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# Instructions

Using a Pearson Current Monitor is easy.

## 1 Connect the monitor to a voltage-measuring instrument, using a coaxial cable.

Suitable instruments include oscilloscopes, volt meters, and digitizers. Standard model current monitors have either BNC, UHF or type N output connectors. 50 Ohm cables that mate with these connectors are readily available, as are adapters between connector types. Normally, the monitor is connected to a high-impedance ( $>1$  megohm) input. If the filling and reflecting times of the connecting cable are comparable with the fastest signal to be viewed, some improvement in pulse-edge fidelity can be obtained by placing a matched load at the instrument end of the cable. In this case, the sensitivity is determined by the parallel combination of the monitor source impedance (usually 50 Ohm) and the load impedance. For a 50 Ohm source and load, and negligible cable resistance, the sensitivity is divided by two.

## 2 Pass the conductor to be monitored through the hole in the monitor, and close the circuit.

The conductor must be insulated adequately for its voltage level. The conductive case of the monitor is painted but not otherwise insulated. The case of single-shielded models, or the inner shield of double-shielded models, is tied to the outer shell of the connector, which is usually grounded to the instrument by the outside conductor of the coaxial cable. The case of double-shielded models is isolated, and can be grounded to the circuit under test through the mounting holes.

## 3 Read the measuring instrument.

Convert the voltage reading into a current using the monitor's sensitivity (V/A). Include in the conversion any factor resulting from an external terminating resistance. Remember that the monitor output contains no dc component. For example, a periodic positive pulse current will have a dc component. Since this component is not present in the output signal, the baseline of the pulses will appear to be negative

For additional help in selection and use, see Pearson publications *Selecting a Pearson Current Monitor*, and *Application Notes for Current Monitors*. Technical advice is also available by calling Pearson Electronics.

## Warranty

Pearson Electronics warrants that its products will be free from defects in workmanship and materials for a period of one year after the date of shipment. Such warranty shall not extend to any devices that are subject to neglect, accident, misuse, improper testing or installation. Pearson Electronics shall not be liable for any incidental or consequential damages resulting from the use of Pearson Current Monitors.



To avoid electrical shock, do not mount or remove the current monitor from a live conductor. The current monitor case is conductive, and protected by a painted finish which has no insulating capability. Therefore, adequate insulation must be provided between the monitor and the conductor under test to withstand the maximum voltage difference.

