

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 is not working?

Check the batteries and the condition of the battery connecting strap. Be sure that the 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.

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 hotsticks.

Do not assume conductors are dead or will remain de-energized.

In the presence of induced voltage, the unit may indicate voltage even though it is less than nominal. If there is any doubt of the type voltage presence, use alternative testing methods to confirm nominal voltage is not present. **See Application Chart.**

Always install proper grounding devices before working on de-energized conductors.

Application is limited to conductors, busses, 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.

OPERATING INSTRUCTIONS

1. To assure unit is in operable condition, switch tester into "Test-240V" position. The tester may now be tested in several different ways.

- Place detector head, as marked, against live wire outlet, or equivalent, above 110V A.C.
- Rub the detector head, as marked, on clothing to obtain a static charge. Detector will only 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 nominal design voltage (e.g. 25 kV).

3. Move detector toward the conductor until head is within the calibrated indicating distance, 8 to 10 inches. If voltage is not indicated repeat **step 3** having selected the next lower voltage setting (e.g. 15 kV to 4 kV). **See Application Chart.**

NOTE: **Never** place the detector in direct contact with the tested part. If the presence of voltage is indicated by the detector, do not move the detector closer to the conductor.

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

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Audio / Visual VOLTAGE DETECTOR



WARNING

READ ALL OPERATING INSTRUCTIONS BEFORE USE



CAUTION

Units are intended for use in verifying the live or de-energized status of conductors, busses, 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.)

Where induced voltage may be present, that voltage may be sufficient to indicate voltage if it exceeds the threshold voltage for the detector setting. It is normally assumed that induced voltage would be less than the de-energized voltage. In such instances the distance from the conductor would be less than if the conductor were energized. [See Application Chart.](#)

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.](#)

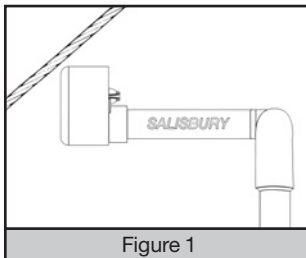


Figure 1

VOLTAGE DETECTION APPLICATION CHART

GREEN - RECOMMENDED FOR USE.
The cells highlighted in green identify appropriate detector settings for a given system voltage.

YELLOW - SUITABLE FOR USE ONLY UNDER SPECIAL CIRCUMSTANCES.
The cells highlighted in yellow may be used in special circumstances. These circumstances may include the detection of voltage on an under-built circuit with induced voltage sufficient to cause a detection alarm. For example: In the 25kV setting the tester may not detect lower voltages at the required 8 to 10 inches from the conductor. However it may detect lower induced voltage, e.g. 5kV at 1" from the conductor.

RED - NEVER SELECT A DETECTOR SETTING INDICATED BY A RED CELL FOR A GIVEN SYSTEM VOLTAGE.
The detector may not indicate voltage present and serious injury or death may result.

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Detector setting	System Voltage - (Phase to Phase/Phase to Ground)																		
	4160 2400	8320 4800	12000 6930	12470 7200	13200 7620	13800 7970	20780 12000	22860 13200	24940 14400	34500 19920	46000 26560	69000 39840	115000 66400	138000 79670	161000 92950	230000 132790	345000 199190	500000 288680	
240 v	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
4.2kV	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
15kV	Red	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
25kV	Red	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
35kV	Red	Red	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
46kV	Red	Red	Red	Red	Red	Red	Yellow	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
69kV	Red	Red	Red	Red	Red	Red	Red	Yellow	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
115kV	Red	Red	Red	Red	Red	Red	Red	Red	Yellow	Yellow	Yellow	Green	Green	Green	Green	Green	Green	Green	Green
230kV	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Yellow	Yellow	Green	Green	Green	Green	Green	Green
345kV	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Yellow	Yellow	Yellow	Yellow	Green	Green	Green
500kV	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Yellow	Yellow	Yellow	Yellow	Green	Green
URD TEST POINTS ONLY																			
15kV URD	Red	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
25kV URD	Red	Red	Yellow	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
35kV URD	Red	Red	Red	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green

The above matrix identifies Salisbury by Honeywell Models 4244, 4544, 4344, 4644, 4444, 4744, voltage detector applications settings for given system voltage. By selecting a detector voltage higher than the system voltage setting, the sensitivity of the detector is reduced and it may not detect the system voltage tested. Always install an appropriate grounding system before working on any conductors.

CAT. NO.		DIMENSIONS in. (mm)	SETTINGS PHASE TO PHASE	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 / 1 15kV / 230kV	0.937 (.43)
4344	4644	11 x 3.5 (279.4 x 89)	Off / 240V / 4.2kV / 35kV / 69kV / 115kV / 230kV / 345kV / 500kV	0.937 (.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	0.937 (.43)