

HI98161

## pH / Temperature Meter for Food

HI98161 is a professional portable pH and temperature meter with a probe designed specifically for pH measurement in the Food sector.

- **Waterproof**
  - IP67 rated waterproof, rugged enclosure
- **CAL Check™**
  - Alerts users to problems during 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 calibration with seven standard buffers and five custom buffers
- **Approximately 200 hour battery life**
  - Powered by 4 1.5V AA batteries
- **Clear display**
  - Dot matrix display with multifunction virtual keys
- **Auto hold**
  - 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**
  - Important and often used functions such as GLP information, help, range, calibration, and backlight have a dedicated button
- **Supplied complete**
  - Each meter is supplied complete with sensor, calibration and cleaning solutions, beakers, PC software and connection cable, instruction manual, quick start guide, and batteries in a rugged, custom carrying case



# Foodcare pH Meter

designed for food professionals

Hanna foodcare pH meters are rugged and portable with the performance and features of a benchtop. Eight models are available in this series to measure food, milk, meat, yogurt, cheese, beer, wine, and soil. Each model is supplied with an application specific electrode and cleaning solutions. These waterproof meters comply to IP67 standards and can be easily operated with one hand.



## Backlit Graphic LCD Display

These meters feature 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.

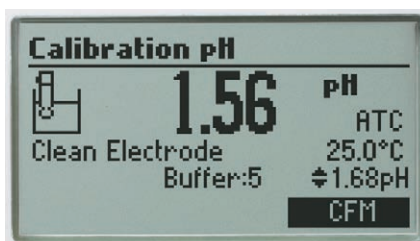


## Quick Connect Probe

Each meter features an application specific pH/temperature probe with a quick connect DIN connector to make attaching and removing the probe simple and easy.

## Calibration Timeout

Alerts when calibration is due at a specified interval.



## pH Calibration

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

## 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 the bracketed range.



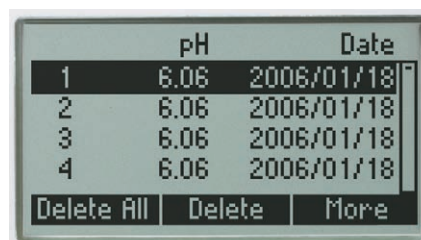
## CAL Check™

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 with logged data for retrieval at a later time.



## Data Logging

The log-on-demand feature allows users to store up to 200 samples that can later be transferred to a PC with the HI920015 USB cable and HI92000 software.

## Automatic Temperature Compensation

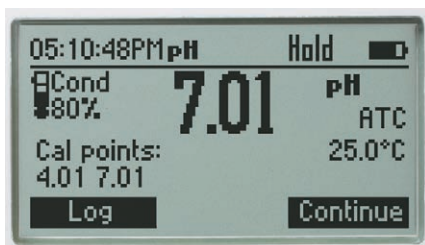
pH sensors incorporate a built-in temperature sensor in the tip of the electrode for a fast and accurate temperature compensated value.

## Intuitive Keypad

The fitted rubber keypad has dedicated keys for many important and often used functions. These meters also feature two virtual soft keys that navigate the user through setup and logging of data. The interface is intuitive for any user's level of experience.

pH

portable



## Auto Hold

Pressing AutoEnd 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.



## Supplied Complete in a Rugged Custom Carrying Case

Each meter is supplied complete with sensor, calibration and cleaning solutions, beakers, PC software and connection cable, instruction manual, quick start guide, and batteries in a rugged, custom carrying case. The inside compartment of the carrying case is thermoformed to securely hold and protect all of the components.

| Specifications            |                                                          | HI98161                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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                                                                                                                                                                                                                                                                                                                                                                                       |
| 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                                                 | FC2023 PVDF body, pH electrode with internal temperature sensor, quick DIN connector and 1 m (3.3' cable)                                                                                                                                                                                                                                                                                      |
|                           | Slope Calibration                                        | from 80 to 110%                                                                                                                                                                                                                                                                                                                                                                                |
|                           | Log-on-demand                                            | Up to 200 samples (100 pH, 100 mV)                                                                                                                                                                                                                                                                                                                                                             |
|                           | PC Connection                                            | opto-isolated USB with HI92000 software and micro USB cable                                                                                                                                                                                                                                                                                                                                    |
|                           | Input Impedance                                          | 10 <sup>12</sup> Ω                                                                                                                                                                                                                                                                                                                                                                             |
|                           | 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                                     | HI98161 is supplied with FC2023 pH electrode, HI7004M pH 4.01 buffer solution (230 mL), HI7007M pH 7.01 buffer solution (230 mL), HI700641 electrode cleaning solution sachet for dairy deposits (2), 100 mL plastic beaker (2), HI92000 PC software, HI920015 micro USB cable, 1.5V AA batteries (4), quality certificate, and instruction manual in a hard carrying case with custom insert. |
| Accessories               | FC096 electrode holder handle with stainless steel blade |                                                                                                                                                                                                                                                                                                                                                                                                |
|                           | HI710035 blue protective rubber boot                     |                                                                                                                                                                                                                                                                                                                                                                                                |

\* Limits will be reduced to actual probe/sensor limits.

- Optional electrode holder handle with stainless steel blade
- Specially designed to house the FC2023 electrode for easy penetration into semi-solids such as cheese and meat



**FC096** electrode holder handle with stainless steel blade (shown with FC2023 inserted)



- Optional shockproof silicon rubber boot
- Specially designed to protect your instrument from damage or impact

**HI710035** Blue