

Research Grade Meter

pH/ORP and Temperature

pH

benchtop



The HI5221 is an advanced research grade benchtop pH/mV meter that is completely customizable with a large color LCD, capacitive touch keys, and USB port for computer connectivity.

The HI5221 features a universal BNC connection for use with the expansive line of pH and ORP electrodes that Hanna Instruments offers. The meter is supplied with the HI1131B glass body, double junction, combination pH electrode that operates over a wide temperature range from 0 to 100°C. All readings are automatically compensated for temperature variations with the separate HI7662-T temperature probe that is included.

The HI5221 can be calibrated up to five points with a choice of eight pre-programmed buffers or five custom buffers. The HI5221

features Hanna's exclusive CAL Check™ to alert the user of potential problems during the pH calibration process. Indicators displayed during calibration include "Electrode Dirty/Broken" and "Buffer Contaminated." The overall probe condition based on the offset and slope characteristic of the electrode is displayed as a percentage after calibration is complete. The calibration data including date, time, buffers used, offset and slope can be accessed at any time along with the current measurement by selecting the Good Laboratory Practice (GLP) display option.

Three selectable logging modes are available: automatic, manual and AutoHold logging. Up to 100,000 data points can be recorded in 100 lots with 50,000 records max/lot and exported to a computer for data review and storage.

Customizable User Interface

The user interface of the HI5221 allows the user to show measurements in various modes: basic measurement with or without GLP information, real-time graphing, and logging data. Calibration stability criteria can be adjusted from fast, moderate, and accurate. Programmable alarm limits can be set to inside or outside allowable limits.

Color Graphic LCD

The HI5221 features a color graphic LCD with on-screen help, graphic, and custom color configurations. The display allows for real-time graphing and the use of virtual keys provide for an intuitive user interface.

Capacitive Touch

The HI5221 features sensitive capacitive touch buttons for accurate keystrokes when navigating menus and screens. There are four dedicated keys that are used for routine operations including calibration and switching measurement modes and four virtual keys that change based upon use. The capacitive touch technology ensures the buttons never get clogged with sample residue.

Choice of Calibration

Automatic buffer recognition, semiautomatic, and direct manual entry pH calibration options are available for calibrating up to five points, from a selection of eight standard buffers and up to five custom buffers.

GLP Data

HI5221 includes a GLP feature that allows users to view calibration data and calibration expiration information at the touch of a key. Calibration data include date, time, buffers /standards used for calibration and slope characteristics. The offset is also displayed for pH electrodes.

CAL Check™

CAL Check™ alerts users to potential problems during the calibration of the pH electrode. Indicators include "Electrode Dirty/Broken," "Buffer Contaminated," electrode response time and the overall probe condition as a percentage that is based on the offset and slope characteristics.

Data Logging

Three selectable logging modes are available on the HI5221: automatic, manual, and AutoHold logging. Automatic and manual logs up to 100 lots with 50,000 records max/lot, with up to 100,000 total data points. Automatic logging features the option to save data according to sampling period and interval.

Data Transfer

Data can be transferred to a PC with USB cable and HI92000 software (both sold separately).

Contextual Help

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 setup and calibration. The help information displayed is relative to the setting/option being viewed.

| Specifications | HI5221 | |
|---------------------------|---|---|
| pH | Range | -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 |
| | Accuracy | ±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 |
| | Temperature Compensation | 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 |
| | Resolution | 0.1 mV |
| | Accuracy | ±0.2 mV ±1 LSD |
| | Relative mV Offset Range | ±2000 mV |
| Temperature* | Range | -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 |
| | Accuracy | ±0.2°C; ±0.4°F; ±0.2K |
| 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 |
| | 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 : fourteen presets selectable between 1 second and max log time of 180 minutes; type : automatic, manual, AutoHold |
| | Display | color graphic LCD 240x340 pixels |
| | PC Connection | USB |
| | 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) and HI5221-02 (230V) are supplied with HI1131B pH electrode, HI7662-T temperature probe, pH 4.01 buffer solution sachet (2), pH 7.01 buffer solution sachet (2), HI700601 electrode cleaning solution sachet (2), HI7082 3.5M KCl electrolyte solution (30 mL), HI76404W electrode holder, 12 VDC adapter, capillary dropper pipette, quality certificate, quick start guide and instruction manual. | |

(*) Reduced to actual probe limits