POGO Portable Soil Sensor

Description

The POGO Portable Soil Sensor puts the power of the popular *Stevens* Hydra Probe II in the palm of your hand. Featuring Stevens Hydra-Mon PDA software, you are free to take soil measurements anywhere at any time, without the time requirements of setting up a permanent soil monitoring system.

With the *Stevens* HydraMon software, taking soil readings is easy. Simply insert the probe into the soil, select the correct soil type from the menu, and click the "Sample" button on your PDA's screen. The software will display soil temperature, conductivity and dielectric permittivity on-screen for immediate viewing. The user also has the option to log all sensor measurements to a file with user-defined physical locations. The PDA can be synchronized and readings automatically downloaded to a PC as a CSV or text file for further data analysis in *MS Excel*.

Any PDA with Windows CE can be connected to the POGO via a serial adapter cable, allowing the Hydra Probe II to communicate directly with the PDA.

The POGO system features a rugged, anodized aluminum housing that contains a rechargeable battery pack that powers the Hydra Probe II. The POGO also has an LCD screen that indicates battery voltage as well as an on/off switch. A strap allows the POGO to be carried over the shoulder, allowing the PDA to be easily operated with two hands while conducing soil measurements.

Benefits

- Instantly measure soil moisture, electrical conductivity, and temperature
- No installation necessary, just insert the probe and click "Sample"
- Optimize soil analysis, watering and fertilization
- Enables measurement of native (undisturbed) soil
- Low risk: ten years of field-proven science
- Performs well in high-salinity soil
- Easier monitoring of remote sites

Features

- Instantaneous sensor response
- Rechargeable battery
- Battery voltage indicator screen
- No calibration for most soils
- Custom calibration available for peat, grain, and organic soil
- Compact & rugged for years of use
- Download data to a PC and view in *Excel* or other programs
- The only portable soil sensor that measures both components of the complex dielectric permittivity

Applications

- Spot checking of soil
- Golf & sports turf management
- Precision agriculture/fertigation
- Greenhouse applications
- Agriculture research
- Watershed management
- Academic/classroom use
- Laboratory research

Stevens®
Water Monitoring Systems, Inc.

Stevens®
Water Monitoring Systems, Inc.

POGO Technical Specifications

LOGGED SOIL MEASUREMENT PARAMETERS	
1. Date	12. Real Dielectric Permittivity (temperature compensated)
2. Time	13. Imaginary Dielectric Permittivity
3. Soil Type	14. Imaginary Dielectric Permittivity (temperature compensated)
4. Location	15. Diode Temperature
5. Coordinates	16. Voltage 1
6. Soil Temp (C)	17. Voltage 2
7. Soil Temp (F)	18. Voltage 3
8. Soil Moisture	19. Voltage 4
9. Soil Electrical Conductivity	20. Voltage 5
10. Soil Electrical Conductivity (temperature compensated)	
11. Real Dielectric Permittivity	

HYDRA PROBE II TECHNICAL SPECIFICATIONS		
Typical Measurements	Range	Accuracy
Dielectric Permittivity	1 to 80 where 1 = air 80 = distilled water	± 1.5% or 0.2 whichever is typically greater
Soil Moisture for inorganic & mineral soil	From completely dry to fully saturated	> ± 0.03 water fraction by volume max in typical soil
Conductivity	0.01 to 1.5 S/m	± 2.0% or 0.005 S/m whichever is typically greater
Temperature	-10° to +65° C	± 0.1° C

POGO TECHNICAL SPECIFICATIONS	
Battery Type	Rechargeable NiMH battery, 12V / 3500mAh
Housing	Black Anodized Aluminum
Cable	22 gauge, UV Resistant
Operating Temperature	-10° C to +65° C
Water Resistance	PROBE tolerates continuous full immersion in liquid DO NOT SUBMERSE BATTERY ENCLOSURE OR PDA!
Probe	Fully potted 304-grade stainless steel, shock resistant
Length x Width x Height	6.75 in x 4 in x 2.5 in (L x W x D)
Weight	4.1 lbs (1.85 kg) - All equipment: POGO, PDA and cables

ORDERING INFORMATION	
Part #	Description
93633	POGO and HydraMon Software (no PDA included)
93633-001	POGO with PDA and HydraMon Software

Since 1911, Stevens Water Monitoring Systems, Inc. has provided complete water monitoring solutions including:

- Water Level Sensors
- Water Quality Sensors
- Soil Moisture Sensors
- Chart Recorders
- Staff Gages
- Weather Sensors
- Telemetry Systems
- Data Collection Platforms

Monitoring the Earth's Water Resources Since 1911