

Application Note

0.5 W Conductive Plastic Potentiometers 392 Series, RV6 Series

Background

Potentiometers convert rotary motion into a change of resistance, supplying a smooth transition of voltage or current levels.

The resulting voltage output may be used to control position transducers in a wide variety of potential applications.

The 392 Series and RV6 Series 0.5 W Plastic Potentiometers are economical devices designed to meet wave soldering process requirements for mounting to printed circuit boards (PCBs). All versions contain an internal shaft seal for moisture protection and comply with PCB washability test requirements and MIL-R-94 standards where appropriate. Termination types are PC pin or solder hook, both are solder-dipped.

These small, single turn devices have a 3,18 mm [0.125 in] diameter shaft that is available in a range of lengths. Most configurations have either a standard or split locking 3/8-32 NEF-2A bushing in panel seal or no panel seal versions. The shaft/bushing materials are nickel-plated brass or thermoplastic. They are available in metal/metal, plastic/plastic or a combination of the two. Custom designs are available upon request.

The 392 Series and RV6 Series are available in resistances from 100 Ohm to 5 MOhm, inclusive. Tapers include linear, log, and antilog to meet a wide range of application requirements.

The RV6 Series devices meet requirements of MIL-R-94 and high grade industry specifications.

Solutions

These sensors may potentially be used in a variety of Transportation, Industrial and Medical applications to adjust an analog signal level via a separate knob or a dial, and as a control input for an electronic circuit.

Potential Applications

INDUSTRIAL/COMMERCIAL

- **Audio and visual equipment (e.g., guitars, sound mixers, projectors):** Volume, tone, brightness, contrast, and other signal controls (See Figure 1.)
- **Light switches:** Dimmer control (See Figure 2.)
- **Hand-held equipment (e.g., multimeters and mobile monitoring devices):** Dial selection (See Figure 3.)
- **Test and measurement equipment (e.g. oscilloscopes):** Signal control, dial selection (See Figure 4.)
- **Communications equipment (e.g. walkie-talkies):** Dial selection (See Figure 5.)
- **Thermostats:** Dial selection (See Figure 6.)



Figure 1. Sound mixer



Figure 2. Light switches



Figure 3. Multimeter



Figure 4. Oscilloscope



Figure 5. Walkie-talkies



Figure 6. Thermostat

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MEDICAL

- **Mobile monitoring/diagnostic devices (e.g. portable defibrillator):** Dial selection (See Figure 7.)
- **Laboratory and diagnostic equipment:** Dial selection (See Figure 8.)

TRANSPORTATION

- **Vehicle manual controls (e.g., joysticks):** Position detection (See Figure 9.)




Figure 7. Portable defibrillator



Figure 8. Diagnostic equipment



Figure 9. Joysticks

392 Series, RV6 Series	Key Features and Benefits
	<ul style="list-style-type: none">• Wave solderable: Allows the devices to be automatically soldered on a PCB using the wave soldering process instead of being manually soldered, saving time and yielding consistent results• PCB washable: Permits the PCB board containing the soldered devices to be washed after soldering, saving time and yielding consistent results• Cost effective: Supplies good performance at a reasonable price• Wide range of resistance values (100 Ohm to 5 MOhm, inclusive): Promotes flexibility in the applications• Small package size: Allows use where space constraints may be present

Find out more

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Sensing and Control
Honeywell
1985 Douglas Drive North
Golden Valley, MN 55422
honeywell.com

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