

HI5221 • HI5222

Research Grade Meters

pH/ORP/ISE and Temperature



- Capacitive touch keypad
- Clean user interface
- CAL Check™
 - Alerts users of calibration status
- Five-point calibration
 - Five-point pH and ISE (HI5222 only) calibration
- Logging
 - Large log memory with different logging methods
- Provided methods (HI5222)
 - ISE incremental methods
- Multiple input channels
 - (HI5222) pH/ORP/ISE and temperature
- On-screen help
 - Users can consult the on-screen help from any mode simply by pressing the HELP key.

Measure up to 4 Parameters

HI5221 and HI5222 are research grade pH, mV and temperature benchtop meters. HI5222 is a dual channel meter with two independent inputs for pH, ORP and ISE probes. Each channel has it's own temperature input and supports half-cells with a separate reference electrode input.

User-friendly features

These instruments offer multi-language support and contextual help is always available through a dedicated help key. Clear tutorial messages and directions are available on-screen to quickly and easily guide users through measurement and calibration procedures to ensure they are performed properly.

Highly Customizable

The user interface of both instruments is customizable and the HI5222 is capable of displaying two channels simultaneously. These meters are capable of showing the measurements in various modes: basic measurement with or without GLP information, real-time graphing at either channel and logging data.

Up to 10 profiles can be saved and recalled for both instruments. A profile is a user-definable configuration that can include: mode, standards, isopotential point, measurement units of ISE and ISE electrode type (HI5222 only), temperature units and resolution reading mode. Recalling a pre-defined profile can save time when changing the meter to a different measurement.

CAL Check™

Hanna's exclusive CAL Check™ diagnostics system ensures accurate pH readings every time by alerting users to potential problems during the calibration process. The CAL Check™ system eliminates erroneous readings due to dirty or faulty pH electrodes or contaminated pH buffer solutions during calibration. After the guided calibration process, the electrode condition is evaluated and an indicator is displayed informing the user of the overall pH electrode status.

Choice of Calibration

Automatic, semiautomatic and manual pH calibration is available for up to five points, with eight standard (1.68, 3.00, 4.01, 6.86, 7.01, 9.18, 10.01 and 12.45) and five custom buffers. The out of calibration range and calibration expiration features alert the user in the event the measurement is far from the calibration point or when the meter is due for recalibration. Proper, scheduled calibrations are crucial for accurate and repeatable measurements.

HI5222 also features ISE calibration up to five points, with standard solutions and up to five custom solutions, with or without temperature compensation. From the on-screen list, users can select the ISE electrode being used along with the standard configuration profile or create a custom version.

Data Logging

Three selectable logging modes are available: automatic, manual and AutoHold logging. Automatic and manual logs up to 100 lots, 50,000 records max/lot; 100,000 data points per channel, and up to 100 ISE methods reports (HI5222 only). Automatic logging features the option to save data according to sampling period and interval. GLP information is stored with each lot recorded. GLP information includes complete data about user calibration of each parameter and identification information for the instrument, user, and company. Data can be transferred to a PC via USB and HI92000 software (optional).

Specifications	HI5221	HI5222	
pH	Range	-2.0 to 20.0 pH; -2.00 to 20.00; -2.000 to 20.000 pH	-2.0 to 20.0 pH; -2.00 to 20.00; -2.000 to 20.000 pH
	Resolution	0.1 pH; 0.01 pH; 0.001 pH	0.1 pH; 0.01 pH; 0.001 pH
	Accuracy	±0.1 pH; ±0.01 pH; ±0.002 pH ±1 LSD	±0.1 pH; ±0.01 pH; ±0.002 pH ±1 LSD
	Calibration	automatic, up to five point calibration, eight standard buffers available (1.68, 3.00, 4.01, 6.86, 7.01, 9.18, 10.01, 12.45), and five custom buffers	automatic, up to five point calibration, eight standard buffers available (1.68, 3.00, 4.01, 6.86, 7.01, 9.18, 10.01, 12.45), and five custom buffers
	Temperature Compensation	automatic or manual from -20.0 to 120.0°C/-4.0 to 248.0°F/253.15 to 393.15K	automatic or manual from -20.0 to 120.0°C/-4.0 to 248.0°F/253.15 to 393.15K
mV	Range	±2000 mV	±2000 mV
	Resolution	0.1 mV	0.1 mV
	Accuracy	±0.2 mV ±1 LSD	±0.2 mV ±1 LSD
	Relative mV Offset Range	±2000 mV	±2000 mV
Temperature*	Range	-20.0 to 120°C; -4.0 to 248.0°F; 253.15 to 393.15K	-20.0 to 120°C; -4.0 to 248.0°F; 253.15 to 393.15K
	Resolution	0.1°C; 0.1°F; 0.1K	0.1°C; 0.1°F; 0.1K
	Accuracy	±0.2°C; ±0.4°F; ±0.2K	±0.2°C; ±0.4°F; ±0.2K
ISE	Range	-	1 x 10 ⁻⁶ to 9.99 x 10 ¹⁰ concentration
	Resolution	-	1; 0.1; 0.01; 0.001 concentration
	Accuracy	-	±0.5% (monovalent ions); ±1% (divalent ions)
	Calibration	-	automatic, up to five point calibration, five fixed standard solutions available (0.1, 1, 10, 100, 1000 ppm), and five user defined standards
Additional Specifications	pH Electrode	HI1131B glass body pH electrode with BNC connector and 1 m (3.3') cable (included)	
	Temperature Probe	HI7662-T stainless steel temperature probe with 1 m (3.3') cable (included)	
	Input Channel(s)	1 pH/ORP	2 pH/ORP/ISE
	GLP	calibration points, calibration time stamp, probe offset, slope, date, time and buffers/standards used	
	Logging	record: 100,000 data point storage/channel, 100 lots with 50,000 records/lot; interval: settable between 1 second and 180 minutes max log time; type: automatic, manual, AutoHOLD	
	Display	color graphic LCD with on-screen help, graphing, and custom color configuration	
	PC Connection	USB and RS232	
	Power Supply	12 VDC adapter (included)	
	Environment	0 to 50°C (32 to 122°F; 273 to 323K) RH max 95% non-condensing	
	Dimensions	160 x 231 x 94 mm (6.3 x 9.1 x 3.7")	
Weight	1.2 kg (2.64 lbs.)		
Ordering Information	HI5221-01 (115V), HI5221-02 (230V), HI5222-01 (115V) and HI5222-02 (230V) are supplied with HI1131B pH electrode, HI7662-T temperature probe, HI76404N electrode holder, HI70004 pH 4.01 buffer solution sachet, HI70007 pH 7.01 buffer solution sachet, HI700601 electrode cleaning solution sachet (2), HI7082 3.5M KCL electrolyte solution (30 mL), 12 VDC adapter and instructions.		

pH and ORP electrodes begin on page 3.77; pH and ORP solutions begin on page 3.100; ISE electrodes and solutions begin on page 4.22

(*) Reduced to actual probe limits