Hanna Instruments HI9819X Multiparameter series

HI98194

Multiparameter Waterproof Meter

pH / mV, ORP, EC, TDS, Resistivity, Salinity, Seawater σ, Dissolved Oxygen, Atmospheric Pressure and Temperature

- Waterproof
  - IP67 rated waterproof, rugged enclosure for meter, IP68 for probe
- Digital probe
  - Digital probe with three connections for pH (ORP), EC and DO sensors and integral temperature sensor
- Color coded, field replaceable sensors
- Auto-sensor recognition
- Quick calibration feature
- Automatic temperature compensation
- Automatic logging
  - Store up to 45,000 samples
- Log-on-demand
  - Store measurement data at the press of a button
- GLP
  - GLP data provides data from previous five calibrations to ensure Good Laboratory Practices are met
- Dedicated help key
  - On-screen context specific help is readily available at the press of a button
- Backlit LCD display with multifunction virtual keys
- Intuitive keypad
  - Hard and virtual soft keys
- Connectivity
  - PC connectivity via opto-isolated micro-USB with Hanna software
- Up to 360 hours of battery life
  - Powered by (4) 1.5V AA batteries

- Quick Connect Probe
  - Built in barometer for DO concentration in meter

For Universal Applications

HI98184 provides multiparameter measurement in a compact and rugged, IP67 waterproof enclosure. Ideal for demanding applications, each meter features our rugged, quick connect multi-function probe with field replaceable sensors.

A backlit, graphic LCD provides easy to read resolution even in low-lit areas. A combination of dedicated and soft keys allows easy, intuitive operation in a choice of languages.

Data Logging

The HI98194 allows users to store up to 45,000 continuous or log-on-demand samples with logging intervals from one second to three hours. Logged data can be later transferred to a PC with the HI920015 micro USB cable and Hanna software.

Dedicated help button

The contextual Help Menu can be accesssed to obtain on-screen information and assistance about each feature at the touch of a button.

Quick connect probe

The HI7698194 probe features a quick connect DIN connector to make attaching and removing the probe simple and easy.
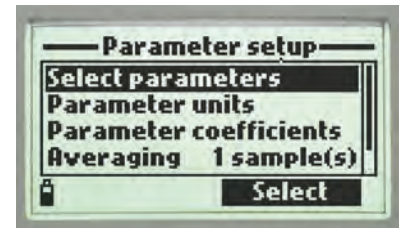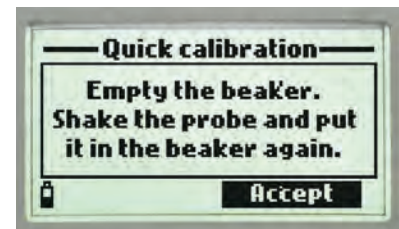
HI9828-25 "Quick Calibration" solution

- Field Ready with quick calibration solution
  - Standardize pH and conductivity with one calibration solution
  - Simply screw the calibration beaker filled with HI 9828-25 (500 mL) or HI9828-27 (1 gallon) solution onto the probe, select "Quick calibration" from the menu and press OK. Individual calibration may also be performed using multiple calibration points

- Setup
  - Extensive setup screen features

- Guides
  - On screen guides are displayed to help you while performing procedures such as calibration

pH Specific Features

- Calibration
  - Up to a three point calibration with five standard buffers and one custom buffer available

EC/TDS/Resistivity Specific Features

- Calibration
  - Single point calibration from six standards (84 µS/cm, 1.413 µS/cm, 5.00 mS/cm, 12.88 mS/cm, 80 mS/cm, 111.8 mS/cm or custom point)

- Temperature compensation
  - Automatic Temperature Compensation
  - Configurable temperature coefficient range from 0.00 to 6.00%/°C
  - Choice of reference temperatures at 20 or 25°C
  - Absolute conductivity can be displayed along with the temperature compensated value

- Autoranging

- Salinity readings
  - Practical Salinity Scale (PSU) based on conductivity calibration

Dissolved Oxygen Specific Features

- Choice of units
  - Display units in % saturation or mg/L (ppm)

- Salinity compensation for concentration

- Pressure compensation for concentration
  - Built-in barometer with user-selectable units (mmHg, inHg, atm, psi, kPa, mbar)

- Temperature compensation

- Polarization
  - Automatic polarization of probe at startup

- Membrane caps
  - Ready-to-use HDPE pre-tensioned membrane caps are easy to replace

- rugged carrying case with custom thermoformed insert included

Multiparameter

Probe Specifications	HI7698194
Sensor inputs	3 (pH, DO, EC)
Sample Environment	Fresh, brackish, seawater
waterproof Protection	IP68
Operating Temperature	-5 to 55°C
Storage Temperature	-20 to 70°C
Maximum Depth	20 m (66')
Dimensions (without cable)	342 mm (13.5"); 46 mm (1.8") dia
Weight (without batteries and sensors)	570 g (20.1 oz.)
Cable specification	Multistrand-multiconductor shielded cable with internal strength member rated for 68 kg (150 lb.) intermittent use.

Wetted Materials		
	Body	ABS
	Threads	Nylon
	Shield	ABS / 316 SS
	Temperature Probe	316 SS
	O-rings	EPDM

Multi-function Sensor

- Quick sensor replacement
  - Sensor replacement is quick and easy with field replaceable, screw type connectors and are color coded for easy identification. The these meters automatically recognize sensors

or

Sensor Specifications		HI7698194-0	HI7698194-1	HI7698194-3	HI7698194-2
Description		pH sensor	pH/ORP sensor	EC sensor	DO sensor
Measurement Type		pH, mV (pH)	pH, mV (pH/ORP)	EC	DO (% saturation and concentration
Measurement Range		0.00 to 13.00 pH ; ±600.0 mV	0.00 to 13.00 pH; ±600.0 mV; ±2000.0 mV	0.0 to 200.0 mS/cm; 0.0 to 400 mS/cm (absolute)	0.0 to 500.0 %; 0.00 to 50.00 mg/L
Temperature Range		-5 to 55°C	-5 to 55°C	-5 to 55°C	-5 to 55°C
Color Code		red	red	blue	white
Materials	Tip	glass (pH)	glass (pH); Pt (ORP)	Stainless steel electrodes AISI 316	Cat/An: Ag/Zn
	Junction	ceramic	ceramic		Membrane: HDPE
	Body	PEI	PEI	ABS/epoxy	white top ABS
	Electrolyte	gel	gel		
	Reference	double	double		
Maintenance solution		HI70300 (storage solution)	HI70300 (storage solution)	none	HI7042S (DO electrolyte)
Dimensions		118 x 15 mm	118 x 15 mm	111 x 17 mm	99 x 17 mm
Depth		20 m (65')	20 m (65')	20 m (65')	20 m (65')

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Specifications		HI98194
pH / mV	Range	0.00 to 14.00 pH / ±600.0 mV
	Resolution	0.01 pH / 0.1 mV
	Accuracy	±0.02 pH / ±0.5 mV
	Calibration	automatic one, two, or three points with automatic recognition of five standard buffers (pH 4.01, 6.86, 7.01, 9.18, 10.01) or one custom buffer
ORP	Range	±2000.0 mV
	Resolution	0.1 mV
	Accuracy	±1.0 mV
	Calibration	automatic at one custom point (relative mV)
EC	Range	0 to 200 mS/cm (absolute EC up to 400 mS/cm)
	Resolution	**manual:** 1 µS/cm; 0.001 mS/cm; 0.01 mS/cm; 0.1 mS/cm; 1 mS/cm; **automatic:** 1 µS/cm from 0 to 9999 µS/cm; 0.01 mS/cm from 10.00 to 99.99 mS/cm; 0.1 mS/cm from 100.0 to 400.0 mS/cm; **automatic mS/cm:** 0.001 mS/cm from 0.000 to 9.999 mS/cm; 0.01 mS/cm from 10.00 to 99.99 mS/cm; 0.1 mS/cm from 100.0 to 400.0 mS/cm
	Accuracy	±1% of reading or ±1 µS/cm whichever is greater
	Calibration	automatic single point, with six standard solutions (84 µS/cm, 1413 µS/cm, 5.00 mS/cm, 12.88 mS/cm, 80.0 mS/cm, 111.8 mS/cm) or custom point
TDS	Range	0 to 400000 ppm (mg/L) (the maximum value depends on the TDS factor)
	Resolution	**manual:** 1 ppm (mg/L); 0.001 ppt (g/L); 0.01 ppt (g/L); 0.1 ppt (g/L); 1 ppt (g/L); **automatic:** 1 ppm (mg/L) from 0 to 9999 ppm (mg/L); 0.01 ppt (g/L) from 10.00 to 99.99 ppt (g/L); 0.1 ppt (g/L) from 100.0 to 400.0 ppt (g/L); **automatic ppt (g/L):** 0.001 ppt (g/L) from 0.000 to 9.999 ppt (g/L); 0.01 ppt (g/L) from 10.00 to 99.99 ppt (g/L); 0.1 ppt (g/L) from 100.0 to 400.0 ppt (g/L)
	Accuracy	±1% of reading or ±1 ppm (mg/L) whichever is greater
	Calibration	based on conductivity or salinity calibration
Resistivity	Range	0 to 999999 Ω•cm; 0 to 1000.0 kΩ•cm; 0 to 1.0000 MΩ•cm
	Resolution	dependent on resistivity reading
	Calibration	Based on conductivity or salinity calibration
Salinity	Range	0.00 to 70.00 PSU
	Resolution	0.01 PSU
	Accuracy	±2% of reading or ±0.01 PSU whichever is greater
	Calibration	based on conductivity calibration
Seawater σ	Range	0.0 to 50.0 σ_t, σ_0, σ_{15}
	Resolution	0.1 σ_t, σ_0, σ_{15}
	Accuracy	±1 σ_t, σ_0, σ_{15}
	Calibration	based on conductivity or salinity calibration
Dissolved Oxygen	Range	0.0 to 500.0%; 0.00 to 50.00 ppm (mg/L)
	Resolution	0.1%; 0.01 ppm (mg/L)
	Accuracy	0.0 to 300.0%: ±1.5% of reading or ±1.0% whichever is greater; 300.0 to 500.0%: ±3% of reading; 0.00 to 30.00 ppm (mg/L): ±1.5% of reading or ±0.10 ppm (mg/L), whichever is greater; 30.00 ppm (mg/L) to 50.00 ppm (mg/L): ±3% of reading
	Calibration	automatic one or two points at 0, 100% or one custom point
Atmospheric Pressure	Range	450 to 850 mm Hg; 17.72 to 33.46 in Hg; 600.0 to 1133.2 mbar; 8.702 to 16.436 psi; 0.5921 to 1.1184 atm; 60.00 to 113.32 kPa
	Resolution	0.1 mm Hg; 0.01 in Hg; 0.1 mbar; 0.001 psi; 0.0001 atm; 0.01 kPa
	Accuracy	±3 mm Hg within ±15°C from the temperature during calibration
	Calibration	automatic at one custom point
Temperature	Range	-5.00 to 55.00°C; 23.00 to 131.00°F; 268.15 to 328.15K
	Resolution	0.01°C; 0.01°F; 0.01K
	Accuracy	±0.15°C; ±0.27°F; ±0.15K
	Calibration	Automatic at one custom point
Additional Specifications	Temperature Compensation	automatic from -5 to 55°C (23 to 131°F)
	Logging Memory	45,000 records (continuous logging or log-on-demand of all parameters)
	Logging Interval	one second to three hours
	PC Connectivity	via USB (with Hanna PC software)
	Environment	0 to 50°C (32 to 122°F); RH 100% IP67
	Battery Type / Life	1.5V AA batteries (4) / approximately 360 hours of continuous use without backlight (50 hours with backlight)
	Dimensions / Weight	185 x 93 x 35.2 mm (7.3 x 3.6 x 1.4") / 400 g (14.2 oz.)

Ordering Information

HI98194 is supplied with HI7698194 probe, HI7698194-0 pH sensor, HI7698194-3 EC sensor and HI7698194-2 DO sensor, Hanna PC software, HI920015 micro USB cable, 1.5V AA batteries (4), instruction manual, quick start guide, quality certificate and rugged carrying case with custom thermoformed insert.

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HI98195

Multiparameter Waterproof Meter

pH / mV, ORP, EC, TDS, Resistivity, Salinity, Seawater σ and Temperature

- **Waterproof**
  - IP67 rated waterproof, rugged enclosure for meter, IP68 for probe
- **Digital probe**
  - Digital probe with two connections for pH (ORP) and EC sensors and integral temperature sensor
- **Color coded, field replaceable sensors**
- **Auto-sensor recognition**
- **Quick calibration feature**
- **Automatic temperature compensation**
- **Automatic logging**
  - Store up to 45,000 samples
- **Log-on-demand**
  - Store measurement data at the press of a button
- **GLP**
  - GLP data provides data from previous five calibrations to ensure Good Laboratory Practices are met
- **Dedicated help key**
  - On-screen context specific help is readily available at the press of a button
- **Backlit LCD display with multifunction virtual keys**
- **Intuitive keypad**
  - Hard and virtual soft keys
- **Connectivity**
  - PC connectivity via opto-isolated micro-USB with Hanna software
- **Up to 360 hours of battery life**
  - Powered by (4) 1.5V AA batteries

- **Quick Connect Probe**

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For Universal Applications

HI98195 provides multiparameter measurement in a compact and rugged, IP67 waterproof enclosure. Ideal for demanding applications, each meter features our rugged, quick connect multi-function probe with field replaceable sensors.

A backlit, graphic LCD provides easy to read resolution even in low-lit areas. A combination of dedicated and soft keys allows easy, intuitive operation in a choice of languages.

Data Logging

The HI98195 allows users to store up to 45,000 continuous or log-on-demand samples with logging intervals from one second to three hours. Logged data can be later transferred to a PC with the HI920015 micro USB cable and Hanna software.

GLP and On-Screen Help

Comprehensive GLP data includes data from last five calibrations. The contextual Help Menu can be accesssed to obtain on-screen information and assistance about each feature at the touch of a button.

Quick connect probe

The HI7698195 probe features a quick connect DIN connector to make attaching and removing the probe simple and easy.
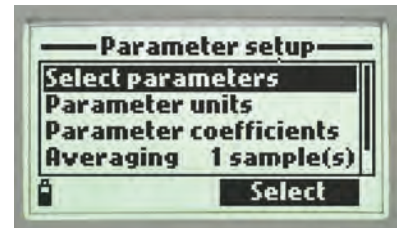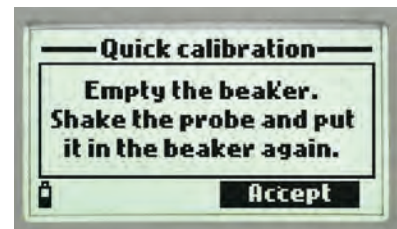
HI9828-25 "Quick Calibration" solution

- Field Ready with quick calibration solution
  - Standardize pH and conductivity with one calibration solution
  - Simply screw the calibration beaker filled with HI 9828-25 (500 mL) or HI9828-27 (1 gallon) solution onto the probe, select "Quick calibration" from the menu and press OK. Individual calibration may also be performed using multiple calibration points

- Setup
  - Extensive setup screen features

pH Specific Features

- Calibration
  - Up to a three point calibration with five standard buffers and one custom buffer available

EC/TDS/Resistivity Specific Features

- Calibration
  - Single point calibration from six standards (84 µS/cm, 1.413 µS/cm, 5.00 mS/cm, 12.88 mS/cm, 80 mS/cm, 111.8 mS/cm or custom point)

- Temperature compensation
  - Automatic Temperature Compensation
  - Configurable temperature coefficient range from 0.00 to 6.00%/°C
  - Choice of reference temperatures at 20 or 25°C
  - Absolute conductivity can be displayed along with the temperature compensated value

- Autoranging

- Salinity readings
  - Practical Salinity Scale (PSU) based on conductivity calibration

- Guides
  - On screen guides are displayed to help you while performing procedures such as calibration

- rugged carrying case with custom thermoformed insert included

Multiparameter

Specifications	HI7698195
Sensor inputs	two (pH/ORP, EC)
Sample Environment	Fresh, brackish, seawater
waterproof Protection	IP68
Operating Temperature	-5 to 55°C
Storage Temperature	-20 to 70°C
Maximum Depth	20 m (66')
Dimensions (without cable)	342 mm (13.5"); 46 mm (1.8") dia
Weight (without batteries and sensors)	570 g (20.1 oz.)
Cable specification	Multistrand-multiconductor shielded cable with internal strength member rated for 68 kg (150 lb.) intermittent use.

Wetted Materials	Body	ABS
	Threads	Nylon
	Shield	ABS / 316 SS
	Temperature Probe	316 SS
	O-rings	EPDM

Multi-function Sensor

- Quick sensor replacement
  - Sensor replacement is quick and easy with field replaceable, screw type connectors and are color coded for easy identification. The these meters automatically recognize sensors

or

Sensor Specifications		HI7698194-0	HI7698194-1	HI7698194-3
Description		pH sensor	pH/ORP sensor	EC sensor
Measurement Type		pH, mV (pH)	pH, mV (pH/ORP)	EC
Measurement Range		0.00 to 13.00 pH ; ±600.0 mV	0.00 to 13.00 pH; ±600.0 mV; ±2000.0 mV	0.0 to 200.0 mS/cm; 0.0 to 400 mS/cm (absolute)
Temperature Range		-5 to 55°C	-5 to 55°C	-5 to 55°C
Color Code		red	red	blue
Materials	Tip	glass (pH)	glass (pH); Pt (ORP)	Stainless steel electrodes AISI 316
	Junction	ceramic	ceramic	
	Body	PEI	PEI	ABS/epoxy
	Electrolyte	gel	gel	
	Reference	double	double	
Maintenance solution		HI70300 (storage solution)	HI70300 (storage solution)	none
Dimensions		118 x 15 mm	118 x 15 mm	111 x 17 mm
Depth		20 m (65')	20 m (65')	20 m (65')

HANNA® instruments

Specifications		HI98195
pH / mV	Range	0.00 to 14.00 pH / ±600.0 mV
	Resolution	0.01 pH / 0.1 mV
	Accuracy	±0.02 pH / ±0.5 mV
	Calibration	automatic one, two, or three points with automatic recognition of five standard buffers (pH 4.01, 6.86, 7.01, 9.18, 10.01) or one custom buffer
ORP	Range	±2000.0 mV
	Resolution	0.1 mV
	Accuracy	±1.0 mV
	Calibration	automatic at one custom point (relative mV)
EC	Range	0 to 200 mS/cm (absolute EC up to 400 mS/cm)
	Resolution	**manual:** 1 µS/cm; 0.001 mS/cm; 0.01 mS/cm; 0.1 mS/cm; 1 mS/cm; **automatic:** 1 µS/cm from 0 to 9999 µS/cm; 0.01 mS/cm from 10.00 to 99.99 mS/cm; 0.1 mS/cm from 100.0 to 400.0 mS/cm; **automatic mS/cm:** 0.001 mS/cm from 0.000 to 9.999 mS/cm; 0.01 mS/cm from 10.00 to 99.99 mS/cm; 0.1 mS/cm from 100.0 to 400.0 mS/cm
	Accuracy	±1% of reading or ±1 µS/cm whichever is greater
	Calibration	automatic single point, with six standard solutions (84 µS/cm, 1413 µS/cm, 5.00 mS/cm, 12.88 mS/cm, 80.0 mS/cm, 111.8 mS/cm) or custom point
TDS	Range	0 to 400000 ppm (mg/L) (the maximum value depends on the TDS factor)
	Resolution	**manual:** 1 ppm (mg/L); 0.001 ppt (g/L); 0.01 ppt (g/L); 0.1 ppt (g/L); 1 ppt (g/L); **automatic:** 1 ppm (mg/L) from 0 to 9999 ppm (mg/L); 0.01 ppt (g/L) from 10.00 to 99.99 ppt (g/L); 0.1 ppt (g/L) from 100.0 to 400.0 ppt (g/L); **automatic ppt (g/L):** 0.001 ppt (g/L) from 0.000 to 9.999 ppt (g/L); 0.01 ppt (g/L) from 10.00 to 99.99 ppt (g/L); 0.1 ppt (g/L) from 100.0 to 400.0 ppt (g/L)
	Accuracy	±1% of reading or ±1 ppm (mg/L) whichever is greater
	Calibration	based on conductivity or salinity calibration
Resistivity	Range	0 to 999999 Ω•cm; 0 to 1000.0 kΩ•cm; 0 to 1.0000 MΩ•cm
	Resolution	dependent on resistivity reading
	Calibration	Based on conductivity or salinity calibration
Salinity	Range	0.00 to 70.00 PSU
	Resolution	0.01 PSU
	Accuracy	±2% of reading or ±0.01 PSU whichever is greater
	Calibration	based on conductivity calibration
Seawater σ	Range	0.0 to 50.0 σ_t, σ_0, σ_{15}
	Resolution	0.1 σ_t, σ_0, σ_{15}
	Accuracy	±1 σ_t, σ_0, σ_{15}
	Calibration	based on conductivity or salinity calibration
Temperature	Range	-5.00 to 55.00°C; 23.00 to 131.00°F; 268.15 to 328.15K
	Resolution	0.01°C; 0.01°F; 0.01K
	Accuracy	±0.15°C; ±0.27°F; ±0.15K
	Calibration	Automatic at one custom point
Additional Specifications	Temperature Compensation	automatic from -5 to 55°C (23 to 131°F)
	Logging Memory	45,000 records (continuous logging or log-on-demand of all parameters)
	Logging Interval	one second to three hours
	PC Connectivity	via USB (with Hanna PC software)
	Environment	0 to 50°C (32 to 122°F); RH 100% IP67
	Battery Type / Life	1.5V AA batteries (4) / approximately 360 hours of continuous use without backlight (50 hours with backlight)
	Dimensions / Weight	185 x 93 x 35.2 mm (7.3 x 3.6 x 1.4") / 400 g (14.2 oz.)
Ordering Information		**HI98195** is supplied with HI7698195 probe, HI7698194-0 pH sensor, HI7698194-3 EC sensor, Hanna PC software, HI920015 micro USB cable, 1.5V AA batteries (4), instruction manual, quick start guide, quality certificate and rugged carrying case with custom thermoformed insert.

HANNA instruments

HI98196

Multiparameter Waterproof Meter

pH / mV, ORP, Dissolved Oxygen, Atmospheric Pressure and Temperature

- Waterproof
  - IP67 rated waterproof, rugged enclosure for meter, IP68 for probe

- Digital probe
  - Digital probe with two connections for pH (ORP) and DO sensors and integral temperature sensor

- Color coded, field replaceable sensors

- Auto-sensor recognition

- Quick calibration feature

- Automatic temperature compensation

- Automatic logging
  - Store up to 45,000 samples

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

- Dedicated help key
  - On-screen context specific help is readily available at the press of a button

- Backlit LCD display with multifunction virtual keys

- Intuitive keypad
  - Hard and virtual soft keys

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

- Up to 360 hours of battery life
  - Powered by (4) 1.5V AA batteries

- Quick Connect Probe
  - Built in barometer for DO concentration in meter

For Universal Applications

HI98196 provides multiparameter measurement in a compact and rugged, IP67 waterproof enclosure. Ideal for demanding applications, each meter features our rugged, quick connect multi-function probe with field replaceable sensors.

A backlit, graphic LCD provides easy to read resolution even in low-lit areas. A combination of dedicated and soft keys allows easy, intuitive operation in a choice of languages.
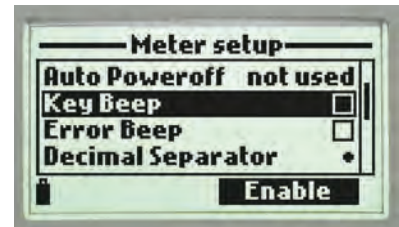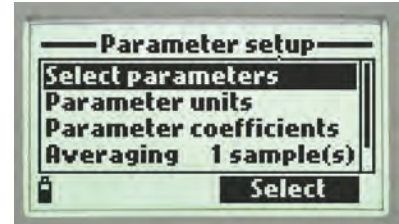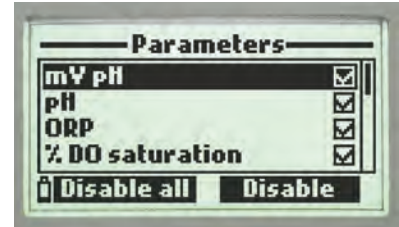
Data Logging

TheHI98196 allows users to store up to 45,000 continuous or log-on-demand samples with logging intervals from one second to three hours. Logged data can be later transferred to a PC with the HI920015 micro USB cable and HI929828 software.

GLP and On-Screen Help

Comprehensive GLP data includes data from last five calibrations. The contextual Help Menu can be accesssed to obtain on-screen information and assistance about each feature at the touch of a button.

Quick connect probe

The HI7698196 probe features a quick connect DIN connector to make attaching and removing the probe simple and easy.

- Setup
  - Extensive setup screen features

pH Specific Features

- Calibration
  - Up to a three point calibration with five standard buffers and one custom buffer available

Dissolved Oxygen Specific Features

- Choice of units
  - Display units in % saturation or mg/L (ppm)

- Salinity compensation for concentration

- Pressure compensation for concentration
  - Built-in barometer with user-selectable units (mmHg, inHg, atm, psi, kPa, mbar)

- Temperature compensation

- Polarization
  - Automatic polarization of probe at startup

- Membrane caps
  - Ready-to-use HDPE pre-tensioned membrane caps are easy to replace

- rugged carrying case with custom thermoformed insert included

Specifications	HI7698196
Sensor inputs	two (pH/ORP, DO)
Sample Environment	Fresh, brackish, seawater
waterproof Protection	IP68
Operating Temperature	-5 to 55°C
Storage Temperature	-20 to 70°C
Maximum Depth	20 m (66')
Dimensions (without cable)	342 mm (13.5"); 46 mm (1.8") dia
Weight (without batteries and sensors)	570 g (20.1 oz.)
Cable specification	Multistrand-multiconductor shielded cable with internal strength member rated for 68 kg (150 lb.) intermittent use.

Wetted Materials	Body	ABS
	Threads	Nylon
	Shield	ABS / 316 SS
	Temperature Probe	316 SS
	O-rings	EPDM

Multi-function Sensor

- Quick sensor replacement
  - Sensor replacement is quick and easy with field replaceable, screw type connectors and are color coded for easy identification. The these meters automatically recognize sensors

or

Sensor Specifications		HI7698194-0	HI7698194-1	HI7698194-2
Description		pH sensor	pH/ORP sensor	DO sensor
Measurement Type		pH, mV (pH)	pH, mV (pH/ORP)	DO (% saturation and concentration
Measurement Range		0.00 to 13.00 pH ; ±600.0 mV	0.00 to 13.00 pH; ±600.0 mV; ±2000.0 mV	0.0 to 500.0 %; 0.00 to 50.00 mg/L
Temperature Range		-5 to 55°C	-5 to 55°C	-5 to 55°C
Color Code		red	red	white
Materials	Tip	glass (pH)	glass (pH); Pt (ORP)	Cat/An: Ag/Zn
	Junction	ceramic	ceramic	Membrane: HDPE
	Body	PEI	PEI	white top ABS
	Electrolyte	gel	gel	
	Reference	double	double	
Maintenance solution		HI70300 (storage solution)	HI70300 (storage solution)	HI7042S (DO electrolyte)
Dimensions		118 x 15 mm	118 x 15 mm	99 x 17 mm
Depth		20 m (65')	20 m (65')	20 m (65')

HANNA® instruments

Specifications HI98196

pH / mV	Range	0.00 to 14.00 pH / ±600.0 mV
	Resolution	0.01 pH / 0.1 mV
	Accuracy	±0.02 pH / ±0.5 mV
	Calibration	automatic one, two, or three points with automatic recognition of five standard buffers (pH 4.01, 6.86, 7.01, 9.18, 10.01) or one custom buffer
ORP	Range	±2000.0 mV
	Resolution	0.1 mV
	Accuracy	±1.0 mV
	Calibration	automatic at one custom point (relative mV)
Dissolved Oxygen	Range	0.0 to 500.0%; 0.00 to 50.00 ppm (mg/L)
	Resolution	0.1%; 0.01 ppm (mg/L)
	Accuracy	0.0 to 300.0%: ±1.5% of reading or ±1.0% whichever is greater; 300.0 to 500.0%: ±3% of reading; 0.00 to 30.00 ppm (mg/L): ±1.5% of reading or ±0.10 ppm (mg/L), whichever is greater; 30.00 ppm (mg/L) to 50.00 ppm (mg/L): ±3% of reading
	Calibration	automatic one or two points at 0, 100% or one custom point
Atmospheric Pressure	Range	450 to 850 mm Hg; 17.72 to 33.46 in Hg; 600.0 to 1133.2 mbar; 8.702 to 16.436 psi; 0.5921 to 1.1184 atm; 60.00 to 113.32 kPa
	Resolution	0.1 mm Hg; 0.01 in Hg; 0.1 mbar; 0.001 psi; 0.0001 atm; 0.01 kPa
	Accuracy	±3 mm Hg within ±15°C from the temperature during calibration
	Calibration	automatic at one custom point
Temperature	Range	-5.00 to 55.00°C; 23.00 to 131.00°F; 268.15 to 328.15K
	Resolution	0.01°C; 0.01°F; 0.01K
	Accuracy	±0.15°C; ±0.27°F; ±0.15K
	Calibration	Automatic at one custom point
Additional Specifications	Temperature Compensation	automatic from -5 to 55°C (23 to 131°F)
	Logging Memory	45,000 records (continuous logging or log-on-demand of all parameters)
	Logging Interval	one second to three hours
	PC Connectivity	via USB (with Hanna PC software)
	Environment	0 to 50°C (32 to 122°F); RH 100% IP67
	Battery Type / Life	1.5V AA batteries (4) / approximately 360 hours of continuous use without backlight (50 hours with backlight)
	Dimensions / Weight	185 x 93 x 35.2 mm (7.3 x 3.6 x 1.4") / 400 g (14.2 oz.)
Ordering Information		**HI98196** is supplied with HI7698196 probe, HI7698194-0 pH sensor, HI7698194-2 DO sensor, Hanna PC software, HI920015 micro USB cable, 1.5V AA batteries (4), instruction manual, quick start guide, quality certificate and rugged carrying case with custom thermoformed insert.