

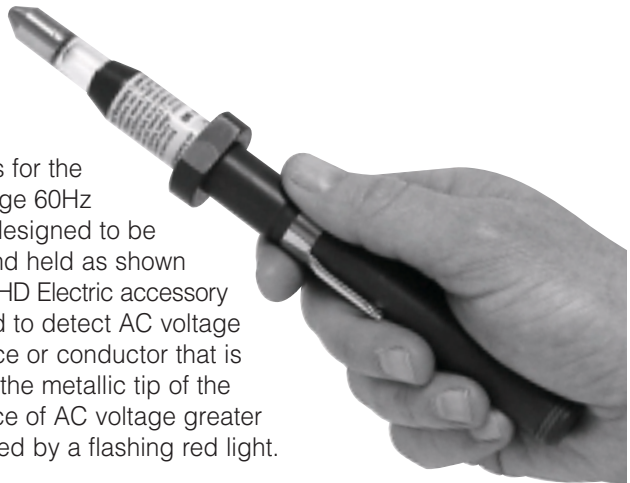
LV-S-5

DIRECT CONTACT STRAY VOLTAGE DETECTOR

Instruction Manual

GENERAL DESCRIPTION

The LV-S-5 is a hand held stray voltage detector for testing exposed metallic surfaces and conductors for the presence of low voltage 60Hz AC. This detector is designed to be used with gloves, hand held as shown or to be used with the HD Electric accessory Extension Handle and to detect AC voltage on any metallic surface or conductor that is in direct contact with the metallic tip of the detector. The presence of AC voltage greater than 5 volts is indicated by a flashing red light.



HOW IT WORKS

The hand of the user holding the LV-S-5 Stray Voltage Detector is an integral part of the measurement system and the detector must be hand held as shown. In typical applications, the hand of the user functions as a "virtual ground" to provide a ground reference for the detector since it has no direct connection to ground. The detector measures voltage applied to the metal tip and flashes the red light if the voltage exceeds 5VAC.



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SAFETY

The LV-S-5 is rated for a maximum direct contact voltage of 600VAC, 50/60Hz whether used with a bare hand or a voltage insulating glove. This detector does not detect DC such as in charged capacitors or underground cable.

- The use of heavy gloves such as lineman's high voltage insulating gloves with leather protectors or thick cold weather gloves may slightly reduce the sensitivity of the detector.
- Keep hands and fingers behind the hand guard at all times.
- This detector can be used to detect voltages up to 600VAC with direct contact and higher voltages may be detected at a distance.
- Do not exceed 600VAC with direct contact.
- Be aware of the red light turning on before direct contact is made indicating the presence of voltage above 600VAC.
- Maintain a safe distance from voltages greater than 600VAC at all times.

Test the detector with the PT-LV-5 Stray Voltage Detector Tester before and after each use. The detector is powered by two AAA alkaline batteries. Replace the batteries when the red flashing light is no longer visible.

This detector is designed for use by trained professionals. Use caution before contacting any equipment or conductor on which AC voltage is detected. The voltages detected by this detector may be lethal.

WARNING: This detector does not detect DC such as in charged capacitors or underground cable. Flashing light indicates AC voltage. Contacting voltage above 600V may lead to electric shock, severe injury or death. Refer all servicing to the factory.

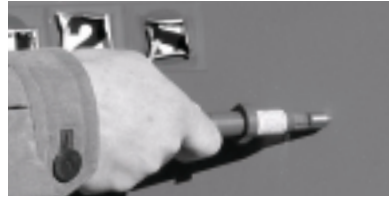


HOW TO USE IT

The LV-S-5 Stray Voltage Detector is always on. The detector should always be hand held as shown for performing voltage tests or to be used with the HD Electric accessory extension handle. Keep your hand behind the hand guard at all times and do not contact conductors energized at greater than 600VAC. Test the detector before and after each use using the PT-LV-5 Stray Voltage Detector Tester.

Apply the detector to any conductor to perform a voltage check. The red light will flash if voltage greater than 5VAC is detected. A typical coat of paint may reduce sensitivity slightly, but avoid areas of thick paint buildup. Low voltage or other protective gloves may be worn with a negligible effect on sensitivity.

When testing in areas where overhead distribution lines are present, test all objects as close to the ground and as far away from the overhead lines as possible. If the detector indicates voltage on equipment known to be de-energized and grounded, it may be necessary to install and use the accessory ground shield and connect it to a portable driven ground. The portable driven ground should be placed as close as possible to the equipment to be tested.



Testing pad mount transformer enclosure.



Testing a meter pedestal.



Testing manhole cover.



Testing street light cover with extension handle.



Testing anchor on a power pole.



Testing anchor on a power pole with Ground Shield.

ACCESSORIES

PT-LV-5 STRAY VOLTAGE DETECTOR TESTER

Test the LV-S-5 Detector with the PT-LV-5 Stray Voltage Detector Tester before and after each use. The PT-LV-5 supplies a low voltage AC signal at the metal plate on the end shown with the large arrow. To test the LV-S-5 Detector, hold the tester and detector as shown, press the tester ON button and make direct contact between the metal tip on the detector and the metal plate on the Detector Tester.

A red light on the PT-LV-5 Tester indicates the Tester is OK. A red light on the LV-S-5 Detector means voltage is detected. Replace the battery in the Tester with a 9V alkaline type when the red light is not on. Note that both units should be hand held as shown for testing. Your hands are part of the test circuit and hand placement can affect test results.

LV-S-5 Voltage Detector being used with Tester.



CAUTION: For use by trained personnel only. This device generates 6VAC for testing LV-S-5 low voltage AC voltage detectors. There is no danger of electric shock when this tester is used as directed.

WARNING: Do not use this tester except as directed. Do not use to test equipment other than the LV-S-5. Applying this tester to energized circuits or equipment may lead to electric shock, severe injury or death. Refer all servicing to the factory.



ACCESSORIES

GS-LV GROUND SHIELD

The ground shield is attached to the detector by sliding it over the detector handle until it locks in place. The ground shield is provided with a ground lead



and alligator clip which is to be connected to a driven earth ground (not supplied). This shield is used in areas where high voltage lines or other energized conductors are present and it prevents the strong electric fields from these lines from interfering with normal voltage tests. Low ground resistance for the portable driven ground is not required, and even the most rudimentary ground will be sufficient to shield the detector from the influence of high voltage overhead lines.

EH-LV EXTENSION HANDLE

The Extension Handle extends the reach of the LV-S-5 probe for testing equipment on or near the ground or other hard to reach locations. The Extension Handle is a rugged plastic tube with an electrically conductive liner to extend the "virtual ground" provided by the hand of the user.



To use the Extension Handle, insert the LV-S-5 into the handle until it snaps into place. Hold the opposite end of the extension handle in your hand and test normally, always making sure that the metal tip of the probe contacts the equipment to be tested.

Using the LV-S-5 probe with other unapproved extension handles will reduce the sensitivity of the probe.

SPECIFICATIONS

Sensitivity: Factory set at 5VAC +/- 10% with new batteries installed, 50/60Hz

Operating Temperature: -10° F to +135° F (-23° C to +57° C)

Battery: AAA alkaline ANSI/NEDA 24A, IEC LR03

Battery Life: 2 years in storage or typical usage

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