

UT22B-EU Voltage Tester User Manual

Preface

Thank you for purchasing the new voltage tester. In order to use this product safely and correctly, please read this manual thoroughly, especially the *Safety Warning* part.

After reading this manual, it is recommended to keep the manual at an easily accessible place, preferably close to the device, for future reference.

Limited Warranty and Liability

Uni-Trend guarantees that the product is free from any defect in material and workmanship within one year from the purchase date. This warranty does not apply to damage caused by accident, negligence, misuse, modification, contamination or improper handling. The dealer shall not be entitled to give any other warranty on behalf of Uni-Trend. If you need warranty service within the warranty period, please contact your seller directly.

Uni-Trend will not be responsible for any special, indirect, incidental or subsequent damage or loss caused by using this device.

I. Safety Warning

This manual contains warning information and safety regulations. Please observe them strictly to ensure the safety of the user and tester.

Note:

- 1. Please read and understand all contents of the manual concerning safety, operation and maintenance before using the tester.
- 2. Uni-Trend is not responsible for any damage caused by improper use or violation of the safety regulations in the manual.
- 3. This manual is subject to change without prior notice. Safety symbol "⚠" has three meanings in the manual. Users should pay special attention to the operation with the symbol when reading.

⚠	Danger ----- identifies conditions and actions that are likely to pose serious or fatal hazards.
⚠	Warning ----- identifies conditions and actions that may pose serious or fatal hazards.
⚠	Caution ----- identifies conditions and actions that may pose minor injury or damage the tester.

- ⚠ To avoid electric shock, pay special attention when the measured voltage exceeds the personal safety voltage (36V).
- ⚠ Before each use verify tester operation by measuring a known voltage.
- ⚠ Only touch the handle part in using the tester. Keep fingers behind the finger guards and away from the metal probe contacts when making measurements.
- ⚠ Do not use the tester over range (400V).
- ⚠ Do not use the tester or test lead if it appears to be damaged.
- ⚠ Do not use the tester in extreme temperatures or wet weather. Keep the operating temperature between -15°C~45°C and relative humidity less than 85%.
- ⚠ The safety is no longer guaranteed if:
 - There is obvious damage.
 - Functions of the tester are impaired.
 - The tester has been stored at extreme temperatures for a long time.

The meaning of the symbols associated with this tester:

⚠	Danger, Warning or Caution
◻	Equipment protected throughout by DOUBLE INSULATION or REINFORCED INSULATION
♻	Do not discard the tester or its accessories as unsorted municipal waste. Please dispose properly in accordance with local regulations.
CE	Complies with European Union standards
⚡	Caution, possibility of electric shock
⚡	Suitable for live working
CAT III	It is applicable to testing and measuring circuits connected to the distribution part of the building's low-voltage MAINS installation.
ELV	Extra Low Voltage (Voltage below 50V a.c. or 120V d.c.)
Time rating	specified on-load time during which the voltage detector is able to operate correctly
Recovery time	minimum no-load time between two uses as specified by the manufacturer

II. Introduction

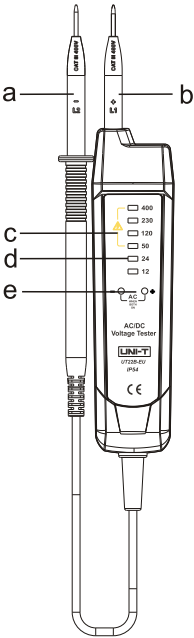
The UT22B-EU is an automatic voltage tester that tests AC/DC voltages from 12V to 400V. It is designed for electricians and homeowners alike. It is available for residential or commercial use, and tests sockets, appliances, etc.

Features:

- Test ranges of AC/DC voltage: 12V, 24V, 50V, 120V, 230V, 400V
- Automatic identification of AC/DC voltage
- Automatic identification of DC voltage polarity
- Hazardous voltage indicator
- Complies with IP54, RoHS, CE, and CAT III 400V standards

III. Structure

- a. Test probe (-)
- b. Test probe (+)
- c. Hazardous voltage indicator
- d. Voltage level indicators
- e. AC/DC voltage indicators



IV. Operating instructions

In a safe operating environment, connect the test probes to the circuit under test. The voltage level indicators will illuminate indicating the voltage present. The range of the measured voltage can be judged based on the status of the indicators. When DC voltage is detected, the "+" or "-" polarity indicator will illuminate, revealing the polarity. When AC voltage is detected, both polarity indicators will illuminate.

- ⚠ If the range of the measured voltage can be clearly determined, please stop testing. The testing time should be less than 5s to ensure the service life of the tester.
- ⚠ If the voltage under test is less than 10V, the tester may not detect it. At this time, the 12V LED voltage level indicator may be on or off.
- ⚠ Do not attempt to measure AC/DC voltage in excess of 400V under any circumstances. The hazardous voltage indicator will illuminate in the presence of voltage exceeding 50V AC or DC ,with characteristics as detailed in the table below:

Hazardous voltage indicator status	AC voltage	DC voltage
Solid on	>50V	>50V
Blinking at approx. 1.5Hz	>400V	>400V

V. Specifications

1. General specifications

- Operating altitude: Up to 2000m
- Relative humidity: <85% non-condensing
- Operating temperature: -15°C~45°C
- Storage temperature: -20°C~60°C
- Dimensions: 265mm*42mm*34mm
- Weight: 142g
- Drop protection: 2m
- Ingress protection: IP54
- Safety rating: CAT III 400V
- Pollution degree: 2
- Recovery time: <5s
- Time rating: >600s
- 18kΩ@ELV a.c. : When voltage below 50Vac ,the tester internal impedance is 18kΩ
- Standards: EN61326-1:2013, EN61326-2-2:2013, EN61243-3:2014

2. Electrical specifications

- Voltage level indicators:
 - AC: 12V, 24V, 50V, 120V, 230V, 400V
 - DC: 12V, 24V, 50V, 120V, 230V, 400V
- Polarity indicators:
 - DC Positive: (+) LED illuminated
 - DC Negative: (-) LED illuminated
 - Both (+/-) LED illuminated indicates AC
- Hazardous voltage indicator:
 - Solid on when voltage >50V
 - Blinking at 1.5Hz when voltage >400V
- Input protection: 400V AC/DC
- Maximum measurable voltage: 400V AC/DC
- Accuracy: Voltage level indicators typically illuminate fully at approx. 70% to 100% of indicated voltage, except for 12V AC/DC (50% to 100%)
- AC frequency: 50Hz/60Hz

VI. Maintenance and Cleaning

- 1. If an abnormal phenomenon occurs or the tester malfunctions during normal operation, please stop using it immediately and contact your seller for confirmation.
- 2. Remove the test probes from the circuit under test before cleaning. Wipe the tester surface with a clean, dry lint-free cloth. Do not use abrasive cleaners or solvents. Make sure the tester is ventilated and dry before using.

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Warnings and safety information

For all information on handling and use, please refer to the instruction manual or product label. Before using the products, read its contents and follow the instructions contained therein.

Also read the following information before use:

Safety of use

1. Use measuring tools for their intended purpose. Do not use measuring tools for tasks for which they were not designed to avoid damage or erroneous measurement results.
2. Always make sure a tool is in good working condition before using it. Damaged tools, such as cracked cases or damaged displays, can lead to incorrect measurements or risk of accidents.
3. Calibrate measuring tools regularly to ensure accuracy and reliability of measurements. Incorrectly calibrated devices can lead to erroneous results.

Precautions

1. Use appropriate eye protection, especially when working with measuring tools that may emit radiation.
2. Keep measuring tools away from children and untrained people to prevent accidental damage or misuse.
3. Avoid using measuring tools in extreme conditions of temperature, humidity or in an atmosphere with a high concentration of dust, which can affect their accuracy and functionality.
4. Be careful not to damage delicate measuring components (e.g., sensors, probes) when working with measuring tools.

Safe use

1. Always make sure that the measuring tool is properly aligned and fixed to avoid measurement errors or damage.
2. Use measuring tools only in designated areas that provide adequate stability and minimize the risk of accidents, such as slippery or uneven surfaces.
3. Never take measurements on live components or in conditions that may pose a safety hazard.

Rules for use in appropriate conditions

1. Store measuring tools in a dry, cool place, away from moisture and direct sunlight, which can damage the devices or affect their accuracy.
2. When using measuring tools, make sure they are well seated and will not be subjected to shocks or impacts that can damage them.
3. Avoid using measuring tools in areas with extreme conditions, such as high vibration, hot surfaces, dust, or moisture, unless the tool is rated for this by the manufacturer.

Maintenance instructions

1. Regularly check the condition of measuring tools, especially measuring components (e.g., sensors, probes, displays) and batteries.
2. Follow the cleaning instructions provided by the manufacturer. Use appropriate cleaning materials (e.g., soft cloths) to avoid damaging delicate components.
3. Calibrate measuring tools regularly, according to the manufacturer's recommendations, to maintain measurement accuracy.

Safe disposal

1. Dispose of used or damaged measuring tools in accordance with current environmental and electronics recycling regulations.
2. Do not dispose of measuring tools in regular waste containers, as they may contain elements harmful to the environment.
3. Contact local authorities or recycling companies for information on proper disposal of used measuring tools.

Statement of compliance

The products have been designed in accordance with the safety requirements of **Regulation (EU) 2023/988** on general product safety, ensuring their compliance with applicable standards for the safety and health protection of users.

EU REP

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