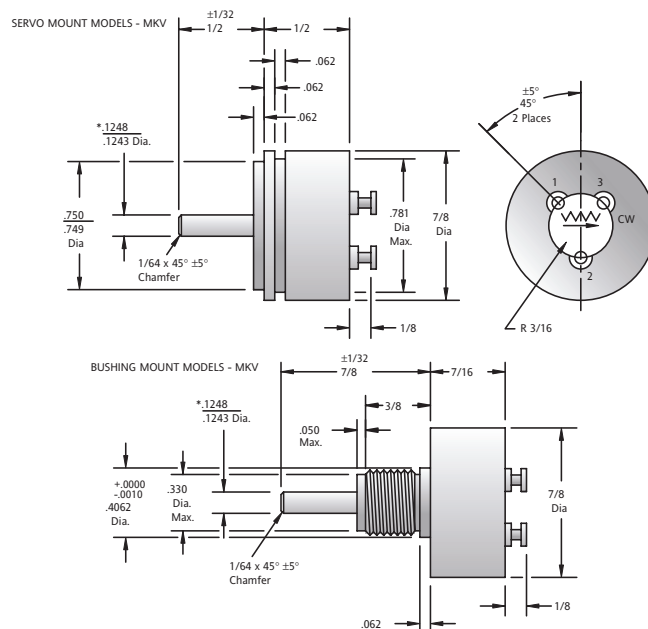
Shock:	per MIL-STD-202
Vibration:	per MIL-STD-202
Temperature Range (operational):	-65°C to +125°C
Temperature Range (storage):	-65°C to +125°C

#### Unless Otherwise Specified

Decimal Dimensions:	±0.005
Fractional Dimensions:	±1/64

\* Consult Factory for custom OEM configurations.

### DIMENSIONS



### ORDERING INFORMATION

#### F78S, F78C, F78B, F78E

F78S - A 103

Shaft Diameter  
Blank-1/8" MKV  
B1-1/4" MKV  
except F78E

Standard Resistances

500	=	501
1,000	=	102
2,000	=	202
5,000	=	502
10,000	=	103
20,000	=	203
50,000	=	503
100,000	=	104

Linearity:

A	=	±1.0%
B	=	±0.5%
C	=	±0.25%

Type Number

F78S = Servo w/Ball bearing  
F78C = Servo w/Sleeve bearing  
F78B = Bushing 3/8-32 w/Sleeve bearing  
F78E = Bushing 1/4-32 w/Sleeve bearing



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Sensor Systems

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