

HI-9812-51 PH EC TDS TEMPERATURE PORTABLE METER

Reference: HI-9812-51



The HI-9812-51 and HI-9811-51 series of meters are pH/EC/TDS instrumentation for agriculture, greenhouse and hydroponics applications.

- ✓ pH
- ✓ Conductivity & TDS

FULL DESCRIPTION

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 $\mu\text{S}/\text{cm}$ and 10 ppm (mg/L) resolution and 2% full scale accuracy. Please select the meter with the range you require for your testing.

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 1500ppm. 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 reduced 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 the motors, ballasts or pumps.

HI-1285-51 probe

The HI-9811-51 and HI-9812-51 are supplied with the HI-1285-51 pH/EC/TDS/temperature probe. 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 (fertiliser) 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

SPECIFICATION

Range	EC	0 to 1990 $\mu\text{S}/\text{cm}$
	TDS	0 to 1990 ppm (mg/L)
	pH	0.0 to 14.0 pH
	Temp	0 to 60°C
Resolution	pH	0.1 pH
	EC	10 $\mu\text{S}/\text{cm}$
	TDS	10 ppm (mg/L)
Accuracy	pH	± 0.1 pH
	EC	$\pm 2\%$ F.S.
	TDS	$\pm 2\%$ F.S.
	Temp	$\pm 1^\circ\text{C}$



TDS Conversion

Factor 0.5 ppm (mg/L) = 1 $\mu\text{S}/\text{cm}$

pH Calibration manual, 1 point through offset trimmer

EC/TDS
Calibration manual, 1 point through slope trimmer

EC/TDS

Temperature automatic from 0 to 70°C with $\beta = 2\% / ^\circ\text{C}$

Compensation

Probe HI 1285-51 pH/EC/TDS/Temperature,
polypropylene body, pre-amplified
multiparameter probe with internal
temperature sensor, 8-pin DIN connector and
1m cable included

Battery Type /
Life 9V / approximately 450 hours of continuous
use

Environment 0 to 50°C; RH 100%

Dimensions /
Weight 145 x 80 x 36mm / 230g

**Ordering
Information**

HI-9811-51 and HI-9812-51 are supplied with HI-1285-51 multiparameter probe, HI-70007 pH 7.01 calibration solution sachet, HI-70032 1382 ppm (mg/L) calibration solution sachet, HI-70031 1413 $\mu\text{S}/\text{cm}$ calibration solution sachet, HI-700661 electrode cleaning solution sachets x 2, 9v battery x 1, instructions and rugged carrying case.

ACCESSORIES		REFERENCE
	HI-70007P pH 7.01 Buffer Sachets, 25 x 20 mL sachets	HI-70007P
	HI-70031P 1413 $\mu\text{S}/\text{cm}$ Conductivity Solution, x25 Sachets	HI-70031P
	HI-70032P 1382 mg/L (ppm) TDS Calibration Solution, x25 Sachets	HI-70032P
	HI-700661P Electrode cleaning Solution for Agricultural applications	HI-700661P





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The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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