

Multiparameter EC/TDS/NaCl/resistivity | HI-98192



3.5 mm connection



cal check



interchangeable electrode



replaceable electrode



battery powered



mains powered

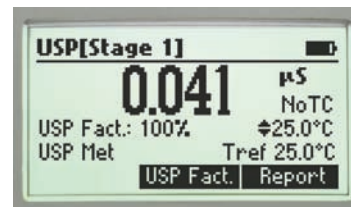
Top of the range portable EC meter

This top of the range portable multiparameter instrument offers all the advantages of a rugged portable meter with the performance and features of a bench top.

A professional waterproof meter, the HI-98192 complies with IP67 standards and is supplied complete with all the accessories needed to perform EC/TDS/NaCl/Resistivity measurements both in the lab and out in the field.

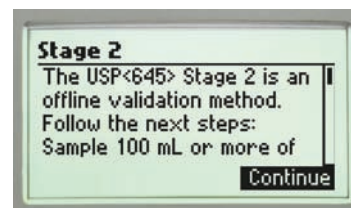


Easy to use with clear on-screen guidance



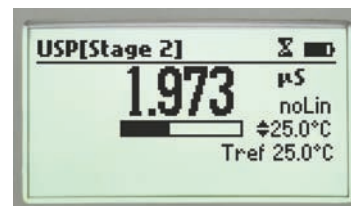
Three stages of conformity

Performs all 3 stages of USP <645> water quality testing requirements.



On-screen guide

Users are provided with on-screen instructions for each USP stage



Progress bar

Displays progress towards meeting stage 2 stability requirements.

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A great set of benefits

4-ring conductivity probe

The 4-ring conductivity probe with its built in temperature sensor is designed to take accurate readings over the complete range with no need to switch electrodes. The polarisation effect is also eliminated with the 4-ring technology.

Quick easy use connector

The unique quick-connect waterproof DIN connector is a great bonus for field work. Replacing the need for a threaded connection for a strong connection, it offers a secure method of attachment that is equally quick and easy to remove.



Expanded range

An expanded conductivity range offers options from 0.000 $\mu\text{S}/\text{cm}$ to 1000 mS/cm actual conductivity (400 mS/cm temperature compensated). Ranges are also included for TDS, resistivity and three salinity scales.

Methods

The meter performs all three stages of USP method required for conductivity measurement in ultrapure water. A report is generated when any of the three stages are met.

GLP data

GLP data includes date, time, standards used, temperature compensation used, reference temperature, and TDS conversion factor.

For direct access to TDS data, simply press the dedicated GLP key.



Seven memorised standards with 5-point EC calibration

Users can choose from seven memorized standards and obtain up to a 5 point conductivity calibration. For salinity (% range), HI-7037 standard allows users to make a one point calibration.

EC and TDS measurements are fully customizable and include:

- Cell constant selection between 0.0 and 10.000
- Selection of linear or non-linear (natural water), or
- No temperature compensation

The temperature compensation coefficient range is configurable from 0.00 to 10.00%/°C with a choice of reference temperatures of 15°C, 20°C and 25°C. Conductivity to TDS factor is adjustable from 0.40 and 1.00.

Customised measurement profiles and data logging

Up to 10 measurement profiles can be created with various user settings including temperature compensation, range selection, cell constant, and TDS conversion factors.

The log-on-demand mode allows the user to record and save up to 400 readings while the lot logging at selected intervals can store up to 1000 readings.

Data can be transferred to a PC using the Hanna micro USB cable and software.

User support

User guidance is provided on screen. Simply press the HELP button and view content specific information based on the screen being viewed at the time.



This instrument can be easily operated with one hand and is housed in an IP67 rated waterproof, rugged enclosure. The meter and accessories all fit in our rugged, custom thermoformed carrying case.

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Key features

Compact, rugged, waterproof to IP67

Methods

- USP <645> capable for checking the quality of water used in pharmaceutical manufacturing

Salinity readings

- Seawater salinity can be displayed as % NaCl, natural seawater scale (ppt) or practical salinity scale (PSU)

Auto-ranging and fixed range options

Calibration

- Perform up to a 5 point calibration for enhanced accuracy
- Calibration timeout to alert the user at a defined interval when the calibration has expired

Temperature compensation

- No temperature compensation, linear temperature compensation and non linear temperature compensation - ISO/ DIN 7888
- Configurable linear temperature compensation coefficient range from 0.00 to 10.00%/°C

GLP Features

- GLP data provides calibration data including date, time, standards used, temperature compensation used, reference temperature, and TDS conversion factor (TDS)

Data logging

- Log on Demand: store measurement data at the press of a button
- Interval lot logging: log measurements at a selectable interval

User-friendly

- Extensive battery life: approximately 100 hours of continuous use (without backlight)
- Menu driven for ease of use with virtual-key extended functionality
- Contextual help at the press of a button
- Easy read backlit, graphic, LCD
- Multiple language selection

Auto Hold freezes first stable reading on the display



Connectivity

PC connectivity via opto-isolated USB with optional HI-92000 software

Code: HI-92000 (Software)
Code: HI-920013 (USB cable)

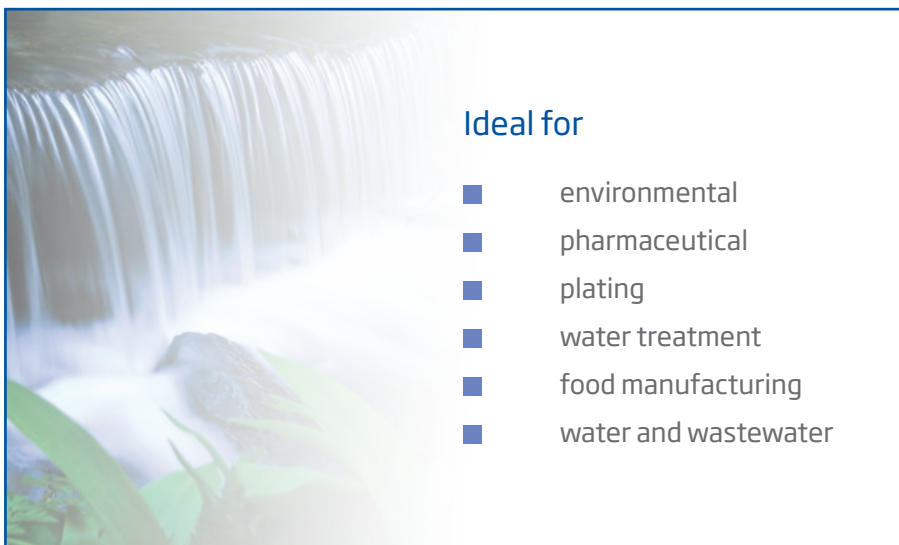


Ordering Information

Multiparameter waterproof meter | HI-98192

supplied with

- HI-763133 conductivity probe
- HI-7031M 1413 $\mu\text{S}/\text{cm}$ calibration solution (230 mL)
- HI-7035M 111.8 mS/cm calibration solution (230 mL)
- 100 mL plastic beaker (2)
- HI-92000 PC software
- HI-920015 micro USB cable
- 1.5V AA batteries (4)
- instruction manual
- quick start guide
- quality certificate
- HI-720192 rugged carrying case



Ideal for

- environmental
- pharmaceutical
- plating
- water treatment
- food manufacturing
- water and wastewater

Specifications

Product Code	HI-98192	
EC	Range	0.000 to 9.999 $\mu\text{S}/\text{cm}^*$; 10.00 to 99.99 $\mu\text{S}/\text{cm}$; 100.0 to 999.9 $\mu\text{S}/\text{cm}$; 1.000 to 9.999 mS/cm ; 10.00 to 99.99 mS/cm ; 100.0 to 1000.0 mS/cm (actual conductivity; temperature compensated to 400 mS/cm)
	Resolution	0.001 $\mu\text{S}/\text{cm}$; 0.01 $\mu\text{S}/\text{cm}$; 0.1 $\mu\text{S}/\text{cm}$; 0.001 mS/cm ; 0.01 mS/cm ; 0.1 mS/cm
	Accuracy	$\pm 1\%$ of reading ($\pm 0.01 \mu\text{S}/\text{cm}$ or 1 digit, whichever is greater)
	Calibration	automatic up to 5 points with seven memorized standards (0.00 $\mu\text{S}/\text{cm}$, 84.0 $\mu\text{S}/\text{cm}$, 1.413 mS/cm , 5.00 mS/cm , 12.88 mS/cm , 80.0 mS/cm , 111.8 mS/cm)
TDS	Range	0.00 to 99.99 ppm; 100.0 to 999.9 ppm; 1.000 to 9.999 ppt (g/L); 10.00 to 99.99 ppt (g/L); 100.0 to 400.0 ppt (g/L)
	Resolution	0.01 ppm; 0.1 ppm; 0.001 ppt (g/L); 0.01 ppt (g/L); 0.1 ppt (g/L)
	Accuracy	$\pm 1\%$ of reading ($\pm 0.05 \text{ mg/L}$ (ppm) or 1 digit, whichever is greater)
Resistivity	Range	1.0 to 99.9 $\Omega\cdot\text{cm}$; 100 to 999 $\Omega\cdot\text{cm}$; 1.00 to 9.99 $\text{K}\Omega\cdot\text{cm}$; 10.0 to 99.9 $\text{K}\Omega\cdot\text{cm}$; 100 to 999 $\text{K}\Omega\cdot\text{cm}$; 1.00 to 9.99 $\text{M}\Omega\cdot\text{cm}$; 10.0 to 100.0 $\text{M}\Omega\cdot\text{cm}$
	Resolution	0.1 $\Omega\cdot\text{cm}$; 1 $\Omega\cdot\text{cm}$; 0.01 $\text{K}\Omega\cdot\text{cm}$; 0.1 $\text{K}\Omega\cdot\text{cm}$; 1 $\text{K}\Omega\cdot\text{cm}$; 0.01 $\text{M}\Omega\cdot\text{cm}$; 0.1 $\text{M}\Omega\cdot\text{cm}^*$
	Accuracy	$\pm 1\%$ of reading ($\pm 10 \Omega$ or 1 digit, whichever is greater)
Salinity	Range	% NaCl: 0.0 to 400.0%; practical salinity: 0.00 to 42.00 (PSU); natural seawater scale - UNESCO 1966: 0.00 to 80.00 (ppt)
	Resolution	0.1%; 0.01
	Accuracy	$\pm 1\%$ of reading
	Calibration	max. one point only in % range (with HI7037 standard); use conductivity calibration for all other ranges
Temperature	Range	-20.0 to 120.0°C (-4.0 to 248.0°F)
	Resolution	0.1°C (0.1°F)
	Accuracy	$\pm 0.2^\circ\text{C}$; $\pm 0.4^\circ\text{F}$ (excluding probe error)
	Calibration	one or two points
Temperature Compensation	noTC, Linear (-20 to 120°C ; -4 to 248°F), Non Linear - ISO/DIN 7888 (-0 to 36°C ; 32 to 96.8°F)	
Measurement Modes	autorange, autoend, lock and fixed range	
Reference Temperature	15°C , 20°C and 25°C	
Temperature Coefficient	0.00 to $10.00\% / ^\circ\text{C}$	
TDS Factor	0.40 to 1.00	
Electrode/Probe	HI-763133 platinum, 4-ring conductivity/TDS probe with internal temperature sensor and 4 m (13.2') cable (included)	
Log-on-demand	400 samples; lot logging: 5, 10, 30 sec, 1, 2, 5, 10, 15, 30, 60, 120, 180 min (max 1000 samples)	
Memorized Profiles	up to 10	
PC Connectivity	opto-isolated USB with optional HI 92000 software and micro USB cable	
Battery Type/Life	1.5V AA batteries (4) / approximately 100 hours of continuous use (without backlight), 25 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	
Weight	400 g	

NB: *The 0.001 $\mu\text{S}/\text{cm}$ EC range and 0.1 $\text{M}\Omega\cdot\text{cm}$ not available with supplied probe

Authorised distributor