

PYRANOMETER & PYRHELIOMETER CALIBRATION FREQUENCY

There are no specific recommendations by the World Meteorological Organisation (WMO) or the International Standards Organisation (ISO) regarding the frequency of calibration of pyranometers and pyrhemometers for field use.

Kipp & Zonen recommends recalibration every two years of use to ensure that the instrument remains within its specified performance parameters.

Assuming that the instrument is correctly installed and maintained, the change in sensitivity with time is largely caused by the black absorber on the detector surface becoming gradually less efficient under exposure to light, mainly the ultraviolet component. This is a cumulative effect with most of the change occurring in the first few months of use, after this the rate of change is very small.

When the instrument is stored in the dark, in clean dry conditions at room temperature, and has the desiccant regularly changed, there is no effect on the sensitivity. Storage periods under these conditions do not count towards the calibration interval. Therefore, instruments kept under such conditions and used only for calibration reference purposes could have longer calibration intervals. However, we recommend that this should not exceed five years.



Clive Lee
Business Manager, Meteorology and Climatology