UT33A+/B/C/D+ Palm Size Multimeter User Manual

1. Overview

The new generation UT33+ series products redefine the performance standards for entry-level digital multimeters. The innovative industrial design ensures the product has a longer service life and higher reliability. The new LCD display features a larger display area and higher contrast. The UT33+ series features safety operation CAT I 600 V environment.

1.1 Main Features

- LCD display: 4 1/2 digit LCD display
- Measurement: AC/DC voltage, AC/DC current, resistance, continuity, capacitance, frequency, temperature
- Data hold
- MIN/MAX recording
- Overload indication
- Data backlit
- Dual display
- Controllable backlight (0-100%)
- Backlight ON/OFF

2. Safety Precautions

2.1 Safety Precautions

- Before measuring AC voltage, be sure that the lead set is electrically insulated.
- Before measuring AC voltage, be sure that the leads are correctly connected.
- Before measuring AC voltage, be sure that the leads are not electrically connected.
- Before measuring AC voltage, be sure that the leads are not electrically disconnected.
- Before measuring AC voltage, be sure that the leads are not electrically insulated.
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IX. Technical Specification

- Accuracy: 4% of reading + 0.01% of rated value in least significant digit (LSD),
- 1 Year Warranty
- Ambient temperature: 25°C ±5°C (77°F ±9°F)
- Ambient humidity: <75% RH

Notes:
- 0.5°C accuracy, operating temperature should be within 15°C~40°C.
- Temperature Coefficient: ±0.5°F/°C (±0.8°F/°F)

1. DC current

Range | Model | Resistance | Accuracy
--- | --- | --- | ---
200mA | LTA3A | 0.1% | ±0.01%
200mA | LTA3A | 0.5% | ±0.05%
20mA | LTA3A | 0.1% | ±0.01%
20mA | LTA3A | 0.5% | ±0.05%
20mA | LTA3A | 0.5% | ±0.05%
2mA | LTA3A | 0.5% | ±0.05%
1mA | LTA3A | 0.5% | ±0.05%
0.5mA | LTA3A | 0.5% | ±0.05%

2. AC voltage

Range | Model | Resistance | Accuracy
--- | --- | --- | ---
200V | LTA3A | 0.1% | ±0.1%
200V | LTA3A | 0.5% | ±0.3%
20V | LTA3A | 0.1% | ±0.1%
20V | LTA3A | 0.5% | ±0.3%
20V | LTA3A | 0.5% | ±0.3%
20V | LTA3A | 0.5% | ±0.3%
20V | LTA3A | 0.5% | ±0.3%
20V | LTA3A | 0.5% | ±0.3%

3. Resistance

Range | Model | Resistance | Accuracy
--- | --- | --- | ---
200Ω | LTA3A | 1% | ±2%
200Ω | LTA3A | 1% | ±2%
200Ω | LTA3A | 1% | ±2%
200Ω | LTA3A | 1% | ±2%
200Ω | LTA3A | 0.1% | ±0.1%
200Ω | LTA3A | 0.1% | ±0.1%
200Ω | LTA3A | 0.1% | ±0.1%

4. Continuity diode

Range | Resistance | Remark
--- | --- | ---
0.1Ω | If the measured resistance is greater than 50Ω, the measured circuit will be regarded as open status, and the buzzer does not go off.
0.01Ω | Open circuit voltage 2.1V and LED lamp is lit.

5. Capacitance (only for UT33A+)

Range | Resistance | Accuracy
--- | --- | ---
2000pF | 0.1% | ±0.2%
200pF | 0.1% | ±0.2%
20pF | 0.1% | ±0.2%
200pF | 0.1% | ±0.2%
20pF | 0.1% | ±0.2%

6. Temperature (only for UT33C+)

Range | Resolution | Accuracy
--- | --- | ---
-40~+50°C | 0.1°C | ±0.5°C
-40~+100°C | 0.1°C | ±1°C
-40~+150°C | 0.1°C | ±1°C

Overload protection: 600%max(DC/AC)

7. DC current

Range | Model | Resistance | Accuracy
--- | --- | --- | ---
200mA | LTA3A | 0.1% | ±0.1%
200mA | LTA3A | 0.5% | ±0.5%
20mA | LTA3A | 0.1% | ±0.1%
20mA | LTA3A | 0.5% | ±0.5%
20mA | LTA3A | 0.5% | ±0.5%
20mA | LTA3A | 0.5% | ±0.5%
20mA | LTA3A | 0.5% | ±0.5%
20mA | LTA3A | 0.5% | ±0.5%

8. AC current (only for UT33A+)

Range | Model | Resistance | Accuracy
--- | --- | --- | ---
200mA | LTA3A | 0.1% | ±0.1%
200mA | LTA3A | 0.5% | ±0.5%
20mA | LTA3A | 0.1% | ±0.1%
20mA | LTA3A | 0.5% | ±0.5%
20mA | LTA3A | 0.5% | ±0.5%
20mA | LTA3A | 0.5% | ±0.5%
20mA | LTA3A | 0.5% | ±0.5%

9. Maintenance

Warning: Before opening the rear cover, switch off the power supply (remove test leads from the input terminal and the circuit).

- General maintenance
  - Cover the case with a damp cloth and disconnect. Do not use solvents or solvents.
  - If there is any malfunction, stop using the device, and send it to the maintenance.
- Test leads
  - Store the test leads in a dry place. Remove the power supply to replace the battery. Please identify the positive and negative poles.

Fuse replacement:
- Switch off the device and remove the test leads from the input terminal.
- Leave the test leads in the same position. Leave the back cover on the rear cover, and then replace the fuse.

Fuse specifications
- F1: Fuse L1200250 6.3x32mm ceramic tube
- F2: Fuse 10A/600V 6.3x32mm ceramic tube

Manufacturers:
- UNI-Trend Technology (China) Limited
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