

HI 98280

GPS Multiparameter Meter with Fast Tracker™ Tag Identification System

- Display up to 12 parameters
- Track measurement locations with GPS
- Waterproof protection for meter (IP67) and probe (IP68)
- Fast Tracker™—Tag I.D. System simplifies test logging
- Graphic LCD with backlight
- Built-in barometer for DO compensation
- Quick calibration feature
- Measurement check eliminates erroneous readings
- Auto recognition of pH and pH/ORP probe
- Logger function records the data of all connected sensors
- Log on demand and automatic logging (up to 60,000 samples)
- Logged data can be displayed as graphs
- USB for PC connectivity
- Autorange of EC and TDS readings
- Good Laboratory Practice feature with last 5 calibrations recorded
- Field replaceable sensors
- Meter accepts both alkaline and rechargeable batteries
- Rugged probe with stainless steel tip has a diameter under 2" for wells and pipes

The HI 98280 multiparameter meter with GPS receiver monitors up to 13 different water quality parameters (6 measured, 7 calculated). Measurements include pH, pH/mV, ORP, % saturation DO, mg/L DO, EC, absolute EC, resistivity, TDS, salinity, seawater specific gravity, atmospheric pressure and temperature.

Measurements from specific locations are tracked with detailed coordinate information that can be viewed immediately on the display. GPS information can be transferred to a PC using HANNA's

HI 929828 software. GPS information can also be viewed by GPS mapping software such as Google™ maps*. Clicking on visited locations using mapping software such as Google™ Maps displays measurement information. The built-in 12 channel GPS receiver and antenna guarantees a position accuracy of 30 ft (10 m).

For measuring points within a 30 ft range or where GPS signals are not available, HI 98280's Fast Tracker™ is invaluable for associating measurements with their locations. HANNA's exclusive Fast Tracker™—Tag I.D. System monitors and records data using iButton®s that can be installed at any number of sampling sites.

The HI 98280 has a graphic, backlit LCD that automatically sizes the digits to fit the screen and allows full configuration of each parameter measured along with on-screen graphing capability. The meter incorporates comprehensive GLP features and the downloading of data via USB connection.

Each parameter is supported by on-screen context sensitive help, both in the calibration mode and during measurement.

Designed for outdoor environments, the meter is impact resistant and waterproof meeting IP67 standards (30 minutes immersion under 1 m of water). The multi-sensor probe can be left underwater in accordance with IP68 standards.

HI 769828 Multiparameter, Intelligent Probe

HANNA's HI 769828 multiparameter probe incorporates a built-in microprocessor and amplifier that convert the high impedance signals from the sensors of the probe to eliminate common problems such as cable length limitations and noise associated with high impedance signals. This allows the probe to have a reliable communication with the meter and also immediately warns the user of problems such as a broken cable. The standard cable lengths of the probe are 4, 10 and 20 meters (13, 32 and 64 feet) and custom lengths are also available.

The probe also features HANNA's Quick Calibration which allows the user to calibrate pH and conductivity with one solution in a single, simple step. Dissolved oxygen is also calibrated in one step in saturated air. The probe houses 5 of the 6 measured parameters: pH, ORP, EC, dissolved oxygen and temperature. The sensors are all independently replaceable and are easy to maintain and keep clean. The sensors are protected by an outer PVC/stainless steel sleeve and cap which is suitable for use in 2" wells. The probe housing complies with IP68 standard.

GPS (Global Positioning System) Enabled

The new HI 98280 features an internal 12 channel GPS receiver and antenna that calculates its position to track locations along with measurement data. The GPS tracks your location using satellites to within 30 ft (10 m).

GPS coordinates are shown on the LCD with up to 10 measurement parameters. The LCD also displays the GPS signal strength, number of satellites and logged data embedded with GPS coordinates.

Users can associate GPS coordinates with alphanumeric locations and distances between current location and predefined locations are displayed arranged by distance. In the case of GPS signal loss, the HI 98280 memorizes the last location and time.

HI 929828 PC Software manages logged data from the HI 98280 and displays GPS coordinates along with logged data.

Track Measurement Locations

Users can connect to GPS tracking software such as Google™ Maps* to view locations where samples have been taken. Measurement information is shown right on the map.

Fast Tracker™—Tag Identification System

HANNA's Fast Tracker™—Tag Identification System simplifies test logging. iButton®s with a unique ID can be installed at various sampling sites. When the matching connector on the meter contacts the location button, measurements are logged and labeled with the alphanumeric user entered location ID. Location, date, time and measurements are logged into the meter which can be transferred to a PC. The Fast Tracker™ system complements the GPS for ultimate tracking.

Choose your configuration -

HI 982804-01 HI 9828 with GPS and 4 m (13.1') probe cable, 115VAC

HI 982804-02 HI 9828 with GPS and 4 m (13.1') probe cable, 230VAC

HI 9828010-01 HI 9828 with GPS and 10 m (33') probe cable, 115VAC

HI 9828010-02 HI 9828 with GPS and 10 m (33') probe cable, 230VAC

HI 9828020-01 HI 9828 with GPS and 20 m (66') probe cable, 115VAC

- HI 9828020-02** HI 9828 with GPS and 20 m (66') probe cable, 230VAC
- HI 9828030-01** HI 9828 with GPS and 30 m (98') probe cable, 115VAC
- HI 9828030-02** HI 9828 with GPS and 30 m (98') probe cable, 230VAC
- HI 9828040-01** HI 9828 with GPS and 40 m (131') probe cable, 115VAC
- HI 9828040-02** HI 9828 with GPS and 40 m (131') probe cable, 230VAC
- HI 9828050-01** HI 9828 with GPS and 50 m (164') probe cable, 115VAC
- HI 9828050-02** HI 9828 with GPS and 50 m (164') probe cable, 230VAC
- HI 9828060-01** HI 9828 with GPS and 60 m (200') probe cable, 115VAC
- HI 9828060-02** HI 9828 with GPS and 60 m (200') probe cable, 230VAC
- HI 9828070-01** HI 9828 with GPS and 70 m (230') probe cable, 115VAC
- HI 9828070-02** HI 9828 with GPS and 70 m (230') probe cable, 230VAC
- HI 9828080-01** HI 9828 with GPS and 80 m (262') probe cable, 115VAC
- HI 9828080-02** HI 9828 with GPS and 80 m (262') probe cable, 230VAC
- HI 9828090-01** HI 9828 with GPS and 90 m (295') probe cable, 115VAC
- HI 9828090-02** HI 9828 with GPS and 90 m (295') probe cable, 230VAC

Order Information:

HI 9828 configurations are supplied with HI 769828 multisensor probe (pH/ORP, EC, DO, temperature), HI 9828-25 quick calibration standard solution (500 mL), probe maintenance kit, rechargeable C size Ni-MH batteries (4), power adapter & cable, car 12V accessory outlet adapter, HI 7698281 USB interface cable, HI 92828 Windows® compatible software and instruction manual in a rugged carrying case.

- Specifications
- **Accessories**
- Downloads

pH	Range	0.00 to 14.00 pH
	Resolution	0.01 pH
	Accuracy	±0.02 pH
mV of pH Input	Range	±600.0 mV
	Resolution	0.1 mV
	Accuracy	±0.5 mV
ORP	Range	±2000.0 mV
	Resolution	0.1 mV
	Accuracy	±1.0 mV
Dissolved Oxygen	Range	0.0 to 500.0% / 0.00 to 50.00 mg/L
	Resolution	0.1% / 0.01 mg/L
	Accuracy	0.0 to 300.0%: ±1.5% of reading or ±1.0% whichever is greater; 300.0 to 500.0%: ±3% of reading; 0.00 to 30.00 mg/L: ±1.5% of reading or 0.10 mg/L whichever is greater; 30.00 mg/L to 50.00 mg/L: ±3% of reading
Conductivity	Range	0.000 to 200.000 mS/cm (absolute EC up to 400 mS/cm) manual: 1 µS/cm; 0.001 mS/cm; 0.01 mS/cm; 0.1 mS/cm; 1 mS/cm; automatic: 1 µS/cm from 0 to 9999 µS/cm; 0.01 mS/cm from 10.00 to 99.99 mS/cm; 0.1 mS/cm from 100.0 to 400.0 mS/cm;
	Resolution	automatic mS/cm: 0.001 mS/cm from 0.000 to 9.999 mS/cm; 0.01 mS/cm from 10.00 to 99.99 mS/cm; 0.1 mS/cm from 100.0 to 400.0 mS/cm
	Accuracy	±1% of reading or ±1 µS/cm whichever is greater
Resistivity	Range	0 to 999999 Ω•cm; 0 to 1000.0 kΩ•cm; 0 to 1.0000 MΩ•cm

TDS	Resolution	dependent on resistivity reading
	Range	0 to 400000 mg/L or ppm (the maximum value depends on the TDS factor) manual: 1 mg/L (ppm); 0.001 g/L (ppt); 0.01g/L (ppt); 0.1 g/L (ppt); 1 g/L (ppt); autorange scales: 1 mg/L (ppm) from 0 to 9999 mg/L (ppm); 0.01 g/L (ppt) from 10.00 to 99.99 g/L (ppt);
	Resolution	0.1 g/L (ppt) from 100.0 to 400.0 g/L (ppt); autorange g/L (ppt) scales: 0.001 g/L (ppt) from 0.000 to 9.999 g/L (ppt); 0.01 g/L (ppt) from 10.00 to 99.99 g/L (ppt); 0.1 g/L (ppt) from 100.0 to 400.0 g/L (ppt)
Salinity	Accuracy	±1% of reading or ±1 mg/L (ppm) whichever is greater
	Range	0.00 to 70.00 PSU (Extended Practical Salinity Scale)
	Resolution	0.01 PSU
Seawater Specific Gravity	Accuracy	±2% of reading or 0.01 PSU whichever is greater
	Range	0.0 to 50.0 σ_t , σ_0 , σ_{15}
	Resolution	0.1 σ_t , σ_0 , σ_{15}
Atm. Pressure	Accuracy	±1 σ_t , σ_0 , σ_{15}
	Range	450 to 850 mmHg; 17.72 to 33.46 inHg; 600.0 to 1133.2 mbar; 8.702 to 16.436 psi; 0.5921 to 1.1184 atm; 60.00 to 113.32 kPa
	Resolution	0.1 mmHg; 0.01 inHg; 0.1 mbar; 0.001 psi; 0.0001 atm; 0.01 kPa
Temperature	Accuracy	±3 mmHg within ±15°C from the calibration temperature
	Range	-5.00 to 55.00°C; 23.00 to 131.00°F; 268.15 to 328.15K
	Resolution	0.01°C; 0.01°F; 0.01K
Calibration	Accuracy	±0.15°C; ±0.27°F; ±0.15K
	pH	automatic one, two, or three points with five memorized standard buffers (pH 4.01, 6.86, 7.01, 9.18, 10.01) or one custom buffer
	ORP	automatic at one custom point
	Conductivity	automatic one point with six memorized standards (84 μ S/cm, 1413 μ S/cm, 5.00 mS/cm, 12.88 mS/cm, 80.0 mS/cm, 111.8 mS/cm) or custom point
	DO	automatic one or two points at 0, 100% or one custom point
	Resistivity, TDS, σ	based on conductivity or salinity calibration
	Salinity	one custom point
	Atm. Pressure, Temperature	automatic at one custom point
	Temperature Compensation	automatic from -5 to 55°C (23 to 131°F)
	Logging Memory	up to 60,000 samples with 13 measurements each; Up to 45,000 samples with 15 measurements each (GPS)
Logging Interval	1 second to 3 hours	
Computer Interface	USB (with HI 929829 software)	
Waterproof Protection	meter IP67, probe IP68	
Environment	0 to 50°C (32 to 122°F); RH 100%	

Power Supply

1.5V alkaline C cells (approximately 150 hours of continuous use without backlight) (4) / 1.2V rechargeable C cells (approximately 70 hours of continuous use without backlight) (4)

Dimensions**Meter/Probe**

221 x 115 x 55 mm (8.7 x 4.5 x 2.2") / 270 x 46 mm DIA (10.6 x 1.8" DIA)

Weight

meter: 750 g (26.5 oz.); probe: 750 g (26.5 oz.)