

UT207A/UT208A/UT209A User Manual

I. Basic Information

Brand: UNI-T (United Test)

Model: UT207A / UT208A / UT209A

Name: Digital Clamp Multimeter (AC/DC Clamp Meter)

II. Operating Instructions

Power-On and Range Selection: Rotate the function dial to the desired measurement function.

Current Measurement: Press the trigger to open the clamp jaw, then clamp a single conductor, ensuring the conductor is centered.

For DC current measurement, press the ZERO button to null the reading before measuring.

Voltage Measurement: Insert the red test lead into the VΩHz socket and the black test lead into the COM socket; connect in parallel.

Resistance / Diode / Continuity Measurement: Select the Ω / Diode range; connect the red probe to the positive terminal and the black probe to the negative terminal.

Frequency / Duty Cycle Measurement: Select the %Hz range; connect the test leads in parallel to the signal source, ensuring input amplitude meets specifications.

Temperature Measurement (UT208A only): Connect the temperature sensor and select the temperature measurement range.

III. Precautions

Pre-Use Inspection: Ensure the instrument, test leads, and battery cover are intact.

Do Not Change Ranges Under Load: Never switch ranges while measurements are being taken.

Electric Shock Prevention: Keep fingers behind the finger guards; do not touch exposed conductors.

Voltage Limits: Do not apply voltages exceeding DC 1000 V or AC 750 V.

High-Voltage Operation: Exercise extra caution when measuring voltages above 70 V DC or 33 V AC.

DC Current Measurement Accuracy: Press the ZERO button to null the reading prior to DC current measurement.

The conductor must be centered within the clamp jaws; otherwise, measurement error may reach $\pm 1.0\%$.

Resistance Measurement Prerequisite: Ensure the circuit is de-energized and fully discharged before measurement.

Battery Management: Replace batteries promptly when the "△" symbol appears; remove batteries if the instrument will not be used for an extended period.

Environmental Requirements: Avoid high-temperature, high-humidity, flammable, explosive, or strong electromagnetic field environments.

Cleaning and Maintenance: Wipe with a soft cloth and neutral cleaning agent; do not use abrasive agents or solvents.

IV. Function Overview

Function Description

AC/DC Current Measurement Up to 1000 A (model-dependent); DC requires zeroing; AC response frequency: 50–60 Hz

AC/DC Voltage Measurement Up to 1000 V DC / 750 V AC

Resistance Measurement Auto-ranging supported

Diode / Continuity Test Audible beep indication; open-circuit voltage ≈ 1.5 V

Frequency / Duty Cycle Measurement Supports simultaneous frequency and duty cycle display; input amplitude restrictions apply

Temperature Measurement (UT208A only) Supports °C / °F unit display

Capacitance Measurement Supports nF / μF units

Data Hold / Relative Mode Supports HOLD and REL modes

V. Troubleshooting

Issue Cause / Solution

Unstable DC Current Reading Hall-effect sensor affected by temperature/stress; press ZERO button before measurement

Large Current Measurement Error Conductor not centered in clamp jaw, or clamp jaw not fully closed

No Display During Frequency Measurement Input signal amplitude insufficient; verify ≥ 300 mVrms (≤ 100 kHz)

Display Shows "OL" or "1" Over-range condition; select a higher range

Unit Fails to Power On or Auto-Shuts Down Check battery level or whether auto-power-off is enabled

VI. After-Sales Service and Accessories

Package Contents:

Main Unit $\times 1$, Test Leads $\times 1$ set, Temperature Sensor (UT208A only) $\times 1$, Carrying Case $\times 1$, User Manual $\times 1$.

Technical Support and Warranty: For instrument damage, abnormal display, unresponsive keys, or other issues, contact your supplier or UNI-T after-sales service.

