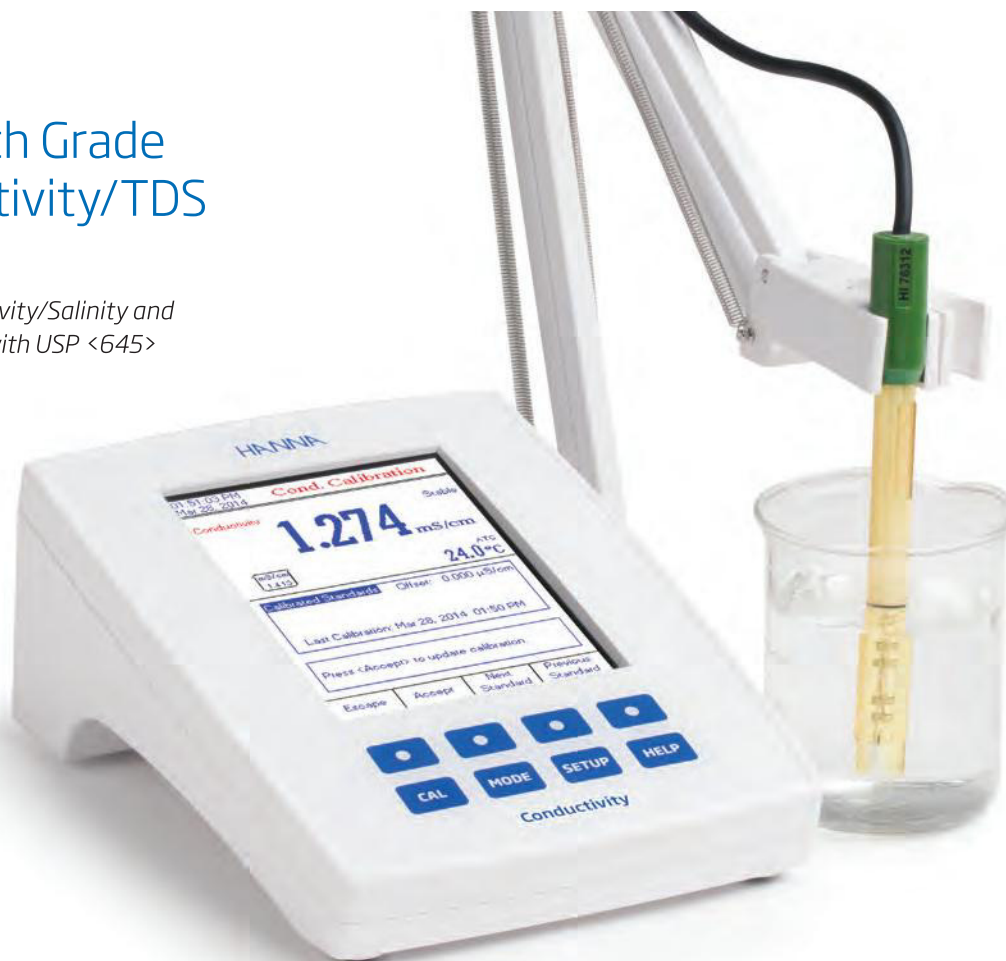


Research Grade Conductivity/TDS Meter

EC/TDS/Resistivity/Salinity and Temperature with USP <645>



The HI5321 is an advanced research grade benchtop EC/TDS/Salinity/Resistivity meter that is completely customizable with a large color LCD, capacitive touch keys, and USB port for computer connectivity.

Customizable User Interface

The user interface of the HI5321 allows the user to show measurements in various modes: basic measurement with or without GLP information, real-time graphing, and logging data. Calibration stability criteria can be adjusted from fast, moderate, and accurate. Programmable alarm limits can be set to inside or outside allowable limits.

Color Graphic LCD

The HI5321 features a color graphic LCD with on-screen help, graphic, and custom color configurations. The display allows for real-time graphing.

Capacitive Touch

The HI5321 features sensitive capacitive touch buttons for accurate keystrokes when navigating menus and screens.

Auto-ranging

The meter can be set to auto-ranging in which the meter chooses the appropriate conductivity range from seven ranges or fixed range in which the meter will only display reading in $\mu\text{S}/\text{cm}$ or mS/cm .

Automatic Temperature Compensation

All readings are automatically compensated for temperature variations with a built in temperature sensor.

Calibration

The HI5321 can be calibrated up to four points with a choice of six pre-programmed conductivity standards or user defined custom standards. Resistivity, TDS, Practical Salinity (PSU) and Natural Seawater Scale are calibrated through conductivity. The % NaCl is calibrated to single point with the HI7037 salinity standard.

GLP Data

HI5321 includes a GLP Feature that allows users to view calibration data and calibration expiration information at the touch of a key. Calibration data include date, time, standards used for calibration.

Data Logging

Three selectable logging modes are available on the HI5321: automatic, manual, and AutoHold logging. Automatic and manual logs up to 100 lots with 50,000 records max/lot, with up to 100,000 total data points. Automatic logging features the option to save data according to sampling period and interval.

Data Transfer

Data can be transferred to a PC with USB cable and HI92000 software (both sold separately).

Contextual Help

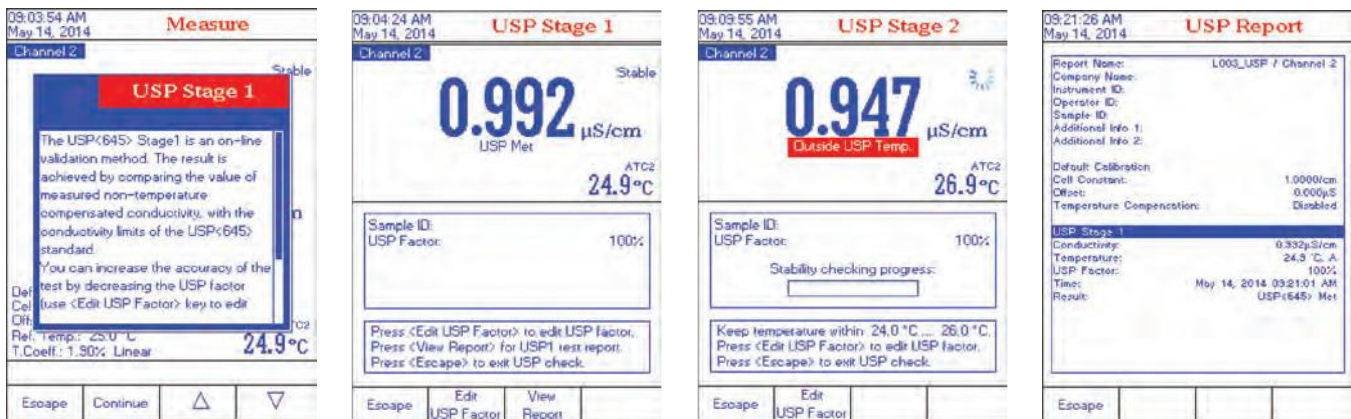
Contextual help is always available through a dedicated "HELP" key

Four-ring Conductivity Probe

All readings are performed with the HI76312 four-ring conductivity probe with a built in temperature sensor for automatic temperature correction. The four rings are made with platinum and the body of the electrode is made of Polyetherimide (PEI) plastic that is resistant to many harsh chemicals.

USP <645>

For the measurement of high purity water used in pharmaceutical manufacturing, the HI5321 is programmed with the first two stages of the USP <645> method. Once a stage is met a report is generated and can be saved. Up to 200 reports can be stored and transferred to a Windows® compatible computer using a USB cable and software (sold separately).



Specifications

HI5321

| | | |
|---------------------------|---|---|
| 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 |
| | 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 ($\pm 0.01 \mu\text{S}/\text{cm}$) |
| | Cell Constant | 0.0500 to 200.00/cm |
| | Cell Type | 4 cells |
| | Calibration | automatic standard recognition, user standard, single point / multi-point calibration |
| | EC Calibration Solution | 84.00 $\mu\text{S}/\text{cm}$, 1.413 mS/cm , 5.000 mS/cm , 12.88 mS/cm , 80.00 mS/cm , 111.8 mS/cm |
| | Calibration Reminder | yes |
| | Temperature Compensation | disabled, linear and non-linear (natural water) |
| | Temperature Coefficient | 0.00 to 10.00 %/ $^{\circ}\text{C}$ |
| | Reference Temperature | 5.0 to 30.0 $^{\circ}\text{C}$ |
| | Profiles | up to 10 |
| USP <645> Application | yes | |
| TDS | Range | 0.000 to 9.999 ppm; 10.00 to 99.99 ppm; 100.0 to 999.9 ppm; 1.000 to 9.999 ppt; 10.00 to 99.99 ppt; 100.0 to 400.0 ppt actual TDS (with 1.00 factor) |
| | Resolution | 0.001 ppm; 0.01 ppm; 0.1 ppm; 0.001 ppt; 0.01 ppt; 0.1 ppt |
| | Accuracy | $\pm 1\%$ of reading ($\pm 0.01 \text{ ppm}$) |
| 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 ($\pm 1 \Omega \cdot \text{cm}$) |
| Calibration | Uses Conductivity | |
| Salinity | Range | practical scale: 0.00 to 42.00 psu; natural sea water scale: 0.00 to 80.00 ppt; percent scale: 0.0 to 400.0% |
| | Resolution | 0.01 for practical scale/natural sea water scale; 0.1% for percent scale |
| | Accuracy | $\pm 1\%$ of reading |
| Calibration | percent scale – one-point (with HI7037 standard) | |
| Temperature* | Range | -20.0 to 120.0 $^{\circ}\text{C}$; -4.0 to 248.0 $^{\circ}\text{F}$; 253.15 to 393.15K |
| | Resolution | 0.1 $^{\circ}\text{C}$; 0.1 $^{\circ}\text{F}$; 0.1K |
| | Accuracy | $\pm 0.2^{\circ}\text{C}$; $\pm 0.4^{\circ}\text{F}$; $\pm 0.2\text{K}$ (without probe) |
| | Calibration | User calibration in 3 points (0, 50, 100 $^{\circ}\text{C}$) |
| Additional Specifications | EC Probe | HI76312 platinum, four-ring EC/TDS probe with and 1 m (3.3') cable (included) |
| | GLP | Probe cell constant / offset, reference teperature, compensation coefficient, calibration points, calibration time stamp |
| | Logging | record : Up to 100 lots, 50,000 records max/lot / maximum 100,000 data points; interval : 14 selectable between 1 second and 180 minutes; type : Automatic, Log on demand, AutoHold; additional : 200 records USP |
| | PC Connection | Opto-isolated USB |
| | Power Supply | 12 VDC adapter (included) |
| | Environment | 0 to 50 $^{\circ}\text{C}$ (32 to 122 $^{\circ}\text{F}$; 273 to 323K) RH max 95% non-condensing |
| | Dimensions / Weight | 160 x 231 x 94 mm (6.3 x 9.1 x 3.7") / 1.2 kg (2.64 lbs.) |
| Ordering Information | HI5321-01 (115V) and HI5321-02 (230V) are supplied with HI76312 EC/TDS probe, 1413 $\mu\text{S}/\text{cm}$ conductivity standard sachet (4), 12880 $\mu\text{S}/\text{cm}$ conductivity standard sachet (2), 5000 $\mu\text{S}/\text{cm}$ conductivity standard sachet (2), electrode rinse solution sachet (2), HI76404W electrode holder, 12 VDC adapter, capillary dropper pipette, quality certificate, quick start guide and instruction manual. | |

(*) Reduced to actual probe limits