



W650 Pro Inline Online

pH EC PPM TDS Temp Monitor

User manual



About Aqua Master Tools

Established in 2018

Aqua Master Tools is the Dutch supplier of user-friendly and reliable pH, EC, and temperature meters. Our meters are used for swimming pools, aquariums, Jacuzzi's, ponds, and liquid plant nutrition.

We understand the importance of convenient, accurate and high-quality meters - and we are on a continuous quest to innovate our products. Aqua Master Tools' wide range of products are customised to our user's needs.

Satisfaction **guaranteed**

- Easily replaceable electrodes
- Built to last products
- Fully calibrated meters
- Unprecedented quality



TABLE OF CONTENTS

User manual English	4
Benutzerhandbuch Deutsch	11
Handleiding Nederlands	19
Manuel d'utilisation en français	27
Manuale utente Italiano	35
Manual del usuario en español	43



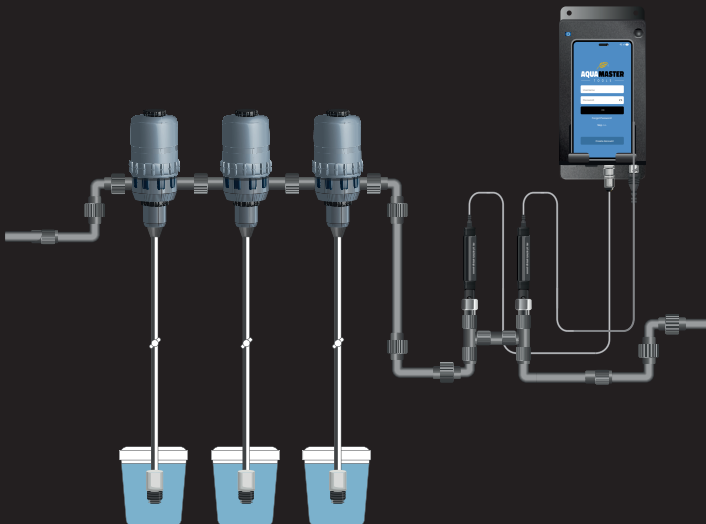
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our **HOW-TO VIDEOS**

INTRODUCTION

The W650 Pro Online Monitor Inline is a compact and intelligent solution for continuous monitoring of pH, EC, PPM, TDS, and temperature. Seamlessly managed through the Aqua Master Tools app, it provides you with real-time insights at any moment.

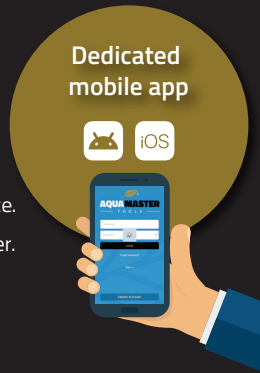
The inline electrodes are designed for installation in a pipeline using a 3/4" tapping saddle. With their 3/4" thread, the electrodes can be directly screwed into the saddle, making them ideal for applications such as inline dosing pumps and similar systems.

With a stable Wi-Fi connection to your local router, your data is always accessible, anytime and anywhere. Applications include hydroponics, horticulture, aquariums, ponds, water treatment, laboratories, R&D, and various other industries.



Key benefits:

- Unlimited device connections in one app, including other Aqua Master Tools devices.
- Full app integration with alarms, calibration reminders, and up to one year of data history.
- Seamless real-time monitoring on any mobile device.
- Compact design with integrated phone/tablet holder.
- Automatic temperature compensation.



Contact and Support

For technical support or more information about Aqua Master Tools Online Monitors, please contact us via:

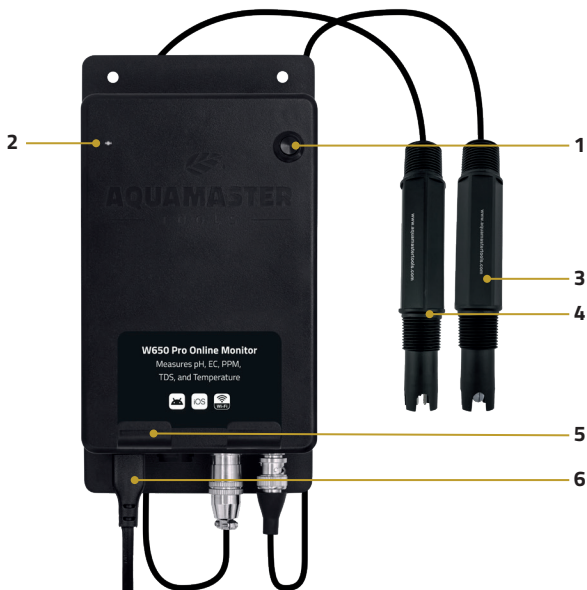
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This manual provides all the necessary information for the installation, configuration, operation, and maintenance of Aqua Master Tools controllers. Please follow the instructions carefully to ensure optimal performance of your system.

1. What's in the Box

The package includes:

- W650 Pro Online Monitor Inline
- Power adapter set (USB-C adapter with EU/UK/US/AU plugs)
- Inline pH probe
- Inline EC probe (for measuring both EC and temperature in a single probe)
- Quick start guide



1. Connection button
2. LED
3. Inline pH probe

4. Inline EC probe
5. Mobile device holder
6. USB-C cable

2. Installation & Connection

2.1 HARDWARE

1. Connect pH electrode to BNC connector
2. Connect EC/temp electrode to pin connector
3. Plug in USB-C power adapter
4. LED status: Green = connected, Flashing red = pairing, Red = no connection

2.2 APP CONNECTION

1. Download the **Aqua Master Tools app** (App Store / Google Play)
2. Create an account (needed for history & dosing settings) or skip for live data only
3. Hold reset button on the W650 for 5 sec > red LED flashes (pairing mode)
4. In app, press "+" (top right) > follow steps to connect to Wi-Fi
5. LED turns green when connected

3. App operation

3.1 DASHBOARD & LIVE DATA

- Dashboard shows all devices > tap to open home screen
- Home screen: live values (pH, EC/PPM/TDS, temp) + history (hour, day, month, year)
- Alarm active = value turns red + bell icon; cleared when alarm is removed
- Alarm ranges also set graph scaling; to view full range, set min/max triggers

3.2 HOME SCREEN MENU (3 DOTS, TOP RIGHT)

1. Control Settings – adjust device settings
2. Notifications – overview of pH, EC, temp and calibration alarms
3. Set Device Info – rename device and add note

3.3 CONTROLLER SETTINGS

- **Alarms:** set high/low triggers (pH, EC, PPM, TDS, temp).
 - Transparent = alarms off,
 - Green = within range
 - Red = out of range + notification

- **Resolution:** choose 0.0 or 0.00 for pH/EC
- **Calibration:**
 - pH: 1-point (7.0), 2-point (7.0/4.0, recommended), 3-point (7.0/4.0/10.0)
 - EC: 1-point at 1.4, 3.0, or 12.8 mS/cm (choose closest to expected value)
 - Notes: clean electrodes, use fresh 25 °C solution. Errors indicate dirty/damaged electrodes. Electrodes have limited lifespan. App guides calibration step-by-step.
- **Calibration reminders:** set 1–90 days, shown as red bell until cleared/recalibrated
- **Temperature units:** °C / °F
- **Measurement mode:** EC / TDS / PPM

3.4 PERSONAL CENTER

- Found bottom right on dashboard
- Options: share devices, check app version, website, terms, privacy policy, contact info, and account management (change password, log out, delete account)

4. Troubleshooting

Problem	Cause	Solution
No measurement	Loose connection, cable break, dirty electrode	Reconnect, inspect cables, clean & recalibrate
Unrealistic pH/EC	Expired calibration, dirty/dry electrode, glass broken, end of life	Recalibrate, clean/store correctly, replace if damaged
No app connection	Weak Wi-Fi, wrong frequency (... Hz), wrong settings, outdated app/phone	Improve Wi-Fi, check router frequency, reset Wi-Fi in app, update app/phone
Module not working	No power, adapter/cable broken, faulty unit	Check LED, test socket, replace adapter, contact supplier if still not working

5. Specifications

Range	pH: 0.00~14.00 pH EC: 0.00~20.00 mS/cm TDS: 0.00~14.00 PPT PPM: 0~14000 PPM Temp.: 0°C~50°C (32°F~122°F)
Resolution	pH: 0.01 or 0.1 pH EC: 0.01 mS/cm TDS: 0.01 or 0.1 PPT PPM: 7 PPM Temp.: 0.1°C (0.2°F)
Accuracy	pH: ±0.1 pH EC: ±2% F.S. TDS: ±2% F.S. PPM: ±2% F.S. Temp.: ±0.5°C (32.9°F)
PPM scale	700 PPM
Calibration	pH: 1, 2 or 3 point cal 4.0 - 7.0- 10.0 pH EC: 1 point auto cal 1.4 - 3.0 - 12.88 EC
Calibration indicator	Adjustable calibration indicators
Features	Low high, pH, EC and temp alarms
Power supply	USB-C, 5 V
Signal	Wi-Fi 2.4 GHz
Waterproof	IP63 (electrodes are IP67 waterproof)
Threaded inline electrode	Screw thread 3/4
Max. pressure inline electrode	6 Bar
System requirements	Android (8.0 or later) or iOS (12 or later)
Dimensions	250 x 110 x 80 mm
Weight	600 grams

6. Warnings and issues

- **Electrical safety:** unplug before service; use correct voltage (110–240 V); never use damaged cords
- **Waterproofing:** electrodes IP67 (fully waterproof), connectors & unit IP63 (splash-proof only)
- **Chemical exposure:** avoid aggressive chemicals/solvents beyond probe specs
- **Calibration tips:**
 - Always use fresh 25 °C calibration solution
 - Ensure no air bubbles on electrode tip; gently shake for 5–10 sec
 - Do not store in distilled/RO/de-ionized water
 - Do not immerse in oils, proteins, or solids that leave residue on the glass bulb
 - Avoid sudden temperature changes (cold electrode into hot liquid) – may break glass
 - Do not bump electrode or hit glass bulb – glass damage is not covered by warranty
- **Interference:** avoid placing the unit near electrical ballasts or strong fields
- **Common problems:**
 - Incorrect readings: recalibrate, clean electrodes, replace if worn
 - Probe failure: pH probe may dry/wear out, EC probe may clog. Clean regularly and replace when needed

7. Warranty

- **Coverage:** 2 years for W650 unit; 6 months for all electrodes
- **Not covered:** broken glass (unless reported within 24h), normal wear, misuse, shock damage, sudden temperature changes, improper storage, non-original parts, water damage, unauthorized repairs, missing/defaced serial numbers
- **Service:** return to point of purchase. Replaced parts become property of Aquamastertools®
- **Liability:** Aquamastertools® is not liable for consequential loss arising from use or inability to use this product