



LIGHT

Non-zero readings from light sensors at night

Skye manufacture 2 types of light sensors, amplified and non-amplified. Please see the relevant section for your sensor:

NON-AMPLIFIED SENSORS

These sensors will have an output expressed in mV or μA and the signal is direct from the sensor's photodiode without amplification. As photodiodes give a zero output in the dark, then all readings taken at night should also be zero (unless in an environment with artificial light).

So if a small reading is observed in the dark (this may be positive or negative), it will be due to either 'noise' pick up by the sensor cable (especially if a long cable is used) or a function of the datalogger measurement at low signal levels (usually just 1 or 2 'counts' of the loggers A/D converter).

If you find that the datalogger is regularly recording a constant small reading at night (e.g. 0.2 watts/m²), the solution would be to use this value as a zero offset in the datalogger's setup to bring the readings back to zero.

AMPLIFIED SENSORS

These sensors will have an output expressed as 0-1V, 0-5V, 4-20 mA etc., and have an zero offset due to the amplifier.

So if a small reading is observed in the dark (this may be positive or negative), it could be due to either the zero offset incorrectly entered in the datalogger setup, 'noise' pick up by the sensor cable (especially if a long cable is used) or a function of the datalogger measurement at low signal levels (usually just 1 or 2 'counts' of the loggers A/D converter).

If you find that the datalogger is regularly recording a constant small reading at night (e.g. 0.2 watts/m²), the solution would be to use this value and add (or subtract as necessary) to the amplifier zero offset and re-enter in the datalogger's setup to bring the readings back to zero.

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