

The detector should be maintained in a temperature range of -11°F to 158°F (-24°C to 70°C)

Always store the detector in a protective container when not in use to ensure maximum protection and a longer life.

In the event of malfunction, check the following:

Does the selector switch snap properly from setting to setting?

If not, the switch has been damaged usually by impact to the knob. This is not economical to repair.

Is this switch operating properly but the detector not working?

Check batteries, condition of battery connecting strap, and be sure battery strap is properly positioned to establish an electrical connection between the base of the battery and the sleeve on the head of the detector.

Use three “C” size alkaline batteries only. Replace all three batteries at the same time.

Why does the detector “beep” when moved around?

The detector is sensing a static charge created by the movement of the detector through the air.

Is there any reason to avoid touching an energized high voltage line?

Yes. On transmission voltages, it is possible that an arc may be drawn from the conductor to the detector. Such an arc may cause internal damage to the detector. If a voltage is detected, there is no reason to bring the detector any closer to the conductor.

The detector contains no serviceable components.

CAUTION



Use of this voltage detector should be restricted to trained personnel.

- **Always follow approved safe work practices established by the safety officials of your company.**
- **Detectors should be used in conjunction with ASTM D-120 specification rubber gloves and/or ASTM F-711 hot sticks.**
- **Do not assume conductors are dead or will remain de-energized.**
- **Always install proper grounding devices before working on de-energized conductors.**
- **Application is limited to conductors, buss, and other types of exposed electric equipment. Shielded and underground conductors are excluded. Only use models with URD settings to check for voltage on underground elbows with capacitive test points.**

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Audio / Visual

VOLTAGE DETECTOR



W A R N I N G

Read all operating instructions before use.

Units are intended for use in verifying the live or de-energized status of conductors, buss bars, and other types of exposed electrical equipment.

Use with rubber insulating gloves and/or hotsticks following company's safety work practices.

Voltage Detectors consist of a detection circuit that in the presence of an electrical field drives a solid state buzzer and a high intensity L.E.D. lamp assembly indicating an item is energized.

Voltage Detectors have a selector switch labeled with various voltage ranges. Models having URD settings are intended for use with capacitive test points on URD elbows only. It will *not* provide reliable results nor is it recommended for use on shielded cable or cable with concentric neutrals.

Six standard detectors are available. Product number 4244, 4344 and 4444 are our standard models. Numbers 4544, 4644 and 4744 feature a self test function. Self test models have a continuous flashing light and beep to indicate that the batteries are charged and the unit is functioning properly including the detection circuit and the light and buzzer.

Voltage detectors are calibrated to indicate within 8 to 10 inches of a conductor energized to the voltage switch setting. When verifying URD test points, URD switch settings are calibrated to indicate within 0.5 to 2 inches. The minimum system voltage required for detection (URD 15kV setting) is 12,475 volts.

The 240V/Test switch position is intended to test the detector for its operational integrity, or to test 120/240 circuits.

Some difficulty may be encountered in situations where a lower voltage circuit is in the immediate vicinity of a higher voltage circuit, such as an overbuild parallel circuit. (The detector may respond to higher voltage line.)

In these situations turn the detector 90° on the hotstick and approach the conductor from the side rather than from below. This angle of approach will be less sensitive to the electric field of the higher voltage circuit in the overbuild.

See Figure 1.

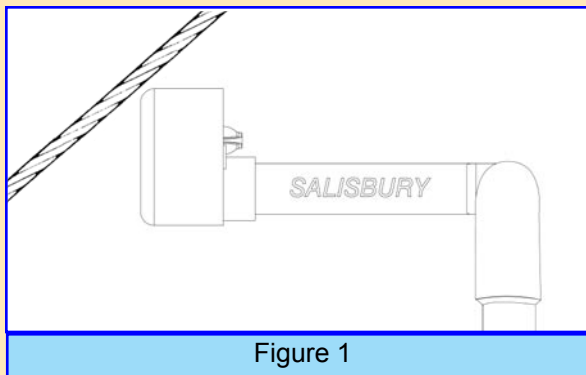


Figure 1

Cat. No.		Dimensions in. (mm)	Settings	Weight ea. lbs. (kgs)
Std. Model	Self Test Model			
4244	4544	11 x 3.5 (279.4 x 89)	Off / 240V / 4.2kV / 15kV/25kV/35kV/69kV/115kV/230kV	15oz. (.43)
4344	4644	11 x 3.5 (279.4 x 89)	Off / 240V / 4.2kV / 35kV/69kV/115kV/230kV/345kV/500kV	15oz. (.43)
4444	4744	11 x 3.5 (279.4 x 89)	Off / Test-240V / Battery / URD:15kV/25kV/35kV Overhead: 4.2kV / 15kV/25kV/35kV/46kV/69kV	15oz. (.43)

1. Check operational integrity of the detector. Switch to 240V/Test position and check in one of several manners.

- Place detector head, as marked, in close proximity to live wire outlet or equivalent, above 120 volts A.C. - detector will indicate.
- Rub the detector head, as marked, on clothing to obtain a static charge. Detector will indicate intermittently.
- Set switching at 240V or 4.2kV Overhead setting and place head of detector, as marked, against a spark plug lead of a running truck or auto engine - Detector will indicate.
- If an indication is not achieved using any of these methods, replace batteries and perform functional check again. If still no indication, notify your company for replacement unit or use another authorized method of checking voltage.

2. Select appropriate switch setting.

3. Move detector head progressively closer to the conductor until voltage is detected or until the head of the detector touches the conductor.

Note: if the presence of voltage is indicated by the detector **do not** move the detector closer to the conductor.

4. If no voltage is detected, repeat step 3 having selected the next lower voltage setting.

5. When a no voltage condition is determined, retest detector as in step 1 to verify the detector is still working properly.