

PH METER

Model : YK-21PH

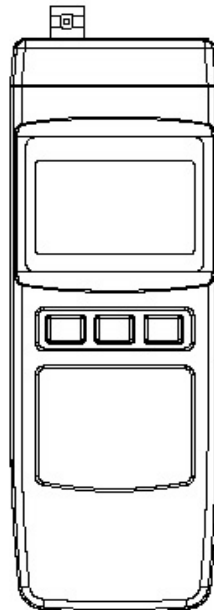


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1. FEATURES

* High quality & general purpose pH measurement.
* Easy operation, compact size.
* Water resistance on the front panel.
* All function keys are used the rubber button.
* Available for wide applications, such as AQUARIUM, BEVERAGE, FISH HATCHERIES, FOOD PROCESSING, PHOTOGRAPHY, LABORATORY, QUALITY CONTROL, SCHOOL & COLLEGES, SWIMMING POOLS, WATER CONDITIONS.

2. SPECIFICATIONS

Display	LCD, 21.5 mm (0.7") digit height.
Measurement Range	0 to 14 pH x 0.01 pH
Resolution	0.01 pH
Accuracy	± 0.07 PH (PH5 - PH 9) ± 0.1 PH (PH 4 - PH 10) ± 0.2 PH (PH 1 - PH 3.9, PH 10.1 - PH 13) <i>* Main instrument only.</i> <i>* $23 \pm 5^{\circ}\text{C}$, after calibration.</i>
Input Impedance	10^{12} ohms.
Temperature Compensation	Not necessary to make adjustment.
Sampling Time	Approx. 0.4 second.

Operating Temperature	0°C to 50°C (32°F to 122°F).
Operating Humidity	Less than 80% RH.
Calibration VR	External PH 4 (slope adjustment) & PH 7 (Cal. adjustment).
Power Supply	006P DC 9V battery.
Power Consumption	Approx. 2.0 mA.
Dimension	205 x 68 x 30 mm (8.1 x 2.7 x 1.2 inch).
Weight	220 g/0.48 LB.
PH electrode (Optional)	Any connector pH Electrode with BNC connector.
Standard Accessories	Instruction Manual.....1 PC.
Optional Accessories	PH electrode, Carrying case. pH 4.0, pH 7.0 buffer solution.

3. FRONT PANEL DESCRIPTION

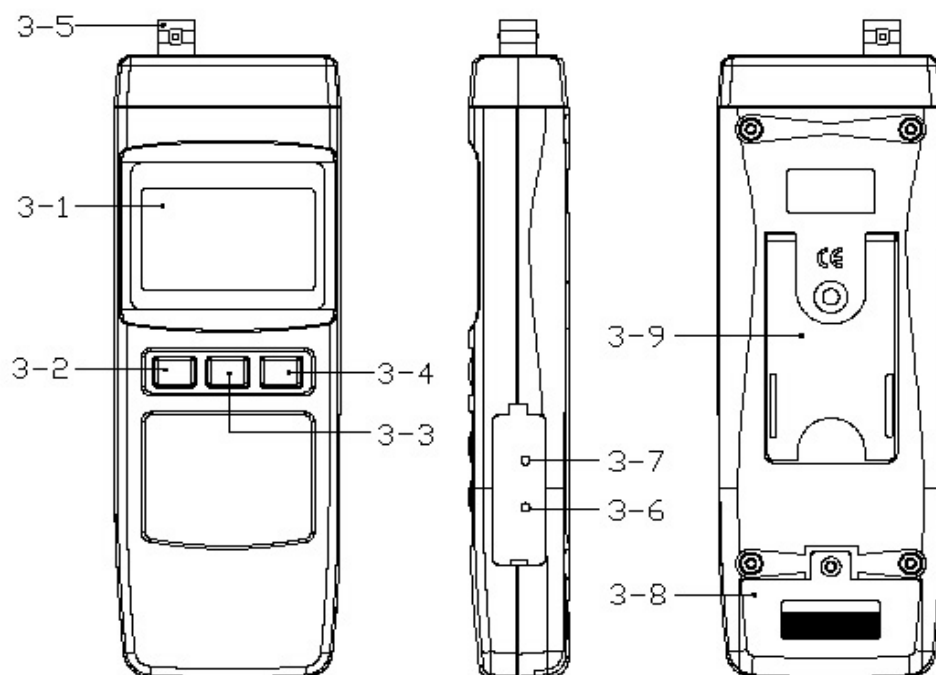


Fig. 1

- 3-1 Display
- 3-2 Power ON Button
- 3-3 Power OFF Button
- 3-4 Hold Button
- 3-5 PH Electrode BNC Socket
- 3-6 PH 4 Adjust VR (SLOPE VR, VR1)
- 3-7 PH 7 Adjust VR (CAL. VR, VR2)
- 3-8 Battery compartment/Cover
- 3-9 Stand

4. PH CALIBRATING PROCEDURE

4-1 Calibrating Consideration

These PH meter already calibrated by mV signal that simulated from the ideal PH ELECTRODE mV output (base on 25 °C environment). However due to (a) An ideal electrode will produce 0 mV at PH 7.00, but most electrodes are slightly off. (b) The measuring environment temperature may not near 25 °C (15 to 35 °C). It is necessary to make the following calibration procedures (4-1, 4-2, 4-3) if the user need to keep instrument combined electrode within high accuracy.

4-2 Requiring Equipment for Calibration

- 1) Combination PH ELECTRODE (optional).
- 2) Two buffer solutions (optional) : PH 7.00 & PH 4.00.

4-3 Two Points Calibration

- 1) Connect the combination PH ELECTRODE to the BNC socket and place electrode into buffer PH 7.00 solution.
- 2) Power on the instrument by pressing the " Power ON Button " (3-2, Fig. 1).
- 3) Adjust " PH7 Adjust VR " (3-7, Fig. 1) until the display reading values same as 7.00 exactly.
- 4) Rinse the electrode in distilled water.
- 5) Place electrode into buffer PH4.00 solution.
Adjust " PH4 Adjust VR " (3-6, Fig. 1) until the display reading values same as 4.00 exactly.
- 6) Repeat above 3) to 5) procedures two times at least.

4-4 Single Point Calibration

- 1) Connect the combination PH ELECTRODE to the BNC socket and place electrode into a standard buffer solution (for example PH 7.00 or other larger values as possible).
- 2) Power on the instrument by pressing the " Power ON Button " (3-2, Fig. 1).
- 3) Adjust " PH7 Adjust VR " (3-7, Fig. 1) until the display reading values same as the values of above standard buffer solution exactly.

5. MEASURING PROCEDURE

After the instrument and PH electrode are calibrated, then the unit is now ready for measuring.

- 1) Connect the combination PH ELECTRODE to the " BNC socket " (3-5, Fig. 1).
- 2) Power on the instrument by pressing the " Power ON Button ".
- 3) Place the electrode into the measured solution, then the instrument will display the PH value.
- 4) During the measurement, pressing the " Hold Button " (3-4, Fig. 1) will freeze the display value, at the same time the LCD will show the " HOLD " indicator.
To release the Data Hold function, just pressing the " Hold Button " again, then the " HOLD " indicator will be disappeared and cancel the Data Hold function.
- 5) After make the measurement, please rinse the electrode in distilled water.

6. REPLACEMENT OF BATTERY

- 1) When the left corner of LCD display show ' , It is necessary to replace the battery. However, in-spec measurement may still be made for several hours after LOW BATTERY INDICATOR appears before the instrument become inaccurate.
- 2) To replace the battery, remove the " Battery Cover " (3-6, Fig. 1) on the rear cabinet.
- 3) Take out the battery, install a new one (006P DC 9V) and reinstall the battery cover again.

7. OPTIONAL ELECTRODES, ACCESSORIES

PH ELECTRODE
Model : PE-03
General purpose pH electrode with BNC connector. Range : 1 to 13 pH (typical 0 to 14 pH). Epoxy body, Body size : 12 mm dia. x 160 mm. Cable length : 1 meter.

PH ELECTRODE
Model : PE-11
General purpose & high quality pH electrode with BNC connector. Range : 1 to 13 pH (typical 0 to 14 pH). Epoxy body, Body size : 9.5 mm dia. x 120 mm. Cable length : 1 meter.

pH ELECTRODE PE-01

Professional, laboratory & field usage. 9.5 mm dia. x 130 mm. Epoxy body, 0 - 14 pH. Cable length : 1 meter.

SPEAR TIP PH ELECTRODE Model : PE-04HD, PE-06HD
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The " Spear Tip pH electrode " is perfect for those pH measurements in applications where sample piercing is required. Meat, sausage and cheese are ideal applications. The electrode features a very durable glass measuring spear packaged in a rugged virtually unbreakable epoxy body. Measuring range : 0 to 14 pH . Size 12 mm dia. x 150 m.

BUFFER SOLUTION

Model : PH-07

PH 7.00 standard buffer solution.

BUFFER SOLUTION

Model : PH-04

PH 4.00 standard buffer solution.

CARRYING CASE	Model : CA-06
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Hard carrying case.

CARRYING CASE	Model : CA-05A
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Vinyl soft case.
