Wipcool ADC400

Wipcool ADC400 Digital Clamp Meter Instruction Manual

Model: ADC400

1. Overview

The Wipcool ADC400 is a digital clamp meter designed for accurate measurement of various electrical parameters. It is suitable for professional and DIY use, offering functions such as AC/DC voltage, AC current, resistance, capacitance, and temperature measurement. Its compact design and large LCD display ensure ease of use and clear readability.

2. Safety Information

Please read and understand all safety instructions before operating the Wipcool ADC400 Digital Clamp Meter. Failure to follow these instructions may result in electric shock, fire, or personal injury.

- Always ensure the meter is in good working condition before use. Do not use if damaged.
- Do not apply voltage or current that exceeds the maximum rated values specified for the meter.
- Exercise extreme caution when working with live circuits. High voltages can be dangerous.
- Always disconnect power to the circuit before making resistance, capacitance, or diode measurements.
- Use appropriate personal protective equipment (PPE) such as insulated gloves and safety glasses.
- Do not operate the meter in wet environments or in the presence of explosive gases or dust.
- Ensure the test leads are properly connected and free from damage before each use.
- Replace batteries promptly when the low battery indicator appears to ensure accurate readings.

3. Package Contents

Upon opening the package, verify that all items listed below are present and undamaged:

- Wipcool ADC400 Digital Clamp Meter
- Testing cables (Red and Black)

- Carrying case (if included)
- User Manual (this document)

Image: Wipcool ADC400 Digital Clamp Meter stored in its protective carrying case, alongside the included test leads.

Image: The red and black testing cables, essential accessories for voltage, resistance, and capacitance measurements.

4. Product Features

The Wipcool ADC400 Digital Clamp Meter offers a range of advanced features for accurate and reliable electrical testing:

- **Fast Capacitance Measurement:** Quickly and accurately measures capacitance values.
- **Audio Visual Alarm for NCV Function:** Provides non-contact voltage detection with audible and visual alerts for enhanced safety.
- **True RMS Measurement:** Ensures accurate readings for non-sinusoidal AC waveforms.
- **AC Voltage Frequency Measurement:** Measures the frequency of AC voltage signals.
- **Large LCD Display:** Offers clear and easy-to-read measurement results.
- **Overcurrent Indication:** Alerts the user to potential overcurrent conditions.
- **Full-featured False Detection Protection:** Enhances reliability and prevents incorrect readings.

5. Setup

5.1 Battery Installation

The Wipcool ADC400 is powered by batteries. To install or replace batteries:

1. Ensure the meter is turned OFF.
2. Locate the battery compartment cover on the back of the meter.
3. Use a screwdriver to open the battery compartment.
4. Insert new batteries, observing the correct polarity (+ and -).
5. Replace the battery compartment cover and secure it with the screw.

5.2 Connecting Test Leads

For voltage, resistance, capacitance, and temperature measurements, connect the test leads:

- Insert the **red** test lead into the **VΩmA** input jack.
- Insert the **black** test lead into the **COM** (common) input jack.
- Ensure connections are firm before taking any measurements.

6. Operating Instructions

This section details how to use the Wipcool ADC400 for various measurements.

6.1 Turning On/Off

Rotate the function dial to any measurement setting to turn the meter ON. Rotate it to the "OFF" position to turn the meter OFF.

6.2 AC Current Measurement (Clamp Function)

1. Rotate the function dial to the "A~" (AC Current) position.
2. Press the clamp trigger to open the jaws.
3. Encircle only **one** conductor of the circuit with the clamp jaws. Ensure the jaws are fully closed.
4. Read the AC current value on the LCD display.

6.3 DC Voltage Measurement

1. Connect the test leads as described in Section 5.2.
2. Rotate the function dial to the "V=" (DC Voltage) position.
3. Touch the red test probe to the positive side of the circuit and the black test probe to the negative side.
4. Read the DC voltage value on the LCD display.

6.4 AC Voltage Measurement

1. Connect the test leads as described in Section 5.2.
2. Rotate the function dial to the "V~" (AC Voltage) position.
3. Touch the test probes across the circuit points where AC voltage is to be measured.
4. Read the AC voltage value on the LCD display. The frequency will also be displayed.

6.5 Resistance Measurement

1. **Ensure the circuit is de-energized before measuring resistance.**
2. Connect the test leads as described in Section 5.2.

3. Rotate the function dial to the "Ω" (Resistance) position.
4. Touch the test probes across the component or circuit to be measured.
5. Read the resistance value on the LCD display.

6.6 Capacitance Measurement

1. **Ensure the capacitor is fully discharged before measuring capacitance.**
2. Connect the test leads as described in Section 5.2.
3. Rotate the function dial to the "F" (Capacitance) position.
4. Touch the test probes across the capacitor terminals.
5. Read the capacitance value on the LCD display.

6.7 Temperature Measurement

(*Note: A temperature probe is typically required and may be sold separately if not included*)

1. Connect the temperature probe (if available) to the meter's input jacks, observing polarity.
2. Rotate the function dial to the "°C/°F" (Temperature) position.
3. Place the tip of the temperature probe on or near the object whose temperature is to be measured.
4. Read the temperature value on the LCD display.

6.8 NCV (Non-Contact Voltage) Function

The NCV function allows for detection of AC voltage without direct contact with conductors.

1. Rotate the function dial to the "NCV" position.
2. Move the top tip of the clamp meter near a live AC voltage source.
3. The meter will emit an audible alarm and/or visual indication (LED) when AC voltage is detected.

6.9 Special Functions (SELECT, MAX/MIN, HOLD)

- **SELECT Button:** Used to switch between different measurement modes within a single dial position (e.g., AC/DC, Resistance/Continuity/Diode).
- **MAX/MIN Button:** Press to record the maximum or minimum reading during a measurement session. Press again to cycle through MAX, MIN, and current readings.
- **HOLD Button:** Press to freeze the current reading on the display. Press again to release the hold function.

7. Maintenance

7.1 Cleaning

Wipe the meter's casing with a damp cloth and mild detergent. Do not use abrasives or solvents. Ensure the meter is completely dry before use.

7.2 Battery Replacement

Refer to Section 5.1 for instructions on battery replacement. Replace batteries when the low battery indicator appears on the display to maintain measurement accuracy.

7.3 Storage

When not in use for extended periods, remove the batteries to prevent leakage. Store the meter in its carrying case in a cool, dry place, away from direct sunlight and extreme temperatures.

8. Troubleshooting

Problem	Possible Cause	Solution
Meter does not turn on.	Dead or incorrectly installed batteries.	Check battery polarity and replace batteries if necessary.
No reading or "OL" (Overload) displayed.	Incorrect range selected, open circuit, or measurement exceeds range.	Select appropriate range, check circuit continuity, or ensure measurement is within meter's limits.
Inaccurate readings.	Low battery, damaged test leads, or external interference.	Replace batteries, inspect and replace test leads if damaged, move away from strong electromagnetic fields.
NCV function not detecting voltage.	Voltage too low, or meter not close enough to the source.	Ensure the meter's tip is very close to the live conductor.

9. Technical Specifications

The following table outlines the key technical specifications for the Wipcool ADC400 Digital Clamp Meter:

Parameter	Specification
Model	ADC400
AC Current (A)	400A
AC Current Frequency (Hz)	50Hz ~ 100Hz
DC Voltage (V)	600V
AC Voltage (V)	600V
AC Voltage Frequency (Hz)	10Hz ~ 10KHz
Resistance (Ω)	40MΩ
Capacitance (F)	4mF
Temperature Measurement (°C/°F)	-40 ~ 1000°C / -40 ~ 1832°F
Power Source	Battery Powered
Measurement Type	Clamp Meter
True RMS	Yes
NCV Function	Yes (Audio Visual Alarm)
Display	Large LCD
Safety Class	CAT II 600V / CAT III 300V (*Based on image PT03*)

Image: The product packaging displaying detailed technical specifications for the Wipcool ADC400 Digital Clamp Meter.

10. Warranty and Support

Specific warranty information for the Wipcool ADC400 Digital Clamp Meter is not provided in the product details. Please refer to your point of purchase or the manufacturer's official website for warranty terms and conditions. For technical support or service inquiries, contact the retailer or manufacturer directly.