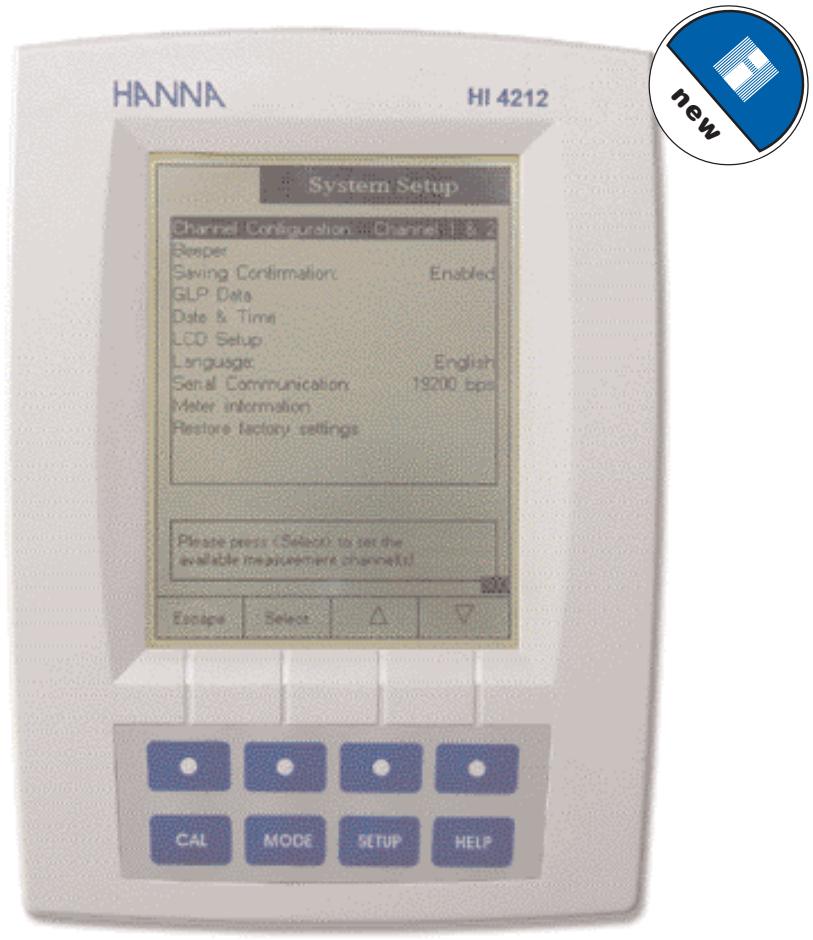
Graphic Display pH Meters with Calibration Check™

- HANNA instruments®' 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



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.

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For greatest accuracy, particular attention must be payed to calibration.
In fact, during calibration the electrode/instrument system acquires the data to be used as measurement references. The calibration curve will be much more precise if more calibration points are used.

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.

Specifications

		HI 4212
Range	pH	-2.000 to 20.000 pH
	mV	±2000.0 mV
	Selective Ions	$1*10^{-6}$ to $9.99*10^{10}$ conc.
	Temperature	-20.0 to 120.0°C / -4.0 to 248.0°F / 253.15 to 393.15 K
Resolution	pH	0.1 pH / 0.01 pH / 0.001 pH
	mV	0.1 mV
	Selective Ions	1/ 0.1 / 0.001 / 0.001 conc.
	Temperature	0.1°C / 0.1°F / 0.1 K
Accuracy (@20°C)	pH	±0.1 pH / ±0.01 pH / ±0.002 pH ±1 LSD
	mV	±0.2 mV ±1 LSD
	Selective Ions	±0.5% (monovalent ions) / ±1% (divalent ions)
	Temperature	±0.2°C / ±0.4°F / ±0.2 K
Relative mV Offset Range		±2000.0 mV
Input Channels		2
Calibration Check		status of electrode condition, 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
Ion Calibration		automatic, up to 5 points with 5 standard values (0.1, 1, 10, 100, 1000 conc + 5 custom values
Temperature Compensation		automatic or manual, -20.0 to 120°C (-4 to 248°F)
pH Electrode		HI 1131B
Temperature Probe		HI 7662-T
Input Impedance		10^{12} Ohm
Log-on-demand		5000 samples
Automatic Data Logging		5000 samples
PC Connection		USB and RS232 optoisolated ports
Menu Languages		English, Italian, Spanish, French
Power Supply		12 Vdc adapter (included)
Environment		0 to 50°C (32 to 122°F); RH max 95%
Dimensions / Weight		159 x 230 x 93 mm (6.3 x 9.1 x 3.7") / 800 g (1.8 lb.)

Accessories

HI 1131B	Refillable pH electrode with BNC connector and 1 m cable
HI 7662-T	Temperature probe
HI 76404N	Electrode holder
HI 6016	pH 1.677 buffer solution, 500 mL bottle
HI 6004	pH 4.010 buffer solution, 500 mL bottle
HI 6007	pH 7.010 buffer solution, 500 mL bottle
HI 6010	pH 10.010 buffer solution, 500 mL bottle
HI 6124	pH 12.450 buffer solution, 500 mL bottle
HI 77400P	pH 4 and pH 7 buffer sachets, 20 mL, 5 pcs. each
HI 710005	115 Vac/12 Vdc power adapter
HI 710006	230 Vac/12 Vdc power adapter
HI 92000	Windows® compatible software
HI 920010	RS232 cable for PC connection
HI 180H/D	Magnetic stirrer, 230/240 Vac

Ordering Information

HI 4212 is supplied complete with power adapter and instructions.
HI 4212-01 is supplied complete with HI 1131B, pH electrode, HI 7662-T temperature probe, power adapter, pH 4 and pH 7 buffer solutions, electrode refilling solution, HI 76404N electrode holder, magnetic stirrer and instructions.

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.

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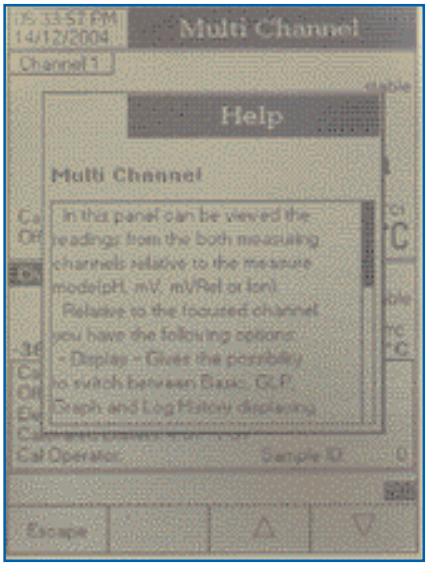

Users can consult the on-board help from any mode screen simply by pressing the HELP button.
The meter will then display a brief explanation of the meaning and use of the current command.

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Specifications

		HI 4211
Range	pH	-2.000 to 20.000 pH
	mV	±2000.0 mV
	Temperature	-20.0 to 120.0°C/ -4.0 to 248.0°F / 253.15 to 393.15 K
Resolution	pH	0.1 pH / 0.01 pH / 0.001 pH
	mV	0.1 mV
	Temperature	0.1°C / 0.1°F / 0.1 K
Accuracy (@20°C)	pH	±0.1 pH / ±0.01 pH / ±0.002 pH ±1 LSD
	mV	±0.2 mV ±1 LSD
	Temperature	±0.2°C / ±0.4°F / ±0.2 K
Relative mV Offset Range		±2000.0 mV
Input Channel		1
Calibration Check		status of electrode condition, 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
Temperature Compensation		automatic or manual, -20.0 to 120°C (-4 to 248°F)
pH Electrode		HI 1131B
Temperature Probe		HI 7662-T
Input Impedance		10^{12} Ohm
Log-on-demand		5000 samples
Automatic Data Logging		5000 samples
PC Connection		USB and RS232 optoisolated ports
Menu Languages		English, Italian, Spanish, French
Power Supply		12 Vdc adapter (included)
Environment		0 to 50°C (32 to 122°F); RH max 95%
Dimensions / Weight		159 x 230 x 93 mm (6.3 x 9.1 x 3.7") / 800 g (1.8 lb.)

Ordering Information

HI 4211 is supplied complete with power adapter and instructions.

HI 4211-01 is supplied complete with **HI 1131B**, pH electrode, **HI 7662-T** 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 and 1 m cable	HI 6124	pH 12.450 buffer solution, 500 mL bottle
HI 7662-T	Temperature probe	HI 77400P	pH 4 and pH 7 buffer sachets, 20 mL, 5 pcs. each
HI 76404N	Electrode holder	HI 710005	115 Vac/12 Vdc power adapter
HI 6016	pH 1.677 buffer solution, 500 mL bottle	HI 710006	230 Vac/12 Vdc power adapter
HI 6004	pH 4.010 buffer solution, 500 mL bottle	HI 92000	Windows® compatible software
HI 6007	pH 7.010 buffer solution, 500 mL bottle	HI 920010	RS232 cable for PC connection
HI 6010	pH 10.010 buffer solution, 500 mL bottle	HI 180H/D	Magnetic stirrer, 230/240 Vac

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.