

Combo pen

P110 Pro2

Measures pH • EC • Temp

User manual

Benutzerhandbuch

Handleiding

Manuel d'utilisation

Manuale utente

Manual del usuario



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



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Visit www.aquamastertools.com
or scan the QR code to watch
our **HOW-TO VIDEOS**

Thank you for choosing Aqua Master Tools' Combo pen P110 Pro2.

The Combo pen P110 Pro2 is ideal for measuring pH, EC, and temperature of liquid plant nutrition and water in swimming pools, Jacuzzi's and ponds. The user-friendly buttons can be used to effortlessly switch between the parameters. A rechargeable integrated battery is included - so even when you have no access to power, you will still be able to use the P110 Pro2 and do not need to purchase batteries.

Vielen Dank, dass Sie sich für den Combo pen P110 Pro2 von Aqua Master Tools entschieden haben.

Das Messgerät Combo Meter P110 Pro2 eignet sich hervorragend für Messungen von pH-, EC- und Temperaturwerten in flüssiger Pflanzennahrung, in Wasser von Schwimmbädern, Whirlpools und Teichen. Per Tastendruck schalten Sie einfach und schnell zwischen den verschiedenen Parametern um. Sie brauchen keine Batterien zu kaufen: Der wiederaufladbare Akku ist im Lieferumfang enthalten, damit Sie den P110 Pro2 auch ohne Strom verwenden können.

Bedankt dat u heeft gekozen voor de Aqua Master Tools Combo pen P110 Pro2.

De Combo meter P110 Pro2 is uitermate geschikt voor het meten van de pH, EC en temperatuur van voedingswater voor planten en water in zwembaden, Jacuzzi's en vijvers. Met de eenvoudig te bedienen knoppen schakelt u gemakkelijk tussen de parameters. De oplaadbare geïntegreerd accu wordt meegeleverd, zodat u de P110 Pro2 zelfs zonder elektriciteit kunt gebruiken en geen batterijen hoeft aan te schaffen.

Nous vous remercions d'avoir choisi le compteur combiné P110 Pro2 d'Aqua Master Tools.

Le Combo mètre P110 Pro2 est idéal pour mesurer le pH, la CE et la température de la nutrition liquide des plantes et de l'eau des piscines, des jacuzzis et des étangs. Les boutons conviviaux permettent de passer sans effort d'un paramètre à l'autre. Une batterie intégrée rechargeable est incluse - ainsi, même lorsque vous n'avez pas accès à l'électricité, vous pourrez toujours utiliser le P110 Pro2 et vous n'aurez pas besoin d'acheter des piles.

Grazie per aver scelto il Misuratore Combinato P110 Pro2 di Aqua Master Tools.

Il Misuratore Combinato P110 Pro2 è ideale per misurare pH, EC e temperatura della nutrizione liquida delle piante e dell'acqua in piscine, vasche idromassaggio e stagni. I pulsanti, molto intuitivi, servono per passare facilmente da un parametro all'altro. È inclusa una batteria integrata ricaricabile, quindi anche quando non sarà possibile accedere all'alimentazione, si potrà comunque utilizzare il P110 Pro2 senza bisogno di acquistare le batterie.

Gracias por elegir el medidor combo P110 Pro2 de Aqua Master Tools.

El medidor Combo P110 Pro2 es ideal para medir el pH, la EC y la temperatura de la nutrición líquida de las plantas y del agua de piscinas, jacuzzis y estanques. Los botones de fácil uso permiten cambiar sin esfuerzo entre los parámetros. Se incluye una batería integrada recargable, por lo que incluso cuando no tenga acceso a la electricidad, podrá seguir utilizando el P110 Pro2 y no tendrá que comprar pilas.



1. Cap
2. Display
3. On/off button
4. Mode/Up button

5. Celsius/Fahrenheit/
CAL/Down button
6. Electrode
7. Screw cap
8. Protective cover

Operation and use

Soak the meter for 12 hours in tap water before first use.

1. Remove the protective cover.
2. Gently clean the electrode with distilled water and dry it off.
3. Press the On/off button to start the meter.
4. Insert the meter upright into the solution up to the edge and stir gently. Wait a few seconds for the correct value to appear on the display.
5. Press the C/F button to switch between Celsius and Fahrenheit.
6. Press the MODE button to switch between pH and EC.
7. By pressing the MODE button for 5 seconds, you can switch between one or two decimals.
8. Rinse the electrode with water after use and press the On/off button to turn off the meter.

Our electrodes are designed for dry storage. Therefore, storage in liquid is not required for the electrode.

Calibrating the pH meter

Watch the How-to videos at Aqua Master Tools' website.

1. Press the On/Off button to start the meter.
2. Press the MODE button to switch to pH on the display.
3. Gently clean the electrode with distilled water and dry it off.
4. Insert the pH electrode in pH buffer solution pH 7.00 (make sure this is 25°C) and stir gently.
5. Wait until the value on the display is stable.
6. Press and hold the pH CAL button for 5 seconds until the CAL ✓ logo at the top of the screen starts flashing and the value of the buffer solution is shown. The meter automatically recognizes the buffer solution and calibrates itself. After 5 flashes the meter will return to standard mode and the calibration is complete.
7. Gently clean the electrode with distilled water and dry it off.
8. Repeat this process with pH 4.01 buffer solution.
9. Gently clean the electrode before storing.
10. Calibration is complete and the meter is ready for use.

Calibrating the EC meter

Watch the How-to videos at Aqua Master Tools' website.

1. Press the On/Off button to start the meter.
2. Press the MODE button to switch to EC on the display.
3. Gently clean the electrode with distilled water and dry it off.
4. Place the meter in the desired EC calibration liquid.
5. Press and hold the CAL button for 5 seconds until the cal logo at the top of the screen flashes.
6. Use the up or down key to set the calibration fluid value.
7. Once the correct value is reached, press the power key to confirm the calibration. The meter will now return to normal mode and the calibration is complete.
8. Rinse the meter with clean water.

Calibration indicator

The calibration indicator on top of the screen (CAL✓) will appear after successfully calibrating pH or EC. The indicator will disappear after 30 days as a reminder that the device needs to be recalibrated.

Replacing the electrode

Watch the How-to videos at Aqua Master Tools' website.

1. Properly unscrew the sealing ring in the lower part of the meter.
2. Remove the defected/old electrode by gently pulling it.
3. Carefully place the new electrode with the recess in the correct position so that the connectors properly connect and do not damage the meter or electrode.
4. Check that the rubber seal is properly placed.
5. Tightly tighten the sealing ring.
6. Calibrate the meter as described in this manual.
7. The meter is now ready for use.

Specifications

Range	pH: 0.00 ~ 14.00 pH EC: 0.00 ~ 19.99 mS/cm Temperature: 0°C ~ 50°C (32°F ~ 122°F)
Resolution	pH: 0.01 or 0.1 pH EC: 0.01 or 0.1 mS/cm Temp.: 0.1 °C (0.2 °F)
Accuracy	pH: ± 0.1 pH EC: ± 2% F.S Temp: ±0.5°C Temp. compensation: 0°C - 50°C (32°F - 122°F)
Calibration	pH: 4.0 - 7.0 pH EC: manual calibration suitable for every EC calibration liquid
Features	Battery indicator & automatic temp. compensation
Power supply	2x 1.5 Volt AAA battery (included)
Auto. power-off	After 8 minutes
Calibration indicator	After successful calibration, indicator disappears after 30 days
Waterproof	IP67
Dimensions	230 x 43 x 43 mm
Weight	132 grams

Replacing the batteries

If the battery indicator at the top right of the display is activated, or if the display dims, please replace the batteries. To do so, unscrew the top and replace the 2 x 1.5 Volt AAA battery.

Warning or issues

- If your meter is not working properly, watch the troubleshooting videos on the product page of our website aquamastertools.com
- Always make sure that there are no air bubbles present in the solution during calibration. This could affect the measurements.
- If the EC value does not decrease to 0, insert the electrode into ethyl alcohol and shake gently for 5 to 10 seconds.
- Make sure the calibration solution is 25 °C when calibrating the meter. Failure to do so may affect the result of the calibration.
- Never store the electrode in distilled water.
- **DO NOT** immerse the electrode in oil, proteins or suspended solids that leave a layer on the glass bulb.
- **DO NOT** soak in RO (Reverse Osmosis), distilled or de-ionised water. Pure water alters the chemistry of the reference liquid so that it no longer works.
- **DO NOT** place a cold electrode in hot liquid (or vice versa). Sudden changes in temperature may break the glass and permanently damage the pen. Broken glass is not covered by the warranty.
- Make sure not to bump the glass electrode into anything, because this might break the glass bulb on the outside of the internal glass tube. Broken glass is not covered by the warranty.
- Avoid placing the meter near ballasts or any other electrical appliances. Force fields may affect the readings.
- If during calibration the pH/EC value slowly keeps rising or dropping and does not stabilise, please replace the batteries and calibrate the meter. Bad batteries or low power levels may influence the measurement results.

Warranty

This meter is warranted from all defects in material and manufacturing for a period of one year from the date of purchase. The electrode is warranted from all defects in material and manufacturing for a period of six months from the date of purchase. If during this period any parts need reparation or replacement and the damage is not due to incorrect operation by the user, please send the parts to the dealer or to us and the repair will be free of charge. Please refer to the exclusion warning.