

Standard Precision MKV Potentiometers

Honeywell

Position Measurement Sensor

F78S, F78C, F78B, F78E

330
Dia
Max

1248
1243
Dia

4062 $\pm \frac{.0000}{.0010}$
Dia

.050
Max

3/16 R

7/8 $\pm 1/32$

7/16

3/8

1/4 $\pm 5^\circ \pm 5^\circ$
Chamfer

.062

1/2 $\pm 1/32$

1/2

.062

.062

.062

48
43
Dia

1/6 $\times 45^\circ \pm 5^\circ$
Chamfer

SPACE AGE SENSORS FOR DOWN TO EARTH NEEDS



FEATURES

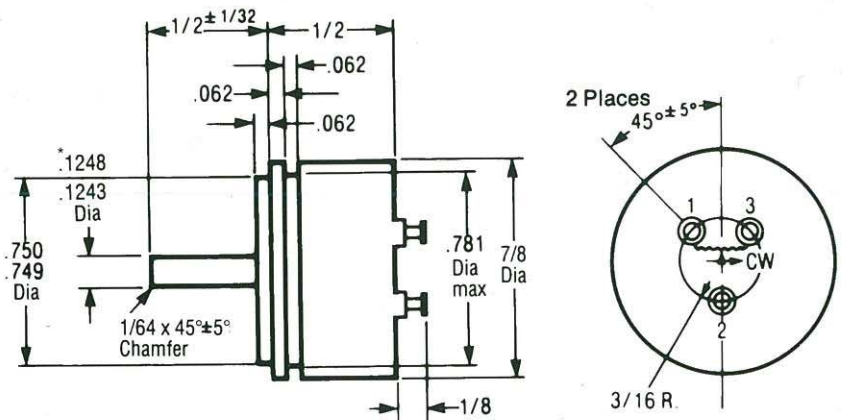
- NEI's conductive plastic RESISTOFILM®
- Precious metal contacts
- Stainless steel shafts
- Molded housings
- Solderable terminals
- Anodized aluminum mounting plates
- Stainless steel ball bearings (F78S only)

OPTIONS

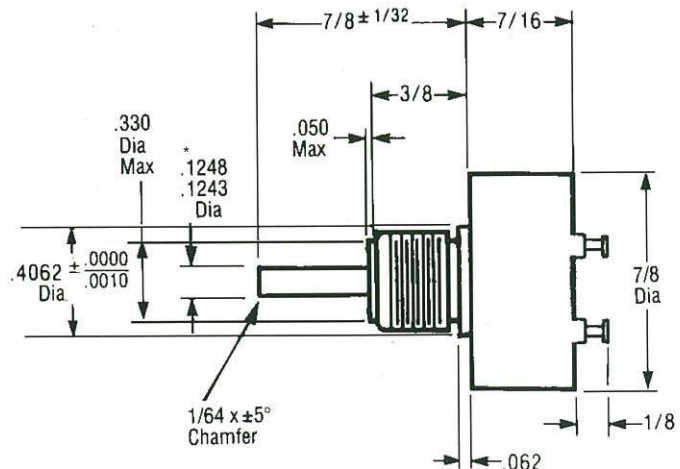
(CONTACT FACTORY)

- Shaft extension up to 2"
- Shaft flat, slot
- Electrical angle
- Low torque (F78S) down to 0.2 oz-in min
- High torque (F78B, F78E) up to 6 oz-in max
- Resistance tolerance to $\pm 5.0\%$
- Anti-rotation pin (F78B, F78E)

SERVO MOUNT MODELS-MKV



BUSHING MOUNT MODELS-MKV



Unless otherwise specified:

Decimal dimensions ± 0.005
Fractional dimensions $\pm 1/64$

*0.2498/0.2493 Diameter shaft available in MKV (except F78E)



TYPE NUMBER

F78S

F78C

F78B

F78E

Electrical Parameters

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

Mechanical Parameters

Mechanical Travel	360°	360°	360°	360°
Mounting Type	servo	servo	bushing	bushing
Bearing Type	ball	sleeve	sleeve	sleeve
Mounting Thread	n/a	n/a	3/8-32 NEF	1/4-32 NEF
Stop Strength (nominal)	n/a	n/a	n/a	n/a
Weight (max)	16 grams	16 grams	16 grams	16 grams
Life Expectancy (cycles)	20,000,000	10,000,000	10,000,000	10,000,000
Torque (oz-in max)	0.5	1.0	1.0	1.0
End Play (max)	0.005	0.005	0.005	0.005
Shaft Diameter (inches)	1/8 or 1/4	1/8 or 1/4	1/8 or 1/4	1/8

Environmental Data

Shock	per MIL-STD-202	per MIL-STD-202	per MIL-STD-202	per MIL-STD-202
Vibration	per MIL-STD-202	per MIL-STD-202	per MIL-STD-202	per MIL-STD-202
Temperature Range (operational)	-65°C to + 125°C	0°C to + 125°C	0°C to + 125°C	0°C to + 125°C
Temperature Range (storage)	-65°C to + 125°C	-65°C to + 125°C	-65°C to + 125°C	-65°C to + 125°C

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ORDERING INFORMATION

(F78S, F78C, F78B, F78E)

Example:

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 = $\pm 1.0\%$
- B = $\pm 0.5\%$
- C = $\pm 0.25\%$

Type Number

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Printed in the USA 10/97 - Rev. NC

Courtesy of Steven Engineering, Inc - (800) 258-9200 - sales@steveneng.com - www.stevenengineering.com