Automatic Infiltration Meter

Product Overview

The Automatic Infiltration Meter (AIM) is an automated solution for the measurement of infiltration rate in soils. The AIM is a convenient solution for infiltration measurements that saves researchers time. The AIM relieves researchers of the need to manually monitor their infiltrometer with a stop-watch and notepad.

The AIM automatically calculates cumulative infiltration (cm) as a function of time. Converted and unconverted data is stored within the AIM and can be downloaded as a csv file for further data manipulation and analysis.

The AIM can support up to 5 x Tension Infiltrometers or your own infiltrometer/permeameter with installation advice from ICT International.

The AIM is a fully self-contained unit with 4GB data logging capacity and an internal battery that will last several days' field work. The battery is easily recharged with a 24V power supply (CH24). Communication is via a USB port or wireless connectivity. The AIM is IP-65 rated and has a Windows driven GUI interface.

Applications

- Unsaturated and saturated hydraulic conductivity
- Hydrological modelling
- Run-off and groundwater recharge estimation
- Irrigation practices
- Waste water and mine site management

Features

- Stand-alone, wireless data logging
- Automatic conversion of pressure transducer measurements to cumulative infiltration
- Up to 5 x pressure transducers per AIM
- Low power requirement in the field, recharge battery at night
- IP-65 weather proof rated

The AIM is ideally used in combination with the volumetric moisture content instrument, the MPKit. For longer term monitoring the Soil Tension Meter (soil water potential) and Soil Moisture Meter (soil water content) are available.

AIM Specifications

AIM Logging	
Differential Channels	5 Channels
Resolution	0.00001V-24-Bit
Accuracy	0.001V
Minimum Logging Interval	1 second
Delayed Start	Suspend Logging, Customised Intervals
Sampling Frequency	10Hz
Data	
Communications:	USB, Wireless Radio Frequency 2.4 GHz
Data Storage	MicroSD Card, SD, SDHC & SDXC Compatible (FAT 32 Format)
Software Compatibility	Windows Vista, 7, 8 & 8.1
Data File Format	Comma Separated Values (CSV) format for compatibility with all software programs
Memory Capacity	Up to 16GB, 4GB microSD card included.
Operating Conditions	
Temperature Range	-40 ° C to +80 ° C
R/H Range	0 -100%
Upgradable	User upgradeable firmware using USB boot strap loader function
Power	
Power supply	8-30V DC 2-wire non polarized bus
Power Consumption	20 mA
Internal Battery Monitoring	Logging internal battery voltage & charging current
Charging Rate	Automatic variable rate of charging to maximise solar panel charging current on full sun days and or under low light cloudy conditions. Variable current 60 mA to 200 mA

Features

Power Management

- Internal Lithium-Polymer Battery
- Power On/Off Switch
- Internal Voltage Regulation
- Optical Isolation Lightning Protection

Logging

- Stand-Alone Logging
- 24-Bit Resolution
- MicroSD Expandable Memory
- USB Connectivity
- Wireless Data Transfer
- IP65 Water Proof Rating
- Free Windows Utility Configuration Software

Accessories

- MCC
- Quad Band GPRS, GSM, 3-G CDMA Modem

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