

## Benchtop conductivity meter with advanced features HI 6321

### Conductivity/Resistivity/TDS/Salinity meter

The HI6321 is an advanced benchtop meter designed for professional Conductivity/Resistivity/TDS/Salinity measurement.

Featuring a large, intuitive touchscreen and innovative features, this device is perfect for a wide range of applications from potable water to industrial process water.

The included HI7631233 four-ring probe provides stable measurements over a wide range and requires infrequent calibration.

With its built-in temperature sensor, the HI6321 provides accurate analysis with automatic temperature compensation, making it essential for precise water quality assessment.

- Advanced Touchscreen Interface
- Multiple Scales of Measurement
- Internet connection



### Temperature sensor

The integrated temperature sensor measures the sample temperature and allows automatic compensation during analysis, with the possibility of choosing the type of algorithm to apply:

- Linear : appropriate when the temperature coefficient of variation is assumed to have the same value for all measured temperatures
- Standard : Suitable for high purity water analysis and documented in ASTM D5391-14. This setting should be used for resistivity measurements >1Mohm.cm.
- Natural : Suitable for natural groundwater, well or surface water (or water with similar composition) according to ISO7888 standard.

The result is a reliable analysis of conductivity (EC), TDS (Total Dissolved Solids), resistivity or salinity of seawater (percentage units, PSU or ppt).

TDS Factor TDS is a calculated value based on the conductivity of the solution ( $TDS = \text{factor} \times EC25$ ). A TDS factor is a conversion factor used to change an EC measurement to a ppm measurement. Salinity expressed in PSU (Practical Salinity Unit) Practical salinity of seawater relates the electrical conductivity ratio of a normal seawater sample at 15 °C and 1 atmosphere to a potassium chloride (KCl) solution with a mass of 32.4356 g/kg of water at the same temperature and pressure. Under these conditions the ratio is equal to 1 and  $S=35$ . Practical salinity scale can be applied to values from 0 to 42.00 PSU at temperatures between 0 and 35 °C. Salinity expressed in ppt Measurements expressed in ppt are based on the natural seawater scale which ranges from 0.00 to 80.00 g/L and covers a temperature range of 10 to 31 °C. Determine salinity based on a ratio of the sample conductivity to standard seawater at 15 °C and an approximate salinity value of 35 in seawater. Salinity expressed in %

On this scale, 100% salinity equals approximately 10% solids.

### Detailed Specifications

Measurement

- Measurement scales:  $\mu\text{S}/\text{cm}$ ,  $\text{mS}/\text{cm}$  (Conductivity);  $\Omega\text{ cm}$ ,  $\text{k}\Omega\text{ cm}$ ,  $\text{M}\Omega\text{ cm}$  (Resistivity); ppm, ppt (TDS); ppt, PSU, % (Salinity) and temperature
- Recording function active during measurements
- Measurement stability indicator (using the Stability Criteria setting)
- Reading Mode: Direct and Direct with Autohold
- Automatic temperature compensation (via temperature probe) or manually set
- Acoustic and/or alarm messages for measurements outside the predefined limits
- Galvanically isolated probe input to avoid electrical interference during measurements

### Related products

- Conductivity calibration solutions

### Technical data

Parametro		Descrizione
EC	Scala	0.000-9.999 $\mu\text{S}/\text{cm}$ ; 10.00-99.99 $\mu\text{S}/\text{cm}$ ; 100.0-999.9 $\mu\text{S}/\text{cm}$ ; 1.000-9.999 $\text{mS}/\text{cm}$ ; 10.00-99.99 $\text{mS}/\text{cm}$ ; 100.0-1000.0 $\text{mS}/\text{cm}$
	Risoluzione	0.001 $\mu\text{S}/\text{cm}$ ; 0.01 $\mu\text{S}/\text{cm}$ ; 0.1 $\mu\text{S}/\text{cm}$ ; 0.001 $\text{mS}/\text{cm}$ ; 0.01 $\text{mS}/\text{cm}$ ; 0.1 $\text{mS}/\text{cm}$
	Accuratezza	$\pm 1\%$ of reading ( $\pm 0.01\ \mu\text{S}/\text{cm}$ )
Resistività	Scala	1.0-99.9 $\Omega\text{-cm}$ ; 100-999 $\Omega\text{-cm}$ ; 1.00-9.99 $\text{K}\Omega\text{-cm}$ ; 10.0-99.9 $\text{K}\Omega\text{-cm}$ ; 100-999 $\text{K}\Omega\text{-cm}$ ; 1.00-9.99 $\text{M}\Omega\text{-cm}$ ; 10.0-100.0 $\text{M}\Omega\text{-cm}$
	Risoluzione	0.1 $\Omega\text{-cm}$ ; 1 $\Omega\text{-cm}$ ; 0.01 $\text{K}\Omega\text{-cm}$ ; 0.1 $\text{K}\Omega\text{-cm}$ ; 1 $\text{K}\Omega\text{-cm}$ ; 0.01 $\text{M}\Omega\text{-cm}$ ; 0.1 $\text{M}\Omega\text{-cm}$
	Accuratezza	$\pm 1\%$ of reading ( $\pm 1\ \Omega\text{-cm}$ )
Solidi Totali Disciolti (TDS)	Scala	0.000-9.999 ppm; 10.00-99.99 ppm; 100.0-999.9 ppm; 1.000-9.999 ppt; 10.00-99.99 ppt; 100.0-400.0 ppt; actual TDS (with 1.00 factor)
	Risoluzione	0.001 ppm; 0.01 ppm; 0.1 ppm; 0.001 ppt; 0.01 ppt; 0.1 ppt
	Accuratezza	$\pm 1\%$ of reading ( $\pm 0.01\ \text{ppm}$ )
Salinità	Scala	0.00-42.00 PSU - Practical Scale; 0.00-80.00 ppt - Natural Sea Water; 0.0-400.0 % - Percent Scale
	Risoluzione	0.01 for Practical Scale / Natural Sea Water; 0.1 % for Percent Scale
	Accuratezza	$\pm 1\%$ della lettura
Temperatura	Scala	-20.0-120.0 $^{\circ}\text{C}$
	Risoluzione	0.1 $^{\circ}\text{C}$
	Accuratezza	$\pm 0.2\ ^{\circ}\text{C}$
Calibrazione EC	Punti di calibrazione	Riconoscimento automatico dei tamponi / valori impostabili dall'utente, singolo punti /più punti
	Soluzioni	84.00 $\mu\text{S}/\text{cm}$ , 1.413 $\text{mS}/\text{cm}$ , 5.000 $\text{mS}/\text{cm}$ , 12.88 $\text{mS}/\text{cm}$ , 80.00 $\text{mS}/\text{cm}$ , 111.8 $\text{mS}/\text{cm}$
	Avviso	Disabilitato; Giornaliero: 0 min. fino 23 ore e 59 min; Periodico: 1 min. a 500 days, 23

Parametro	Descrizione	
		ore e 59 min.
Calibrazione Resistività	Come Conducibilità	
Calibrazione Salinità	1 punto per scala percentuale	
Compensazione Temperatura	Automatica o Manuale	
Letture	Modalità	Diretta; Diretta/Autohold
	Stabilità	Accurato; Medio; Veloce
	Frequenza di campionamento	1000 ms
Visualizzazioni	Base	Misurazione (EC, Resistività, TDS, Salinità, Temperatura); Stato di stabilità
	GLP semplice	Informazioni di base; Ultima data di calibrazione, offset
	GLP completa	Informazioni GLP Semplici e dettagli del punto di calibrazione
	Tabella	Le misurazioni aggiornate ogni secondo vengono visualizzate in tabella
	Grafico	Il grafico della misurazione nel tempo può essere spostato o ingrandito (tecnologia pinch-to-zoom)
Registrazione dati	Tipo	Automatica, Manuale, Autohold
	Numero di record	Massimo 50.000 per file; Memorizza almeno 1.000.000 di punti dati per utente
	Intervallo automatico	1, 2, 5, 10, 30 secondi; 1, 2, 5, 10, 15, 30, 60, 120, 150, 180 minuti
	ID campione	Incrementale
	Formato esportazione	.csv file
Utenti	Fino a 9 utenti e l'account amministratore	predefinito
Connettività	USB-A	2 porte per l'inserimento della tastiera o chiavetta USB
	USB-C	1 porta per la connettività al PC e chiavetta USB-C
	Wi-Fi & Ethernet	FTP; Server web per trasferimento e download dei log; Email
	RS232	Collegamento per periferiche
Alimentazione	Adattatore DC 100-240AC a 24VDC 2.5A	
Condizioni di utilizzo	0 - 50 °C massimo 95% RH senza condensa	
Dimensioni	205 x 160 x 77 mm	
Peso	Circa 1.2 kg	

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