RuoShui 140A

RuoShui 140A Digital Current Clamp Meter User Manual

Model: 140A
Brand: RuoShui

Introduction

This manual provides detailed instructions for the safe and effective operation of your RuoShui 140A Digital Current Clamp Meter. This device is designed for measuring AC line current, AC/DC voltage, resistance, and continuity. Please read this manual thoroughly before use and retain it for future reference.

Important Safety Instructions

Always adhere to safety precautions when using electrical testing equipment. Failure to do so may result in injury or damage to the device.

- Do not use the meter if it appears damaged or if the insulation is compromised.
- Ensure the battery cover is securely closed before operation.
- Do not measure current on circuits exceeding AC 600V.
- Always use caution when working with live circuits.
- Refer to the warning labels on the device for maximum voltage and current ratings.

Product Overview and Components

The RuoShui 140A Digital Current Clamp Meter is a high-precision instrument featuring a special alloy clamp core for stable and reliable measurements. It incorporates magnetic shielding technology to minimize external interference.

Key Components

This image displays the RuoShui 140A Digital Current Clamp Meter with its main components labeled: 1. Double Input Toroid, 2. HOLD Key, 3. Toroid Opening Lever, 4. POWER key, 5. LCD display, 6. Lanyard hole, 7. RS232 Interface. Dimensions are also indicated: 175mm length, 70mm width, 38mm depth.

- **Clamp Jaw:** Used to encircle the conductor for non-contact current measurement.
- **LCD Display:** Shows measurement readings, units, and function indicators.
- **POWER Button:** Turns the device on/off.
- **HOLD Button:** Freezes the current reading on the display. Also used for data storage and recall.
- **RS232 Interface:** For connecting to a PC for data transfer and analysis.
- **Battery Compartment:** Houses the 9V battery.

Setup

Battery Installation

The device requires one 9V battery (included).

This image shows the back of the clamp meter with the battery cover open, revealing the compartment for a 9V battery.

1. Locate the battery compartment on the back of the meter.
2. Use a screwdriver to open the battery cover.
3. Insert a 9V battery, observing the correct polarity.
4. Securely close the battery cover.

Operating Instructions

Product Demonstration Video

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This video demonstrates the physical features of the RuoShui 140A Digital Current Clamp Meter, including powering on, opening the clamp jaw, and performing a current measurement in a circuit breaker box.

Power On/Off

Press the **POWER** button to turn the meter on. Press and hold the**POWER** button to turn it off. The meter features an automatic shut-down function to conserve battery life.

AC Current Measurement

This meter is designed for non-contact AC current measurement.

This image illustrates the clamp meter in use, measuring current on a wire. The display shows "AC 5.00mA".

1. Turn on the meter.
2. Press the lever to open the clamp jaw.
3. Encircle a single conductor (not a bundle of wires) with the clamp jaw. Ensure the jaw is completely closed.
4. Read the AC current value displayed on the LCD screen.

Data Hold Function

Press the **HOLD** button briefly to freeze the current reading on the display. Press it again to release the hold and resume live measurements.

Data Storage and Recall

The meter can store up to 60 measurement readings.

1. To store a reading, press the **HOLD** button briefly while a measurement is displayed. The display will

show a storage location number (e.g., "01").

2. To recall stored data, press and hold both the **POWER** and **HOLD** buttons simultaneously. The display will show the first stored reading.
3. Briefly press the **HOLD** button to cycle through the stored readings.
4. To exit data recall mode, press the **POWER** button.

Deleting Stored Data

To delete all stored data, enter data recall mode (press and hold **POWER** and **HOLD**). Then, press and hold the **HOLD** button until "DEL" appears on the screen, indicating all memories have been cleared. Note: Individual readings cannot be deleted; only all stored data can be cleared at once.

PC Connection and Software

The meter is equipped with an RS232 interface for connecting to a PC. This allows for online monitoring, historical data inquiry, active curve drawing, and alarm setting. Data can be saved and printed using the provided software.

This image shows the clamp meter, a USB cable for PC connection, and its packaging.

1. Connect the meter to your PC using the provided USB to Micro USB cable.

2. Install the accompanying software (typically found on a CD or available for download from the manufacturer's website).
3. Follow the software instructions for data transfer, monitoring, and analysis.

Maintenance

- Keep the meter clean and dry. Use a soft, damp cloth for cleaning; do not use abrasive cleaners or solvents.
- Store the meter in its protective pouch when not in use to prevent damage.
- Replace the battery when the low battery indicator appears on the display.
- Do not attempt to repair the meter yourself. Refer to qualified service personnel for any repairs.

Troubleshooting

Problem	Possible Cause	Solution
Meter does not power on	Dead or incorrectly installed battery	Check battery installation; replace battery if necessary.
Inaccurate readings	Clamp jaw not fully closed; multiple conductors within jaw; external magnetic interference	Ensure jaw is closed; measure only one conductor; move away from strong magnetic fields.
PC software not connecting	Incorrect cable connection; software not installed or outdated drivers	Verify USB cable connection; install/update software and drivers.

Technical Specifications

- **Model:** 140A
- **Measurement Range (AC Current):** 0.000mA to 60.00A
- **Max AC Voltage:** 600V
- **Jaw Size:** 25mm x 30mm (0.9 x 1.1 inches)
- **Data Storage:** Up to 60 readings
- **Interface:** RS232 (USB connection via adapter cable)
- **Power Source:** 1 x 9V battery
- **Product Dimensions:** 7.09 x 2.95 x 1.65 inches (175mm x 70mm x 38mm)
- **Item Weight:** 4.23 ounces (120 Grams)
- **Safety Rating:** CAT III 600V MAX

Warranty and Customer Support

RuoShui is committed to providing reliable products and excellent customer support. For any questions, issues, or warranty claims, please contact the seller or manufacturer directly.

Related Documents - 140A

	Ruoshui 4091C 10Hz-100kHz LCR Meter - Technical Specifications and Product Information Detailed specifications, features, and product information for the Ruoshui 4091C 10Hz-100kHz LCR Meter, a versatile instrument for electrical measurements.
	RuoShui 6801 Digital Thermometer Operation Manual This manual provides detailed information on the operation, features, and specifications of the RuoShui 6801 digital thermometer, a 3 1/2 digit K-type thermocouple thermometer.
	XMC MPPT Charger User Manual - Installation, Operation, and Troubleshooting Comprehensive user manual for XMC MPPT Chargers (XMC-24V/140A, XMC-48V/140A, XMC-96V/80A). Covers safety, installation, operation, LCD settings, battery equalization, fault codes, maintenance, specifications, and troubleshooting.
	VICTOR Electronic Testing and Measuring Instruments Catalog | Digital Multimeters, Oscilloscopes, and More Explore the comprehensive range of VICTOR electronic testing and measuring instruments, including digital multimeters, clamp meters, oscilloscopes, function generators, and more. High-quality, reliable equipment for professional use.