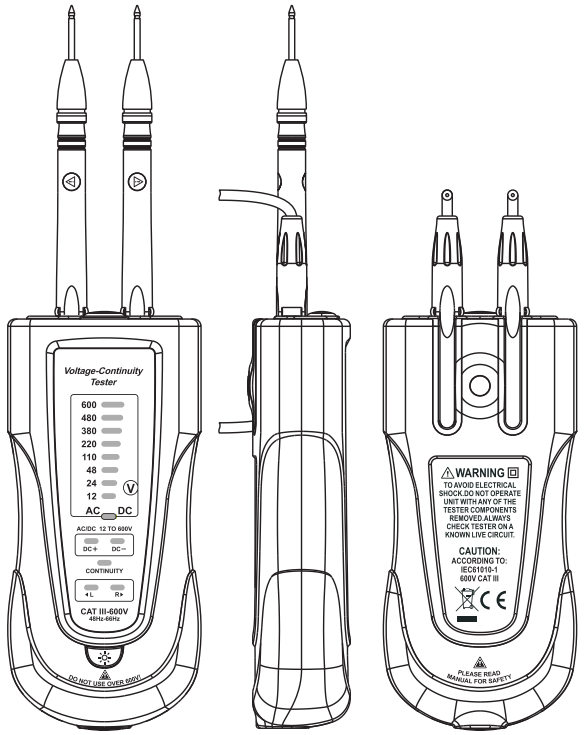
Voltage/Continuity Tester
User Manual



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CONTENTS

I. Descriptions of safety symbols

⚠	Danger warning, read the user manual carefully before use.		
⚠	There is dangerous voltage, avoid electric shock when using.		
⧈	Double insulation	CE	CE approval

II. Safety precautions

- To avoid electric shock, pay special attention when the detected voltage is over the safety voltage. (Normally, the safety voltage is 36V). When the voltage is over 36V, check whether the tester is in good condition by testing the given voltage first.
- you can only hold the body of the tester,Not to cover indicating points and not to touch the contact electrode before and during tests.
- The tester can only be used when it is within the specified range (Refer to the specifications) and the voltage is less than 600V.
- Make sure the device is in good condition before use. The tester can not be used when one or several functions are unavailable or there is no function indication.
- Make sure the test probe and tester are in good condition before use.
- Do not test in rainfall.
- Do not test in wet conditions.
- It is most suitable for use when the temperature is between -10°C and 55°C, and the relative humidity is less than 85%.
- When the security of the operator can not be guaranteed, the tester must be sent for repair.

ATTENTION This user manual contains necessary information about safety use and maintenance methods about the device. Please read all the contents of this manual carefully before use.

WARNING Not operating the device according to the user manual may do harm to your body or cause damages to the tester.

ATTENTION If below situations occur, safety shall not be guaranteed any more:
1, There is obvious damage.
2, The functions of the tester differ from the proper functions.
3, The tester has been stored under inappropriate conditions (such as high temperature and damp environment) for a long period.
4, The tester has been extruded by the machine in transportation.
5, If indication of one or more steps fails,or if no functioning is indicated the tester shall no longer be used.

III. Introduction

1) Brief introduction

1. This voltage tester has below functions:
- AC/DC voltage test(including three-phase AC);
- Phase indication function of three-phase AC;
- Continuity test function;
- Judging function of firewire;
- Lighting function in dark environment.

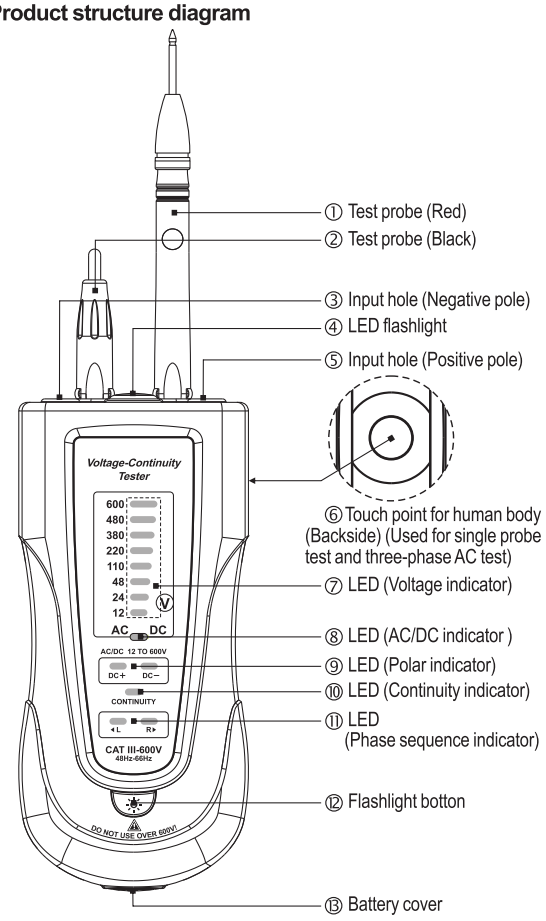
2. This tester has a probe installation hole which can protect the probe, and more importantly, it can protect the user. Insert the probe into the probe socket after the test is finished.
3. This tester can be used in various occasions, including home, factory, electricity sector, etc.

2) Product features

1. This product already passed below approvals: IEC6010-1, and it complies with CAT III 600V.
2. There is no need to install battery when this device is used for voltage test.
3. This product has a probe installation hole, which is convenient and safe for single-hand operation in some cases.
4. LED voltage display.
5. The maximum AC/DC voltage measured value can reach 600V.
6. The singe probe test can distinguish zero wire from fire wire.
7. Continuity measurement.
8. It can indicate the phase relationship of the three-phase AC.
9. There is buzzer and LED indicator during measuring.

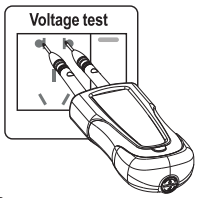
⚠ATTENTION
Please check whether every part of the tester is in serviceable condition after the package is opened, below details need to be confirmed:
1, Whether the insulation of tester case and probe is in good condition.
2, Whether there is user manual.

3) Product structure diagram



IV. How to use

1) Voltage test

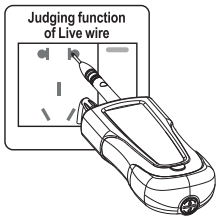


⚠ **Follow the safety testing standards mentioned in second point of the user manual !!!**

1. Connect the two test probes to the object to be detected during testing. (The minimum test voltage of the tester is equal to or more than 12V.)
2. During AC voltage testing, voltage indicator LED ⑦ indicates the tested voltage values. It indicates AC voltage and is accompanied with buzzer when two LED of the polar indicator LED ⑨ are lighted at the same time.
3. During DC voltage testing, when the red test probe is connected to the voltage anode and the black test probe to the voltage cathode, LED ⑦ shall display the corresponding voltage, and LED (DC+) which indicates anode in LED ⑨ shall light at the same time; when the red test probe is connected to the voltage cathode and the black test probe to the voltage anode , LED⑦ shall display the corresponding voltage, and LED (DC-) which indicates cathode in LED ⑨ shall light, and LED ⑩ shall light with buzzer at the same time.

> ⚠ ATTENTION
> **The voltage indicator of this tester is composed by one line of LED ⑦ , including 12V, 24V, 48V, 110V, 220V, 380V, 480V and 600V. The LED shall light one by one with increase of the voltage during testing.**

2) Judging function of Live wire (Single probe test)



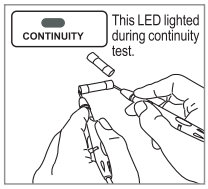
Only single probe test can realize the judging function of fire wire, touch the ground polar ⑥ with finger and connect the red test probe to the electrical conductor to be tested. When the AC voltage of the electrical conductor to be detected is more than 100V, LED ⑧ shall be lighted with buzzer.

> ⚠ ATTENTION
> **(1) Single probe test is only used to measure whether the conductor is with electricity, but can not indicate the voltage level, and it is only used for AC circuit.**
> **(2) When the voltage value of the detected electric field is more than 100V and the finger does not touch electrode ⑥ ,the LED may be lighted with buzzer.**

3) Continuity Test

⚠ **Make sure the detected object is uncharged before testing.**

⚠ **The continuity test is used to detect whether the detected object conducts normally.**



(You may adopt voltage test or single probe test to measure whether the detected object is with electricity.)

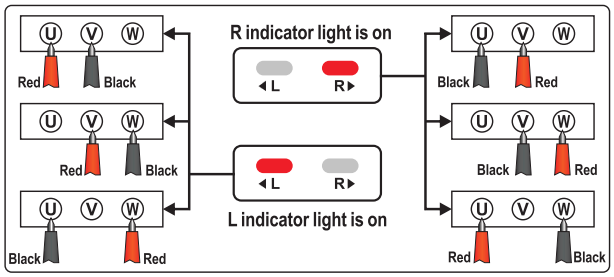
Connect these two test probes (Regardless of polarity) to two ends of the detected object, if the resistance is within the range (refer to the specifications), there shall be buzzer and LED ⑩ shall be lighted at the same time.

4)Phase sequence test (Phase indication of three-phase AC)

⚠ **This measurement must conform to the safety test rules mentioned in the third point of this manual.**

⚠ **Phase sequence test is only valid when used in three-phase electric power system, which is corresponding to LED display of symbol R or L.**

1. Connect the red test probe to any phase of the three-phase electric power, and connect the black test probe to any other phase;
2. Touch the ground electrod ⑥ with finger;
3. One LED corresponding to R or L shall be lighted, move any test probe to another phase, and another LED shall be lighted;
4. When the position of these two test probes is exchanged, the LED corresponding to L or R shall exchange to be lighted.
5. As shown in below diagram, light L shall always be on only when all the detected phases are positive, while light R shall always be on when all the detected phases are negative;
6. Voltage indicator LED ⑦ shall display the corresponding voltage values at the same time.



5) Lighting function

You may use the lighting function at night or in dark places; press lighting botton ⑫ on the body, floodlight LED flashlight ④ at the front end shall be lighted for your convenience.

V. Cleaning and maintenance

1) Maintenance

There is no special requirement for maintenance when the tester is correctly used according to the user manual. When any functional fault occurs during normal operation, please stop using and contact the nearest authorized service center.

2) Cleaning

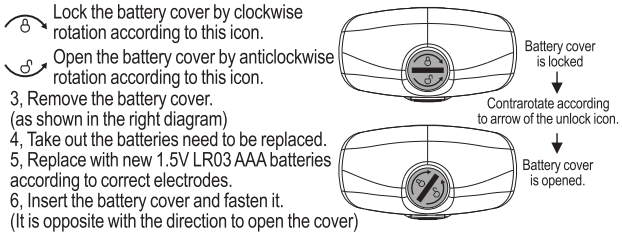
Before cleaning, disconnect the voltage tester with the detected circuit, and wipe it with a wet cloth or a small amount of household cleaner. Do not use acid cleaner or solvent, and do not use the tester within 8 hours after cleaning.

3)Battery replacement

⚠ **The voltage test function is available when this product is without battery.**

When the test probe is short-circuited, if there is no sound (or the volume is low), or LED ⑩ is not lighted, or LED ④ is not lighted after pressing lighting botton ⑫ , please replace the batteries according to below steps:

1, To prevent electric shock, please make sure the test probe has been removed before opening the battery cover.
2, Open the battery cover ⑬ according to the direction of the arrow;



3, Remove the battery cover.
(as shown in the right diagram)
4, Take out the batteries need to be replaced.
5, Replace with new 1.5V LR03 AAA batteries according to correct electrodes.
6, Insert the battery cover and fasten it.
(It is opposite with the direction to open the cover)

> ⚠ ATTENTION
> **When you deal with the disposable batteries or storage batteries, please consider your environment, as they are garbage containing hazardous materials which can be recycled by places selling battery in most cases.**
> **Please follow the valid recycling rules at every place, and follow the rules of how to deal with the old batteries and storage batteries.**

4) Test probe replacement

⚠ For safety use, the test probe for use and replacement must be produced by formal manufacturer and comply with the safety standards, and the product safety must be above 1000V CAT II 10A or 600V CAT III 10A.

VI. Specifications

Voltage Test Range	12~600V AC/DC
LED Voltage Indication Point	±12, 24, 48, 110, 220, 380, 480, 600V
Voltage Test	Automatic
Prompt Tone	Yes
Polar Indication	AC/DC
Range Selection	Automatic
Response Time	<0.1S
Working Current	<0.5mA
Internal Basic Load	About 30mA when the voltage is 600V
Internal Battery Cusumption	About 15mA(When the light is on)
Testing Time	10S
Recovery Time	1min
Single Probe Test	Voltage Range: 100~600V
	Hz Range: 50~400Hz
Overvoltage Protection	600V AC / DC
Continuity Test	R：0~200kΩ
	Accuracy：Rn +50%
Phase Sequence test (Three-Phase AC)	Voltage Range:100~600V
	Hz Range: 48~66Hz
	Testing principles：Bipolar Connected
Power Supply	2×1.5V AAA batteries
Temperature Range	-10℃~55℃
Overvoltage Protection Class	CAT III 600V
Pollution Class	2
Approval	IEC61010-1
Weight	235g(Including Batteries)
Dimension	144.5×66.6×35.5 mm