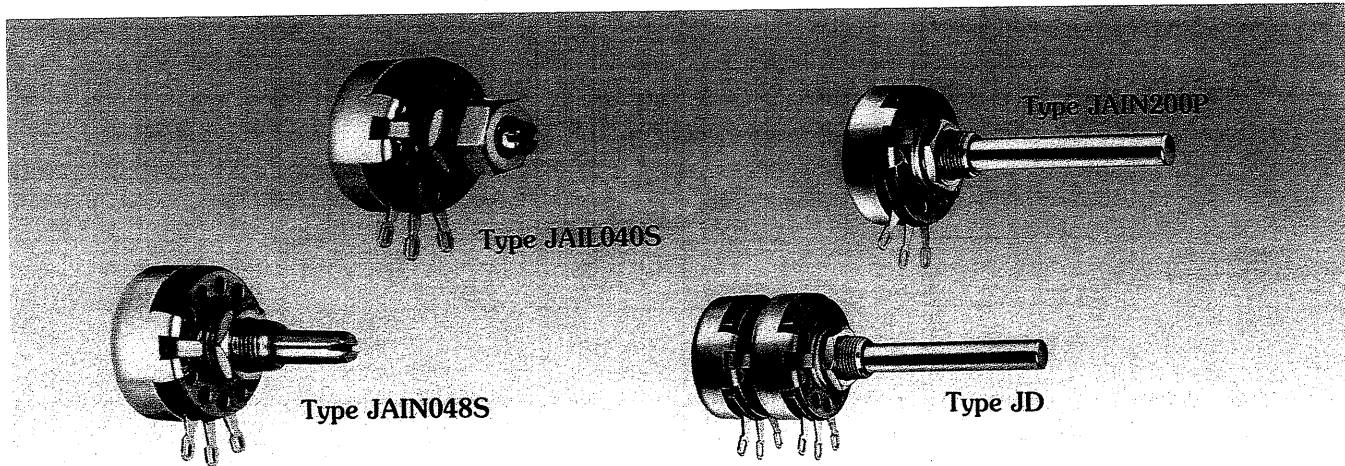




# Hot-Molded Panel Potentiometers



## Features

- 2.25 Watts @ 70°C
- 50 Ohms to 5 Megohms
- Multiple Sections
- UL Approved Switch
- Style RV4
- Linear and Non-Linear Tapers

## Benefits

- High Power Capabilities
- Wide Resistance Range
- Independent Control of Two Circuits
- Approved for Switching Primary Power
- Meets MIL-R-94 Requirements
- Versatility

## MIL-R-94 Style RV4 And RV6 Type Designation

Example of Complete Type Designation

Style (Table 2)	Bushing Type & Length (Table 1)	"A" - No Switch (Table 1)	Temperature & Moisture Resistance Characteristic	Slotted Shaft Ending	Shaft Length (Table 1)	Resistance Value	Taper & Resistance Tolerance (Table 3)
RV4	N	A	Y	S	D	102	A

TABLE 1

Bushing Type & Length	Shaft Length	Without Switch
		MIL-R-94 Designation
N Standard .375 (9,52)	B - .500 (12,70)	RV4NAYSB -----
N Standard .375 (9,52)	D - .875 (22,22)	RV4NAYS -----
L Locking .500 (12,70)	A - .625 (15,88)	RV4LAYS -----
N Standard .250 (6,35)	D - .875 (22,22)	RV6NAYS -----
L Locking .500 (12,70)	A - .625 (15,88)	RV6LAYS -----

TABLE 2

Style	
MIL-R-94	Allen-Bradley
RV4	J
RV6	G

TABLE 3

Available Tapers and Resistance Tolerances			
MIL-R-94		Allen-Bradley	Resistance Tolerance
Symbol	Taper	Taper	
A	A	U	±10%
B	A	U	±20%

1 All MIL approved variable resistors are marked with both A-B Part Number and MIL-R-94 Part Number.  
 2 Standard hardware is packaged with the above potentiometers and is included in the published price.  
 3 Basic dimensions in inches. Dimensions shown in Italics are in millimeters.  
 4 All shaft lengths measured from mounting surface.  
 5 MIL-R-94 designation is completed by replacing 4 dashes with proper alphanumeric values. First 3 dashes replaced by numbers indicating resistance.

## SPECIFICATIONS

### General

Temperature range –  $-55^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$ .  
 Total resistance values – 50 ohms to 5.0 megohms.  
 Total resistance tolerances –  $\pm 10\%$ .  
 Tapers – Available in the following resistance ranges:

TAPER	TOTAL RESISTANCE RANGE
U	50 Ohms to 5.0 Megohms
A and B	500 Ohms to 2.5 Megohms

See chart on Page 47 for explanation of tapers. Special tapers, where practical, can be supplied.

Add-on JS-1 Line Switch – Single pole, single throw snap switch that “closes at start of clockwise rotation”. Underwriter rating 2 amperes 125 volts RMS 60 Hertz. Underwriter Laboratories approval file number E-10392. Also rated 10 amperes 10 volts direct current noninductive. Meets 3 ampere 117 volts MIL-R-94 specification. Switches can be operated 5000 mechanical cycles at full rating.

### Electrical

Power – 2.25 watts maximum at  $+70^{\circ}\text{C}$  (single resistors only) provided voltage rating is not exceeded.  
 Power derating – Derate power linearly from  $+70^{\circ}\text{C}$  to zero at  $+120^{\circ}\text{C}$ . Derate 50 percent for non-metallic mounting and for resistors with “A” and “B” tapers.

Voltage – 500 volts maximum working voltage (RMS or DC), or as determined by  $E_{\text{max}} = \sqrt{PR}$ , whichever is less (at sea level).

### Operational

Load life – 10 percent maximum change in total resistance as a result of a 1000 hour test at rated power across entire element in still air at  $+70^{\circ}\text{C}$  (1.5 hours “ON” – 0.5 hour “OFF”).

Rotational life – 10 percent maximum change in total resistance as a result of a 100,000 mechanical cycle life test without load (single section resistors only).

### Mechanical

Shafts – Diameter of single 0.250 inch (6,35mm).  
 All shaft lengths are measured from the mounting surface of the resistor to the free end of the shaft with plain or screwdriver slotted endings. Special shaft endings can be supplied.

Bushings – All bushings have a 32-NEF-2A thread and are .375 inch (9,52mm) in diameter.

All bushings are measured from the mounting surface.

Locating Lugs – Two locating lugs are available so resistors may be indexed with respect to the surface on which they are mounted. Lug option 1 standard.

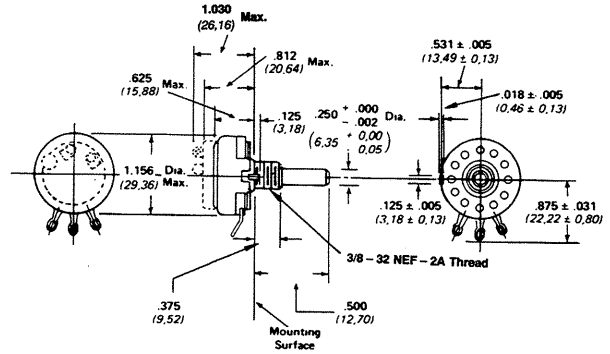
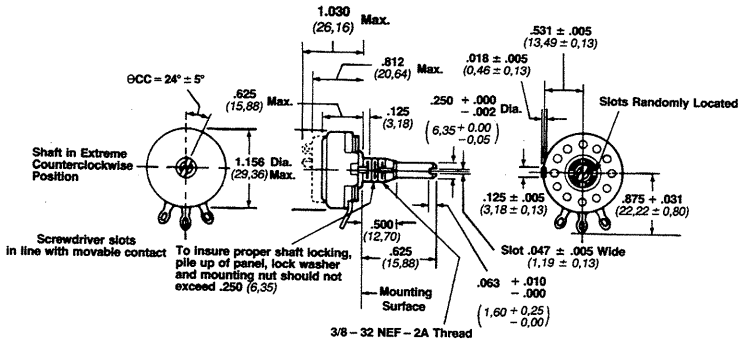
Standard locking bushings will prevent shaft rotation with torques up to 40 inch-ounces (2,88 kgf-cm) after lock nuts have been tightened with a torque of 10 inch pounds (11,52 kgf-cm).

Hardware – Resistors are normally supplied with one mounting nut, M-2786, and one internal tooth lock washer, M-2898. Resistors with standard locking bushings are normally supplied with one lock nut, B-13750, in addition to the above.

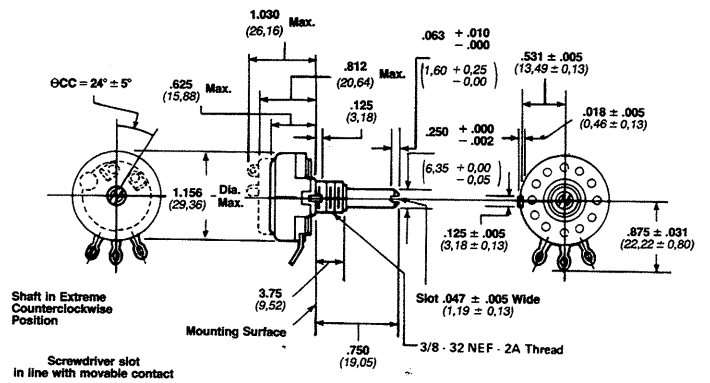
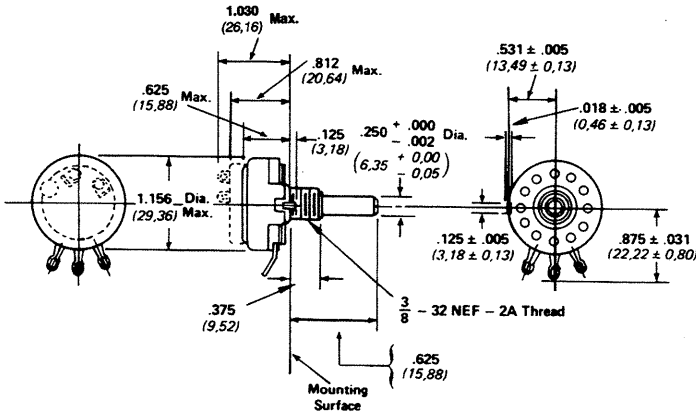
Marking – Allen-Bradley part number and nominal total resistance are marked in two lines. A-B monogram plus “Type J” always included. MIL-R-94 designation marked on all distributor units where it applies.

# DIMENSIONS

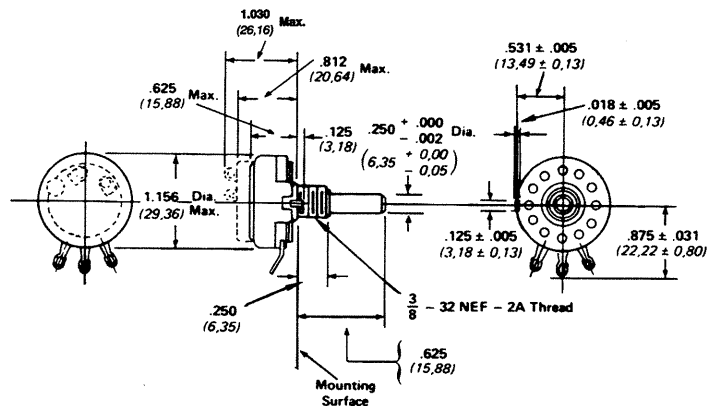
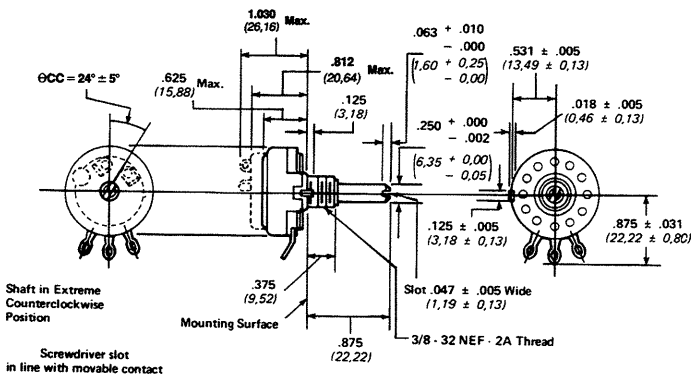
## Type JA1L040S, JA1N032S



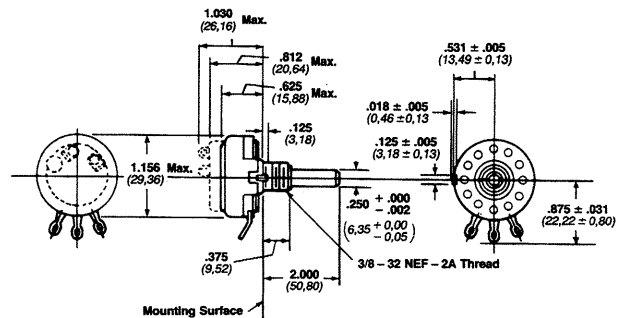
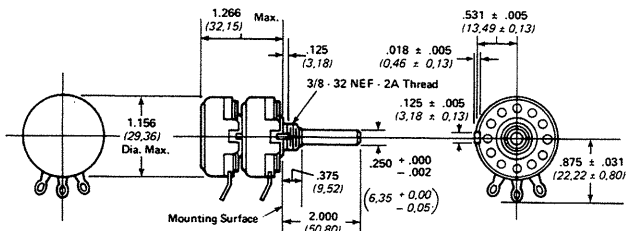
## Type JA1N040S, JA1N048S



## Type JA1N056S, JA1G040S



## Type JD1N200P, JA1N200P



Basic dimensions in inches.  
Dimensions shown in parentheses are in millimeters.

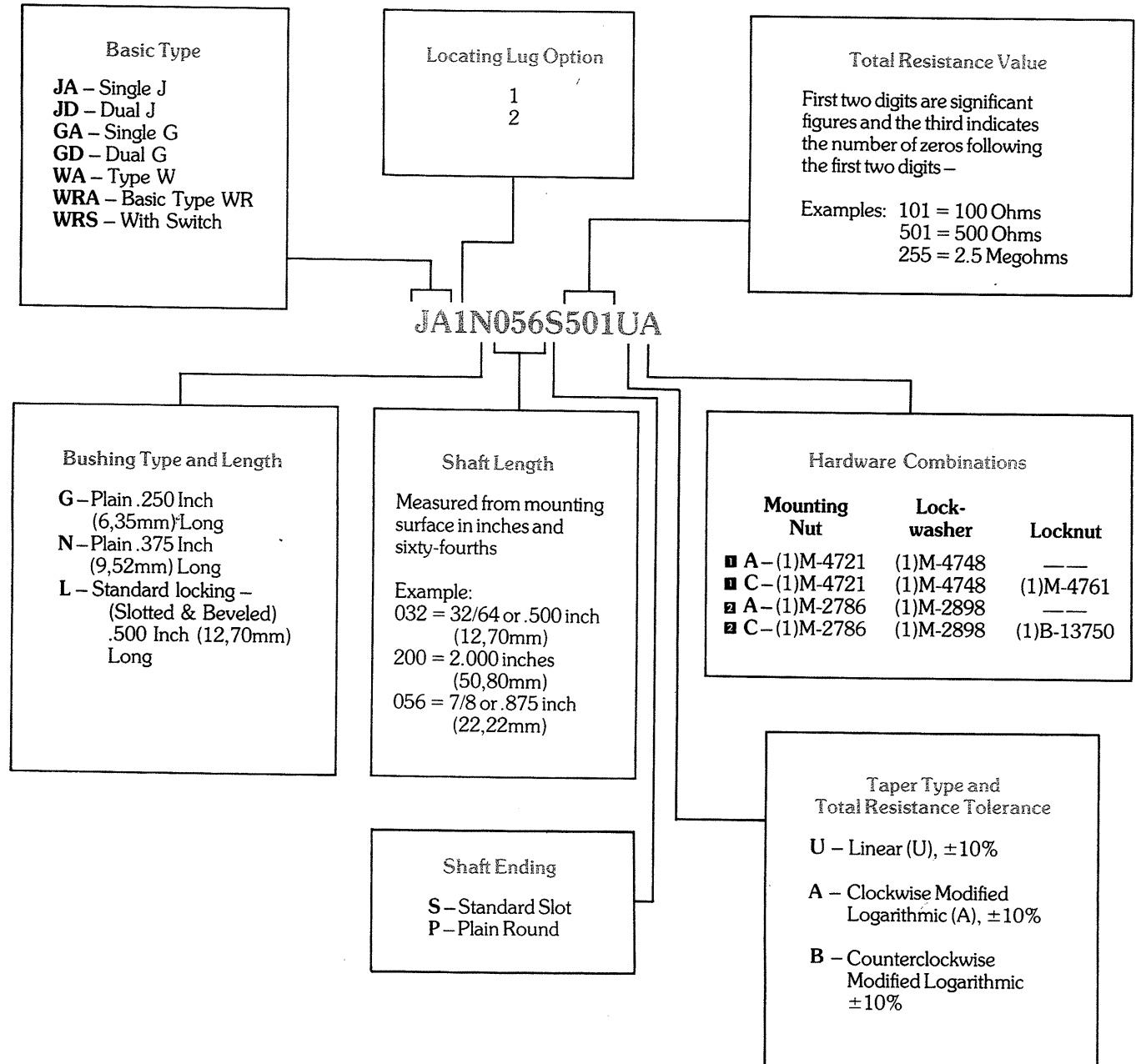
**TOLERANCES**  
Dimensional Tolerance  $\pm .016$  (0,40)  
Except as Specified.

**NOT TO SCALE**

# Explanation of Part Numbers

## Panel Potentiometers

### TYPES J, G, and W



■ Used with Types GA, GD, WA, WRA and WRS.

■ Used with Types JA and JD.