Apera Instruments AI5512

Apera Instruments EC850 Portable Handheld Conductivity Meter Kit User Manual

Model: AI5512

1. Introduction

The Apera Instruments Value Series EC850 Portable Conductivity Meter Kit is engineered for precise conductivity and TDS measurements in various field applications. Its robust design and practical features ensure reliable performance and ease of use for professionals.

2. Product Overview

2.1 Key Features

- Reliable conductivity/TDS measurements for quick and easy analysis.
- IP57 rugged structure, ideal for field use, with a foldable stand for benchtop operation.
- Automatic 1- to 3-point calibration, with included calibration solutions.
- Built-in temperature sensor for automatic temperature compensation (ATC).
- Self-diagnosis function to ensure proper calibration and assist with common issues.

2.2 What's in the Box

- Apera Instruments EC850 Portable Conductivity Meter Kit

2.3 Product Components

Figure 1: The EC850 meter with its conductivity probe, displaying a measurement of 1413 µS at 25.0°C. The meter is waterproof and features clear buttons for calibration, mode, setup, and power.

Figure 2: The EC850 meter shown with its integrated kickstand extended, allowing for convenient benchtop use. The display shows a reading of 1413 µS and 25.0°C.

Figure 3: Close-up view of the conductivity probe's connector, designed for secure attachment to the EC850 meter.

Figure 4: The complete EC850 Portable Conductivity Meter Kit neatly organized within its durable carrying case, including the meter, probe, and calibration solutions.

Figure 5: Detailed view of the conductivity probe tip, showing the electrodes responsible for accurate measurements.

3. Setup

3.1 Initial Inspection

Upon receiving your EC850 kit, carefully inspect all components for any signs of damage during transit. Ensure all listed items in "What's in the Box" are present.

3.2 Battery Installation

Locate the battery compartment on the back of the meter. Insert the required batteries (typically AA or AAA, refer to the meter's battery compartment for specific type and polarity) ensuring correct orientation. Close the compartment securely.

3.3 Probe Connection

Connect the conductivity probe to the meter's input port. Ensure the connection is firm and secure to prevent measurement inaccuracies.

3.4 Initial Calibration

For optimal accuracy, perform an initial calibration. The EC850 supports 1- to 3-point automatic calibration. Refer to the included quick start guide for detailed steps on using the provided calibration solutions.

4. Operating Instructions

4.1 Basic Measurement

1. Turn on the meter by pressing the power button.
2. Rinse the probe thoroughly with distilled or deionized water before each measurement.
3. Immerse the probe into the sample solution, ensuring the sensor area is fully submerged.
4. Allow the reading to stabilize on the display. The meter will show conductivity/TDS and temperature.
5. Record the measurement.
6. Rinse the probe again after use.

4.2 Understanding Display Readings

The EC850 display shows the primary measurement (Conductivity in µS/cm or mS/cm, or TDS in ppm) and the temperature in °C. The meter automatically compensates for temperature variations (ATC) to provide accurate readings.

4.3 Self-Diagnosis

The meter features a self-diagnosis function that can alert you to common issues such as calibration errors or probe problems. Follow the on-screen prompts or consult the troubleshooting section for guidance.

5. Maintenance

5.1 Cleaning the Probe

Regularly clean the conductivity probe to prevent buildup that can affect accuracy. Rinse the probe with distilled water after each use. For stubborn deposits, refer to the detailed cleaning instructions in the full manual or Apera Instruments' support resources.

5.2 Storage

When not in use, store the probe in its protective cap with a small amount of storage solution (or appropriate calibration solution if storage solution is unavailable). Store the meter and probe in a cool, dry place, preferably in its original carrying

case.

5.3 Battery Replacement

Replace batteries when the low battery indicator appears on the display. Ensure the meter is turned off before opening the battery compartment. Dispose of old batteries responsibly.

6. Troubleshooting

If you encounter issues with your EC850 meter, consult the following common problems and solutions:

Problem	Possible Cause	Solution
Inaccurate Readings	Dirty probe, expired calibration, incorrect calibration.	Clean the probe, recalibrate the meter with fresh solutions, ensure correct calibration procedure.
Meter does not turn on	Dead batteries, incorrect battery installation.	Replace batteries, check battery polarity.
Erratic Readings	Air bubbles on probe, damaged probe, electrical interference.	Gently tap the probe to dislodge bubbles, inspect probe for damage, move away from strong electrical fields.

For more complex issues or persistent problems, please contact Apera Instruments customer support.

7. Specifications

Attribute	Detail
Product Dimensions	13.78 x 10.63 x 3.15 inches; 2.6 Pounds
Item Model Number	AI5512
Manufacturer	Apera Instruments
ASIN	B083RC3441
First Available	January 11, 2020
Ingress Protection (IP) Rating	IP57 (Waterproof)
Calibration	Automatic 1- to 3-point
Temperature Compensation	Automatic (ATC)

8. Warranty and Support

Apera Instruments products are backed by a manufacturer's warranty. For detailed information regarding your product's warranty period, terms, and conditions, please visit the official Apera Instruments website or contact their customer support directly.
For technical assistance, troubleshooting, or to purchase replacement parts and accessories, please reach out to Apera Instruments customer service. Contact information can typically be found on their official website or within the product

packaging.

Manufacturer: Apera Instruments

Website: www.aperainst.com