

# ATO



## PHM-295 pH Meter User Manual

## INTRODUCTION

Thank you for purchasing the pH and Temperature monitor. Please read this manual completely and keep the manual for future reference.

### FEATURES:

- Large display with smart backlight
- Compact size
- Accurate pH and temperature reading
- Low battery indicator.
- °C/°F unit switchable.
- Power by 4pcs AA batteries.
- Multi points calibration.
- One touch button for calibration.

## SET INCLUDES

- pH and temperature monitor
- 4 pcs AA alkaline battery
- Built in temperature probe
- Replaceable pH probe
- Calibration Buffer Powder (pH 7.0, pH 4.01, pH 10.01)
- 2 pcs Wall mount hanger and nylon screw
- Operation manual

## POWER SUPPLY

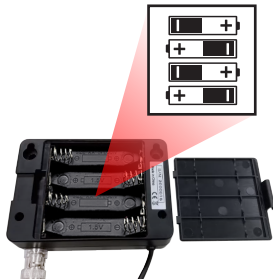
The meter is powered by 4 pcs AA batteries.

Replace the batteries when:

- The low battery icon flashes on LCD.
- The meter can not be powered on.

### To install the batteries:

1. Turn off the meter and remove the battery cover.
2. Replace the old batteries with 4 new AA batteries.
3. Make sure the batteries are in place and the polarity is correct.
4. Put back the battery cover



### NOTE:

**Remove the batteries from the meter if you do not plan to use for a month or more. Do not leave the batteries in meter.**

**BUTTONS:****Power button**

Short press to turn on or turn off the meter

**Backlight / Up button**

When in measuring mode, press the button to turn on the backlight for 30 sec. When in calibration mode, press the button to increase the value.



**Unit / Calibration / Down button**

Short press to switch between °C and °F unit. Long press to enter the calibration mode. When in calibration mode, press the button to decrease the value.

**1 CHECK THE PROBE STATUS**

Remove the probe protection bottle from probe to expose the electrode. Check the appearance of pH glass bulb, the pH glass bulb should be integrated, clear and not dried out.

**2 POWER UP THE METER**

Please read above power supply section first for battery installation. Once the batteries are installed, short press  button to power on the meter. To turn it off, press  button again.


**3 GET THE READING**

Dip the electrode into the test solution and stir gently. The pH & temperature reading will show on LCD. The pH monitor will update the reading every second in the first 5 mins. **Then, it goes into power saving mode and only update the reading every 10 mins.** In this way, it can provide battery life time for at least 3 months.

**4 TEMPERATURE UNIT SWITCH**

The meter's temperature unit is default as °C, short press  button to switch to °F.

**5 SMART BACKLIGHT DESIGN**

To view the reading in dark environment, press  button to light up the backlight for 30 seconds. While the backlight is on, the reading updates every second.

**6 WALL MOUNT**

This pH and temperature meter is easy to mount on the wall and has wall mount hanger that can be hung on a support bar.

wall mount hanger installed ▶



Calibration is executed before shipment but it is still necessary and should be done regularly. At least two points calibration are recommended and may start from pH 7.

**Please use fresh pH calibration buffer and don't re-use the buffer.**

- 1 Empty each pack of powder in 250ml distilled water and gently stir for 30secs. until all the powder is all dissolved




- 2 Power on the meter.





- 3 Place the electrodes into a **pH 7.0** (pH 4.01 or pH 10.01) buffer solution.



- 4 Long press  button for more than 1 second to enter pH calibration mode. The icon "CAL" will appear on the LCD and then pH value 7.0 (4.01, or 10.01) will be displayed on the LCD.



- 5 When the reading becomes stable and if the display value is not 7.0 (4.01 or 10.01), press  or  to adjust the reading till it matches to 7.0 (4.01 or 10.01). The adjustable ranges are 3.50 to 4.50, 6.50 to 7.50 and 9.50 to 10.50.



- 6 When the reading becomes stable and there is no operation, the meter will save the calibration data in 15 secs automatically and exit the calibration mode. "SA" will appears on the screen to followed by "End" to indicate the calibration process is done.



- 7 Rinse the probe with distilled water before next calibration point.

- 8 Repeat step 3 to 7 for pH 4.01 and pH 10.01. After calibrating to three solutions, calibration is finished.

Distilled water



**NOTE :** If the buffer is incorrectly inserted or the probe is damaged or aging, the meter will exit the calibration mode automatically after 10 seconds. Text "End" will appear on the LCD in one second and then will go back to normal status.

## SPECIFICATION

pH range	0.00~14.00
pH accuracy	+/-0.1
pH resolution	0.01
Temp. range	-5.0~60.0 C
Temp. accuracy	+/-0.5 C
Temp. resolution	0.1
ATC	ATC
LCD size	26(H)x44(W)mm
Operating temp.	0~50 C
Operating RH%	Humidity < 80%
Storage temp.	-10~50 C
Storage RH%	Humidity < 90%
Sensor life time	>3 months (with good maintenance)
Dimension	90(L)x63(W)x31(H)mm
Battery	AA x 4pcs
Backlight	Green Backlight

## MAINTENANCE

- **Please always keep the pH glass bulb wet by using the storage bottle to protect and store the electrode.**
- Always rinse the pH electrode with distilled water before next use.
- Never touch or rub glass bulb in order to last pH electrode life.
- Make sure the electrode is clean.
- Between measurements, rinse the electrode with distilled water. If the electrode has been exposed to a solvent immiscible with water, clean it with a solvent miscible with distilled water e.g. ethanol or acetone and rinse carefully with distilled water.



**Power on but no display**

- Make sure the time of pressing power button is more than 100 mS.
- Check the batteries are in place and in correct polarity.
- Replace with new batteries and try again.
- Move away the batteries for one minute and then put back again.

**Reading no change**

The ph monitor updates reading every second in the first 5 mins. Then, it goes into power saving mode and only update the reading every 10 mins to save power. To refresh the readings anytime, press the backlight. While the backlight is on, reading updates every second.

**LCD display “ - - - ”**

Out of pH range, too acidic/or too alkaline.

**“H.” Or “L.”**

Out of temp. range, too cold/or too hot.

**pH value fluctuate quickly**

It is normal when the electrode is not immersed in the water but exposed in air.

**Slow response**

Clean probe by immersing the electrode in tap water for 10~15 minutes, then rinse thoroughly with distilled water or use a general purpose electrode cleaner