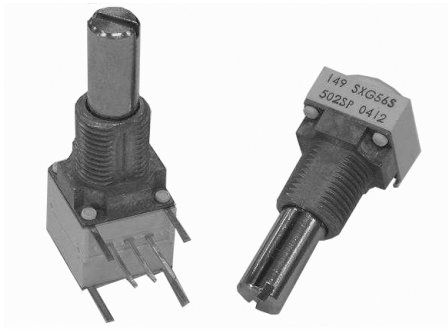


# 1/2" (12.7mm) Conductive Plastic and Cermet Potentiometers



## 148 FEATURES

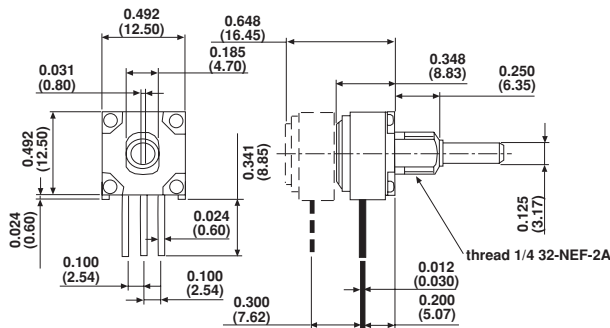
- Conductive Plastic Element
- High Rotational Life
- Quiet Electrical Output
- Robust Construction

## 149 FEATURES

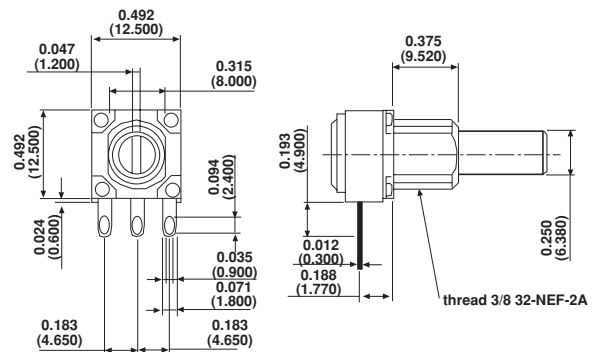
- Cermet Element
- Temperature Stable
- Robust Construction

## DIMENSIONS in inches (millimeters)

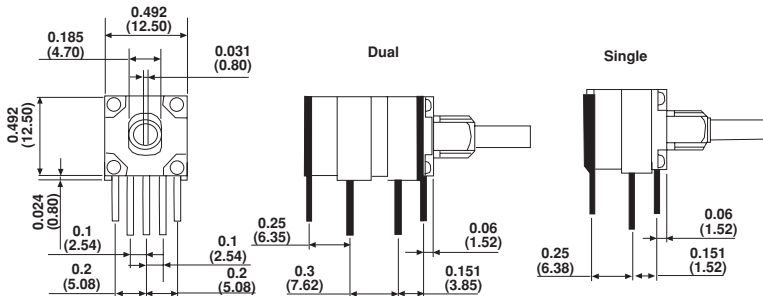
SINGLE, DUAL OR TRIPLE



SOLDER LUG TERMINALS



FRONT AND REAR SUPPORT PLATES  
E = Flush with board surface



**MOUNTING ACCESSORIES: PRODUCT IS SUPPLIED WITH A NUT & WASHER**

## OPTIONAL FEATURES

Up to three sections PC support plates  
Rotary switches, detents, Solder lugs terminals.

## CONSTRUCTION MATERIALS

Housing - Molded thermoplastic white  
Shaft - Brass, nickel plated



<b>ELECTRICAL SPECIFICATIONS</b>		
PARAMETER	148	149
Resistance Range	1kΩ to 1MΩ linear 500Ω to 500kΩ non-linear	100Ω to 2.0MΩ linear 250Ω to 1MΩ non-linear
Resistance Tolerance	Standard ± 10% to 500K, ± 20% over 500K	
Linear	Standard ± 10% to 100K, ± 20% over 100K	
Non-Linear	20% of the Nominal R at 50 mechanical rotation	
Taper Tolerance	± 5% Independent	
Linearity (Typical)	4Ω maximum each end	
End Resistance	0.5 watts @ 70°C 0 watts @ 120°C	1 watt @ 70°C 0 watt @ 150°C
Power Rating	Non-Linear or PC mount, derate 50%	
Effective Rotation	270° ± 10° without rotary switch 240° ± 10° with rotary switch	
Contact Resistance Variation	1.5% of total resistance	3% of total resistance
Maximum Continuous Working Voltage	350VAC across end terminals, but within power rating	
Dielectric Withstanding Voltage	Sea Level - 750VAC 70,000 feet - 350VAC	
Switch Specifications	Rotary (AL) switch: S.P.S.T and S.P.D.T 125mA, 28VDC CCW or CW, rotational life 10,000 cycles (rated load)	

<b>MECHANICAL SPECIFICATIONS</b>	
Mechanical Rotation	300° ± 5°
Torque	
Operating	Single section 0.2 to 3.0 oz - in Dual or triple section 0.3 to 4.5 oz - in
Center Detent	0.6 to 3.0 oz - in
Stop Strength	3 in - lbs min
Weight (approx)	
Single	0.19 oz
Dual	0.27 oz
Triple	0.35 oz

<b>ENVIRONMENTAL SPECIFICATIONS</b>		
	148	149
Operating Temperature	- 40°C to + 120°C	- 40°C to + 150°C
Storage Temperature	- 55°C to + 120°C	- 55°C to + 150°C
Temperature Cycling (5 Cycles)	- 40°C to + 120°C (4% ΔRt)	- 40°C to + 150°C (3% ΔRt)
Load Life (1000hrs. Rated Load at 70°C)	10% ΔRt	5% ΔRt
Rotational Load Life	50,000 cycles	25,000 cycles
TCR	± 1000ppm/°C	± 150ppm/°C



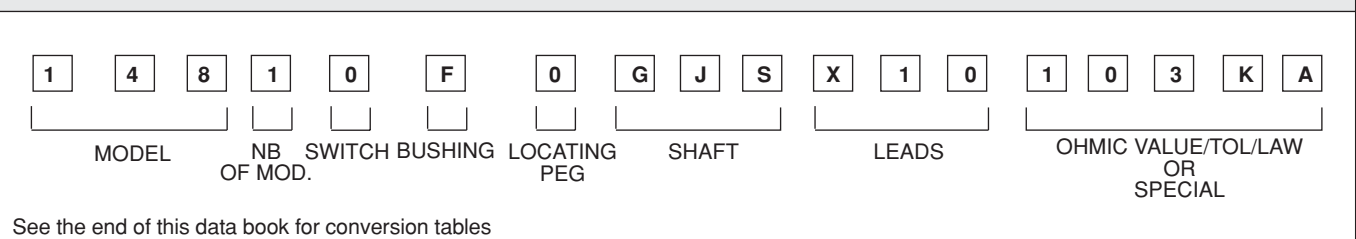
**MARKING**

Unit Identification: Ink stamp on periphery

**ORDERING INFORMATION**

148 MODEL	S NUMBER OF SECTIONS	X MECHANICAL CONFIGURATION	G METRIC BUSHING SIZE & SHAFT	56 SHAFT LENGTH	S SHAFT STYLE	103 RESISTANCE CODE Ω	S TAPER	P TERMINAL CONFIGURATION
148 CP 149 Cer	S: Single D: Duals, T: Triple	X: None (single shaft D, T sections) S: Single w/rotary switch P: Dual w/rotary switch	N: 1/4 Dia x 1/4L Shaft 1/8 Dia J: 1/4 Dia x 3/8 L Shaft, 1/8 Dia G: 3/8 Dia x 3/8 L Shaft, 1/4 Dia	FROM THE MOUNTING SURFACE Shaft length code 32: 1/2 in 40: 5/8 in 48: 3/4 in 56: 7/8 in 64: 1 in 80: 1 1/4 in	S: Slotted F: Flatted P: Plain	EIA code - first 2 significant digits 3rd is number of zeros 100 10K 500K 250 20K 750K 500 25K 1meg 750 50K 2meg 1K 75K 2.5K 100K 5K 250K	S: Linear ± 10% Z: CW Log, ± 10% to 500KΩ ± 20% over 500K R: CCW Log, ± 10% to 500K Ω ± 20% over 500K	P: PC, 0.250 E: PC terminals with E support plate S: Solder lugs

**SAP PART NUMBERING GUIDELINES**





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