Digital Voltage Tester

1. Statement

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1.1 Safety Declaration

⚠The "Warning" sign indicates a hazardous situation which, if not avoided, could pose a danger to the user.

Care must be taken when performing this operation. Failure to perform this operation correctly or to follow this procedure may result in personal injury or death. Do not proceed with any operation indicated by the WARNING sign without meeting these conditions or without fully understanding them.

Please read the instructions carefully and pay attention to the relevant safety warnings before use.

1.2 Safety Information

The design and manufacturing of this instrument strictly comply with the IEC61010-1 CAT.III 600V over-voltage safety standard and Pollution Degree 2 requirements.

1.3 Safe Operating Procedures

⚠WARNING：In order to avoid possible electric shock or personal injury, please strictly comply with the following instructions:

● Before using the meter, please read this manual carefully and pay special attention to the warning information.

●Before using the meter, please check the meter housing for cracks or damaged plastic parts. If so, please do not use it again.

●Before using the meter, please check if the meter is working properly. If it is not normal or has been damaged, please do not use it again.

● Before using the meter, please check the probes for cracks or damages. If so, please replace the probes with the ones with the same specification before use.

●Before using the meter, verify that the meter is working properly by measuring a known voltage with the meter first.

●Use the meter in strict compliance with the operation of this manual, otherwise the protection provided by the meter may be damaged or weakened.

● Use the meter according to the measurement category, voltage or rate current value specified in the meter or manual.

● Observe local and national safety specifications. Wear personal protective equipment (such as approved rubber gloves, masks and flame-retardant clothing) to prevent injury from electric shock and arcing when dangerous live conductors are exposed.

●The voltage applied between the input terminals or between any of the terminals and the ground point must not exceed the rated value indicated on the meter.

●Special care should be taken when measuring beyond AC true RMS at 30V, AC peak value at 42V or DC at 60V. There is a risk of electric shock

with these types of voltage.

●When the low battery indicator appears, please replace the battery in time to prevent measurement errors.

● Do not use the meter around explosive gases or steam or in a humid environment.

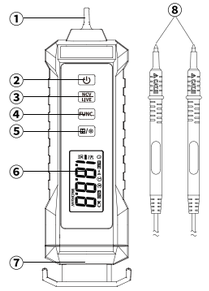
● When using the probes, keep your fingers behind the finger protection on the probes.

●Remove the probes from the meter before opening the housing or battery cover. Never use the meter with the meter disassembled or the battery cover open.

2. Overview

2.1Components

①NCV Sensor area
②Power Button
③NCV and LIVE function switching button
④Function switching button
⑤Data-hold and backlight button
⑥LCD Display Area
⑦Pen holder
⑧Test probe



3. Operational instructions

3.1 Power On/Off

Press the " ⏻ " key to turn on the device. Press it again to turn it off. If there is no operation for about 10 minutes after turning on, it will automatically shut down.

Note: When starting up, the test leads need to be short-circuited to clear the resistance. When the test leads are short-circuited to 0Ω during measurement, the base value will be displayed.

3.2 AC or DC voltage measurement

3.2.1 DC voltage measurement

The default measurement of DC voltage interface of this machine is turned on, and the interface displays DC ---. Connect the pen to the power supply or load to be measured, and the polarity of the red pen end will be displayed on the screen at the same time.

NOTE：

1. Do not input voltage higher than 600V, as there is a risk of damaging the internal circuit of the instrument.

2.When measuring high voltage, special attention should be paid to avoiding electric shock.

3.2.2 AC voltage measurement

1.Press the "**FUNC.**" button to make it at the interface of measuring AC voltage, and the interface is displayed as AC ----.

2.Connect the probe to the power supply or load to be tested, and the measured value will be displayed on the screen.

NOTE：

1.Do not input voltage higher than 600V, as there is a risk of damaging the internal circuit of the instrument.

2.When measuring high voltage, special attention should be

paid to avoiding electric shock.

3.3 NCV or LIVE function measurement

1.Press the "**NCV/LIVE**" button to make the NCV measurement interface display, and the interface displays EF. Then, the NCV area is in the measurement area, and with the increase of the magnetic field strength in the measured area, the LCD displays "---" to indicate the induced signal strength, and the buzzer emits a reminder sound of different speeds.

2.Press the "**NCV/LIVE**" button to make it in the LIVE measurement interface, the interface displays LF, and then use the red pen measuring end to contact the measured load or power supply, with the increase of the measured load voltage, the LCD displays "---" to indicate the inductive signal strength, and the buzzer sends out a reminder sound of different speeds.

Note: The negative pole of the pen is charged during the LIVE measurement and the pen should be placed well to avoid electric shock.

3.Press the "**FUNC.**" button to switch between DC voltage, AC voltage, frequency and resistance.

4.During the measurement process, if it is necessary to hold the reading, you can briefly press the "**H/☼**" key, and the displayed value on the monitor will be held. Press the "**H/☼**" key briefly again to release the reading hold state.

5.Long press the "**H/☼**" key to turn on the backlight. Press and hold the "**H/☼**" key again to turn off the backlight.

4. Technical Indicators

4.1 General Characteristics

●Maximum voltage between voltage input and ground: 600V AC/DC.
●Automatic range,Over-range display: "OL".
● Display: 3 1/2-bit segment code LCD display, with maximum display of 1999.
●Polarity display: Negative polarity displays "-".
●Working environment: 0 ~ 40°C; < 80% RH.
●Storage conditions: -10 ~ 50°C; <70%RH.
●Power supply: CR2450 3V battery x1.
●Battery under-voltage prompt: When it is below about 2.6V, the LCD screen displays "🪫".
●Safety level: IEC61010-1, CAT III 600V.
●Operating altitude:<2000m.
●Size: 131×42×33mm.
●Weight: Approximately 92g (including battery).

4.2 Accuracy Index

Accuracy: % reading± dgt; Warranty period: one year from the date of manufacture.

Environment temperature: 18 ℃ ~28 ℃ . Environment humidity: < 80%.

4.2.1 DC Voltage

Range	Resolution	Accuracy
200V	0.1V	± (1.0% reading + 5dgt)
600V	1V	

Input impedance: about 10MΩ.

4.2.2 AC Voltage

Range	Resolution	Accuracy
200V	0.1V	± (1.5% reading + 5dgt)
600V	1V	

Input impedance: about 10MΩ.

Frequency range: 50/60Hz.

4.2.3 Frequency

Range	Resolution	Accuracy
100Hz	0.1Hz	± (1.0% reading + 3dgt)
1000Hz	1Hz	

Hz signal voltage range: ⩾ 2V-600V AC (RMS).

Overvoltage protection: 600AC (RMS).

4.2.4 Resistance

Range	Resolution	Accuracy
1.0kΩ	0.01kΩ	± (1.5% reading + 5dgt)
100kΩ	1kΩ	

Overvoltage protection: 600DC or 600AC (RMS).

5. Repair

5.1Replace the Battery

If the "🪫" symbol appears on the LCD screen when the instrument is in use, the battery must be replaced to prevent the instrument from working abnormally.

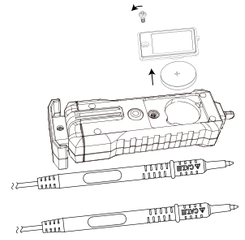
1. Remove the test leads from the measurement terminals to power

off the device；

2. Use a screwdriver to open the battery cover on the back and remove the battery;

3. The battery used in this device is: CR2450 3V. Replace it with a battery of the same specification, paying attention to the polarity;

4.After replacing the battery, securely close the battery cover and tighten the screw before using the instrument.



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折页前尺寸 400*120mm，折页后尺寸100*120mm

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