Extech 380940

Extech 380940 True RMS 400A AC/DC Power Clamp Meter User Manual

Model: 380940

1. Introduction

This manual provides comprehensive instructions for the safe and effective operation, maintenance, and troubleshooting of the Extech 380940 True RMS 400A AC/DC Power Clamp Meter. This device is designed for professional use in electrical testing applications.

Key Features:

- Measures Watts, current, and voltage.
- True Power measurements up to 240kW.
- Large 4000-count LCD with 40-segment analog bargraph.
- Data Hold, Max/Min recall, Auto Zero for DC current, and low battery indication.
- Automatic power off function to conserve battery life.

2. Safety Information

Please read and understand all safety information before operating this meter. Failure to follow these instructions may result in electric shock, fire, or damage to the meter.

- **WARNING:** This meter is rated for CAT II-600V. Do not use on circuits exceeding this rating.
- Always inspect the meter and test leads for damage before use. Do not use if damaged.
- Ensure the rotary switch is in the correct position for the desired measurement before connecting to a circuit.
- Do not attempt to measure current on uninsulated conductors.
- Use extreme caution when working with live electrical circuits.
- Keep fingers behind the finger guards on the test leads during measurements.
- Replace batteries immediately when the low battery indicator appears.

3. Product Description and Components

The Extech 380940 clamp meter features a robust design for reliable electrical measurements. Familiarize yourself with the components shown below.

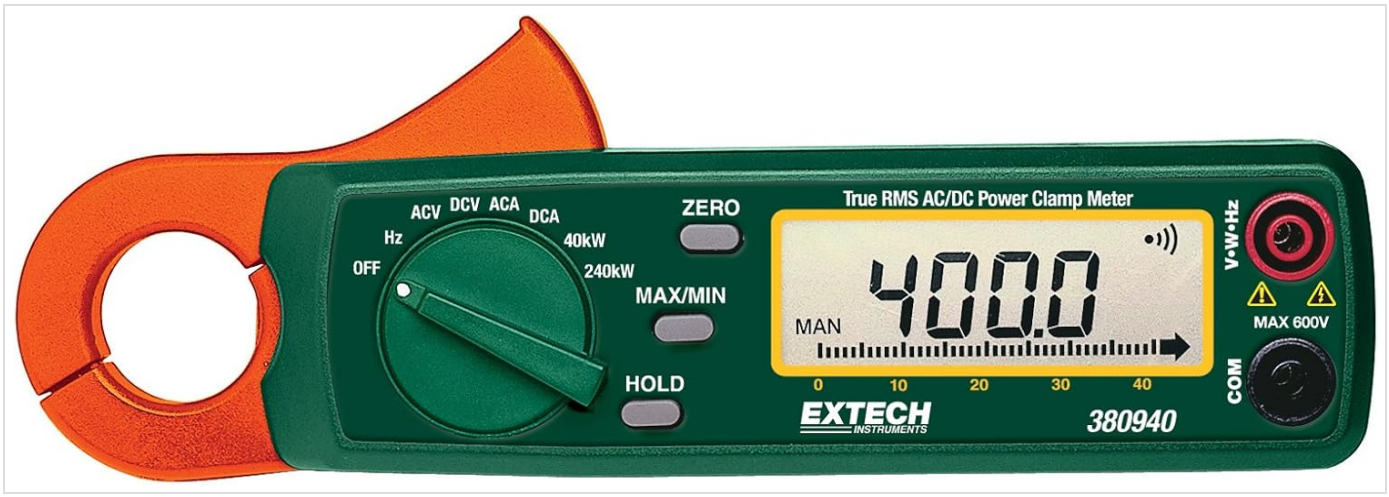


Figure 1: Extech 380940 True RMS 400A AC/DC Power Clamp Meter. This image displays the meter's main body, the orange clamp jaw, the green rotary switch, the LCD display showing '400.0', and various function buttons including ZERO, MAX/MIN, and HOLD. Input jacks for voltage, wattage, and frequency measurements are visible on the right.

Component Overview:

- **Clamp Jaw:** Used for non-contact AC/DC current measurements.
- **Rotary Switch:** Selects measurement functions (OFF, Hz, ACV, DCV, ACA, DCA, 40kW, 240kW).
- **LCD Display:** Shows measurement readings, units, and other indicators. Includes a 40-segment analog bargraph.
- **ZERO Button:** Used to zero the display for DC current measurements.
- **MAX/MIN Button:** Toggles between maximum and minimum measured values.
- **HOLD Button:** Freezes the current reading on the display.
- **Input Jacks (V•W•Hz, COM):** For connecting test leads for voltage, wattage, and frequency measurements.

4. Setup

4.1 Battery Installation

1. Ensure the meter is turned OFF.
2. Locate the battery compartment cover on the rear of the meter.
3. Unscrew the retaining screw(s) and remove the cover.
4. Insert two (2) AA batteries, observing correct polarity (+ and -).
5. Replace the battery compartment cover and secure with the screw(s).

Note: Two AA batteries are included with the meter.

4.2 Connecting Test Leads

- For voltage, wattage, and frequency measurements, insert the black test lead into the **COM** input jack.

- Insert the red test lead into the **V•W•Hz** input jack.
- Ensure connections are secure before taking measurements.

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5. Operating Instructions

5.1 Measuring AC/DC Current (Clamp Function)

1. Turn the rotary switch to the **ACA** (AC Current) or **DCA** (DC Current) position.
2. For DC current measurements, press the **ZERO** button to clear any offset before clamping.
3. Open the clamp jaw by pressing the trigger.
4. Enclose a single conductor (not a cable containing multiple conductors) within the clamp jaw.
5. Close the clamp jaw completely.
6. Read the current value on the LCD display.

5.2 Measuring AC/DC Voltage

1. Connect the test leads as described in Section 4.2.
2. Turn the rotary switch to the **ACV** (AC Voltage) or **DCV** (DC Voltage) position.
3. Connect the test leads in parallel to the circuit or component where voltage is to be measured.
4. Read the voltage value on the LCD display.

5.3 Measuring Power (kW)

1. Connect the test leads as described in Section 4.2.
2. Turn the rotary switch to the **40kW** or **240kW** position, depending on the expected power range.
3. Connect the test leads to measure voltage, and simultaneously clamp the jaw around the current-carrying conductor.
4. Read the power value in kilowatts (kW) on the LCD display.

5.4 Measuring Frequency (Hz)

1. Connect the test leads as described in Section 4.2.
2. Turn the rotary switch to the **Hz** position.
3. Connect the test leads in parallel to the circuit where frequency is to be measured.
4. Read the frequency value in Hertz (Hz) on the LCD display.

5.5 Using Special Functions (ZERO, MAX/MIN, HOLD)

- **ZERO:** Press this button in DCA mode to zero out any residual readings before taking a measurement.
- **MAX/MIN:** Press to display the maximum or minimum value recorded since the function was activated. Press again to cycle through MAX, MIN, and current readings.
- **HOLD:** Press to freeze the current reading on the display. Press again to release the hold function and resume live readings.

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6. Maintenance

6.1 Cleaning

- Wipe the meter with a dry, soft cloth.
- Do not use abrasives or solvents.
- Keep the clamp jaw free of dust and debris for accurate readings.

6.2 Battery Replacement

When the low battery indicator appears on the display, replace the two AA batteries following the instructions in Section 4.1. Remove batteries if the meter is not to be used for an extended period.

6.3 Calibration

Periodic calibration by qualified personnel is recommended to ensure the accuracy of the meter. Refer to Extech's official support channels for calibration services.

7. Troubleshooting

Problem	Possible Cause	Solution
Meter does not power on.	Dead or incorrectly installed batteries.	Check battery polarity or replace batteries.
Inaccurate readings.	Incorrect function selected; dirty clamp jaw; meter needs calibration.	Verify rotary switch position; clean clamp jaw; consider professional calibration.
"OL" or Overload displayed.	Measurement exceeds meter's range.	Ensure the measurement is within the specified range for the selected function.
No reading in clamp mode.	Clamp jaw not fully closed; multiple conductors in jaw; very low current.	Ensure jaw is closed around a single conductor; check for minimum current requirements.

8. Specifications

Brand	Extech
Model Number	380940
Measurement Type	True RMS AC/DC Power Clamp Meter
Current Range	Up to 400A AC/DC
Power Measurement	Up to 240kW
Voltage Measurement	AC/DC Voltage (Max 600V)
Display	4000-count LCD with 40-segment analog bargraph
Safety Rating	CAT II-600V

Power Source	2 AA batteries (included)
Dimensions (L x W x H)	7.2 x 2.5 x 1.4 inches
Weight	6.7 ounces (0.19 Kilograms)
UPC	793950389485, 793950389409

9. Warranty and Support

9.1 Warranty Information

The Extech 380940 True RMS 400A AC/DC Power Clamp Meter comes with a**1-year warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use.

9.2 Customer Support

For technical assistance, troubleshooting, or warranty claims, please visit the official Extech Store or contact Extech customer service. You can find more information and support resources at the Extech Store on Amazon.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

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