HI98191

Professional Waterproof Meters

pH/ORP/ISE

- ISE measurement units
  - Extensive choice of units to display readings (ppm, ppt, g/L, µg/L, mg/L, M, mol/L, mmol/L, %, w/v, user)

- Waterproof
  - IP67 rated waterproof, rugged enclosure

- CAL Check™
  - Alerts users to problems during pH calibration including dirty/broken electrode, contaminated buffer and overall probe condition

- Automatic or manual temperature compensation
  - pH sensors incorporate a built-in temperature sensor

- Calibration
  - Up to a five-point pH calibration with seven standard buffers and five custom buffers available

- Approximately 200 hour battery life
  - Powered by (4) 1.5V AA batteries

- Clear display
  - Dot matrix display with multifunction virtual keys

- AutoHold
  - Automatically holds the first stable reading on the display

- Calibration timeout
  - Alerts when calibration is due at a specified interval

- Connectivity
  - PC connectivity via opto-isolated micro-USB with HI92000 software

- GLP
  - GLP data provides data from previous calibration to ensure Good Laboratory Practices are met

- Intuitive keypad
  - Most of the available options such as GLP information, help, range, calibration and backlight have a dedicated button

- Supplied complete
  - Each meter is supplied complete with sensor, calibration solution, beakers, PC software and connection cable, instruction manual, quick start guide and batteries in a rugged, custom carrying case.

Designed for professionals

The HI98191 is a rugged, portable pH/ORP/ISE meter with the performance and features of a benchtop meter. Exchange out the pH probe for an ORP probe to obtain mV readings in the ±2000 mV range. This professional, waterproof meter can easily be operated with one hand and complies with IP67 standards. The HI98191 is supplied with all necessary accessories to perform a pH/temperature measurement packaged into a durable carrying case.
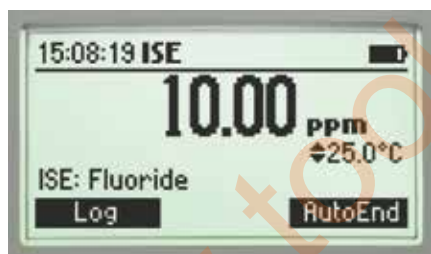
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Backlit Graphic LCD Display

The HI98191 features a backlit graphic LCD with on-screen help. The graphic display allows for the use of virtual keys to provide for an intuitive user interface.
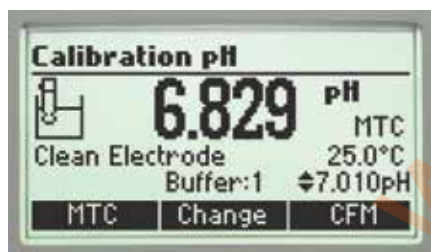
Waterproof Protection

The meter is enclosed in an IP67 rated waterproof casing and can withstand immersion in water at a depth of 1 m for up to 30 minutes. The probe features an IP68 rating for continuous immersion in water.

ISE Sensors and Calibration

HI98191 has 17 different standard ISE sensors pre-programmed in the meter. Selecting the appropriate sensor will automatically update the ion charge for slope calibration and can be calibrated up to five points with the choice of seven standards and five custom standards (choice of units). This meter allows an extensive choice of measurement units (ppm, ppt, g/L, ppb, µg/L, mg/mL, M, mol/L, mmol/L, % w/v, user) and has an expanded measuring range of 1.00×10^{-7} to 9.99×10^{10}.

pH Calibration

Choose from seven standard pH buffers and five custom pH buffers to obtain up to five point calibration and achieve high precision readings with a pH accuracy of ±0.002 and up to ±0.001 pH resolution.

Enhanced Calibration

An "Out of Calibration Range" warning can be engaged to keep the user informed of the current calibration and help to avoid performing measurements that are out of range.
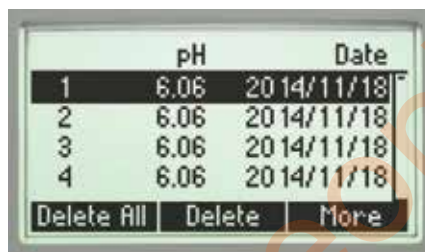
CAL Check™

Hanna's CAL Check maintains a history of past calibrations and monitors the pH electrode and buffers during subsequent calibrations for any signs of wide variances due to a dirty or broken electrode or contaminated pH buffers. During calibration, users are alerted to problems should they occur. After calibration, the electrode's overall condition is displayed as a percentage.

GLP

Comprehensive GLP functions are directly accessible by pressing the GLP key. Calibration data, including date, time and calibration values are stored for retrieval at a later time.

Data Logging

The log-on-demand feature allows users to store up to 300 samples that can be later transferred to a PC with the HI920015 USB cable and HI92000 software.
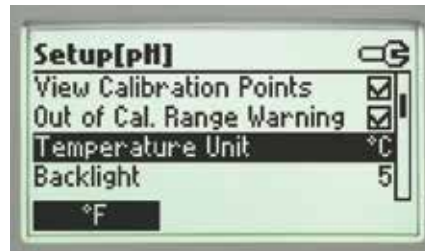
Intuitive Keypad

The fitted rubber keypad has dedicated keys for power, backlight, up/down arrows, help and alphanumeric characters. The meter also features two virtual soft keys that navigate the user through the configuration of each parameter, meter setup, and logging of data. The interface is intuitive for any user's level of experience.

AutoHold

Pressing AutoHold during measurement will automatically hold the first stable reading on the display.

Dedicated Help Key

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.

Setup screen

Our extensive setup screen features a host of configurable options such as time, date, temperature units and language for help screens and guides.

PC Connectivity

Logged data can be transferred to a Windows compatible PC with the included HI920015 micro USB cable and HI92000 software.

Long Battery Life

The display of the meter has a battery icon indicator to show the remaining power. The meter uses four 1.5V AA batteries that provide up to 200 hours of battery life.

Rugged Custom Carrying Case

The HI98191 meter, probe, and all accessories are supplied in the HI720191 rugged carrying case designed to provide years of use. The inside compartment of the carrying case is thermoformed to securely hold and protect all of the components.

HI72911B pH Electrode

- Titanium body
  - Titanium construction provides an unbreakable structure and allows the transfer of heat to the internal temperature sensor for rapid temperature compensation

- Maintenance free, gel-filled electrode
  - No fill solution required

Calibrate right in the case with custom beaker holders

Our custom carrying case features beaker holders for calibration out in the field.

Specifications		HI98191
pH*	Range	-2.0 to 20.0 pH; -2.00 to 20.00 pH; -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
	Calibration	up to five-point calibration, seven standard buffers available (1.68, 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)
mV*	Range	±2000 mV
	Resolution	0.1 mV
	Accuracy	±0.2 mV
	Relative mV Offset Range	±2000 mV
ISE	Range	from $1.00\ E^{-7}$ to $9.99\ E^{10}$ concentration
	Resolution	3 digits 0.01; 0.1; 1; 10 concentration
	Accuracy	±0.5% of reading (monovalent ions), ±1% of reading (divalent ions)
	Calibration	up to five point calibration, six standard solutions available (0.1, 1, 10, 100, 1000, 10000 ppm)
Temperature*	Range	-20.0 to 120.0 °C (-4.0 to 248.0°F)
	Resolution	0.1°C (0.1°F)
	Accuracy	±0.4°C (±0.8°F) (excluding probe error)
Additional Specifications	pH Probe	HI72911B titanium body, pH electrode with internal temperature sensor, BNC connector and 1 m (3.3' cable)
	Slope Calibration	from 80 to 110%
	Log-on-demand	300 samples (100 each pH/mV/ISE range)
	PC Connection	opto-isolated USB with HI92000 software and micro USB cable
	Input Impedance	$10^{12}\ \Omega$
	Battery Type / Life	1.5V AA batteries (4) / approximately 200 hours of continuous use without backlight (50 hours with backlight)
	Auto-off	user selectable: 5, 10, 30, 60 min, disabled
	Environment	0 to 50°C (32 to 122°F); RH 100% IP67
	Dimensions / Weight	185 x 93 x 35.2 mm (7.3 x 3.6 x 1.4") / 400 g (14.2 oz.)
Ordering Information		**HI98191** is supplied with HI72911B pH electrode, HI7004M pH 4.01 buffer solution (230 mL), HI7007M pH 7.01 buffer solution (230 mL), electrode cleaning solution sachet (2), 100 mL plastic beaker (2), HI92000 PC software, HI920015 micro USB cable, 1.5V AA batteries (4), quick start guide, quality certificate and instruction manual in an HI720191 rugged carrying case with custom insert.

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