

Thsinde ACM91

Thsinde AC-DC Current Digital Clamp-Meter

MODEL: ACM91

1. INTRODUCTION

Thank you for choosing the Thsinde AC-DC Current Digital Clamp-Meter, Model ACM91. This versatile instrument is designed for precise and safe measurement of various electrical parameters, including AC/DC current, AC/DC voltage, resistance, capacitance, frequency, temperature, and continuity. Its compact design, 1mA sensitivity, and True RMS capabilities make it an essential tool for professionals and enthusiasts alike. Please read this manual thoroughly before use to ensure proper operation and to prevent damage to the device or injury to yourself.

2. SAFETY INFORMATION

WARNING: To avoid electric shock or personal injury, please read and understand all safety information before using this product.

- Always adhere to local and national safety codes.
- Do not use the meter if it appears damaged or if the insulation on the test leads is compromised.
- Do not apply more than the rated voltage, as marked on the meter, between the terminals or between any terminal and earth ground.
- Use caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC. These voltages pose a shock hazard.
- Always disconnect the test leads from the circuit before changing functions.
- Ensure the battery compartment is securely closed before operation.
- Do not operate the meter in explosive gas, vapor, or dust environments.
- Use the correct terminals, function, and range for your measurements.

3. PRODUCT OVERVIEW

Familiarize yourself with the components of your Thsinde Clamp-Meter:



Figure 3.1: Thsinde Clamp-Meter with key components labeled. This includes the V-Alert sensor area, Jaws for current measurement, Trigger, Function selection keys, Reading Hold/Backlight button, Slot for test lead, Rotary switch, Power button, V-Alert activation button, Display, and Input Terminals (COM, INPUT).

- **Jaws:** Used for non-contact measurement of AC/DC current.
- **Trigger:** Opens and closes the jaws.
- **Rotary Switch:** Selects the desired measurement function.
- **Display:** Digital screen showing measurement readings, units, and indicators. Features a dual-line display.
- **Function Buttons:** Include SEL/ZERO (for function selection within a range and DC current zeroing), H/* (Data Hold and Backlight), and V-Alert (Non-contact AC voltage detection).
- **Input Terminals:** COM (common/negative) and INPUT (positive) for test lead connections.
- **Back Clip:** Located on the rear for convenient portability and attachment to a belt or pocket.

4. SETUP

4.1. Battery Installation

The Thsinde Clamp-Meter requires batteries for operation. To install or replace batteries:

1. Locate the battery compartment on the back of the meter.
2. Use a screwdriver (often included) to open the battery cover.
3. Insert the required batteries, observing correct polarity (+ and -).
4. Replace the battery cover and secure it with the screw.

4.2. Initial Checks

Before first use, ensure the meter powers on correctly and the display is clear. Check that the test leads are in good condition with no visible damage to the insulation.

5. OPERATING INSTRUCTIONS

This meter features True RMS measurement for accurate readings on non-sinusoidal waveforms and a 1mA sensitivity for precise low current measurements.

5.1. Power On/Off

Press the **Power button** to turn the meter on or off.

5.2. Measuring AC/DC Current (Clamp)

The clamp function allows for non-contact current measurement, ideal for safely measuring current without breaking the circuit.

1. Set the rotary switch to the **A~** (AC Current) or **A-** (DC Current) position.
2. For DC current, press the **SEL/ZERO** button to zero the reading before measurement.
3. Press the trigger to open the jaws and clamp around a single conductor. Ensure the conductor is centered within the jaws.
4. Read the current value on the display. The 1mA sensitivity provides highly accurate readings.

5.3. Measuring AC/DC Voltage

1. Insert the black test lead into the **COM** terminal and the red test lead into the **INPUT** terminal.
2. Set the rotary switch to the **V~** (AC Voltage) or **V-** (DC Voltage) position.
3. Connect the test leads in parallel to the circuit or component you wish to measure.
4. Read the voltage value on the display. The dual-line display can show both AC voltage/current and frequency simultaneously.

5.4. Measuring Resistance and Continuity

1. Insert the black test lead into the **COM** terminal and the red test lead into the **INPUT** terminal.
2. Set the rotary switch to the **Ω** (Resistance/Continuity) position.
3. For resistance, connect the test leads across the component. For continuity, touch the test leads to the points you want to check. A continuous beep indicates continuity.

5.5. Measuring Capacitance

1. Insert the black test lead into the **COM** terminal and the red test lead into the **INPUT** terminal.
2. Set the rotary switch to the **CAP** (Capacitance) position.
3. Connect the test leads across the capacitor. Ensure the capacitor is discharged before measurement.

5.6. Measuring Frequency

Frequency can be measured in conjunction with AC voltage or current measurements, or as a standalone function depending on the model's specific rotary switch markings.

1. Insert the black test lead into the **COM** terminal and the red test lead into the **INPUT** terminal.
2. Set the rotary switch to the **Hz** (Frequency) position, or select the frequency display mode if available on AC voltage/current ranges.
3. Connect the test leads to the circuit.

5.7. Measuring Temperature

1. Insert the temperature probe into the **COM** and **INPUT** terminals, observing polarity.
2. Set the rotary switch to the **TEMP** (Temperature) position.
3. Place the tip of the temperature probe on the object or in the environment you wish to measure.
4. The dual-line display can show temperature in both Celsius and Fahrenheit.

5.8. V-Alert (Non-Contact AC Voltage Detection)

This function allows for quick detection of AC voltage without direct contact.

1. Press the **V-Alert** button. This function can be activated under any function range.
2. Move the top of the meter (V-Alert sensor area) close to the conductor.
3. The meter will indicate the presence of AC voltage through an audible beep and/or visual indicator on the display.

5.9. Live Wire Check

This function helps identify live wires.

1. Set the rotary switch to the **LIVE** position.
2. Insert the red test lead into the **INPUT** terminal.
3. Touch the red test lead to the wire you want to check. The meter will indicate if the wire is live.

5.10. Data Hold and Backlight

- Press the **H/*** button briefly to hold the current reading on the display. Press again to release.
- Press and hold the **H/*** button to activate the display backlight. Press and hold again to turn it off.

5.11. Back Clip Design

The integrated back clip allows for convenient carrying and hands-free operation by attaching the meter to your belt or pocket.

6. MAINTENANCE

6.1. Cleaning

Wipe the meter casing with a damp cloth and mild detergent. Do not use abrasives or solvents. Keep the terminals free from dirt and moisture.

6.2. Battery Replacement

When the battery indicator appears on the display, replace the batteries promptly to ensure accurate readings. Refer to Section 4.1 for battery installation instructions.

6.3. Storage

If the meter is not used for an extended period, remove the batteries to prevent leakage. Store the meter in a cool, dry place, away from direct sunlight and extreme temperatures.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Meter does not power on.	Dead or incorrectly installed batteries.	Check battery polarity; replace batteries.
No reading or unstable reading.	Incorrect function/range selected; poor test lead connection; open circuit.	Verify function and range; ensure secure test lead connection; check circuit for breaks.
"OL" or "OVER" displayed.	Measurement exceeds selected range.	Select a higher range or verify the measurement is within the meter's capabilities.
Inaccurate DC current reading.	Not zeroed before measurement.	Press the SEL/ZERO button to zero the meter before taking a DC current measurement.

8. SPECIFICATIONS



True-RMS/5999 Counts

1mA Resolution

Industrial Strength

It keep up with professionals electricians and industry professionals

Figure 8.1: The Thsinde Clamp-Meter features True-RMS measurement and 1mA resolution for precise readings.

Feature	Specification
Brand	Thsinde
Model Number	ACM91
Measurement Type	Multimeter (AC/DC Current, AC/DC Voltage, Resistance, Capacitance, Frequency, Temperature, Continuity, Live Wire Check)
Display Counts	6000 Counts
Current Sensitivity	1mA (AC/DC Current)
True RMS	Yes
Low Impedance Voltage (LoZ)	Yes
Power Source	Battery Powered
Item Weight	137 Grams (approx. 4.8 ounces)
Color	Red
Dimensions	Approx. 7.99 x 3.54 x 2.17 inches (Package Dimensions)

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation included with your purchase or contact Thsinde customer service through their official channels. Keep your purchase receipt as proof of purchase for any warranty claims.

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Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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