

HI 4211 • HI 4212

Graphic Display pH Meters
with Calibration Check™

HI 4212

HANNA

Measure

Stable

17:55:36
Jan 21, 2005
Channel 1

8.944 pH

Last Calibr.: Jan 21, 2005 17:27
Electrode Cond.: 100% Good

Channel 2

7.466

-34.4 mV

Last Calibr.: Jan 21, 2005 17:27
Offset: -6.8 mV Slope: 1

Calibrated: Hanna 1.680

Elec. Cond: Hanna 4.010

Display

Start

Loc

HI 4211•HI 4212

*Graphic Display pH Meters
with Calibration Check™*

HI 4211 & HI 4212 are single and dual-channel Calibration Check™ pH meters with a backlit, dot matrix display. These instruments perform electrode diagnostics to ensure that the electrode used is always in good condition. As part of the Calibration Check™ feature, if the measurement is outside of the calibration range, users are warned with a graphic message.

In order to always perform a calibration that is as close as possible to the measurement range, the

user has the flexibility to choose up to 5 calibration points with standard or custom buffers.

The dual-channel **HI 4212** provides simultaneous graphing and logging of each independent channel on the screen. These meters can display extensive GLP data, concurrent measurement readout and logged graphed data, calibration data with used buffer values and expiration date and definition of the ionic strength constant value (ISE measurement only). **HI 4211** and

HI 4212 also provide on-screen feature related help: at the touch of a button users can access current content related guidelines and procedures in 4 languages.

The two measurement channels of the **HI 4212** are galvanically isolated to eliminate noise and instability. In ISE mode these instruments provide the user with a choice of several incremental methods. Communication is via opto-isolated USB and RS232 ports.





Features

- HANNA's Exclusive Calibration Check™
- Large, dot-matrix LCD with backlight
- Simultaneous dual graph display and real-time logging
- Opto-isolated USB and RS232
- GLP data
- Calibration data (buffer values, expiration date)
- Date and time
- Multi-language interface
- ID number
- Manual or automatic temperature compensation
- Temperature measure unit (degree K, °C, °F)
- Relative mV scale
- Incremental ISE methods
- Auto end point mode
- Data logging
- Acoustic signal alarm

HI 4212 rear view



L C D D i s p l a y E x a m p l e s



Basic single channel display



Basic dual-channel display



Channel 1 GLP display



Ch 1 basic with Ch 2 GLP display



Log report display

O t h e r O n - S c r e e n F e a t u r e s



Users can consult the on-board help from any mode screen simply by pressing the HELP button. The meter will then display a brief explanation of the meaning and use of the current command.



HI 4211 and HI 4212 can calculate a calibration curve by using up to 5 points. You can choose these points among the memorized buffer values or enter values that best fit the requirements of your application.

NEW

HI 4211 • HI 4212

Graphic Display pH Meters
with Calibration Check™



SPECIFICATIONS	HI 4211 (Single-channel)	HI 4212 (Dual-channel)
pH Range	-2.00 to 16.00; -2.000 to 20.000 pH	
mV Range	±2000 mV	
Selective Ions Range	-	1*10 ⁻⁶ to 9.99*10 ⁺¹⁰ concentration
°C Range	-20.0 to 120.0°C	
pH Accuracy (@20°C)	±0.1 pH; ±0.01 pH; ±0.002 pH ±1 LSD	
mV Accuracy (@20°C)	±0.2 mV ±1 LSD	
Selective Ions Accuracy (@20°C)	-	±0.5% (monovalent ions); ±1% (divalent ions); ±1.5% (trivalent ions)
°C Accuracy (@20°C)	±0.2°C	
pH Resolution	0.1 pH; 0.01 pH; 0.001 pH	
mV Resolution	0.1 mV	
Selective Ions Resolution	-	1; 0.1; 0.01; 0.001 concentration
°C Resolution	0.1°C	
Relative mV Offset Range	±2000 mV	
Input Channel(s)	1	2
Calibration Check	Status of electrode condition and response time; Status of the buffer solutions during calibration	
pH Calibration	Automatic up to 5 points with 8 memorized values (pH 1.68, 3.00, 4.01, 6.86, 7.01, 9.18, 10.01, 12.45) + 5 custom buffers	
ISE Calibration	Automatic, up to 5 points with 5 standard values (0.1, 1, 10, 100, 1000 conc + 5 custom values	
Temperature Comp.	Automatic or manual temperature compensation from -20.0 to 120.0°C (-4 to 248°F)	
pH electrode	HI 1131B (optional)	
Temperature probe	HI 7669/2W stainless steel probe (optional)	
Log-on-demand	5000 samples	
Automatic Data Logging	5000 samples	
PC Connection	Opto-isolated USB and RS232	
Menu Languages	English, Italian, Spanish, French	
Input impedance	10 ¹² ohm	
Power	12 VDC adapter (included)	
Environment	0 to 50°C (32 to 122°F) 95% RH	
Dimensions	159 x 230 x 93 mm (6.3 x 9.1 x 3.7")	
Weight	800 g (1.8 lb.)	

ORDERING INFORMATION

HI 4211 and **HI 4212** are supplied with power adapter and instructions.

HI 4211-01 and **HI 4212-01** are supplied with HI 1131B pH electrode, HI 7669/2W temperature probe, power adapter, pH 4 and pH 7 buffer solutions, electrode refilling solution, HI 76404N electrode holder, magnetic stirrer and instructions.

ACCESSORIES

HI 1131B

Refillable pH electrode with BNC connector & 1 m cable

HI 7669/2W

Temperature probe

HI 76404N

Electrode holder

HI 6016

pH 1.677 buffer solution, 500 mL

HI 6004

pH 4.010 buffer solution, 500 mL

HI 6007

pH 7.010 buffer solution, 500 mL

HI 6010

pH 10.010 buffer solution, 500 mL

HI 6124

pH 12.450 buffer solution, 500 mL

HI 77400P

pH 4 & 7 buffer Sachets, 20 mL, 5 pcs each

HI 92000

Windows® compatible software

HI 920010

9-pin serial cable for PC

HI 180H/U

Magnetic stirrer

Authorized Distributor



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instruments
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