

HI9810-61 · HI9811-51 · HI9812-51

pH/EC/TDS/ Temperature Portable Meters

- Waterproof
- Automatic Temperature Compensation
 - All readings are compensated for variations in temperature
- Low battery indicator

HI9810-61 is a pH/EC/TDS meter designed to measure pH, $\mu\text{S}/\text{cm}$, mg/L and temperature in hydroponics, greenhouse, farming and ground water applications. HI9810-6 features Cal Check™, which allows the user to easily check the probe calibration status at any time.

The HI9812-51 and HI9811-51 are pH/EC/TDS meters for agriculture, greenhouse and hydroponics applications.

These meters feature a large LCD which displays either pH, EC, TDS or temperature readings along with tutorial instructions. The pH readings are displayed with a 0.1 resolution and an accuracy of ± 0.1 pH while the EC and TDS readings are displayed with a 10 mS/cm and 10 ppm (mg/L) resolution and 2% full scale accuracy. The temperature correction coefficient (β) is fixed at 2 %/°C and allows for automatic temperature compensated measurements of EC and TDS. These meters are calibrated manually to a single point with the use of two trimmers. pH is calibrated to pH 7.01 while EC/TDS is calibrated to either 1.41 mS/cm (1413 $\mu\text{S}/\text{cm}$) or 1500 ppm. The LCD screen has battery life indicator as well as on-screen tutorial messages.

No probe changes are required when switching your measured parameter between pH, conductivity and TDS. These multiparameter meters reduce the number of instruments required for daily water quality analysis.

The supplied probe on all models feature a polypropylene body, amplified pH electrode with a built-in EC/TDS and temperature sensors. The amplifier for the pH electrode prevents interference from humidity and electrical noise from common sources including from motors, ballasts or pumps.





HI1285-51 and HI1285-61 probes

HI9811-51 and HI9812-51 are supplied with the HI1285-51 pH/EC/TDS/temperature probe. The HI9810-61 is supplied with the HI1285-61 pH/EC/TDS/temperature probe with CAL Check. The pH, EC, TDS, and temperature sensor are housed in a single body that connects to the meter with a DIN connector.

- **Amplified pH electrode**
 - The pH electrode circuit has a built in amplifier that will reduce the effects of electrical noise on the high impedance pH measurement. Examples of sources of electrical noise include motors, ballasts, and pumps which are common in greenhouses.
- **Amperometric EC/TDS sensor**
 - The EC/TDS readings are performed by an amperometric sensor. An alternating voltage is applied to the sensor and the amount of current that passes between the two stainless steel pins is dependent upon the amount of salts (fertilizer) present. A greater amount of salt present results in an increase in conductance.
- **Polypropylene body**
 - The polypropylene body houses all the sensors in a single body design and is durable. The probe is gel filled for maintenance free operation. It does not have to be refilled periodically.
- **3 sensors in a single probe**
- **Gel filled maintenance free pH electrode**

Specifications		HI9810-61	HI9811-51	HI9812-51
pH	Range	0.0 to 14.0 pH	0.0 to 14.0 pH	0.0 to 14.0 pH
	Resolution	0.1 pH	0.1 pH	0.1 pH
	Accuracy	±0.1 pH	±0.1 pH	±0.1 pH
EC	Range	0 to 6000 µS/cm	0 to 6000 µS/cm	0 to 1990 µS/cm
	Resolution	10 µS/cm	10 µS/cm	10 µS/cm
	Accuracy	±2% F.S.	±2% F.S.	±2% F.S.
TDS	Range	0 to 3000 ppm (mg/L)	0 to 3000 ppm (mg/L)	0 to 1990 ppm (mg/L)
	Resolution	10 ppm (mg/L)	10 ppm (mg/L)	10 ppm (mg/L)
	Accuracy	±2% F.S.	±2% F.S.	±2% F.S.
Temperature	Range	0 to 70°C	0 to 70°C	0 to 60°C
	Resolution	0.1°C	0.1°C	10°C
	Accuracy	±0.5°C	±0.5°C	±1°C
Additional Specifications	TDS Conversion Factor	0.5 ppm (mg/L) = 1 µS/cm	0.5 ppm (mg/L) = 1 µS/cm	
	pH Calibration	manual, 1-point through offset trimmer		
	EC/TDS Calibration	manual, 1-point through slope trimmer		
	EC/TDS Temperature Compensation	automatic from 0 to 70°C (32 to 158°F) with β = 2% /°C		
	Probe (included)	HI1285-61 polypropylene body, pre-amplified multiparameter probe with CAL Check, internal temperature sensor, 8-pin DIN connector and 1 m (3.3') cable	HI1285-51 polypropylene body, pre-amplified multiparameter probe with internal temperature sensor, 8-pin DIN connector and 1 m (3.3') cable	
	Battery Type / Life	9V / approximately 450 hours of continuous use		
	Environment	0 to 50°C (32 to 122°F); RH max 100%		
	Dimensions	145 x 80 x 36 mm (5.7 x 3.1 x 1.4")		
	Weight	230 g (8.1 oz.)		
Ordering Information	<p>HI9810-61 is supplied with HI1285-61 multiparameter probe with CAL Check, HI70007 pH 7.01 calibration solution sachet, HI70032 1382 ppm (mg/L) calibration solution sachet, HI70031 1413 µS/cm calibration solution sachet, HI700661 electrode cleaning solution sachets (2), 9v battery (1), instructions and rugged carrying case.</p> <p>HI9811-51 and HI9812-51 are supplied with HI1285-51 multiparameter probe, HI70007 pH 7.01 calibration solution sachet, HI70032 1382 ppm (mg/L) calibration solution sachet, HI70031 1413 µS/cm calibration solution sachet, HI700661 electrode cleaning solution sachets (2), 9v battery (1), instructions and rugged carrying case.</p>			
Accessories	<p>HI710007 blue shockproof rubber boot</p> <p>HI710008 orange shockproof rubber boot</p> <p>HI7209811 spare carrying case for HI981X-X series</p>			



Code	HI1285-7	HI1285-61	HI1285-51	HI12883
Description	pre-amplified pH and EC probe	pre-amplified pH and EC probe	pre-amplified pH and EC probe	pre-amplified pH and EC probe
Reference	single, Ag/AgCl	single, Ag/AgCl	single, Ag/AgCl	single, Ag/AgCl
Junction / Flow Rate	cloth	cloth	cloth	cloth
Electrolyte	gel	gel	gel	gel
Max Pressure	0,1 bar	0,1 bar	0,1 bar	1 bar
Range	pH: 0 to 13 / EC T: 0 to 50°C (32 to 122°F) - LT	pH: 0 to 13 / EC T: 0 to 50°C (32 to 122°F) - LT	pH: 0 to 13 / EC T: 0 to 50°C (32 to 122°F) - LT	pH: 0 to 13 / EC T: 0 to 50°C (32 to 122°F) - LT
Tip / Shape	spheric (dia: 8,0 mm)	spheric (dia: 8,0 mm)	spheric (dia: 8,0 mm)	spheric (dia: 8,5 mm)
Glass Type	LT (low temperature)	LT (low temperature)	LT (low temperature)	LT (low temperature)
Temperature Sensor	yes	yes	yes	yes
Amplifier	yes	yes	yes	yes
Body Material	polypropylene	polypropylene	polypropylene	polypropylene
Cable	7-pole; 1 m (3,3')	7-pole; 1 m (3,3')	7-pole; 1 m (3,3')	7-pole; 1 m (3,3')
Recommended Use	greenhouses, hydroponics	greenhouses, hydroponics, environmental monitoring, water treatment, boilers, cooling towers	greenhouses, hydroponics, environmental monitoring, water treatment, boilers, cooling towers	general purpose, water treatment, agriculture, boilers, cooling towers
Plug	Quick Connect DIN To be used with HI9814	DIN with CAL Check™ To be used with HI9813-61 and HI9810-61	DIN To be used with HI9811-51, HI9812-51 and HI9813-51	Quick Connect DIN To be used with HI991300 and HI991301