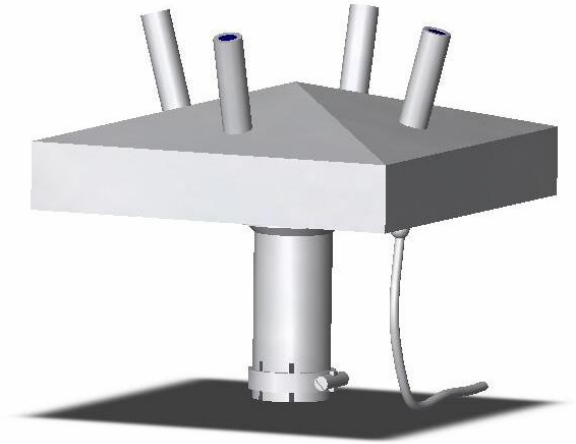


CIR 4

The Solution for Day and Night Nebulosity Measurement

Up to now measurements of the cloud cover are still performed by human observers with a low frequency around once every three hours or by ceilometers (ASOS algorithm). In parallel new challenges in meteorology, climatology and environmental protection require accurate and frequent measurements of this parameter day and night.



Principle:

The infrared technology of CIR 4 answers this challenge. Indeed, it allows the measurement of nebulosity day and night and associated parameters with a frequency up to once per minute. The transmission is done at the same rate as any type of remote systems with serial inputs (RS485) and optionally with voltage inputs.

Each of the four detectors points to one of the ordinal wind directions (N, E, S, W).

CIR 4 provides in the transmitted data string:

- Global Nebulosity in percent or octa (user selectable)
- Nebulosity per cloud height class in percent or octa (user selectable)
- Ceiling per cloud height class in meters or feet (set by the user)
- Main direction where clouds are located (ordinal)

Technical Features:

- **Nebulosity:**
 - Range: 0 to 100%
 - Accuracy: +/- 6%
- **Ceiling:**
 - Range: 0 - 8000 m
 - Accuracy: +/- 200 m (with adiabatic profile)
- **Power supply:** 12-30 VDC (450mA)
- **Installation:** 1-1/2" pipe (34 mm)
- **Dimensions:** 150x150x300mm (mounting post included)
- **Communication:** The transmitted data string is terminated at its end by control characters <CR/LF>. A polled mode is also available with an address to manage multiple sensors
- **Parameters:** a Software under Windows 2000 or XP (CQCOM) is supplied with the instrument



Options :

- Communication box : RS232
- Power supply
- Cable and reel
- Analogic converter
- CQ tracker: software which allows the integration and storage of the data sent by CIR 4
- Portable tripod with its guy wire assembly
- Carrying case
- Checking by Atmos of the sensor with a conformity certificate
- Possibility to rent the sensor

Benefits :

Thanks to its 4 detectors, CIR 4 allows a better description of the sky dome than a ceilometer using the ASOS algorithm.

A ceilometer provides an accurate value of the ceiling within one point whereas CIR 4 provides statistical ceiling height over an important number of points.

Concerning the nebulosity, an automatic process provides a better reliability and repeatability of the data.

Its low consumption allows the deployment of the instrument on all kinds of locations even remote ones.

Finally, its passive infrared technology does not affect the surrounding environment.

