



MINIMET

Factory Calibration Methods for MiniMet

- 1) **DATAHOG2 DATALOGGER**
Each sensor input of the DataHog2 datalogger is electrically checked individually. Exact known signals to simulate sensors is introduced to each input and the datalogger's output is checked and calibrated. For example, 100 pulses to simulate a wind speed sensor, a known voltage to simulate RH, air pressure or wind direction, a known resistance to simulate temperature.
The datalogger's sensor excitation power supply is checked and calibrated, as is all software & memory functions. Recalibration is recommended annually.
- 2) **RELATIVE HUMIDITY SENSOR**
These sensors are calibrated in a temperature controlled environment, using saturated salt solutions to generate exact RH, for example sodium chloride for a 'wet' 75% RH, and using molecular sieve drying agents to create a 'dry' 1% RH. This method is a recognised national standard by the UK's National Physical Laboratory (NPL).
Skye Instruments can offer a RH recalibration kit (SKH 1093) which provides equipment for the user to make their own recalibrations using a similar technique. Recalibration is recommended annually.
- 3) **AIR TEMPERATURE**
These sensors are calibrated in a temperature controlled environment by a direct comparison against a reference thermometer calibrated to national standards (UKAS). Recalibration is recommended annually.
- 4) **WIND SPEED**
These wind speed rotors are calibrated in a wind tunnel by comparison with a standard reference rotor calibrated to national standards (NPL).
As long as the physical shape or form of these calibrated parts does not change, (i.e. by physical damage to the rotor) then the sensor calibration does not change to any measurable degree as long as the bearings are allowing free movement. A bearing check is recommended annually, with a bearing change recommended at a minimum of every 5 years. This is standard procedure as used by the UK Met Office.
- 5) **WIND DIRECTION**
The position of the wind vane relative to the electrical potentiometer inside is calibrated and fixed at the time of manufacture.
As long as the physical shape or form of the wind vane and its spindle does not change (i.e. by physical damage), then the sensor calibration does not change to any measurable degree as long as the bearings are allowing free movement. A bearing check is recommended annually, with a bearing change recommended at a minimum of every 5 years. This is standard procedure as used by the UK Met Office.
- 6) **BAROMETER**
This sensor is calibrated against a reference standard which is calibrated to national standards. Recalibration is recommended annually.

SKYE INSTRUMENTS LTD

21, Ddole Enterprise Park, Llandrindod Wells, Powys, LD1 6DF, UK

Tel: +44(0)1597 824811 Fax: +44(0)1597 824812

Email: skyeemail@skyeinstruments.com Web: www.skyeinstruments.com

