ALBEDOMETER AB20/K

The albedometer is an electronic sensor built to measure the intensity and the daily length of the insolation by monitoring of two parameters: the total incident solar radiation and the reflected radiation, corresponding respectively to the power and the energetic flow of sun energy, and to the quantity absorbed by the earth's surface.

These data are important to value the atmosphere transparency referring to the pollution of gases and vapours and to determine the main relating thresholds in the agricultural, biological, architectonical, meteorological field.

TECNOLOGY AND FUNCTIONING

The albedometer is a tool composed of two radiometers: one pointing to the sky, which measures the incident solar radiation, and one rotated 180 degrees and pointed to the ground, to measure the reflected radiation.

The sensor, made by a 64 element thermo-pile, produces electricity responding to the solicitation's intensity, thus returning the value of the measured parameter. Particular attention is given to building details (such as the use of an airtight container with a double-glass dome, the presence of hydroscopic salts to maintain the inside air dry and clean, and the use of a white screen to protect the sensor from the radiation usury) optimizes the measurement conditions, to obtain the most reliable and realistic data.

The electronic components have the function to elaborate and analyzing the sensor's measurements, translating them into data and they are protected by a poly-carbonate container.

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innovation for a safer world.

TECHNICAL SPECIFICATIONS

- Measurement range: 0 ÷ 1500 W/m²

- Spectral window: 305 ÷ 2800 nm

- Non linearity: ± 1.5% in the gap 0 ÷ 1000 W/m²

- Temperature's operative interval: da -40 to +60 °C

- Accuracy: 5% (daily total) 1st class WMO (ISO9060)

- Influencing parameters: sensibility dependence from temperature < 2% in the interval from -10 to +40 °C

- Size: 150 (Ø) x 115 mm (per sensor)

- Weight: 2.1 Kg (with screen)