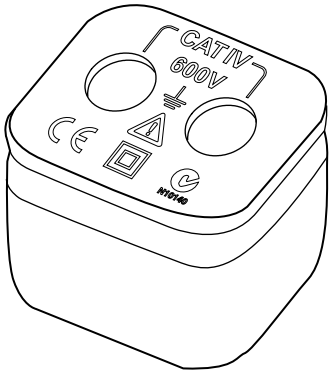
FLUKE®

Instruction Sheet

SV225

Stray Voltage Eliminator



Introduction

The SV225 Stray Voltage Eliminator (hereafter referred to as "the Adapter") is a digital multimeter accessory that allows measurements in circuits which may be subject to stray voltages encountered from adjacent-energized wiring.

The Adapter provides an approximate 3,000 Ω load to the measured circuit, desensitizing the meter to low energy, spurious sources of interference. The Adapter is only used for voltage measurements. When used with a compatible digital multimeter, it can be determined whether the circuits under test are energized or not.

Safety Information

⚠⚠ Read First: Safety Information

To avoid possible electric shock or personal injury:

- **Read the operating instructions before use and follow all safety instructions.**
- **Use caution when working with voltages above 60 V dc or 30 V ac. Such voltages pose a shock hazard.**
- **Before testing the desired circuit, ensure that the multimeter and Adapter are functioning properly by testing a known live circuit. A de-energized circuit will be indicated on the multimeter display as a reading near zero volts.**
- **When using the Adapter to eliminate stray or ghost voltage, the Adapter has a low input impedance, nominally 3,000 Ω. This low impedance places a moderate load on the circuit under test. Do not use the Adapter to measure live voltages in circuits that could be damaged by a 3 kΩ load.**
- **Do not apply more than the rated voltage, as marked on the multimeter or in the Adapter specifications (whichever is lower) between the terminals, or between any terminal and earth ground.**
- **Before each use, inspect test leads for damage and check for continuity. Do not use leads that are damaged or show high resistance. Look for cracks or missing plastic on the lead housing or cable insulation.**
- **Adhere to local and national safety codes.**
- **Individual protective equipment must be used to prevent shock and injury.**
- **If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.**
- **The Adapter is specified for CAT III 1000V/CAT IV 600V per EN61010.**
- **CAT III equipment is designed to protect against transients in equipment in fixed-equipment installations, such as distribution panels, feeders and short branch circuits, and lighting systems in large buildings.**
- **CAT IV equipment is designed to protect against transients from the primary supply level, such as an electricity meter or an overhead or underground utility service.**

Symbols

The following symbols appear on the Adapter or in this instruction sheet.

⧈	Product is protected by double insulation.
⚠	Risk of Danger. Important information. See Instruction Sheet.
⚠	Hazardous voltage.
✓ N10140	Conforms to relevant Australian standards.
CE	Conforms to relevant European Union directives.

Specifications

Voltages up to 1000 volts continuous can be safely applied to the Adapter without damage.

Operation Temperature

-20 °C to +55 °C (-40 °F to 131 °F)

Altitude

2,000 Meters Operating

Humidity

90 % at 0 to 35 °C (32 °F to 95 °F), 70 % at 35 to 55 °C (95 °F to 131 °F)

Nominal Resistance

3,000 Ω @ 25 °C (77 °F)

Instrument Compatibility

The Adapter is for use with any high-impedance digital multimeter (≥ 1 MΩ) which accepts 4 mm safety-shrouded banana plugs and with any test leads using the same safety-shrouded banana plugs. The Adapter is compatible with the following Fluke digital multimeters and testers:

- Fluke 27
- 70 Series
- 80 Series
- Fluke-110 Series
- 170 Series
- 180 Series

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Operation

To use the Adapter, do the following:

1. Plug the Adapter into the digital multimeter's **V/Ω** and **COMMON** input jacks.
2. Plug the test leads into the Adapter input jacks observing the proper polarity (red lead to red jack, black lead to black jack). Make sure the leads and Adapter are fully connected to the instrument.
3. Turn the multimeter's function switch to the Volts AC measurement function.

   ⚠⚠ Warning

   To avoid possible electric shock or personal injury, before testing the desired circuit, ensure that the multimeter and Adapter are functioning properly by testing a known live circuit. A de-energized circuit will be indicated on the multimeter display as a reading near zero volts.
4. After determining the circuit under test is de-energized, retest the known live circuit again to insure the multimeter and Adapter are still working properly.

   Note

   Most digital multimeters never display a zero-volt reading for a de-energized circuit. A small residual reading may always be present.

   The example in Figure 1 shows a reading of 13.2 millivolts AC which is very close to a zero-volt reading. 1 millivolt is equal to .001 volts or 1/1000th of a volt.

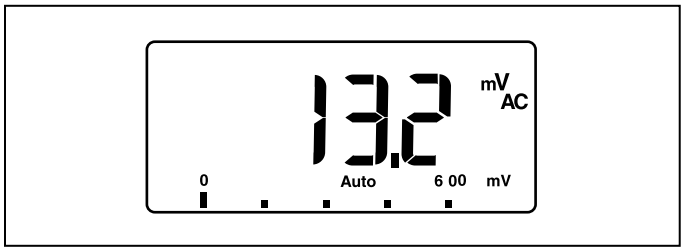

Figure 1. Residual Voltage Reading

Maintenance

Cleaning

⚠ Caution

To avoid damaging the Adapter, do not use abrasives or solvents for cleaning.

Periodically wipe the Adapter with a damp cloth and mild detergent.

LIMITED WARRANTY AND LIMITATION OF LIABILITY

This Fluke product will be free from defects in material and workmanship for one year from the date of purchase. This warranty does not cover fuses, disposable batteries, or damage from accident, neglect, misuse, alteration, contamination, or abnormal conditions of operation or handling. Resellers are not authorized to extend any other warranty on Fluke's behalf. To obtain service during the warranty period, contact your nearest Fluke authorized service center to obtain return authorization information, then send the product to that Service Center with a description of the problem.

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