



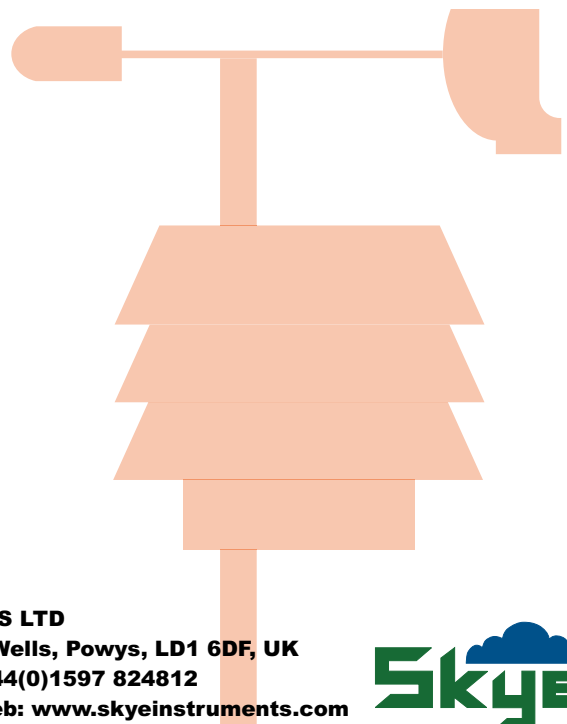
MINIMET

Using Wind sensors at low Temperatures

When temperatures are freezing in condensing conditions, ice crystals can build up on the sensors, both around the spindle and cap so that the rotor can no longer rotate, meaning no wind speed readings are obtained and the wind direction measurement may be incorrect.

There are two main opinions for the use of wind sensors in such freezing conditions. Users should consider both options and decide which is most appropriate for their application.

1. Install heaters to the metal body of the wind sensors, so that the ice crystals will melt, allowing rotation to continue. If this option is considered, the weather station can no longer be a low power consumption system, mains power is usually required to run the heaters.
2. Do not install heaters and choose to allow zero wind recordings rather than inaccurate measurements. Heaters will keep the main body and spindle of the wind sensors free from ice, but the crystals will still form on the wind vane fin and the plastic rotor cups of the anemometer. As the shape and form of these 'wind catching' parts directly affect its calibration, then if the moving parts are heavy with ice crystals, the calibration will be greatly affected, resulting in inaccurate measurements. In many cases freezing conditions are very dry and non condensing, so ice crystals may not be a significant problem anyway.



SKYE INSTRUMENTS LTD
21, Ddole Enterprise Park, Llandrindod Wells, Powys, LD1 6DF, UK
Tel: +44(0)1597 824811 Fax: +44(0)1597 824812
Email: skyemail@skyeinstruments.com Web: www.skyeinstruments.com

