



NON-CONTACT VOLTAGE TESTERS

FREQUENTLY ASKED QUESTIONS

Q: What is a non-contact voltage tester (NCVT)

A: A non-contact voltage tester tests for the presence of AC voltage (-V) – not DC voltage meaning it detects the voltage without any metallic contact (the metallic voltage sensor in the NCVT is covered by plastic to keep it from touching a live circuit).

Always ensure that the voltage to be detected falls within the specified range of the particular tester and that the proper CATegory environment is also met.

Q: What is a NCVT used for ?

A: An NCVT can be used for the following:

- » Is AC Voltage present in an outlet?
- » Is AC voltage present in a conductor (is it a live conductor) ?
- » Is AC voltage present in a Panel, ie. Is the panel “live”?
- » Where is the break in this Wire? Moving away from power source:
 - » Red light indicates live voltage
 - » Green light indicates no voltage
 - » Break is where light turns green

However, always check for the presence of dangerous voltage with a digital readout measuring device before touching any conductors in the circuit.

A measuring device can be a fork meter, a clamp meter, a multi-meter or a contact type Voltage Tester with voltage readout.

Always check for the ABSENCE of voltage by using a suitably rated test instrument – prior to working on an electrical circuit.

The basic steps include:

- » Check to see that your meter indicates properly on a known source of voltage
- » Use your meter to test the locked-out circuit for any dangerous voltage
- » Check your meter once more on a known source of voltage to see that it still indicates as it should.

Q: How does a NCVT work ?

A: Voltage produces an electric field as it pushes electrons through the conductor.

AC voltage creates a changing electrical field (DC's is constant) around the conductor that is detected by the NCVT using the principal of “Capacitive Coupling”.

With two capacitors in series a larger voltage will develop across the smaller capacitor.

When the tip of the NCVT is placed near a live conductor, the sensing circuit (small capacitor) develops a larger voltage that turns on a light and/or sounds the buzzer in the NCVT.

Q: Is a NCVT the correct tool for what you are testing?

A: Are you working on an AC or DC system?

- » Remember NCVTs only find AC Voltages.
- » NCVTs do not work on DC Voltages, therefore they will not work for the electrical systems in cars, DC transformers, etc.

Is the conductor or device you're testing armoured or shielded?

- » An NCVT will not detect the electrical field through armoured or shielded conductors

Remember:

- » It is only a first response tool
- » It should not be used to verify voltage levels prior to working on a circuit
- » A contact tester with voltage readout should be used to verify voltage levels prior to working on a circuit

IDEAL has launched a new range of Non-Contact Voltage Testers with features geared from apprentice through residential to commercial.



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