



Code	HI1230[]	HI1144[]
Description	combination pH electrode	refillable, combination pH electrode with calomel references
Reference	double, Ag/AgCl	single, Hg/Hg ₂ Cl ₂
Junction / Flow Rate	ceramic, single / 15-20 µL/h	ceramic / 15-20 µL/h
Electrolyte	gel	KCl 3.5M
Max Pressure	2 bar	0.1 bar
Range	pH: 0 to 13	pH: 0 to 14
Recommended Operating Temp.	0 to 70°C (32 to 158°F) – HT	0 to 60°C (32 to 140°F) – HT
Tip / Shape	spheric (dia: 7.5 mm)	spheric (dia: 9.5 mm)
Temperature Sensor	no	no
Amplifier	no	no
Body Material	PEI	glass
Cable	coaxial; 1 m (3.3')	coaxial; 1 m (3.3')
Recommended Use	field applications	tris buffer
Connection	HI1230B BNC HI1230D DIN	HI1144B BNC HI1144D DIN

Tips for the Most Accurate Measurements

Keep Electrode Hydrated

Ideally, pH electrodes should be kept in a storage solution when not in use. Placing the electrode in a small glass filled with storage solution is suitable. An option for pocket meters is to place a small piece of sponge into the meter's cap and pour storage solution into the cap to wet the sponge. Pouring off any excess solution beforehand, the cap can then be placed on the meter.

If a storage solution is not available the next best option is to use pH 4.01 buffer (pH 7.01 is also suitable to a lesser extent).

Clean Electrodes Before Use

Clean the junction of your electrodes once a day or at least once a week to prevent junction clogging and to maintain accuracy. Immerse the electrode in the proper cleaning solution for at least 15 to 20 minutes. Hanna offers a wide range of cleaning solutions for general purpose and specific applications.

Replace Electrodes Once a Year

If your electrode takes too long to stabilize a reading, or readings fluctuate wildly, it is most likely time to replace the electrode. The typical life span of any pH electrode is from 6 months to 1.5 years.

Additional Tips

- Calibration and storage solutions should be changed regularly (i.e. monthly)
- Calibrate the meter often if a high degree of accuracy is required.
- Remember that the calibration is as only as good the buffer being used (i.e. old or contaminated buffer may not have the same value on the label).
- Calibration sachets, as opposed to bottles, ensure that your buffer solution is always fresh.
- If the meter takes an unusually long time to get a stable reading, the junction may be clogged.
- Rinse the probe with purified water after each use.