Version 1.0
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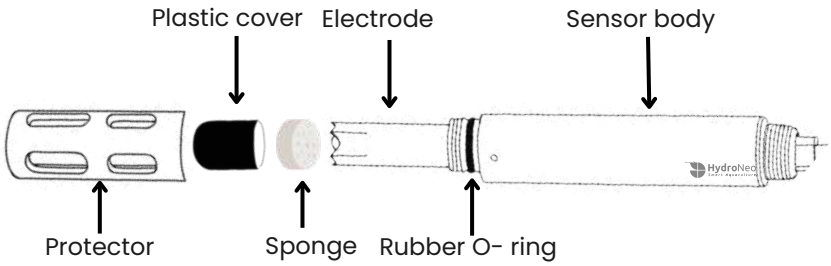
HydroNeo
Smart Aquaculture

Quick pH Sensor Guide

Parts of the pH sensor



⚠ *Remove the plastic cover before using the sensor. It is used to protect the electrode from drying out during longer periods of storage.*

⚠ *Electrode can be replaced separately when needed.*

Connecting the cable

- Connect the sensor to the cable by aligning the sensor mark with the cable (See figure 1).
- Ensure that the locking ring on the cable connector is fully tightened before use to prevent water leakage into the sensor.

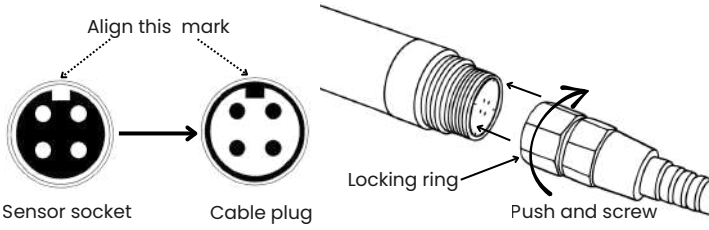
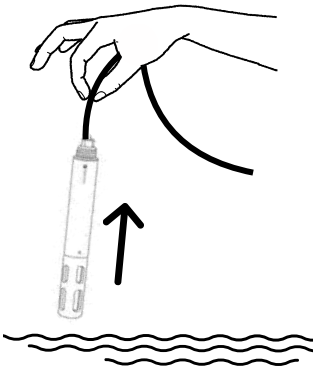
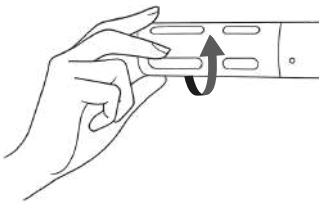
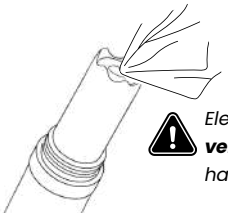


Figure 1

pH Sensor cleaning procedure







⚠ *Avoid harsh chemicals that may damage the electrode.*

⚠ *Be gentle—do not use fingernails, sharp objects, or excessive pressure to avoid damaging the electrode.*

Recommended for deep cleaning

⚠ *Electrode glass is **very fragile**, please handle with care.*

Don't use these

1. Remove sensor from the water.
2. Turn to remove the protector.
3. Gently wipe electrode and sensor body with a soft and clean fabric.
   If deeper cleaning is needed, use a mild dish soap containing Benzalkonium Chloride (BKC).

When to clean the sensor

Uncleaned sensors may report inaccurate pH value. The frequency of cleaning required depends on your water conditions:

For typical warm water shrimp and fish ponds clean every 1–5 days.

High bio-load water may require daily cleaning.

When to change the electrode

- When calibration cannot be performed.
- Very slow respond on the calibration.
- When the electrode is visibly damaged (e.g., broken).

Good condition | Need to change

⚠ *Aged electrode and broken electrode will cause failure during calibration.*

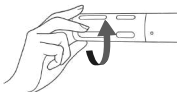
When to calibrate

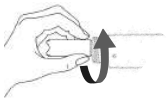
- At the start of each production cycle.
- Every week.

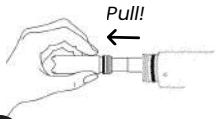
When sensor not in use

When not in use, moisten the sponge in the plastic cover with clean water and put it on the sensor to keep it moist and prevent damage from drying out.

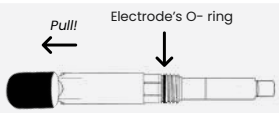
How to replace the inside electrode







1. Open the protector.
2. Turn the electrode counterclockwise to loosen it.
3. Gently pull it out using slight force.
4. Replace the electrode and ensure it is fully tightened to prevent water leakage during use, then put the protection back on.



⚠ *New electrode supply with the plastic cover, please remove it before use.*

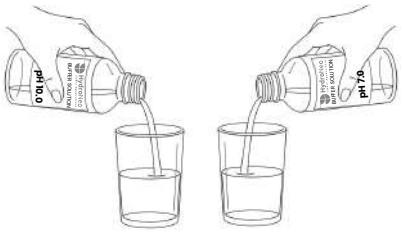
⚠ *The electrode is a consumable part containing chemicals that are used up over time. The sensor body is a long-term asset, while the electrode is designed for periodic replacement.*

pH Sensor calibration instruction

1 Clean the sensor, following the instructions on the front page. The sensor needs to be clean before calibration.

*Electrode glass is **very fragile**, please handle with care.*

2 Pour each buffer solution into two separate small glasses,



Make sure the pH buffer solutions have been stored dark and dry and are not expired yet.

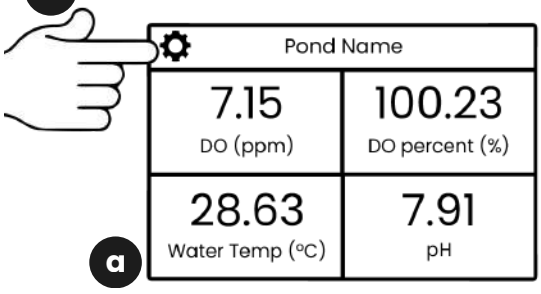
Do not reuse pH buffer solution as it changes its pH level over time.

3 Immerse the sensor into pH7 buffer solution, wait 3 minutes for sensor to completely exchange the ion with the buffer solution.

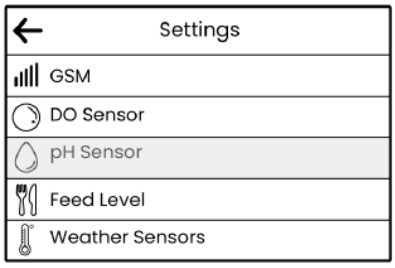
***pH7 buffer solution** is supply in a small bottle as a yellow color liquid.*

Hold the sensor with your hand make sure the electrode is not touching the bottom of the buffer solution container.

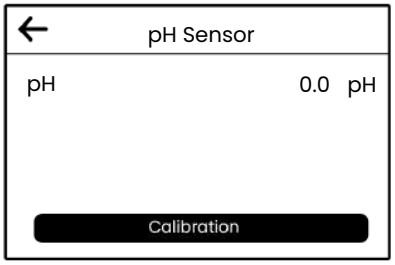
4 Afterward, access the Mini controller display and follow these steps:



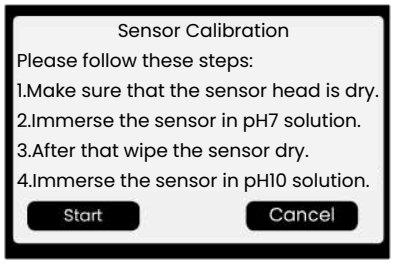
a Tab ⚙ on Mini Controller display.



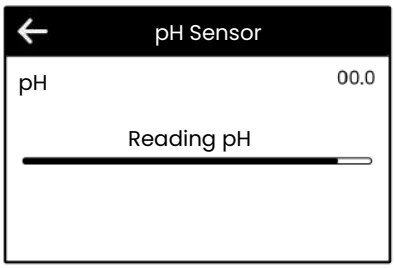
b Tab "pH Sensor"



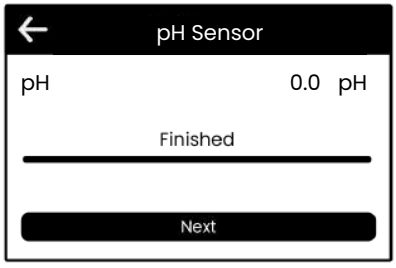
c Tab "Calibration"



d Follow the instructions and start.



e In progress.



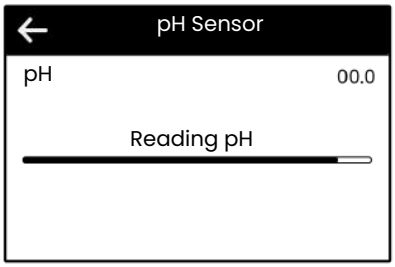
f pH7 Calibration Success!

Do not press 'Next' until you are ready to proceed to the next step by following instruction no.5.

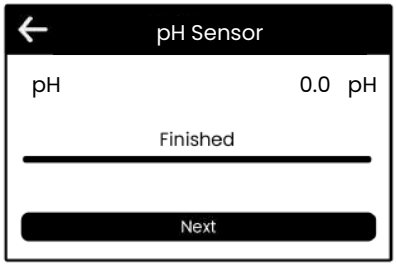
5 Before pressing the "Next" button, Immerse the sensor into pH10 buffer solution, wait 3 minutes for sensor to completely exchange the ion with the buffer solution.

***pH10 buffer solution** is supply in a small bottle as a blue color liquid.*

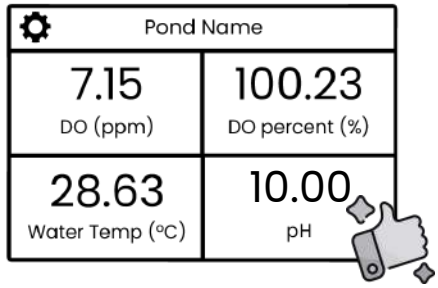
Hold the sensor with your hand make sure the electrode is not touching the bottom of the buffer solution container.



g In progress.



h pH10 calibration completed.



i pH10 Calibration Success!

Ensure the final pH reading is 10(±0.1).

6 After finished the calibration

- Put the protector back onto the sensor. (Optional test: Put the sensor back into the pH 7 buffer solution; a reading of 7 (±0.1) shortly after confirms the successful calibration.)
- Check that all cables/ locking rings are tightly screwed before placing the sensor back into the water.