

TENMA®



Multifunction Voltage Tester

Models: 72-3565

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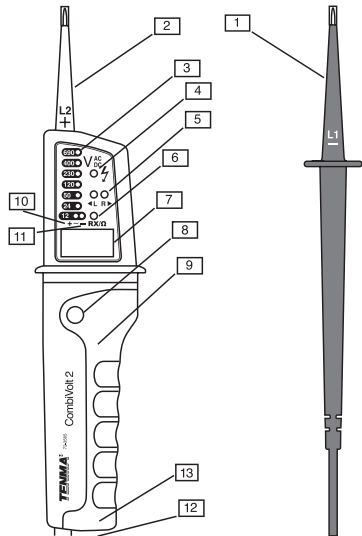
Please read these instructions carefully before use and retain for future reference.

IMPORTANT SAFETY INFORMATION

- When using electrical appliances basic safety precautions should always be followed.
- The voltage detectors are designed to be used by skilled persons in accordance with safe methods of work.
- The voltages marked on the voltage detector are nominal voltages and the voltage detector is only to be used on installations with the specified nominal voltages.
- The different indicating signals of the voltage detector are not to be used for measuring purposes.
- Before using a voltage detector at locations with a high background noise level, it has to be determined whether the audible signal is perceptible.
- It is important to check the state of the batteries (not included) before use and replace if necessary.
- Voltages above 75V DC or 50V AC may pose a serious shock hazard.
- Before using the meter check for physical damage to the casing, in particular around the connectors. If the case is damaged do not use the meter.
- Check the test probes for damaged insulation or exposed metal. Check the leads for continuity.
- Do not apply more than the rated voltage, as marked on the meter, between the terminals or between any terminal and ground.
- Do not use or store the meter in an environment of high temperature, high humidity, an inflammable nature, or where a strong magnetic field exists.
- Disconnect the circuit power and discharge all high voltage capacitors before testing resistance, continuity and diodes.
- The meter may only be opened by a qualified service technician for calibration and repair.
- Remove the batteries if the meter is not in use for a long period of time.
- Ensure the batteries are inserted correctly, observing the plus and minus marks on both the batteries and the compartment.
- Fit a full set of batteries at one time.
- Remove dead batteries from the meter, or if it is not going to be used for a long time.
- Never mix old and new batteries together, or different types of batteries.
- Never dispose of batteries in a fire, or attempt to recharge ordinary batteries.
- Clean the instrument using a soft, dry cloth.
- Do not use any chemicals, abrasives or solvents that may damage the instrument.

PRODUCT OVERVIEW

1. Test probe (-) L1
2. Test probe (+) L2
3. LEDs for voltage indication
4. LED for single-pole test
5. Right and left LED, phase rotation indication
6. LED for continuity
7. LCD for displaying voltage
8. Contact electrode for double-pole test of phase rotation and single-pole test.
9. Torch button on reverse
10. Positive LED
11. Negative LED
12. Battery compartment
13. Anti-leakage piece

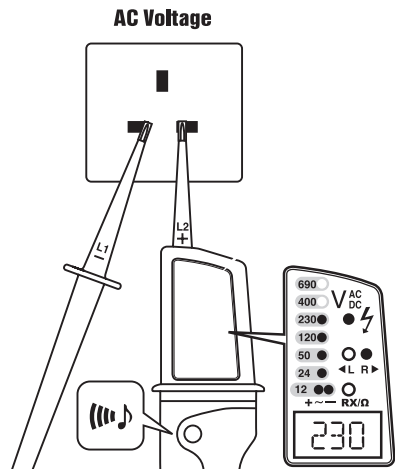


MEASURING

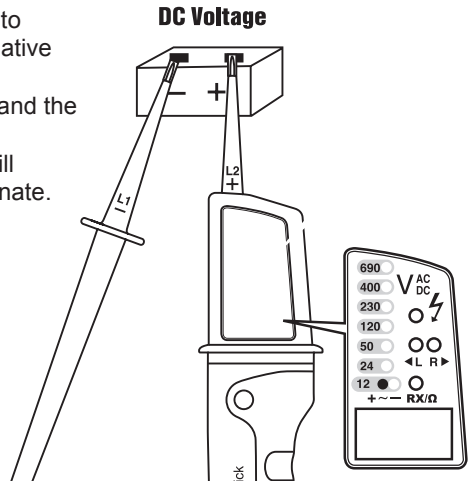
- Before measuring, perform a self-test of the unit.
- Connect the two test probes L1 and L2.
- The continuity LED will be lit and an audible tone will be heard.
- Before any test, check the unit on a known voltage source.

VOLTAGE TEST

- Always hold the test probes by the handles behind the finger guards.
- An audible tone will be heard when an AC voltage and a negative DC voltage are indicated.
- The maximum switch-on time is 30 seconds. When this time has elapsed you must wait 10 seconds before retesting.
- Connect the probes to the voltage source, observing polarity of the test probes. Note: L2 is the positive probe, while L1 is the negative.
- For AC voltage the value is indicated on the three LEDs and on the LCD. The positive and negative LEDs will illuminate and the buzzer will sound.

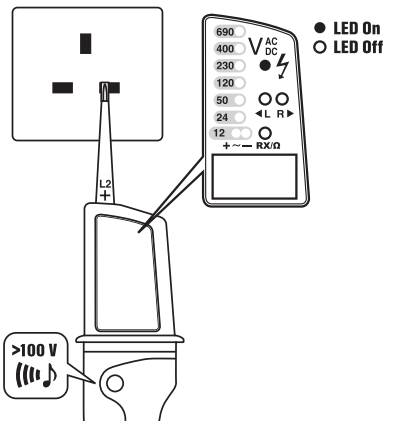


- For DC voltage, connect the L2 probe to the positive terminal and L1 to the negative terminal.
- The voltage is displayed on the LEDs and the LCD. The positive LED is illuminated.
- If the polarity is reversed the buzzer will sound and the negative LED will illuminate.



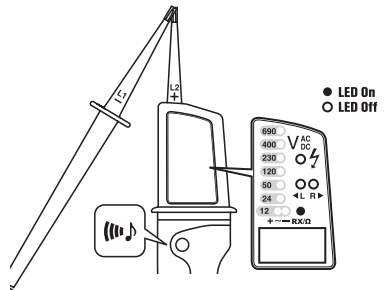
SINGLE-POLE VOLTAGE DETECTION

- Perform a function test prior to this test.
- This unit can be used as a single-pole voltage detector when batteries are inserted.
- The single-pole test is intended only as a quick check. The circuit must be checked again for the presence of voltage using the two-pole method.
- Connect the L2 test probe to the voltage source and keep your finger on the contact electrode.
- If an AC voltage above 100V is present, the LED will illuminate and the buzzer will sound.
- The single-pole test can be negatively affected by unfavourable conditions such as an electrostatic field or strong insulation etc.



CONTINUITY TEST

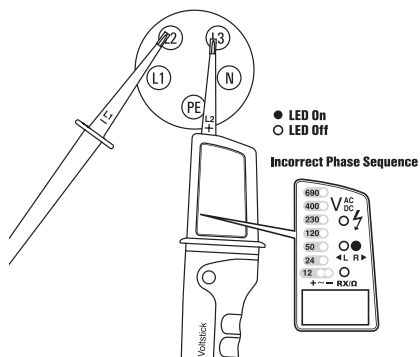
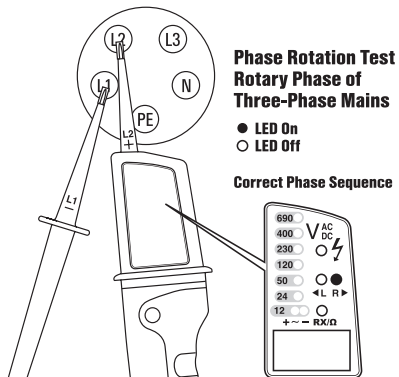
- The continuity test is only possible when batteries are inserted and in good condition.
- Ensure the circuit under test is not live.
- Connect the L1 and L2 test probes to the circuit. The continuity LED will illuminate and the buzzer will sound.
- The unit indicates continuity below 400kΩ.



Note: The continuity test is only possible when batteries are installed and in good condition

PHASE ROTATION TEST

- Perform a function test prior to this test.
- This unit can determine the phase rotation within a three-phase supply.
- Connect the L2 test probe to the supposed phase 2 and the L1 test probe to the supposed phase 1. If the R LED illuminates the phases are in the correct sequence 1 to 2.
- Connect the L2 test probe to the supposed phase 3 and the L1 test probe to the supposed phase 2.
- If the R LED illuminates, the phases are in the correct sequence 2 to 3.
- Connect the L2 test probe to the supposed phase 1 and the L1 test probe to the supposed phase 3.
- If the R LED illuminates the phases are in the correct sequence 3 to 1.
- During phase rotation, test touch the contact electrode. If the LED illuminates then the phase sequence is anti-clockwise.



SPECIFICATION

Voltage display	12 - 690V AC/DC
LED resolution	12, 24, 50, 120, 230, 400, 690
LCD resolution	(12-690V AC/DC) ± 3% + 8 digits
Voltage detection	Automatic
Acoustic signal	AC voltage - DC voltage
Polarity detection	Full range
Response time	LED <0.1s, LCD <2s
Frequency range	0 - 400Hz
Peak current	I _s < 0.3A / I _s (after 5s) <3.5mA
Operation time	30s
Recovery time	10 min
Auto power-on	<12V AC/DC

SINGLE-POLE SPECIFICATION

Voltage range	100 - 690V AC
Frequency range	50 - 400Hz

CONTINUITY SPECIFICATION

Measuring range	0 - 400k Ω
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PHASE ROTATION TEST SPECIFICATION

Voltage range	100 - 690V
Frequency	45 - 65Hz
Over voltage protection	690V AC/DC
Power supply	2 x 1.5V AAA (LR03) batteries
Dimensions	255 x 70 x 28mm
Weight	200g

CLEANING & MAINTENANCE

- Do not attempt to repair this unit. There are no user serviceable parts in the Tester.
- Never attempt to open the casing apart from the battery cover.
- Do not use the Tester if there is any physical damage to the case or test probes.
- The outer casing of the Tester can be cleaned with a soft damp cloth.
- Do not use any chemicals, abrasives or solvents that could damage the Tester.

CHANGING THE BATTERIES

- Turn the battery cover 90 degrees anti-clockwise.
- Remove the cover and take out the spent batteries.
- Replace the old batteries with 2 x 1.5V AAA (LR03) batteries, ensuring the correct polarities are observed.
- Put the battery cover back in place and turn 90 degrees clockwise.

CALIBRATION

- The recommended calibration interval is 12 months.



INFORMATION ON WASTE DISPOSAL FOR CONSUMERS OF ELECTRICAL & ELECTRONIC EQUIPMENT.

When this product has reached the end of its life it must be treated as Waste Electrical & Electronic Equipment (WEEE). Any WEEE marked products must not be mixed with general household waste, but kept separate for the treatment, recovery and recycling of the materials used. Contact your local authority for details of recycling schemes in your area.

