

## DUAL RANGE NON-CONTACT VOLTAGE TESTER (NCVT-2) OWNER'S MANUAL

MANUAL DEL USUARIO DEL PROBADOR DE TENSION SIN CONTACTOS DE INTERVALO DUAL (NCVT-2)

DÉTECTEUR DE TENSION SANS CONTACT À DOUBLE PLAGE (NCVT-2) - MODE D'EMPLOI

Locking tab / Lengüeta de fijación / Languette de verrouillage

Power button / Botón de alimentación / Bouton de mise sous tension

Fig. 1

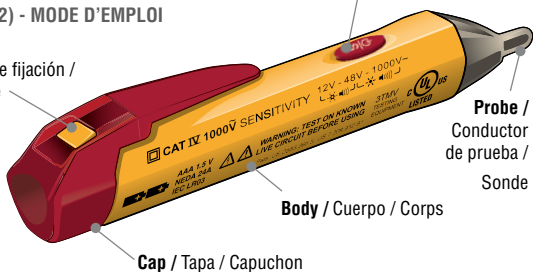
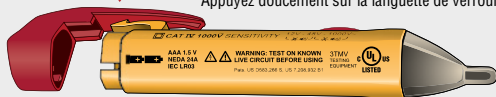


Fig. 2

Gently push down on locking tab.

Empuje suavemente hacia abajo sobre la lengüeta de fijación.

Appuyez doucement sur la languette de verrouillage.



While pushing down on tab, slide cap off body.

Mientras empuja hacia abajo sobre la lengüeta, deslice la tapa hasta separarla del cuerpo.

Faites glisser le capuchon de façon à le détacher du corps de l'appareil tout en appuyant sur la languette.

Fig. 3



Fig. 4 Align locking tab with cap.

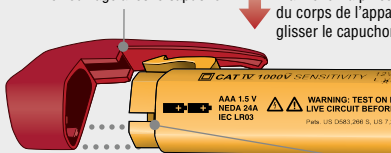
Alinee la lengüeta de fijación con la tapa.

Alignez la languette de verrouillage avec le capuchon.

Hold pocket-clip on cap close to tester body while sliding cap onto tester.

Sujete la pinza para bolsillo ubicada en la tapa cerca del cuerpo del probador mientras desliza la tapa sobre el probador.

Maintenez la pince pour la poche sur le capuchon à proximité du corps de l'appareil de mesure pendant que vous faites glisser le capuchon sur l'appareil de mesure.



Slide cap onto body.

Deslice la tapa sobre el cuerpo.




Faites glisser le capuchon sur le corps de l'appareil.

Align channel tabs on cap with slots on tester body (one on each side of tester).

Alinee las lengüetas de canal ubicadas en la tapa con las ranuras ubicadas en el cuerpo del probador (una a cada lado del probador).

Alignez les languettes à rainures sur le capuchon avec les fentes sur le corps de l'appareil de mesure (une de chaque côté de l'appareil de mesure).

**SYMBOLS ON TESTER:**

-  Warning. Risk of electric shock.
-  Risk of danger. Important information: It is important that users of this tester read, understand, and follow all warnings, cautions, safety information, and instructions in this manual before operating or servicing this tester. Failure to follow instructions could result in death or serious injury.
-  Double Insulated.

**CAT IV** Equipment is designed to protect against transients from the primary supply level. (i.e. - electricity meter or overhead/ underground utility service).

**OPERATING INSTRUCTIONS:**

**Modes of operation:**

The NCVT-2 can operate as a dual range (NCVT-2 mode) or single range (NCVT-1 mode) tester. In NCVT-2 mode, the tester will light a steady blue LED in the tip to indicate power-on and dual range mode. In NCVT-1 mode, the tester will light a steady green LED in the tip to indicate power-on and single range mode.

**Turn unit on:**

Press and hold the power button for ½ second, then release. Listen for single-beep sound and watch for a steady green or blue LED to illuminate in the tip of the tester. The tester is now activated and is operational. Test on known live circuit to verify tester functionality. See *Silent mode* for additional power-on options.

**Turn unit off:**

Press and hold the power button for ½ second then release. Listen for a double-beep sound and watch the green or blue LED turn off. The tester is now deactivated and is not operational.

**System self-test:**

The “power on” blue or green LED visually confirms battery sufficiency, system integrity, and operation/active mode. Always test on known live circuit to verify tester functionality prior to use.

**Changing operation modes:**

While the unit is powered on, press and hold the power button for 2 seconds. The unit will beep 3 times and the power-on LED will switch from blue to green or green to blue. The tester will start in whichever mode it was last powered off in.

**Checking for the presence of AC voltage:**

Prior to use, test on known live circuit to verify tester functionality. Place tip of the tester near an AC voltage and refer to the tables below for each mode:

**NCVT-2 mode:**

	<b>POWER-ON</b>	<b>12 TO 48 VOLTS AC</b>	<b>48 TO 1000 VOLTS AC</b>
<b>Audible</b>	Single Beep	Low-Pitched Pulsing Beeping Sound	High-Pitched Continuous Beeping Sound
<b>Visual</b>	Steady Blue LED	Blue LED Turns OFF and Red LED Blinks (approximately 2-times per second).	Blue LED Turns OFF and Red LED illuminates continuously.

**NCVT-1 mode:**

	<b>POWER-ON</b>	<b>12 TO 48 VOLTS AC</b>	<b>48 TO 1000 VOLTS AC</b>
<b>Audible</b>	Single Beep	No Sound	High-Pitched Continuous Beeping Sound
<b>Visual</b>	Steady Green LED	Steady Green LED	Green LED Turns OFF and Red LED illuminates continuously.

In NCVT-2 mode, the tester will be more sensitive and will show voltage indication at a further distance away from a high voltage source than in NCVT-1 mode. Use NCVT-1 mode in situations where you expect the voltage source will be greater than 48V AC.

**Low battery indication:**

Scenario 1 – Powering on the tester: The “power on” LED in the tip of the tester changes from a steady green or blue to a blinking green or blue and a series of beeping sounds is generated. The tester then turns off. The unit is now deactivated and is not operational, the batteries require replacement. To replace the tester batteries refer to the Maintenance section titled “Battery Replacement.”

Scenario 2 – Operating the tester: If the LED lights dim and the tone fades, the tester may require new batteries. To replace the tester batteries refer to the Maintenance section titled “Battery Replacement.”

**Auto Power Off:**

After 4 minutes of non-use, the tester automatically powers off to conserve battery life. Listen for a double-beep sound and watch the “power on” LED turn off. The tester is now deactivated and is not operational.

**Silent mode:**

The tester can be operated with only visual indication of voltage. With the tester powered off, press and hold the power button for 2 seconds then release.

## MAINTENANCE:

### Battery Replacement:

- Orient the tool/tester with the pocket-clip facing you.
- Gently depress the tab, Fig. 2, until you can slide the end-cap off the main body of the tester.
- Remove the batteries using caution to prevent damage or injury to the internal components.
- Replace with two 1.5V AAA or LR03 or NEDA 24A batteries.
- Place batteries into tester with the positive terminals facing the tip, Fig. 3.
- Carefully align and slide the end-cap to the body of the tester, Fig. 4. Push the cap until it is fully seated (denoted by a clicking sound), Fig. 4.
- **Note:** Hold pocket-clip on cap close to tester body while sliding cap onto tester.
- Test on known live circuit to verify tester functionality.

### Cleaning Tester:

- Tester contains sensitive electronic components; do not submerge in liquid.
- Do not use alcohol, ammonia or cleaners containing solvents to clean tester.
- Gently wipe the tester with Klein Kleeners® (CAT. # 51425 or 51426), a damp cloth or a cloth containing a mild cleaning solution.
- Make sure the tester is completely dry prior to operation.

## DISPOSAL:

- Do not throw depleted batteries away; please recycle properly.
- Do not throw tester away, please recycle properly.
- Please see [www.epa.gov](http://www.epa.gov) or [www.ecycle.org](http://www.ecycle.org) for additional information.

## WARRANTY

Klein electronic test and measurement devices (and accessories), manufactured and sold for commercial or industrial uses, are warranted to be free from defects in materials and workmanship for two years from the date of purchase (unless otherwise noted on the product packaging). THERE ARE NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS. At its option, Klein will repair or replace, or refund the purchase price of, any product which fails to conform to this warranty under normal use and service. **In no event shall Klein be liable for incidental or consequential damage.** This warranty does not apply to batteries.

### CAUTION:

- Do not attempt to repair this tester. It contains no serviceable parts.
- Do not expose the product to extremes in temperature or high humidity.

### WARNINGS:

- It is important that users of this tester read, understand, and follow all warnings, cautions, safety information, and instructions in this manual before operating or servicing this tester. Failure to follow instructions could result in death or serious injury.
- Risk of electric shock and burn. Contact with live circuits could result in death or serious injury.
- Use caution with voltages above 30V AC as a shock hazard may exist.
- A blinking or steady red glow and an audible beep indicate voltage present. If no indication, voltage could still be present.
- Before and after each use, verify operation by testing a known working circuit that is within the rating of this unit.
- Never assume neutral or ground wires are de-energized.
- The tester **WILL NOT** detect voltage if:
  - the wire is shielded.
  - the operator is not grounded or is otherwise isolated from an effective earth ground.
  - the voltage is DC.
- The tester **MAY NOT** detect voltage if:
  - the user is not holding the tester.
  - the user is insulated from the tester with a glove or other materials.
  - the wire is partially buried or in a grounded metal conduit.
  - the tester is at a distance from the voltage source.
  - the field created by the voltage source is being blocked, dampened, or otherwise interfered with.
  - the frequency of the voltage is not a perfect sine wave between 50 and 500Hz.
  - the tester is outside of operation conditions (listed in Specifications section).
- Operation may be affected by differences in socket design and insulation thickness and type.
- In bright light conditions, the LED visual indicators will be less visible.
- Do not use if "power on" LED is not illuminated.
- Do not use if tester appears damaged or if the tester is not operating properly. If in doubt, replace the tester.
- Do not apply more than the rated voltage as marked on the tester (1000 volts AC).
- Detection above 12V is specified under "normal" conditions as specified below. The tester may detect at a different threshold at different conditions, or may not detect at all unless:
  - The tip of the tester is within 0.25" of an AC voltage source radiating unimpeded.
  - The user is holding the body of the tester with his or her bare hand.
  - The user is standing on or connected to earth ground.
  - The air humidity is nominal (50% relative humidity).
  - The tester is held still.
- Always wear approved eye protection.
- Comply with local and national safety requirements.
- If this product is used in a manner not specified by the manufacturer, protection provided by the product may be affected.

## SPECIFICATIONS:

**VOLTAGE RANGE:** 12-1000 Volts AC

**TESTER TYPE:** Non-Contact Voltage Detector

**UL CERTIFICATION**  
E321008 3TMV



**FREQUENCY RANGE:**  
50-500Hz

**STANDARDS:**

UL 61010-1 2<sup>nd</sup> edition, CAN/GSA C22.2 No.  
61010-1-04, EN 61010-1 2<sup>nd</sup> edition, IEC  
61010-1:2001 2<sup>nd</sup> edition, ISA-82.02.01  
(IEC61010-1 MOD)

**CAT IV RATED**



**DOUBLE INSULATED**



**POWER ON INDICATOR AND ILLUMINATOR:**

Visual: High Intensity Green/Blue LED

**POWER OFF & AUTO POWER OFF:**

Visual: High Intensity Green LED Blinks  
Audible: Double Beeping Sound

**LOW BATTERY INDICATORS:**

Visual: Green/Blue LED Blinks  
Audible: Series of Beeping Sounds

**VOLTAGE DETECTION INDICATORS:**

**12 VOLTS TO 48 VOLTS:**

Visual: High Intensity Blinking Red LED  
Audible: Low Pitched, Pulsing Beeping Sound

**48 VOLTS TO 1000 VOLTS**

Visual: High Intensity Continuously  
Illuminated Red LED  
Audible: High Pitched, Continuous  
Beeping Sound

**OPERATING CONDITIONS:**

Temperature: 32° to 104° F (0° to 40° C)  
Relative Humidity: <80%  
Altitude: Up to 6,562 feet (2,000 meters) maximum  
Environment: Indoor Use

**STORAGE CONDITIONS:**

Temperature: 32° to 104° F (0° to 40° C)  
Relative Humidity: <80%  
Altitude: Up to 6,562 feet (2,000 meters) maximum  
Environment: Indoor

**POLLUTION DEGREE:** 2

**BATTERIES:** Two 1.5 volt AAA or IEC LR03 or NEDA 24A

**PATENTS:** US D583,266 S

**DISPOSAL:** DO NOT THROW IN TRASH;  
PLEASE RECYCLE.



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