

Clean & Cal and Fail Safe Technology: Your Electrode is Always Top Performing



A pH meter is essentially a high impedance Volt meter, that can measure the potential difference between the internal and external glass surfaces of the pH sensor. A pH meter has an input impedance of at least 1 million of Megaohms.

Environmental or mechanical problems often affect pH measurements. Typically, in these conditions, pH meters give a false pH 7 reading and, since in most applications, pH 7 is the expected value, the user is not aware of the problem.

Examples of a false pH 7 reading:

- the glass bulb of the pH electrode is broken
- loss of signal (up to hundreds of Megaohms) of the electrode/meter connection cable, due to environmental humidity
- cable or connector short circuit

To prevent the user from erroneous readings due to system failures, HANNA instruments® presents HI 83140.

Should any of the above listed problems occur, HI 83140 will read pH 4. Since the user is not expecting a similar value, he will be immediately warned about the system performance.

Moreover, the Clean & Cal function helps by avoiding the calibration of a dirty pH electrode, that might introduce a systematic measurement error. Simply immerse the electrode in the HI 50021 Check solution and press the Check button: if the green LED lights up, the electrode can be used, otherwise the red LED turns on.

Ordering Information

HI 83140 is supplied complete with HI 1217-6 pH electrode, pH 4 and pH 7 buffer sachets, HI 700661 cleaning solution (2 x 20 mL sachet), HI 50021 Check solution (2 x 20 mL sachet), calibration screwdriver, battery, protective case and instructions.



Specifications

		HI 83140
Range	pH	0.00 to 14.00 pH
	mV	±1999 mV
	Temperature	0.0 to 100.0°C
Resolution	pH	0.01 pH
	mV	1 mV
	Temperature	0.1°C
Accuracy (@20°C)	pH	±0.01 pH
	mV	±1 mV
	Temperature	±0.4°C
pH Calibration	manual, 2 point, through trimmers (offset ±1 pH; slope: 85 to 105%)	
Temperature Compensation	automatic, 0 to 70°C (32 to 158 °F)	
pH Electrode	HI 1217-6 with internal temperature sensor, DIN connector and 1 m cable (included)	
Input Impedance	10 ¹² Ohm	
Battery Type / Life	1 x 9V / circa 100 ore di uso continuo	
Environment	0 to 50°C (32 to 122°F); RH max 95%	
Dimensions / Weight	164 x 76 x 45 mm (6.5 x 3.0 x 1.8") / 180 g (6.3 oz.)	

Accessories

HI 1217-6	Combination pH electrode with internal temperature sensor	HI 700661P	Electrode cleaning solution, 20 mL sachet, 25 pcs.
HI 70004P	pH 4.01 buffer solution, 20 mL sachet, 25 pcs.	HI 710015	Shockproof rubber boot, blue
HI 70007P	pH 7.01 buffer solution, 20 mL sachet, 25 pcs.	HI 710016	Shockproof rubber boot, orange
HI 50021P	Check solution, 20 mL sachet, 25 pcs.	HI 710022	Spare protective case

For a complete range of calibration, cleaning and maintenance solutions, see section F. For pH and ORP electrodes, see section E. For accessories, see section U.