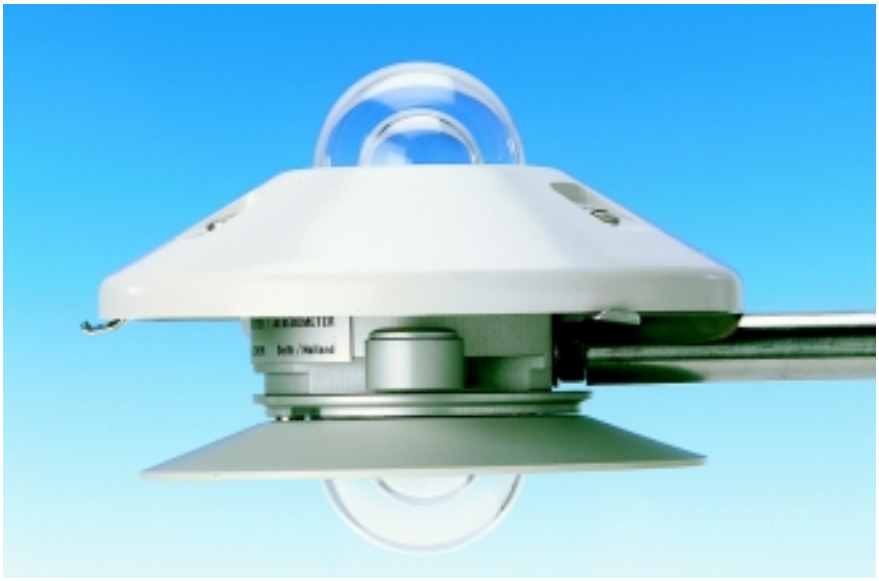
CM7B & CM14
Albedometers



The CM7B and CM14 albedometers are suitable for measuring net global radiation and/or albedo over many differing types of surface. Both sensors are of equal sensitivity. They also have conical lower screens, to prevent illumination of the lower glass dome at sunrise and sunset.

The CM7B albedometer is constructed around two CM6B 64-thermocouple sensors, and the CM14 around two CM11 100-thermocouple sensors. Both are rotationally symmetrical beneath K5 glass domes.

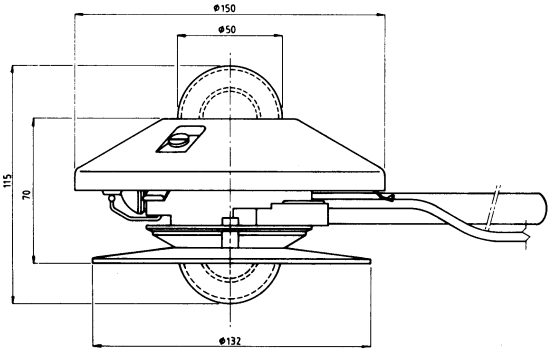
A white screen prevents the body from heating up. The albedometers are equipped with a spirit level and screws for accurate levelling. A drying cartridge keeps the interior free from humidity. All albedometers are supplied with a calibration certificate.

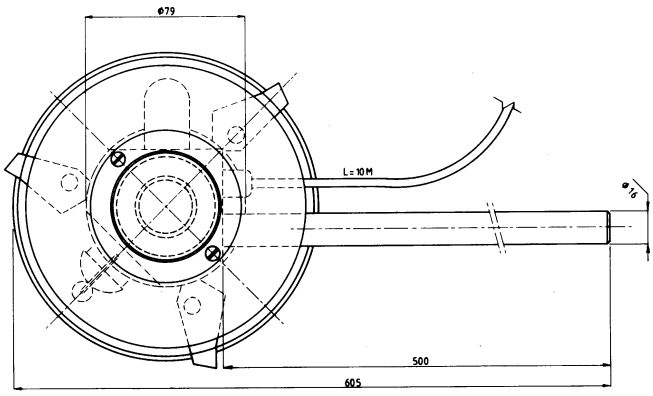
There are two operating modes for an albedometer: net global radiation is measured with the sensors connected in anti-series. Separate recordings of the outputs and a subsequent measurement of the ratio of one output to the other yields the albedo calculation.

TECHNICAL DATA

	CM7B
Spectral range	305...2800 nm (50 % points)
Sensitivity	9..15 µV/Wm^{-2}
Impedance	70...100 Ohm
Response time	1/e 5 s, 99 % 55 s
Non-linearity	<1.5 % (<1000 W/m ^{2})
Tilt error	<1.5 % at 1000 W/m ^{2}
Operating temperature	-40...+90 °C
Temperature dependence of sensitivity	±2 % (-10...+40°C)
Maximum irradiance	2000 W/m^2
Directional error	< ±20 W/m^2 at 1000 W/m^2
Weight	1.9 kg
Cable length	10 m

	CM14
Spectral range	305...2800 nm (50 % points)
Sensitivity	4...6 µV/Wm^{-2}
Impedance	700...1500 Ohm
Response time	1/e 4 s, 99 % 24 s
Non-linearity	± 0.6 % (<1000 W/m ^{2})
Tilt error	none
Operating temperature	-40...+90 °C
Temperature dependence of sensitivity	±1 % (-10...+40°C)
Maximum irradiance	4000 W/m^2
Directional error	< ±10 W/m^2 at 1000 W/m^2
Weight	1.9 kg
Cable length	10 m





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