# Digital Albedometer

"Virtual" make Digital Albedometer reflect state of the art in micro controller based instrumentation design. The Pyranometer sensor can be attached with this handheld terminal for the collection of real time data Manually/automatically (user selectable). The terminal has its internal memory along with, a real time clock with an LCD (16 X 2) to display the instrument status. It is a self-contained power source system, fitted with 2XAA Alkaline type batteries with battery level display, complete with sensor mounted on a levelling Base Plate. Sensor powered directly from Handheld terminal and no need of external power source. 4 x 2 keypad is provided for programming data logger and monitoring sensor reading at site without the help of computer. Can store up-to 9 different sites data with Site ID. USB port is provided for data downloading from terminal to Computer/Laptop. Data file is saved in Microsoft's Excel Format.
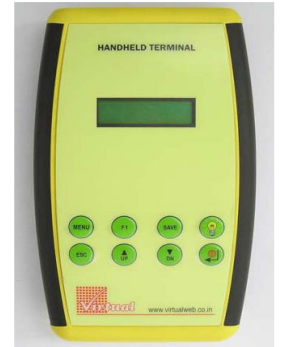
Features & Specifications:

Sensor Input: Two Pyranometer Sensors
Parameter Monitored: Date, Time, Solar Radiation (W/m²).
Display: LCD (16 X 2) to display the instrument status.
Keyboard: provided for on-site programming.
Logging: Manual / Automatic (User Selectable) Interval 1 Sec to 24 hrs
PC Software: GUI based Virtual-ware software for Data download.
Real Time Clock: Internal with accuracy of +/- 2 minutes /year & leap year compensation
Memory: more than 12000 data sets (at user selectable interval).
Battery : 2XAA Alkaline Batteries (easily replaceable onsite).
Battery Monitoring: Battery Level display on LCD with Low Battery Warning
Operating Humidity: 0 to 100%, Operating Temp: - 20 to 70 °C
Data Port: USB Port for Downloading Data from Data Logger to Computer/Laptop.
Data Output Format   MS- Excel

Application Software (Virtualware)

This is a user-friendly, Menu Driven, Windows based software allows you to view & save collected data from data logger to computer/laptop. Data file is saved in Microsoft's Excel format.

Deliverables

1. Two Pyranometer Sensors with 1m cable length
2. Programmed Handheld Data Logger
3. 2 batteries (type AA)
4. USB cable
5. software

Sensor Options (Choose Any One):

Calculate Albedo using Shortwave Solar Radiation Sensor   **Calculate Albedo using Global Solar Radiation Sensor**

Radiation Range: 0 – 2000 w/m2
Cosine response @ 45° zenith angle: ± 4 %
Cosine response @ 75° zenith angle: ± 10 %
Absolute accuracy: ± 5 %
Repeatability: ± 1 %
Output: 0.200 mV / Wm-2
Sensitivity: Custom calibrated to exactly 5.00 W m-2/ mV
Operating environment - 40 to 55 °C; 0 to 100% RH
Calibration traceability WRR

ISO classification second class
Spectral range 285 - 2800 nm
Sensitivity (nominal) 15 µV/ W.m-2
Temperature range -40 - +80 °C
Range 0 to 2000 W.m-2
Temperature dependence < 0.1%/°C

Ordering Guide:

SN	Description	Model No.
1	Digital Albedometer using Shortwave Radiation Sensor	DAM-VH-SR
2	Digital Albedometer using Global Radiation Sensor	DAM-VH-GR

Virtual Hydromet

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Represented by:

**Drawing / specifications are subjected to change at any time without prior notice as per manufacturing suitability.