



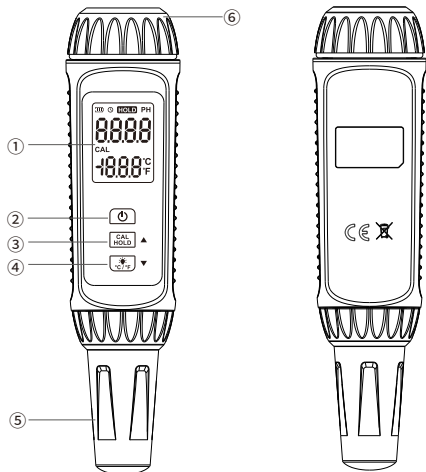
pH Meter User Manual V1.5.3

1. Introduction

The pH detector is an instrument that measures the pH of a solution and displays the temperature of the measured liquid. It is mainly used in industries, electric power, agriculture, medicine, food, scientific research or environmental protection.

2. View

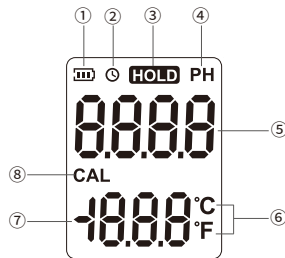
2.1 Appearance



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- ① LCD display
- ② Power button (switch machine)
- ③ Middle button (calibration, HOLD, value increase)
- ④ Down button (backlight, temperature unit switch, value decrease)
- ⑤ Probe cover (including probe)
- ⑥ Battery cover

2.2 LCD



- ① Battery power prompt
- ② Timing shutdown prompt
- ③ Value hold
- ④ pH symbol
- ⑤ pH display area
- ⑥ Temperature unit
- ⑦ Temperature display area
- ⑧ Calibration prompt

3. Battery Installation

- (1) Insert the battery according to the positive and negative instructions inside the battery compartment.
- (2) After installing the battery, please tighten the battery cover.
- (3) When not using the instrument for a long time, be sure to remove the battery and place it properly.

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4. Turn On and Off

- (1) Turn on: Press the power button to turn on the instrument.
- (2) Turn off: Long press the power button to turn off the instrument.

5. Measurement Procedure

Step 1: Install batteries and turn on the instrument.

Step 2: Before measurement, please clean the probe with distilled water and wipe it clean with medical cotton.

Step 3: Immerse the probe into the solution to be measured (the range of the probe into the solution is between 16~38mm), and then measure the pH of the solution.

Note: a. In order to reduce the error, if bubbles are attached around the probe during the measurement, please shake the probe gently to eliminate the bubbles.

b. After the measurement, please clean the probe according to step 2 and cover the probe cover.

6. Backlight

In the measurement state, short press the key to turn on or off the screen backlight.

Note: When the pH of the measured object exceeds the alarm limits of the instrument (pH> 12.5 or pH<3.5), the red backlight of the screen will light up.

7. Calibration

7.1 Calibration Steps

The instrument supports 3-point calibration. The default calibration values of the 3 calibration points are: 4.00, 6.86 and 9.18.

(1) In the normal measurement state, long press the middle button to enter the calibration mode, and the screen displays CAL.

(2) After entering the calibration mode, the temperature zone displays "4.00". At this time, please clean the probe with distilled water and wipe it clean with medical cotton, and then put the probe into a solution with a pH of 4.00. Wait for 3~5 minutes, when the pH is stable, short press the power button and the instrument jumps to calibration point 2.

(3) Repeat the cleaning of step (2), and then put the probe into a

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solution with a pH of 6.86. Wait for 3~5 minutes, when the pH is stable, short press the power button and the instrument jumps to calibration point 3. (4) Repeat the cleaning of step (2) again, and put the probe into the solution with a pH of 9.18. Wait for 3~5 minutes, when the pH is stable, press the power button shortly to complete the calibration. If the calibration is successful, “PASS” is displayed; if the calibration fails, “Err” is displayed, indicating that the pH of the calibration solution is not within the range of the calibration point and needs to be recalibrated.

Note: a. In order to reduce the error, if bubbles are attached around the probe during calibration, please shake the probe gently to eliminate the bubbles.

b. In order to reduce the measurement error, please use a solution with a known pH for calibration. If the pH of the calibration solution used is different from the default value, you can press the middle key or the down key to adjust the value in the calibration state. After adjusting the calibration point value and the pH of the calibration solution to be consistent, calibration can be performed (requirement: point 3>point 2> point 1 value).

7.2 Calibration Considerations

In the following situations, the instrument must be calibrated before measuring.

- (1) Replace with a new probe.
- (2) The instrument has not been used for a long time.
- (3) The instrument has measured solutions with pH<2 or pH>12.
- (4) The instrument has measured the solution containing fluoride and the pH is less than 7, or the concentrated organic solution.

8. Temperature Unit

In the measurement state, long press the key to switch the temperature unit °C and °F.

9. Value Hold

Short press the middle button during measurement. When “HOLD”

appears on the screen, the instrument can hold the current measurement value. Short press the middle button again to cancel the value hold.

10. Shutdown Timer

In the measurement state, short press the power button to turn on or turn off the timing automatic shutdown function. After turning on for about 15 minutes without any key operation, the instrument will automatically shut down.

11. Instrument Maintenance

- (1) Please put on the probe cover when the instrument is not in use, and put a small amount of replenishing solution in the probe cover (the external reference replenishing solution of the electrode is 3.3 mol/L potassium chloride solution) to keep the electrode bulb moist.
- (2) The electrode bulb of the instrument must be kept highly clean. If it is stained, it can be cleaned with 0.1 mol/L dilute hydrochloric acid or wiped lightly with medical cotton.
- (3) If you replace the probe with a new one, you need to soak the probe with 3mol/L potassium chloride solution for 24 hours.
- (4) If the gradient of the instrument decreases, the lower end of the probe can be soaked in 4% HF (hydrofluoric acid) for 3~5 seconds, washed with distilled water, and then soaked with potassium chloride solution.
- (5) The probe of the instrument should not be immersed in distilled water, protein solution and acid fluoride solution for a long time to prevent the electrode bulb from contacting with silicone grease.
- (6) Do not use a cleaning solution that can dissolve polycarbonate resin (such as carbon tetrachloride, trichloroethylene) to clean the electrode bulb to avoid failure of the electrode bulb.

12. Specification

Model	A	B
Measuring range	pH: 0~14; Temperature: 0~60°C	
Accuracy	pH: ±0.05 Temperature: ±0.5°C	pH: ±0.1 Temperature: ±0.5°C
Resolution	pH: 0.01 Temperature: 0.1°C	pH: 0.1 Temperature: 0.1°C
pH repeatability	±0.03	±0.1
Operating environment	Temperature: 0~60°C; Humidity: ≤85%RH	
Storage environment	Temperature: 0~60°C; Humidity: ≤85%RH	
Unit	°C; °F	
Power supply	2 pcs AAA 1.5V dry cell batteries 2 pcs AAA 1.2V rechargeable batteries	
Size	180×44×44mm	
Case materia	ABS	
Weight	103g(Without battery)	
Warranty	12 months	