



Model : GM768
GM769

Pen PH Meter Instruction Manual



Version:768/769-EN-00

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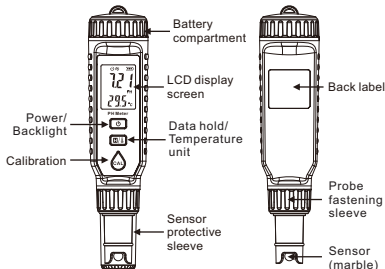
A. Introduction

This product is accurate, stable, reliable and easy to carry. It can be used to measure the PH value of the solution and the temperature of the liquid to be measured. It is widely used in the fields of industry, electricity, agriculture, medicine, food, scientific research, and environmental protection.

Product feature:

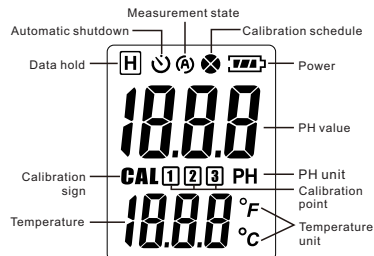
- Measure the PH value of the solution
- Measure the solution temperature
- LCD color screen display
- Data hold
- Temperature switch: °C / °F
- Power cut memory
- Solution temperature compensation
- Automatic calibration
- Power display and charging
- Automatic shutdown
- Red backlight alarm (when PH < 3.5 or PH > 11.5)
- Automatically detect the measurement state

B. Components



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C. LCD display



Display declaration

Display[H]	the value will remain unchanged
Display[CAL]	Enter the calibration model
Display[Lo]	PH value is below 0
Display[Hi]	PH value is above 14
Display[NUL]	No sensor connection detected
Display [A] for more than 5 seconds	It indicates that the measurement state is stable and can be used as a standard value.
Charge Display[▢▢▢]	When charging, the battery cells increase from zero to three cells in turn. When the power is full, the power will not move. After a long time of low power, the meter will turn off, and it needs to be charged as soon as possible. Long-term power loss will affect the battery quality

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D. Operating Instruction

1. Power On/Off

Short press the " **⏻** " button to turn on the machine, and short press the " **⏻** " button to switch on/off automatic power-off after turning on the machine; Long press " **⏻** " to turn off the machine;

2. Data hold

After turning on the machine, short press " **⏻** " button to switch on/off the hold data; the PH value will be saved when the machine is turned off, and that value will be displayed when the machine is turned on next time. Manually remove the value and then continue the measurement.

3. Temperature unit switch

After turning on the machine, long press the " **⏻** " button to switch between °C / °F.

4. Backlight

Press any button to open the backlight for 10 seconds.

5. Automatic power-off

The machine will automatically power off if there is no operation for 10 minutes.

6. Calibration

After turning on the machine, short press the " **⏻** " button without operation, and long press the " **⏻** " button to enter and exit the calibration.

It is recommended to follow the automatic calibration process; short press to skip automatic identification and directly carry out calibration.

Sequential calibration

- SA1:PH=4.0 / 4.00
SA2:PH=6.8 / 6.86
SA3:PH=9.1 / 9.18

Automatic calibration, automatically identify the calibration solution according to the sequence(4.00-6.86-9.18), when the " **⏻** " symbol rotates a single revolution, it indicates that the calibration is completed. If the calibration of the first calibration point is completed, the sensor should be washed with water. And then the next calibration point should be calibrated in turn, and the automatic calibration should be saved.

When the power is on, long press " **⏻** ", and LCD will display [CAL] and [4.00]. After the product sensor is put into the solution with PH=4.00 (the marble needs to be completely immersed), short press " **⏻** " to display the ADC value. Wait until the ADC value is stable, press " **⏻** " again to record the value (or wait for automatic

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calibration of the point). Remove the sensor from the solution, rinse the sensor with water for 1 minute, and then gently wipe it with a paper towel; When the LCD displays 6.86, place the sensor in PH=6.86... Repeat the above steps. After completing the calibration of SA1-SA3, display [End]. Wait for 1 minute, and exit the calibration automatically.

In the calibration process, if [Err] occurs, it means that the marble contacts the solution in the wrong order or the sensor is wrong. Recalibration or single point calibration is required.

E. Technical parameters

Model	GM768	GM769
PH measurement range	0.0 ~ 14.0	0.00 ~ 14.00
PH resolution	0.1	0.01
PH measurement error	±0.1	±0.05
Temperature range	0~60°C(32~140°F)	
Temperature resolution	0.1°C	
Temperature error	±1.0 °C	
Power supply	lithium battery 3.7V 600mAh 2.22wh(inside)	
Display	LCD screen display	
Working Temperature	0~60°C	
Working humidity	≤85%RH	
Red backlight alarm	(PH<3.5 or PH>11.5)	
Product specifications	diameter 43*190mm	
Weight	115.4g	

F. Attention

- In the following cases, the instrument must be recalibrated
 - Electrodes that leave the probe maintenance solution for too long;
 - The probe is replaced by a new one;
 - After measuring solutions containing fluoride and whose pH < 7 or strong organic solutions.

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- If the sensor is damaged, buy a sensor of the same kind. Twist the fastening sleeve of the sensor, and replace the newly purchased sensor.

2. Matters first attention

- Before the first operation or calibration, pour an appropriate amount of buffer solution into the protective cap to completely soak the sensor and let the absorbent rod get completely wet (when the rod is dry, soak it for more than 2 hours).
- Storage method: after use, the sensor shall be washed with clean water, and then soaked in buffer solution for storage, so that it can be used immediately next time;
- The probe should not be immersed in distilled water or protein solution or acid hydride solution for a long time. Prevent it from contacting with organic silicone grease.
- After measuring (shall be no more than 10 seconds) concentrated acid (pH<2) or alkali (pH>12), rinse it with distilled water for at least 1 minute and soak it in the buffer solution for 2 hours, otherwise the probe is vulnerable to damage.

G. Accessory

Pen PH Meter	1PCS
PH4.00 Calibration solution	1PCS
PH6.86 Calibration solution	1PCS
PH9.18 Calibration solution	1PCS
Instruction Manual	1PCS
USB wire	1PCS

Particulars Furnished:

- Old batteries must be disposed of in accordance with local laws and regulations!
- The company shall not be liable for any derivative results resulting from the use of the products
- The company reserves the right to update and modify the design specifications and instructions of the product without prior notice.
- Please do not charge or discharge the lithium battery while overcharging. Please do not charge it for more than two and a half hours. If the instrument is not used for a long time, please charge it before placing it.



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