

## HORIBA LAQUA EC220-K

# HORIBA LAQUA EC220-K Handheld EC Meter Instruction Manual

Model: LAQUA EC220-K

## 1. INTRODUCTION

The HORIBA LAQUA EC220-K is a robust, handheld, and waterproof meter designed for precise water quality testing in various environments. This device accurately measures conductivity (EC), resistivity (RES), salinity (SAL), total dissolved solids (TDS), and temperature. Its durable construction and user-friendly features make it suitable for both laboratory and outdoor field applications.

Key features include:

- **Waterproof Design:** IP67 rated for dust and water resistance, ensuring reliability in challenging conditions.
- **Advanced Functionality:** Offers automatic and manual EC calibration, adjustable reference temperature, temperature coefficient, cell constant, and selectable measurement units.
- **Expansive Measurement Ranges:** Capable of measuring conductivity, resistivity, salinity, total dissolved solids, and temperature with high resolution and accuracy.
- **Durable Construction:** Features a shock and scratch-resistant non-slip casing, a built-in electrode stand, and a foldable meter stand.
- **User-friendly Features:** Includes auto log data, built-in memory for up to 500 data points, auto stable, auto hold, real-time measurement modes, and a custom LCD with backlight for clear readings.

## 2. SAFETY INFORMATION

Please read and understand all safety precautions before operating the HORIBA LAQUA EC220-K meter. Failure to do so may result in injury or damage to the instrument.

- Do not attempt to disassemble or modify the meter. This may void the warranty and cause damage.
- Ensure the battery compartment is securely sealed to maintain the IP67 rating, especially when operating in wet conditions.

- Handle the sensor with care. Avoid dropping or subjecting it to excessive force.
- Keep the meter and sensor away from strong magnetic fields or corrosive chemicals unless specifically designed for such exposure.
- Use only specified batteries (2 AA) for operation.

### 3. PACKAGE CONTENTS

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Verify that all items are present upon unpacking:

- HORIBA LAQUA EC220-K Meter
- EC Sensor (Model 9383-10D)
- Calibration Solutions (as packaged)
- 2 AA Batteries
- Instruction Manual
- Carrying Case

### 4. PRODUCT OVERVIEW

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The image displays the HORIBA LAQUA EC220-K handheld meter in black, with its digital LCD showing 'COND', '25.0°C ATC', and a reading of '1413  $\mu\text{S}/\text{cm}$ '. The meter features control buttons for CAL, MEAS, DATA, MODE, SET, ENT, and power. An EC sensor, labeled HORIBA, is connected to the right side of the meter.

#### 4.1. Meter Components

- **LCD Display:** Shows measurement readings, temperature, battery status, and operational icons.
- **CAL Button:** Initiates calibration mode.
- **MEAS Button:** Switches to measurement mode.
- **DATA Button:** Accesses stored data.
- **MODE Button:** Cycles through measurement parameters (EC, TDS, SAL, RES).
- **SET Button:** Enters setup menu for advanced settings.
- **ENT Button:** Confirms selections or enters values.
- **Up/Down Arrows:** Navigate menus and adjust values.
- **Power Button:** Turns the meter on or off.
- **Sensor Input:** Port for connecting the EC sensor.

## 5. SETUP

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### 5.1. Battery Installation

1. Locate the battery compartment cover on the back of the meter.
2. Use a coin or screwdriver to open the cover.
3. Insert two (2) AA batteries, ensuring correct polarity (+/-).
4. Securely close the battery compartment cover to maintain the waterproof seal.

The meter is designed for over 500 hours of continuous operation on a fresh set of batteries.

### 5.2. Sensor Connection

1. Align the connector of the EC sensor (9383-10D) with the sensor input port on the top right side of the meter.
2. Gently push and twist the connector clockwise until it is securely fastened. Do not overtighten.
3. Ensure the sensor is clean and free from air bubbles before use.

## 6. OPERATING INSTRUCTIONS

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### 6.1. Power On/Off

Press the **Power** button (bottom right) to turn the meter on or off.

### 6.2. Calibration

Regular calibration ensures accurate measurements. The EC220-K supports automatic and manual calibration for EC, TDS, and Salinity.

1. Press the **CAL** button to enter calibration mode.
2. Follow the on-screen prompts to select the appropriate calibration standard solution.
3. Immerse the sensor in the standard solution. The meter will detect the solution and perform automatic calibration.
4. For manual calibration or adjustment of reference temperature, temperature coefficient, or cell constant, use the **SET** button and arrow keys.
5. Confirm calibration with the **ENT** button.

### 6.3. Measurement

After calibration, the meter is ready for measurement.

1. Press the **MEAS** button to enter measurement mode.
2. Press the **MODE** button to cycle through measurement parameters: Conductivity (EC), Total Dissolved Solids (TDS), Salinity (SAL), and Resistivity (RES). Temperature is displayed concurrently.
3. Immerse the sensor into the sample solution. Ensure the sensor tip is fully submerged and free of air bubbles.
4. Wait for the reading to stabilize. The 'Auto Stable' feature will indicate when the reading is stable.
5. The meter can display temperature in both Celsius (°C) and Fahrenheit (°F), adjustable in the settings.

## 6.4. Data Logging and Memory

The LAQUA EC220-K can store up to 500 data points.

- To save a measurement, press the **ENT** button when a stable reading is displayed.
- To review stored data, press the **DATA** button. Use the arrow keys to navigate through the records.
- The 'Auto Log Data' feature can be enabled in the settings for automatic data recording at set intervals.

## 6.5. Settings

Access advanced settings by pressing the **SET** button. Here you can adjust:

- Reference Temperature
- Temperature Coefficient
- Cell Constant
- Measurement Units (e.g.,  $\mu\text{S}/\text{cm}$ ,  $\text{mS}/\text{cm}$ , ppm, ppt, °C, °F)
- TDS Conversion Factor (four curves available)
- Salinity Calibration Curves (two curves available)
- Backlight duration
- Auto Power Off settings

# 7. MAINTENANCE

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## 7.1. Meter Cleaning

Wipe the meter body with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure the battery compartment is sealed before cleaning.

## 7.2. Sensor Care and Cleaning

- Rinse the sensor thoroughly with distilled or deionized water after each use.
- If the sensor is visibly dirty or readings become erratic, clean it according to the sensor-specific instructions provided with the electrode.
- Store the sensor in its protective cap with appropriate storage solution, if specified, to prevent drying out.

## 7.3. Storage

When not in use for extended periods, remove the batteries from the meter. Store the meter and sensor in the provided carrying case in a cool, dry place.

# 8. TROUBLESHOOTING

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Problem	Possible Cause	Solution
Meter does not power on	Dead or incorrectly installed batteries	Replace batteries, ensuring correct polarity.
Inaccurate readings	Sensor dirty or needs calibration; incorrect settings	Clean sensor, recalibrate the meter, check reference temperature and cell constant settings.
Display shows 'Err' or '---'	Sensor not connected; measurement out of range	Ensure sensor is securely connected. Check if the sample is within the meter's measurement range.
Slow response time	Sensor contamination or aging	Clean the sensor thoroughly. If the problem persists, the sensor may need replacement.

## 9. SPECIFICATIONS

Parameter	Detail
Model	LAQUA EC220-K
Measurement Parameters	Conductivity (EC), Resistivity (RES), Salinity (SAL), Total Dissolved Solids (TDS), Temperature
Waterproof/Dustproof Rating	IP67
Display Type	Custom LCD with Backlight
Power Source	2 x AA Batteries
Battery Life	Over 500 hours
Data Memory	Up to 500 data points
Calibration	Automatic and Manual EC Calibration, 4 TDS curves, 2 Salinity curves
Adjustable Parameters	Reference Temperature, Temperature Coefficient, Cell Constant, Measurement Units
Housing Material	Plastic (Shock and scratch-resistant non-slip casing)
Included Components	Meter and Sensor (9383-10D)
Item Length	7 Inches
Manufacturer	HORIBA

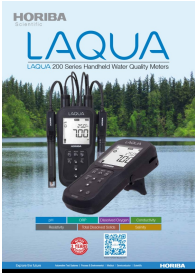

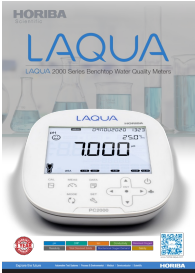
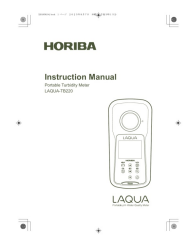
## 10. WARRANTY AND SUPPORT

The HORIBA LAQUA EC220-K meter comes with a **3-year warranty** from the date of purchase, covering manufacturing defects. The sensor may have a separate warranty period; please refer to the sensor's specific documentation.

For technical support, service, or warranty claims, please contact HORIBA customer service or visit the official [HORIBA Store on Amazon](#) or their official website for contact information.

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Related Documents - LAQUA EC220-K

	<p><a href="#">HORIBA LAQUA 200 Series Handheld Water Quality Meters: Features, Specifications, and Accessories</a></p> <p>Discover the HORIBA LAQUA 200 Series of handheld water quality meters. This brochure details features like IP67 waterproofing, large LCD displays, and robust construction, alongside specifications for pH, ORP, Conductivity, Dissolved Oxygen, TDS, Salinity, and Resistivity meters, including models PH210, PH220, EC210, EC220, DO210, DO220, PC210, PC220, PD210, and PD220. Explore available accessories and solutions.</p>
	<p><a href="#">HORIBA LAQUA Series Water Quality Meters Catalog 2025-2026</a></p> <p>Comprehensive catalog of HORIBA LAQUA series pH, conductivity, ORP, and DO meters. Features benchtop, portable, and compact models with various electrode options for diverse water quality measurement applications.</p>
	<p><a href="#">HORIBA LAQUA 2000 Series Benchtop Water Quality Meters: Features, Specifications &amp; Accessories</a></p> <p>Discover the comprehensive range of HORIBA LAQUA 2000 Series benchtop water quality meters, including PH2000, EC2000, ION2000, DO2000, PC2000, and PD2000 models. This brochure details their advanced features, precise specifications, and available accessories for accurate water analysis in laboratory and field applications.</p>
	<p><a href="#">HORIBA LAQUA-TB220 Portable Turbidity Meter Instruction Manual</a></p> <p>This instruction manual provides detailed information on the HORIBA LAQUA-TB220 portable turbidity meter, covering its features, operation, calibration, maintenance, and safety precautions.</p>



[HORIBA LAQUA Electrodes and Accessories Catalog](#)

A comprehensive catalog detailing HORIBA's LAQUA series of electrodes and accessories for water quality analysis, including pH, ORP, DO, Conductivity, and Ion-Selective Electrodes, as well as the WQ-300 Series Smart Digital Sensors and related solutions.



[LAQUA-TB220 Portable Turbidity Meter Quick Manual - HORIBA](#)

This quick manual provides essential information for operating the HORIBA LAQUA-TB220 Portable Turbidity Meter, including calibration procedures, measurement steps, operating precautions, and meter settings.