

Soil Moisture Data Reader

Features

- Hydra Soil Probe Data Acquisition and Storage
- Direct Download of Logged Data to PC
- No Maintenance or Calibration Requirements
- Environmentally Robust, Lightweight & Portable
- Convenient and Accurate



Description

The Stevens portable Hydra Probe Hand Held Data Reader is a handheld data reader used to accurately acquire, log and display data directly from the Hydra Soil Moisture Sensor.

The Data Reader converts raw Hydra Probe voltages directly into soil moisture, salinity, and temperature readings without requiring any further processing or calibration. Data can then be logged and stored freeing the user from manual record keeping for use later or the unit may be put in direct read only mode. The user is prompted for a Site ID number, and the recorded value is automatically given a date and time stamp.

The Data Reader downloads data to a PC for archiving, graphical presentation, and report generation. Software makes downloading simple and the data may be customized to specific user needs.

The Data Reader is compact, lightweight package. There are no maintenance requirements. The durable ABS design allows for operation in harsh outdoor conditions and is rain and shock resistant. The membrane sealed keypad creates a dust-proof enclosure providing further protection against harsh field conditions. Standard AA-Cell batteries power the unit, which typically provides 3000 measurements for several months of operation.

Applications

Supplies user with immediate real time snap shot of field soil moisture conditions for:

- Irrigation management
- Geotechnical
- Weather/climate studies
- Watershed management
- Flood control forecasting

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Technical Specifications

Data Logging		Power Specifications	
User ID sites	255 sites	Batteries	4 AA Cell batteries
Logged data memory	3000 readings	Battery life	3000 measurement (typical)
Interface	RS-232 serial cable to PC	Backup	Separate battery retains logged value
Accuracy	Full accuracy of Hydra Soil Moisture Sensor		
Sample time	2 seconds	Display	
Calibration	None	LCD	32 Character
Physical size		Environmental	
Length x width x height	7.75"x1.75"x4.0" (19cm x 4cm x 10cm)	Operating temperature	-5 C to + 50 C
Weight	1.2 lbs (511 g)	Storage temperature	-40 C to +65 C
Material	ABS Plastic	Rain / dust proof	



The Hand Held data reader is used with Stevens Hydra Soil Moisture Probe. Stevens' patented Hydra Probe determines the electrical response of soils that can be specified by two parameters, the dielectric constant and the conductivity. Unlike other capacitance type sensors, the Hydra Probe measures both of these components simultaneously. The high frequency electrical measurements of the capacitive and conductive properties of soil are then directly related to the soil's moisture and salinity content while a thermistor determines soil temperature.

Ordering Information

Part #	Description	Part #	Description
93324	Hand held data reader	92880	Jig for easy probe installation
92897	Cable: 18 AWG copper wire	93342-001	Data reader connector option

Description	0 to 2.5 Volt P/N	0 to 5.0 Volt P/N
Hydra Probe with 25' of cable	70030-002	70030-001
Hydra Probe with 26' to 100' of cable (with P/N 92897 specify actual length)	70030-006	70030-005

