

HI5521 • HI5522

Research Grade Meters

pH/ORP/ISE and EC/TDS/Resistivity/Salinity and Temperature



- **Five-point calibration**
 - Five-point pH with preprogrammed and custom buffers
 - Five-point ISE with preprogrammed and custom standards (HI5222 only)
- **Logging**
 - Large log memory (100,000 records) with selectable logging modes
- **Multiple input channels**
 - pH/ORP/(ISE, HI5522) and EC/TDS/Resistivity/Salinity
- **Specific Applications**
 - EC specific applications: USP <645> method, salinity in seawater, TDS
 - ISE specific applications: incremental methods
- **Connectivity**
 - PC compatible via USB

Display up to Eight Parameters

HI5521 and HI5522 are research grade benchtop meters that feature up to eight measurement parameters: pH, mV (for Oxidation Reduction Potential), ISE (HI5522 only), conductivity, resistivity, TDS, salinity and temperature.

These meters incorporate dual channels with a separate temperature probe input and support external reference electrodes required by half cell pH and ISE sensors.

An automatic or custom standard conductivity calibration can be performed in up to four points, as well as adjustable probe cell constant. One fixed-point salinity calibration can be performed on the percent scale only. Three salinity ranges are available: practical scale, natural sea water scale and percent scale.

HI5522 features up to five-point manual selection and custom standard ISE calibration with up to five standard solutions and up to five custom solutions with or without temperature compensation. From the on-screen list, users can select their ISE electrode parameter along with the standard configuration profile or create their own.

Specifications	HI5521	HI5522	
pH	Range	-2.000 to 20.000 pH	
	Resolution	0.1 pH; 0.01 pH; 0.001 pH	
	Accuracy	±0.1 pH; ±0.01 pH; ±0.002 pH ±1 LSD	
	Calibration	automatic, up to five-point calibration, eight standard buffers available, and five custom buffers	
	Temperature Compensation	automatic or manual from -20.0 to 120.0°C/-4.0 to 248.0°F/253.15 to 393.15K	
mV	Range	±2000 mV	
	Resolution	0.1 mV	
	Accuracy	±0.2 mV ±1 LSD	
ISE	Range	-	1 x 10 ⁻⁶ to 9.99 x 10 ⁻⁸ concentration
	Resolution	-	1; 0.1; 0.01; 0.001 concentration
	Accuracy	-	±0.5% (monovalent ions); ±1% (divalent ions)
	Calibration	-	automatic, up to five-point calibration, five fixed standard solutions available for each measurement unit, and five user defined standards
Temperature**	Range	-20.0 to 120°C; -4.0 to 248.0°F; 253.15 to 393.15K	
	Resolution	0.1°C; 0.1°F; 0.1K	
	Accuracy	±0.2°C; ±0.4°F; ±0.2K (without probe)	
EC	Range	0.000 to 9.999 µS/cm; 10.00 to 99.99 µS/cm; 100.0 to 999.9 µS/cm; 1.000 to 9.999 mS/cm; 10.00 to 99.99 mS/cm; 100.0 to 1000.0 mS/cm absolute EC*	
	Resolution	0.001 µS/cm; 0.01 µS/cm; 0.1 µS/cm; 0.001 mS/cm; 0.01 mS/cm; 0.1 mS/cm	
	Accuracy	±1% of reading (±0.01 µS/cm)	
	Cell Constant	0.0500 to 200.00/cm	
	Cell Type	4-pole cell	
	Calibration	automatic standard recognition, user standard single point / multi-point calibration	
	Calibration Reminder	yes	
	Temperature Coefficient	0.00 to 10.00 %/°C	
	Temperature Compensation	disabled, linear and non-linear (natural water)	
	Reference Temperature	5.0 to 30.0°C	
	Profiles	up to 10, 5 each channel	
USP Compliant	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	±1% of reading (±0.01 ppm)	
Resistivity	Range	1.0 to 99.9 Ω•cm; 100 to 999 Ω•cm; 1.00 to 9.99 kΩ•cm; 10.0 to 99.9 kΩ•cm; 100 to 999 kΩ•cm; 1.00 to 9.99 MΩ•cm; 10.0 to 100.0 MΩ•cm	
	Resolution	0.1 Ω•cm; 1 Ω•cm; 0.01 kΩ•cm; 0.1 kΩ•cm; 1 kΩ•cm; 0.01 MΩ•cm; 0.1 MΩ•cm	
	Accuracy	±2% of reading (±1 Ω•cm)	
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	±1% of reading	
	Calibration	percent scale—one-point (with HI7037 standard); all others through EC	
Additional Specifications	pH Electrode	HI1131B glass body pH electrode with BNC connector and 1 m (3.3') cable (included)	
	EC Probe	HI76312 platinum, four-ring EC/TDS probe with and 1 m (3.3') cable (included)	
	Temperature Probe	HI7662-T stainless steel temperature probe with 1 m (3.3') cable (included)	
	Input Channel(s)	1 pH/ORP + 1 EC	1 pH/ORP/ISE + 1 EC
	GLP	cell constant, reference temperature/coefficient, calibration points, cal time stamp, probe offset for conductivity	
	Logging	record : 100,000 data point storage/channel, up to 100 lots with max. 50,000 records/lot; interval : fourteen presets selectable between 1 second and max log time of 180 minutes; type : automatic, manual, AutoHOLD; additional : 200 records USP; 200 records incremental methods (HI5522)	
	PC Connection	USB	
	Power Supply	12 VDC adapter (included)	
	Environment	0 to 50°C (32 to 122°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.)		

(*) Uncompensated conductivity (or TDS) is the conductivity (or TDS) value without temperature compensation.
 (**) Reduced to actual probe limits