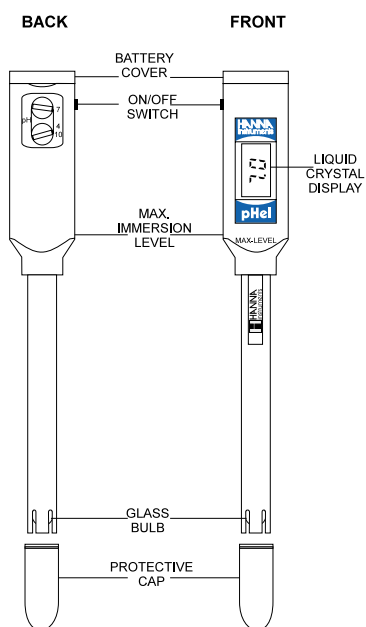


pHel pH electrode

pHel pH electrode

pHel pH electrode

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Specifications

Range	0.0 to 14.0 pH
Resolution	0.1 pH
Accuracy (@20°C/°68F)	±0.2 pH
Typical EMC Deviation	±0.2 pH
Calibration	Two points through trimmers
Environment	0 to 50°C (32 to 122°F), 95% RH
Battery	2 x 1.4V
Life	3000 hours of continuous use
Dimensions	200x28x20 mm 7.9x1.1x0.8"
Weight	46 g (1.6 oz.)

Operating Instructions

pHel is a very easy instrument to use. Simply switch it on, remove the protective cap and immerse the tip of the electrode (the bottom 4cm



or 1½ inch) into the solution. Under no circumstances the immersion shall be above 8 cm or 3 inches. Stir gently and wait until the display stabilizes.

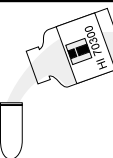
If the electrode is dry, allow a few minutes for the reading to stabilize.

For best results, recalibrate periodically using fresh calibration buffers.

- Do not be alarmed if white crystals appear around the cap. This is normal with pH electrodes and they dissolve when rinsed with water.
- If the electrode is dry, soak it in tap water for a few minutes.
- After use, rinse the electrode with water to minimize contamination.



- Store the electrode with a few drops of **HI70300 Storage Solution** in the protective cap.

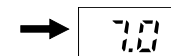


DO NOT USE DISTILLED OR DEIONIZED WATER FOR STORAGE PURPOSES.

Always replace the protective cap after use.

Calibration

- Dip the tip of the electrode (4cm/1½") of pHel in a sample of pH 7.01 buffer (from **HI774P Calibration Kit**). Allow the reading to stabilize.
- Adjust the pH 7 trimmer until the display reads "7.0".



pHel pH electrode

- Rinse the electrode with water and dip it in a sample of pH 4.01 (or 10.01 buffer from **HI 7710P Calibration Kit**). Allow the reading to stabilize.



- Adjust the pH 4/10 trimmer until the display reads the chosen buffer value (either "4.0" or "10.0").



→ 4.0

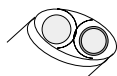
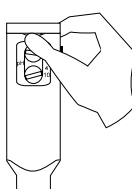
- Calibration is now complete.
FOR BETTER ACCURACY,
ALWAYS USE FRESH
BUFFERS FOR CALIBRATION
& NEVER REUSE THEM.

Battery Replacement

Replace the batteries when the display fades or pHel cannot be switched on or segments are missing.

pHel pH electrode

- Lift the battery cover. Check the polarity of the batteries before removing them. Insert two new 1.4V batteries the same way. Battery replacement must only take place in a non hazardous area using the battery types specified in this instruction manual.



Maintenance

- If the electrode remains dry for a long period, before taking any measurement or calibrating, it is necessary to reactivate it by dipping it into **HI 70300** solution for approximately 4 hours. The electrode should be cleaned after use and stored with the cap on and some **HI 70300** solution inside.

pHel pH electrode

- Solutions available for the calibration, the maintenance, the storage and the cleaning of the electrode:

- **HI 70300** Storage solution
- **HI 7061** General cleaning solution (soak for 30 min.)
- **HI 7073** Protein cleaning solution (soak for 15 min.)
- **HI 7074** Inorganic cleaning solution (soak for 15 min.)
- **HI 7077** Oil and fat cleaning solution (soak several times with clean solution)
- **HI 774P** Calibration kit (pH 4.01 & 7.01 @ 25°C/77°F, 30 ml each)
- **HI 777P** Calibration kit (pH 7.01 @ 25°C/77°F, 2 x 30 ml)
- **HI 7710P** Calibration kit (pH 4.01 & 10.01 @ 25°C/77°F, 30 ml each)

pHel pH electrode

Recommendations for Users

Before using this product, ensure that it is entirely suitable for the environment in which it is used. Operation of this instrument in residential area could cause unacceptable interferences to radio and TV equipments, requiring the operator to take all necessary steps to correct interferences. The glass bulb at the end of the electrode is sensitive to electrostatic discharges. Avoid touching this glass bulb at all times. During operation, ESD wrist straps should be worn to avoid possible damage to the electrode by electrostatic discharges. Any variation introduced by the user to the supplied equipment may degrade the instrument's EMC performance. To avoid electrical shock, do not use these instruments when voltages at the measurement surface exceed 24VAC or 60VDC. To avoid damages or burns, do not perform any measurement in microwave ovens.

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