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› Klein Tools CL150 Clamp Meter User Manual

Klein Tools CL150

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Model: CL150

INTRODUCTION

The Klein Tools CL150 Clamp Meter is a versatile electrical testing instrument designed for accurate measurement of AC current. Its unique 18-inch flexible clamp allows for easy access to conductors in confined spaces, such as electrical panels and bundled wires. This meter provides True RMS readings, ensuring precision in various electrical environments. It is equipped with a backlit LCD display for clear visibility, auto-ranging capabilities, and features like Max/Min and Data Hold for efficient operation.



Figure 1: Klein Tools CL150 Clamp Meter with its flexible current clamp.

SAFETY INFORMATION

WARNING: To ensure safe operation and avoid personal injury or damage to the meter, always adhere to the following safety precautions:

- Read, understand, and follow all instructions, cautions, and warnings attached to and/or packed with all test and measurement devices before each use.
- Before each use, verify meter operation by measuring a known voltage or current.
- Never use the meter on a circuit with voltages that exceed the category-based rating of this meter (CAT IV 600V or CAT III 1000V).
- Always adhere to local and national safety codes. Use personal protective equipment (PPE) to prevent shock and arc blast injury where hazardous live conductors are exposed.
- Usage of this meter in any way other than that specified by the manufacturer can impair safe operation, resulting in severe injury or death.

WHAT'S IN THE BOX

Your Klein Tools CL150 Clamp Meter package includes the following items:

- Flexible AC Current Clamp Meter (CL150)
- Instruction Manual
- Storage Pouch
- 2 x AAA Batteries (pre-installed or included separately)

SETUP

Battery Installation

The CL150 Clamp Meter requires 2 AAA batteries for operation. These are typically included with the product. To install or replace batteries:

1. Ensure the meter is powered off.
2. Locate the battery compartment on the back of the meter.
3. Use a screwdriver to open the battery compartment cover.
4. Insert the 2 AAA batteries, observing the correct polarity (+/-) as indicated inside the compartment.
5. Replace the battery compartment cover and secure it with the screw.

Flexible Clamp Connection

The flexible clamp is an integral part of the CL150. Ensure both ends of the flexible clamp are securely connected to the main unit before use. The connection points are designed for a firm fit to ensure accurate readings.



Figure 2: Detail of the flexible clamp connection point.

OPERATING INSTRUCTIONS

Powering On/Off

Press the power button to turn the meter on. The backlit LCD display will illuminate. The meter will automatically power off after 15 minutes of inactivity to conserve battery life.

Measuring AC Current

The CL150 is designed to measure AC current up to 3000A using its flexible clamp. Follow these steps for accurate measurements:

1. Ensure the meter is powered on.
2. Open the flexible clamp by detaching one end from the main unit.
3. Carefully position the flexible clamp around the single conductor or bundle of conductors you wish to measure. Ensure the conductor(s) are centered within the clamp for optimal accuracy.

4. Securely close the flexible clamp by reattaching the end to the main unit. A click indicates a secure connection.
5. Read the AC current measurement displayed on the backlit LCD screen. The meter features True RMS technology for precise readings.





Figure 3: Demonstrating the use of the flexible clamp in confined areas.

Max/Min and Hold Functions

- **MAX/MIN:** Press the "MAX/MIN" button to cycle through the maximum and minimum readings recorded during a measurement session. This is useful for capturing peak or lowest current values.
- **HOLD:** Press the "HOLD" button to freeze the current reading on the display. This allows you to record the measurement even after removing the clamp from the conductor. Press "HOLD" again to release the reading.



Figure 4: Front view of the CL150 showing the display and control buttons.

MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your CL150 Clamp Meter.

- **Cleaning:** Wipe the meter with a dry, lint-free cloth. Do not use abrasive cleaners or solvents.
- **Storage:** When not in use, store the meter in its provided storage pouch in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Battery Replacement:** Replace batteries promptly when the low battery indicator appears on the display to ensure continued accurate operation. Remove batteries if the meter will not be used for an extended period.
- **Inspection:** Periodically inspect the flexible clamp and the meter housing for any signs of damage, cracks, or wear. Do not use the meter if it appears damaged.

TROUBLESHOOTING

If you encounter issues with your CL150 Clamp Meter, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Meter does not power on.	Dead or incorrectly installed batteries.	Replace batteries, ensuring correct polarity.
Inaccurate or fluctuating readings.	Conductor not centered in clamp; external magnetic fields; damaged clamp.	Reposition conductor; move away from strong magnetic sources; inspect clamp for damage.
Display is dim or unreadable.	Low battery; extreme temperature.	Replace batteries; allow meter to acclimate to operating temperature.
Auto-off feature activates too quickly.	Normal operation (15 minutes of inactivity).	This is a battery-saving feature. Power on again as needed.

SPECIFICATIONS

Key technical specifications for the Klein Tools CL150 Clamp Meter:

Feature	Detail
Model Number	CL150
Measurement Type	AC Current (True RMS)
Max Current Range	Up to 3000A
Clamp Type	Flexible (18-inch)
Safety Rating	CAT IV 600V, CAT III 1000V
Display	Backlit LCD
Power Source	2 x AAA Batteries (included)
Auto Power Off	After 15 minutes of inactivity
Drop Protection	6.6 ft. (2 m)
Product Dimensions	10.59 x 4.19 x 1.06 inches
Item Weight	5.9 Ounces
Country of Origin	China

**KLEIN
TOOLS** 

Since 1857

***True RMS
Measurement
Technology***

3000A ~


2 m

**CAT IV
600V** **CAT III
1000V**



Figure 5: Key features and safety ratings of the CL150.

WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries regarding your Klein Tools CL150 Clamp Meter, please contact Klein Tools directly. Refer to the official Klein Tools website or the contact information provided in the original product packaging for the most up-to-date support details.

You can visit the official Klein Tools website for more information: www.kleintools.com

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