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> Klein Tools CL390 AC/DC Digital Clamp Meter Instruction Manual

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MODEL: CL390



The Klein Tools CL390 Digital Clamp Meter and its included accessories.

1. INTRODUCTION AND OVERVIEW

The Klein Tools CL390 is an automatically ranging True Root Mean Squared (TRMS) digital clamp meter designed for versatile electrical measurements. It measures AC/DC current and Non-Contact Voltage Testing (NCVT) via the clamp, and AC/DC voltage, DC microamps, resistance, continuity, frequency, capacitance, and diodes via test leads. Additionally, it measures temperature using a thermocouple probe.

This meter features a high-visibility, reverse-contrast LCD display for optimal readability in various lighting conditions. Its robust design ensures durability and precision for professional and DIY applications.



Front view of the Klein Tools CL390 Digital Clamp Meter, showing the display and controls.

2. SAFETY INFORMATION

WARNING: Always adhere to local and national safety codes. Use personal protective equipment (PPE) to prevent shock and arc blast injury. Always disconnect power to the circuit or device before installing or removing the test leads.

- This meter is rated CAT III 600V and CAT IV 600V.
- Do not use the meter if it appears damaged.
- Do not use the meter if the test leads are damaged.
- Ensure the meter is set to the correct function and range before making measurements.
- Avoid contact with live circuits.

3. SETUP

3.1 Battery Installation

The CL390 requires 3 x AAA batteries (included). To install or replace batteries:

1. Ensure the meter is OFF.
2. Locate the battery compartment on the back of the meter.
3. Unscrew the battery cover and remove it.
4. Insert the 3 AAA batteries, observing correct polarity (+/-).
5. Replace the battery cover and secure the screw.



Back view of the CL390, showing the battery compartment.

3.2 Connecting Test Leads

For voltage, resistance, continuity, frequency, capacitance, diode, and temperature measurements, connect the included test leads:

- Insert the black test lead into the 'COM' (common) input jack.
- Insert the red test lead into the 'VΩμA' input jack.



The CL390 with red and black test leads properly connected.

4. OPERATING INSTRUCTIONS

4.1 Rotary Dial Functions

Turn the rotary dial to select the desired measurement function:

- **OFF:** Powers the meter off.
- **V~:** AC Voltage measurement.
- **V-:** DC Voltage measurement.
- **400A~:** AC Current measurement (400A range) via clamp.
- **40A~:** AC Current measurement (40A range) via clamp.
- **μA-:** DC Microamps measurement via test leads.
- **Hz % °F °C:** Frequency, Duty Cycle, and Temperature measurement via test leads (requires thermocouple for temperature).
- **Ω))):** Resistance, Continuity, Diode Test, and Capacitance measurement via test leads.

4.2 Button Functions

- **RANGE:** Manually selects the measurement range.
- **MAX/MIN:** Records maximum and minimum readings.
- **REL/ZERO:** Relative mode or Zero function for DC current.
- **NCV/SEL:** Activates Non-Contact Voltage testing or selects sub-functions on the rotary dial (e.g., AC/DC current, Diode/Capacitance).

4.3 Making Measurements

AC/DC Current Measurement (Clamp)

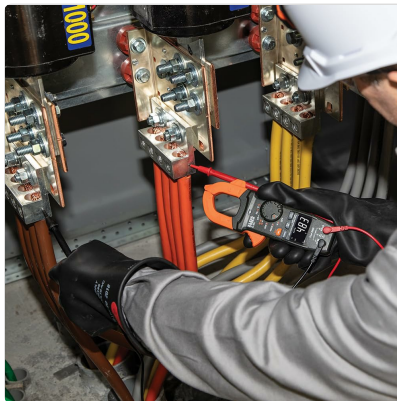
For AC/DC current, clamp the meter jaw around a single conductor. The display will show the current reading.



Measuring AC current with the clamp jaw around a single conductor.

AC/DC Voltage Measurement (Test Leads)

Connect test leads as described in Setup. Touch the probes to the circuit points to measure voltage.



Measuring voltage using the test leads on an electrical panel.

Non-Contact Voltage Testing (NCVT)

Press and hold the NCV/SEL button. Place the tip of the meter near a live conductor. The NCV indicator will illuminate and an audible tone will sound if voltage is detected.

4.4 True Root Mean Squared (TRMS)

The CL390 features TRMS technology, which provides accurate measurements of AC voltage and current, especially for non-sinusoidal waveforms often found in modern electrical systems. This ensures more reliable readings compared to meters that only measure average responding AC.



The CL390's display indicating True RMS measurement capability.

4.5 Official Product Video

An official video from Klein Tools demonstrating various digital clamp meters, including the CL390, and their features.

5. MAINTENANCE

5.1 Cleaning

Wipe the meter with a clean, dry, lint-free cloth. Do not use abrasive cleaners or solvents.

5.2 Battery Replacement

Refer to Section 3.1 for battery replacement instructions. Replace batteries when the low battery indicator appears on the display.

5.3 Test Lead Inspection

Regularly inspect test leads for any signs of damage, such as cuts, cracks, or frayed insulation. Replace damaged leads immediately to ensure safety and accurate measurements.

5.4 Storage

When not in use, store the meter and its accessories in the included carrying case in a cool, dry place away from direct sunlight and extreme temperatures.

6. TROUBLESHOOTING

- **Display shows "OL":** This indicates an overload, meaning the measured value is outside the selected range. Try switching to a higher range or a different function.
- **Inaccurate Readings:** Check battery level, ensure test leads are properly connected, and verify the correct function and range are selected. For current measurements, ensure the clamp is around a single conductor.
- **Auto-Power Off:** The meter automatically powers off after 10 minutes of inactivity to conserve battery life. This feature can typically be disabled by holding a specific button (refer to the full user manual PDF for exact instructions).

For more detailed troubleshooting, please refer to the official Instructions for Use (IFU) PDF document.

7. SPECIFICATIONS

Specification	Value
Model Number	CL390
Product Dimensions	8.45 x 3.51 x 1.51 inches
Item Weight	8.32 ounces
Power Source	Battery Powered (3 x AAA included)
AC/DC Current Range	Up to 400 Amps
Voltage Range	Up to 600V AC/DC

Safety Rating	CAT III 600V, CAT IV 600V
Display Type	Hi-Viz, Reverse Contrast LCD
Measurement Type	True RMS

8. WARRANTY & SUPPORT

Klein Tools products are manufactured to the highest standards of quality and durability. For specific warranty information and support, please visit the official Klein Tools website or contact their customer service.

An official Instructions for Use (IFU) document is available for download:

[Download Official User Guide
\(PDF\)](#)

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Question

Example: How do I reset this device or fix this error?

Details

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

Submit question

