RCYAGO pH-W3988

RCYAGO WiFi Smart 6-in-1 Water Quality Monitor User Manual

Model: **pH-W3988** | Brand: **RCYAGO**

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your RCYAGO WiFi Smart 6-in-1 Water Quality Monitor. This device is designed for continuous monitoring of pH, EC, TDS, Salt, S.G, and Temperature in various water environments. It features WiFi connectivity for remote monitoring via the Tuya Smart App.

Figure 1: RCYAGO WiFi Smart 6-in-1 Water Quality Monitor with included accessories.

2. Package Contents

Verify that all items listed below are present in your package:

- RCYAGO WiFi Smart 6-in-1 Water Quality Monitor (Main Unit)
- pH Probe
- TDS/EC/Salt/S.G Probe
- Temperature Probe
- Power Adapter
- USB Power Cable
- Wall-Mount Bracket and Suction Cups
- pH Buffer Powders (pH 4.01, pH 6.86, pH 9.18)
- Conductivity Calibration Solutions (1413 us/cm, 12.88 mS/cm)
- User Manual

Figure 2: Contents included in the product package.

3. Product Overview

Familiarize yourself with the main components and controls of the water quality monitor.

Figure 3: Main unit with labeled parts and dimensions.

1. **Power Input:** USB port for connecting the power cable.
2. **TDS/EC/Salt/S.G/TEMP Display:** Digital display for conductivity, salinity, specific gravity, and temperature readings.
3. **PH/TEMP Display:** Digital display for pH and temperature readings.
4. **Mode Key:** Used to cycle through display modes or settings.
5. **Temperature Unit Conversion/Calibration Key:** Used to switch temperature units or initiate calibration.
6. **WiFi Signal Key:** Indicates WiFi connection status.
7. **PH Calibration Key:** Dedicated button for pH calibration.
8. **TDS/EC/Salt/S.G Probe Input:** Port for the multi-parameter probe.
9. **Temperature Probe Input:** Port for the dedicated temperature probe.
10. **PH Probe Input:** BNC connector for the pH probe.

Figure 4: Detailed view of the individual probes.

4. Specifications

Parameter	Range	Details
pH	0.00 - 14.00 pH	
EC	0 - 19900 µS/cm, 0 - 199.0 mS/cm	Electrical Conductivity
TDS	0 - 19990 ppm, 0 - 199.0 ppt	Total Dissolved Solids
Salt	0 - 199.9 ppt, 0 - 20%	Salinity
S.G	0.990 - 1.400	Specific Gravity
Temperature	0°C - 50.0°C (32°F - 122°F)	
Connectivity	WiFi (Tuya Smart App)	
Model Number	pH-W3988	

Parameter	Range	Details
Dimensions	10.67 x 7.2 x 2.68 inches	Main unit package dimensions
Weight	1.62 Pounds	

5. Setup

5.1 Initial Assembly and Power-Up

1. Unpack all components and inspect for any damage.
2. Connect the pH probe to the BNC connector (10) on the main unit.
3. Connect the TDS/EC/Salt/S.G probe to its designated input (8).
4. Connect the temperature probe to its designated input (9).
5. Connect the USB power cable to the power input (1) on the main unit and then to the power adapter. Plug the adapter into a suitable power outlet. The device display should illuminate.
6. Mount the main unit using the provided wall-mount bracket or place it in a stable location. Use suction cups to secure the probes in the water source, ensuring they are fully submerged but not touching the bottom or sides of the container.

5.2 Tuya Smart App Installation and WiFi Connection

1. Download the **Tuya Smart** app from your mobile device's app store (iOS or Android).
2. Register or log in to your Tuya Smart account.
3. Ensure your mobile device is connected to a 2.4GHz WiFi network.
4. In the app, tap "Add Device" or the "+" icon. Select the appropriate device category (e.g., "Sensors" or "Water Quality Monitor").
5. Follow the on-screen instructions to put the device into pairing mode. This usually involves pressing and holding a button on the monitor until the WiFi indicator (6) flashes.
6. Enter your WiFi network password in the app to complete the connection. Once connected, the WiFi indicator on the monitor will become solid.

Figure 5: WiFi connection and Tuya Smart App interface.

6. Calibration

Regular calibration is essential for accurate readings. Use the provided buffer powders and conductivity solutions.

6.1 pH Calibration

1. Prepare 250ml of distilled water for each pH buffer powder (pH 4.01, pH 6.86, pH 9.18). Dissolve one packet of powder into each 250ml of distilled water.
2. Rinse the pH probe with distilled water and gently blot dry.
3. Submerge the pH probe into the pH 6.86 buffer solution.
4. Press and hold the **PH CAL** key (7) until the display shows a stable reading matching 6.86. Release the button.
5. Rinse the pH probe with distilled water.
6. Submerge the pH probe into the pH 4.01 buffer solution.
7. Press and hold the **PH CAL** key (7) until the display shows a stable reading matching 4.01. Release the button.
8. For high pH ranges, repeat the process with the pH 9.18 buffer solution.

9. Rinse the pH probe thoroughly with distilled water after calibration.

6.2 EC/TDS/Salt Calibration

1. Prepare the conductivity calibration solutions (1413 µS/cm and 12.88 mS/cm).
2. Rinse the TDS/EC/Salt/S.G probe with distilled water and gently blot dry.
3. Submerge the probe into the 1413 µS/cm solution.
4. Press and hold the **TEMP CAL+** key (5) until the display shows a stable reading matching 1413 µS/cm. Release the button.
5. Rinse the probe with distilled water.
6. Submerge the probe into the 12.88 mS/cm solution.
7. Press and hold the **TEMP CAL+** key (5) until the display shows a stable reading matching 12.88 mS/cm. Release the button.
8. Rinse the probe thoroughly with distilled water after calibration.

7. Operating Instructions

7.1 Basic Device Operation

- **Power On/Off:** The device powers on automatically when connected to power. Disconnect power to turn off.
- **Mode Key (4):** Press briefly to cycle through different display modes for TDS/EC/Salt/S.G.
- **Temperature Unit Conversion (5):** Press briefly to switch between Celsius (°C) and Fahrenheit (°F) for temperature display.
- Ensure probes are fully submerged in the water to be tested for accurate continuous readings.

7.2 Tuya Smart App Features

The Tuya Smart App provides enhanced monitoring and control capabilities:

- **Real-time Data:** View current readings for all 6 parameters directly on your mobile device.
- **Historical Data:** Access daily, weekly, and monthly historical data to track trends and changes in water quality.
- **Alarm Settings:** Set custom high and low alarm thresholds for each parameter. Receive notifications on your phone if readings exceed or fall below these thresholds.
- **Data Export:** Some app versions may offer data export functionality for further analysis.

Figure 6: Tuya Smart App interface displaying temperature and other water quality parameters.

Figure 7: Tuya Smart App displaying historical data trends.

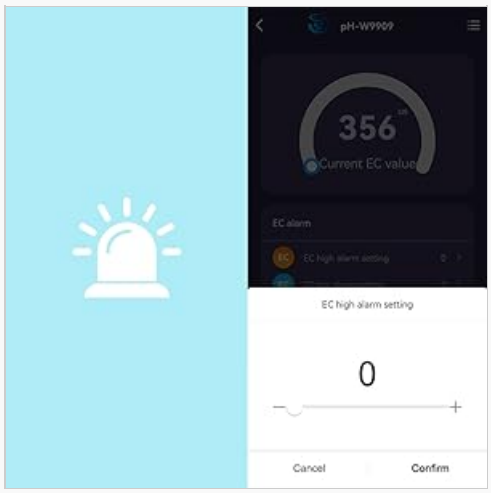

Figure 8: Tuya Smart App interface for setting alarm thresholds.

8. Maintenance

8.1 Probe Cleaning

To ensure accurate and consistent readings, regularly clean the probes:

1. Disconnect the device from power before cleaning.
2. Rinse all probes thoroughly with distilled or deionized water after each use or periodically during continuous monitoring.
3. For stubborn deposits, gently wipe the probes with a soft cloth or cotton swab. Avoid abrasive materials that could scratch the probe surfaces.
4. For pH probes, if readings become sluggish or erratic, soak the probe tip in a pH electrode storage solution or a mild cleaning solution specifically designed for pH electrodes for 15-30 minutes, then rinse.

8.2 Storage

- When not in use for extended periods, ensure probes are clean and properly stored.
- The pH probe tip should always be kept moist. Store it in a pH electrode storage solution or a small amount of pH 4.01 buffer solution. Never store dry.
- Store the main unit and probes in a cool, dry place away from direct sunlight and extreme temperatures.

9. Troubleshooting

Refer to the table below for common issues and their potential solutions.

Problem	Possible Cause & Solution
Device does not power on	• Ensure the power adapter is correctly plugged into a working outlet. • Check the USB cable connection to the main unit. • Verify the power adapter is functioning correctly.
Inaccurate or unstable readings	• Probes may need calibration. Refer to Section 6. • Probes may be dirty. Clean probes as described in Section 8.1. • Probes may be damaged or at the end of their lifespan. Consider replacement. • Ensure probes are fully submerged and not touching container walls.
WiFi connection failure	• Ensure your router is broadcasting a 2.4GHz WiFi signal. The device does not support 5GHz. • Verify the WiFi password entered in the app is correct. • Move the device closer to the WiFi router to improve signal strength. • Restart the device and attempt to reconnect via the Tuya Smart App. • Check if the device is in pairing mode (WiFi indicator flashing).
App not displaying real-time data	• Confirm the device is successfully connected to WiFi (solid WiFi indicator). • Check your mobile device's internet connection. • Ensure the Tuya Smart App is updated to the latest version. • Restart the app or the device.
Temperature readings are inconsistent	• Note that the device may have multiple temperature sensors. The dedicated temperature probe provides the most accurate water temperature. • Ensure the temperature probe is fully submerged and not exposed to air.

10. Safety Information

- Do not immerse the main unit in water. It is not waterproof.
- Keep the device and probes out of reach of children.
- Use only the provided power adapter and cable.
- Avoid exposing the device to extreme temperatures, direct sunlight, or corrosive environments.
- Handle probes with care. The glass bulb of the pH probe is fragile.

- Do not attempt to disassemble or repair the device yourself. Contact support if issues arise.

11. Warranty and Support

For warranty information, technical support, or service inquiries, please contact the seller or manufacturer directly through your purchase platform. Please have your model number (pH-W3988) and purchase date available when contacting support.