# EC/TDS and Temperature Testers

- Waterproof
  - · Waterproof and designed to float
- AT0
  - · Automatic Temperature Compensation
- HOLD Feature
  - HOLD button to freeze readings on the display
- BEPS
  - Alerts the user of low battery power that could adversely affect readings

When the original DiST® (Dissolved Solids Tester) was first introduced, conductivity (EC) and total dissolved solids (TDS) measurements became easy and affordable. The DiST's ease of use, in combination with its affordability, made it the standard in EC and TDS measurement. Hanna continues the standard in EC and TDS testing with the DiST®5 and DiST®6.

These testers include features such as: a replaceable graphite electrode, adjustable TDS ratio, °C or °F measurement, Automatic Temperature Compensation (ATC) with adjustable  $\beta$ , battery level indicator, stability indicator, automatic shut-off and automatic calibration.

The graphite conductivity electrode offers greater accuracy by resisting contamination by salt deposits in the sample.

All of these features are packed in a floating, waterproof casing. These 3-in-1 testers are unmatched in EC/TDS and temperature measurements.



- Replaceable graphite electrode
  - An easy-to-replace graphite electrode with a sturdy, snap-in connector means there are no pins to bend or break.



Specifications		HI98311 (DiST®5)	HI98312 (DiST®6)	
EC	Range	0 to 3999 μS/cm	0.00 to 20.00 mS/cm	
	Resolution	1 μS/cm 0.01 mS/cm		
	Accuracy	±2% F.S.	±2% F.S.	
TDS	Range	0 to 2000 mg/L (ppm)	0.00 to 10.00 g/L (ppt)	
	Resolution	1 mg/L (ppm)	0.01 g/L (ppt)	
	Accuracy	±2% F.S.	±2% F.S.	
Temperature	Range	0.0 to 60.0°C / 32.0 to 140.0°F	0.0 to 60.0°C / 32.0 to 140.0°F	
	Resolution	0.1°C / 0.1°F	0.1°C / 0.1°F	
	Accuracy	±0.5°C/±1°F	±0.5°C/±1°F	
	Calibration	automatic, one point at 1413 µS/cm or 1382 mg/L (ppm)	automatic, one point at 12.88 mS/cm or 6.44 g/L (ppt)	
	TDS Conversion Factor	adjustable from 0.45 to 1.00		
Additional Specifications	Temperature Compensation	automatic, with β adjustable from 0.0 to 2.4% / °C		
	Probe	HI73311 replaceable EC/TDS graphite electrode (included)		
	Environment	0 to 50°C (32 to 122°F); RH max 100%		
	Battery Type / Life	1.5V (4) / approx. 100 hours of continuous use; auto-off after 8 minutes of non-use		
	Dimensions	163 x 40 x 26 mm (6.4 x 1.6 x 1.0")		
	Weight	100 g (3.5 oz.)		
Ordering Information	HI98311 (DiST®5) and HI98312 (DiST®6) are supplied with HI73311 EC/TDS probe, HI73128 probe removal tool, batteries and instructions.			



HI98331

## Soil Test™ Direct Soil EC Tester

- Automatic Temperature Compensation (ATC)
- One-point calibration

The HI98331 Soil Test™ is a pocket tester designed to directly measure soil conductivity and temperature. With a temperature sensor in the penetration probe, measurements are automatically temperature-compensated.

The conductivity range can be calibrated at one point and is designed to be performed in a standardized solution.

• Replaceable 122 mm (4.5") penetration probe

Specifications		HI98331 Soil Test™	
	Range	0.00 to 4.00 mS/cm (dS/m)*	
FC	Resolution	0.01 mS/cm	
	Accuracy	±0.05 mS/cm (0.00 to 2.00 mS/cm), ±0.30 mS/cm (2.00 to 4.00 mS/cm)	
	Range	0.0 to 50.0°C	
Temperature	Resolution	0.1°C	
	Accuracy	±1°C	
	Calibration	manual, one point	
	Probe	HI73331 122 mm (4.5") penetration (included)	
	Temperature Compensation	automatic, temperature coefficient (β) fixed 2% / °	
Additional Specifications	Environment	0 to 50°C (32 to 122°F); RH max 100%	
	Battery Type	1.5V (4)	
V	Dimensions (without probe)	163 x 40 x 26 mm (6.4 x 1.6 x 1.0")	
	Weight	100 g (3.5 oz.)	
Ordering Information HI98331 (Soil Test™) is supplied with HI73331 penetration conductivity a calibration screwdriver, batteries and instructions.			

 $<sup>^{\</sup>star} \text{The meter gives indicative readings with lower accuracy between 4 mS/cm and 10 mS/cm (mS/cm=ds/cm)}.$ 



## EC and TDS Testers

- Automatic temperature compensation (ATC)
- One-point calibration

The DiST® family are rugged and reliable pocket-sized testers that offer quick and accurate readings of conductivity or TDS.

The DiST® family of testers is widely used for monitoring EC/TDS in drinking water, water conditioning, reverse osmosis, cooling towers, wastewater, laboratories, agriculture, aquaculture and aquariums, hydroponics and the printing industry.

These testers feature an amperometric graphite electrode that provides improved repeatability in measurements, since they do not oxidize. An amperometric measurement of EC/TDS is based on Ohm's Law, I = V/R, where R depends on the distance between two pins and their surface. Oxidation changes both the distance and surface, which will directly affect accuracy. DiST® non-oxidizing graphite pins are able to provide an optimal surface for accurate, dependable results.

When calibration is needed, simply submerge the electrode tip into calibration solution and adjust the trimmer on the side of the tester.





#### • Exposed temperature sensor

 These testers feature exposed temperature sensors for faster response times.



#### Guides

• The max level guide lets you know how deep to submerse the probe.

Specifications		HI98301 (DiST® 1)	HI98302 (DiST® 2)	HI98303 (DiST® 3)	HI98304 (DiST® 4)
TDS	Range	1999 mg/L (ppm)	10.00 g/L (ppt)	-	_
	Resolution	1 mg/L (ppm)	0.01 g/L (ppt)	-	_
	Accuracy (@25°C/77°F)	±2% F.S.	±2% F.S.	-	_
EC	Range	_	-	1999 µS/cm	19.99 mS/cm
	Resolution	_	-	1 μS/cm	0.01 mS/cm
	Accuracy (@25°C/77°F)	-	-	±2% F.S.	±2% F.S.
Additional Specifications	TDS Factor	0.65/0.5	0.5	_	_
	Calibration Solution	HI70442: 1500 ppm HI70032: 1382 ppm	HI70038: 6.44 ppt	HI70031: 1413 mS/cm	HI70039: 5.00 mS/cm HI70030: 12.88 mS/cm
	Calibration	manual, one point	manual, one point	manual, one point	manual, one point
	Temperature Compensation	automatic from 0 to 50°C (32 to 122°F)			
	Battery Type / Life	1.5V (4) / approx. 200 hours of continuous use			
	Environment	0 to 50°C (32 to 122°F); RH max 95% non-condensing			
	Dimensions	175 x 41 x 23 mm (6.9 x 1.6 x 0.9")			
	Weight	95 g (3.4 oz.)			
Ordering Information	<b>HI98301</b> (DiST®1), <b>HI98302</b> (DiST®2), <b>HI98303</b> (DiST®3) and <b>HI98304</b> (DiST®4) are supplied with protective cap, screwdriver, batteries and instructions.				



#### Primo

### **EC/TDS Testers**

• Automatic temperature compensation (ATC)

The Primo series of testers provide a fast and dependable way to measure the total dissolved solids or conductivity in your water samples. It is ideally suited for the rigorous demands of water quality professionals.

Temperature is compensated automatically to ensure the readings are consistent to the standard or reference temperature.

Operating and maintenance has never been easier. Primo uses a single button at the top of the meter. Press it once and the meter is powered and ready for use. Press and hold the button for a few seconds and Primo automatically enters calibration mode. Simply open a sachet of calibration solution, dip the probe in, and within seconds the meter automatically recognizes the calibration solution.

Specifications		Primo	Primo 2	Primo 5		
TDS	Range	0 to 1999 mg/L (ppm)	0 to 1999 mg/L (ppm); 0.0 to 60.0°C	-		
	Resolution	1 mg/L (ppm)	1 mg/L (ppm); 0.1°C	-		
	Accuracy (@25°C/77°F)	±2% F.S.	±2% F.S.; ±0.5°C	-		
EC	Range	-	-	0 to 1999 μS/cm		
	Resolution	-	-	1μS/cm		
	Accuracy (@25°C/77°F)	-	-	±2% F.S.		
Additional Specifications	Calibration	automatic, at 1382 mg/L (ppm)	automatic, at 1382 mg/L (ppm)	automatic, at 1413 µS/cm		
	Probe Connection	direct	direct	direct		
	Dimensions	180 x 50 x 25 mm (7.1 x 2.0 x 1.0")	180 x 50 x 25 mm (7.1 x 2.0 x 1.0")	180 x 50 x 25 mm (7.1 x 2.0 x 1.0")		
	Weight	50 g (1.8 oz.)	50 g (1.8 oz.)	50 g (1.8 oz.)		
	Temperature Compensation	automatic from 0 to 60°C (32 to 140°F), β=2%/°C				
	Battery Type / Life	1.5V (2) / approximately 200 hours of continuous use; auto-off after 5 minutes of non-use				
	Environment	0 to 50°C (32 to 122°F); RH max 95%				
Ordering Information	Primo, Primo 2 and Primo 5 are supplied with batteries and instructions.					



