



# Multiparameter Waterproof Meters

Multiparameter measurement in compact,  
IP67 rated waterproof enclosures

 **HANNA**<sup>®</sup>  
instruments

## HI98195

# Multiparameter Waterproof Meter

pH, ORP, EC, TDS, Resistivity, Salinity, Seawater  $\sigma$  and Temperature

- **Waterproof**
  - IP67 rated waterproof, rugged enclosure for meter, IP68 for probe
- **Digital probe**
  - Digital probe with integral temperature sensor and two ports for pH (ORP) and EC sensors
- **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**
  - Dedicated 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**
  - Fast, secure and waterproof connection

## For Universal Applications

HI98195 provides multiparameter measurement in a compact and rugged, IP67 waterproof enclosure. Ideal for demanding applications, this 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 HI9298194 software.

## GLP and On-Screen Help

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

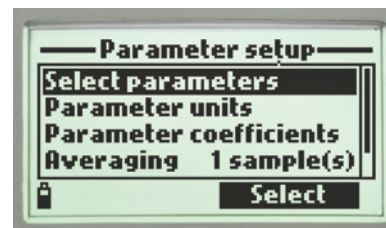
## Quick Connect Probe

The HI7698195 probe features a quick connect DIN connector to make attaching and removing the probe simple and easy.

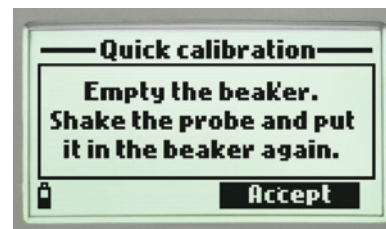


HI9828-25  
Quick Calibration  
solution

- **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



- **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
- **pH in mV option**
  - Useful for diagnostics
- **GLP data**
  - Offset, slope, date, time and buffers used
- **Automatically temperature compensated readings**
- **pH or pH/ORP field replaceable sensors**
  - Gel-filled and maintenance free
  - Double junction for reduced contamination of reference cell

## EC/TDS/Resistivity: Specific Features

- **Calibration**
  - Single-point calibration from six standards (84  $\mu\text{S}/\text{cm}$ , 1,413  $\mu\text{S}/\text{cm}$ , 5.00  $\text{mS}/\text{cm}$ , 12.88  $\text{mS}/\text{cm}$ , 80  $\text{mS}/\text{cm}$ , 111.8  $\text{mS}/\text{cm}$  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
- **Auto-ranging**
- **Salinity readings**
  - Practical Salinity Scale (PSU) based on conductivity calibration



- **Rugged carrying case with custom insert included**

# HI98195 Probe and Sensor Features and Specifications



Specifications	HI7698195	
Sensor Inputs	two (pH or 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 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. These meters automatically recognize sensors



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')	

Specifications	HI98195	
pH / mV	Range	0.00 to 14.00 pH / $\pm 600.0$ mV
	Resolution	0.01 pH / 0.1 mV
	Accuracy	$\pm 0.02$ pH / $\pm 0.5$ 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	$\pm 2000.0$ mV
	Resolution	0.1 mV
	Accuracy	$\pm 1.0$ mV
	Calibration	automatic at one custom point (relative mV)
EC	Range	0 to 200 mS/cm (absolute EC up to 400 mS/cm)
	Resolution	<b>manual:</b> 1 $\mu$ S/cm; 0.001 mS/cm; 0.01 mS/cm; 0.1 mS/cm; 1 mS/cm; <b>automatic:</b> 1 $\mu$ S/cm from 0 to 9999 $\mu$ S/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; <b>automatic mS/cm:</b> 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	$\pm 1\%$ of reading or $\pm 1$ $\mu$ S/cm whichever is greater
	Calibration	automatic single point, with six standard solutions (84 $\mu$ S/cm, 1413 $\mu$ S/cm, 5.00 mS/cm, 12.88 mS/cm, 80.0 mS/cm, 111.8 mS/cm) or custom point
TDS	Range	0.0 to 400.0 ppt (g/L) (the maximum value depends on the TDS factor)
	Resolution	<b>manual:</b> 1 ppm (mg/L); 0.001 ppt (g/L); 0.01 ppt (g/L); 0.1 ppt (g/L); 1 ppt (g/L); <b>automatic:</b> 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); <b>automatic ppt (g/L):</b> 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	$\pm 1\%$ of reading or $\pm 1$ ppm (mg/L) whichever is greater
	Calibration	based on conductivity or salinity calibration
Resistivity	Range	0 to 999999 $\Omega \cdot \text{cm}$ ; 0 to 1000.0 k $\Omega \cdot \text{cm}$ ; 0 to 1.0000 M $\Omega \cdot \text{cm}$
	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	$\pm 2\%$ of reading or $\pm 0.01$ PSU whichever is greater
	Calibration	based on conductivity calibration
Seawater $\sigma$	Range	0.0 to 50.0 $\sigma_t$ , $\sigma_{20}$ , $\sigma_{15}$
	Resolution	0.1 $\sigma_t$ , $\sigma_{20}$ , $\sigma_{15}$
	Accuracy	$\pm 1$ $\sigma_t$ , $\sigma_{20}$ , $\sigma_{15}$
	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	$\pm 0.15$ °C; $\pm 0.27$ °F; $\pm 0.15$ K
	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.)	



HI98194 includes:

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HI7698194/4  
probe



HI7698194-0  
pH sensor



HI7698194-3  
EC sensor



HI7698194-2  
DO sensor



HI7698195/4  
probe



HI7698194-0  
pH sensor



HI7698194-3  
EC sensor



HI9828-25  
quick calibration  
solution



HI76981942  
probe maintenance  
kit



HI9828-25  
quick calibration  
solution



HI76981952  
probe maintenance  
kit



HI98196 includes:



HI7698196/4  
probe



HI7698194-0  
pH sensor



HI7698194-2  
DO sensor



HI9828-25  
quick calibration  
solution



HI7698194-2  
probe maintenance  
kit



rugged carrying case  
with custom insert



HI7698194-3  
calibration beaker



HI9298194 PC software



HI920015 micro USB cable



quality certificate



instruction manual



1.5V AA batteries (4)



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