HI98193

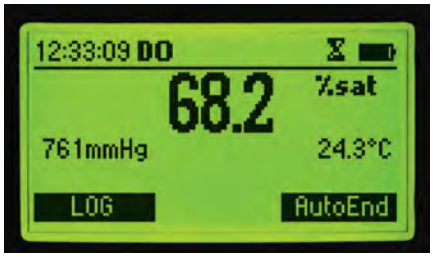
Professional Waterproof Meters

Dissolved Oxygen and BOD

- Waterproof
  - IP67 rated waterproof, rugged enclosure
- Choice of units
  - Display units in % saturation or mg/L (ppm)
- Salinity compensation
  - Salinity compensation allows for direct determination of dissolved oxygen in saline waters.
  - Users can set the salinity value
- Built-in temperature sensor
  - Automatic temperature compensation with one or two point temperature calibration
  - Displays temperature in °C or °F
- Built-in barometer
  - Automatic barometric pressure compensation with 1 point calibration
  - Displays pressure in user-selectable units (mmHg, inHg, atm, psi, kPa, mbar)
- Built-in calculations
  - Determination of Biochemical Oxygen Demand (BOD), Oxygen Uptake Rate (OUR) and Specific Oxygen Uptake Rate (SOUR)
- Polarization
  - Automatic polarization of probe at startup
- Membrane caps
  - Ready-to-use PTFE preformed membrane caps
- 200 hour battery life
  - Approximately 200 hours of continuous use
- 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
- Log-on-demand
  - Store measurement data at the press of a button
- GLP
  - GLP data provides calibration data including date, time, pressure, calibrated value, temperature and salinity value of the last calibration

For Universal Applications

The HI98193 is a portable DO meter with extended ranges of up to 50 ppm and 600% saturation. HI98193 features compensations for pressure, temperature and salinity, which are essential for an accurate dissolved oxygen reading. HI98193 is supplied with the HI764073 polarographic dissolved oxygen probe that utilizes field replaceable PTFE membrane caps.



Backlit Graphic LCD Display

The HI98193 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.

Quick connect probe

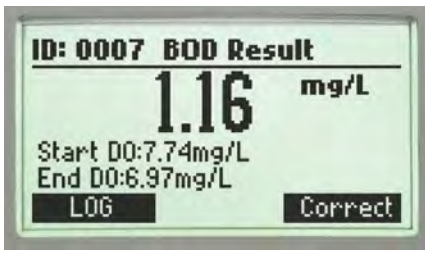
The HI764073 DO probe features a quick connect DIN connector to make attaching and removing the probe simple and easy.

The HI764073's built-in temperature sensor allows for automatic temperature compensation. The temperature sensor can be calibrated to one or two points. Manual entry of salinity values allows for the salinity compensation of dissolved oxygen readings in saline waters.

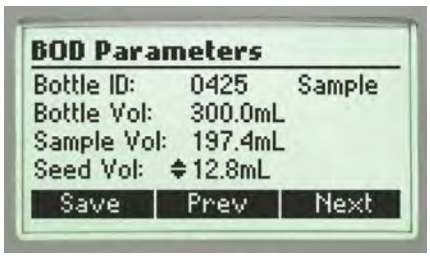
Measurement

The HI98193 has extended ranges of up to 50 ppm and 600% saturation. When measuring dissolved oxygen, compensations for salinity, temperature and pressure are essential to improve the accuracy and precision of readings.

BOD, OUR and SOUR



- BOD results
  - BOD is calculated in mg per liter from the difference between the initial and final dissolved oxygen



- BOD parameters and records
  - All necessary parameters for BOD testing can be set and displayed at once.
  - A list of all saved BOD data can be easily retrieved and shown on the LCD display.

- OUR results
  - Measured in mg of oxygen consumed per L per hour.

- SOUR results
  - Measured in mg of oxygen consumed per g of volatile suspended solids per hour.

AutoHold

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

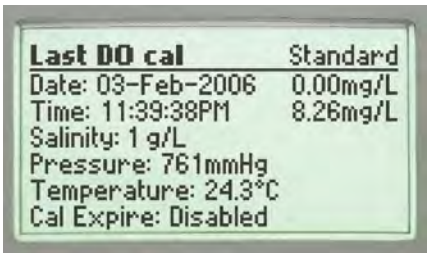
Built-in Barometer

With the internal barometer, the HI98193 is able to compensate for changes in barometric pressure so there is no need for charts, altitude information or external barometric pressure information.

Pressure compensation with the meter's built-in barometer can be validated against a reference barometer, and if needed, can be recalibrated in user-selectable units (mmHg, inHg, atm, psi, kPa, mbar).

Data Logging

The HI98193's log on-demand feature allows users to store up to 400 readings. This data can then be transferred to a PC with the HI920015 USB cable and HI92000 software.



GLP

Comprehensive GLP functions are directly accessible by pressing the GLP key. This data includes date, time, pressure, calibrated value, temperature and salinity value of the last calibration.

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.

Dedicated Help Key

Access help at any time at the press of a dedicated button and view content specific information based on the screen that is currently 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 HI98193 meter, probe, and all accessories are supplied in the HI720193 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.

		HI98193
DO	Range	0.00 to 50.00 mg/L (ppm); 0.0 to 600.0% saturation
	Resolution	0.01 mg/L (ppm); 0.1% saturation
	Accuracy (@25°C/77°F)	±1.5% of reading ±1 digit
	Calibration	automatic one or two point at 100 % (8.26 mg/L) and 0 % (0 mg/L).; manual one point using a value entered by the user in % saturation or mg/L
Atmospheric Pressure	Range	450 to 850 mmHg
	Resolution	1 mmHg
	Accuracy (@25°C/77°F)	± 3 mmHg within ±15% from the calibration point
	Calibration	one point at any in range pressure value
Temperature	Range	-20.0 to 120.0°C; -4.0 to 248.0°F
	Resolution	0.1°C; 0.1°F
	Accuracy (@25°C/77°F)	±0.2°C; ±0.4°F (excluding probe error)
	Calibration	one or two point at any in range temperature value
Additional Specifications	Measurement Modes	direct DO; BOD (biochemical oxygen demand); OUR (oxygen uptake rate); SOUR (specific oxygen uptake rate)
	Barometric Compensation	automatic from 450 to 850 mmHg
	Salinity Compensation	automatic from 0 to 70 g/L
	Temperature Compensation	automatic from 0.0 to 50.0 °C (32.0 to 122.0 °F)
	Probe	HI764073 polarographic DO probe with protective sleeve, internal temperature sensor, DIN connector and 4m (13') cable (included)
	Logging	log-on-demand up to 400 samples
	PC Connectivity	opto-isolated USB (with HI92000 software)
	Battery Type / Life	1.5V (4) AA batteries / approximately 200 hours of continuous use without backlight (50 hours with backlight)
	Auto-off	user-selectable: 5, 10, 30, 60 min or can be disabled
	Environment	0 to 50°C (32 to 122°F); RH 100% IP67
	Dimensions	185 x 93 x 35.2 mm (7.3 x 3.6 x 1.4")
	Weight	400 g (14.2 oz.)
Ordering Information		**HI98193** is supplied with HI764073 polarographic DO probe with protective sleeve, HI7040 bi-component zero oxygen solution (230 mL + 30 mL), HI7041S electrolyte solution (30 mL), preformed PTFE membrane caps (2), DO protective cap, O-rings (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 HI720193 rugged carrying case with custom insert.