



DATALOGGERS

DataHog2 - setting up a single ended voltage input for a UV sensor

The full scale and zero offset values to be entered into the DataHog2 software, need to be calculated for each UV-A or UV-B sensor. Use the formula below and also see Technical Notes 2.0 at the back of the DataHog2 manual.

Full Scale Value = [(Sensor output expressed as 'watts/m2 per mV') / Gain] * 2000

Zero Offset = Sensor offset (in mV) * Gain * 9.5

The calibration certificate supplied with each sensor shows its output expressed in mV per watts/m2 and the zero offset expressed in mV. The Gain = 1 for all UV sensors.

E.g. for UV-A sensor SKU 420/I 0605 29447 output is 9.825 mV per watts/m2 and zero offset is +4.00 mV.

$9.825 \text{ mV per watts/m2} = 1/9.825 = 0.102 \text{ watts/m2 per mV}$

So Full Scale Value = $(0.102 / 1) * 2000 = 204.00$

Zero Offset = $+4.00 * 1 * 9.5 = +38$

Enter the calculated Full Scale Value and Zero Offset as follows:

1. Wake up the DataHog2 as usual, to reveal the Main Menu of the logger
2. Press '9' to choose 'Option 9 - Set Ax+B calibration factors'
3. Enter the software channel you wish to configure (e.g. 00 or 01 etc.)
4. Enter the Full Scale Value for the associated with that software channel (e.g. 204.00 in the UV-A example above). You must use the format of 5 digits plus a decimal point, with no leading zeros.
5. Enter the Offset Count for the same UV sensor (e.g. 0038 for example above). You must enter 4 digits with no decimal point.
6. Enter the Offset Sign + or - of the Offset Count (e.g. + for example above)
7. The figures you have just entered will be displayed for you to confirm. If OK, press 'Y' and you will return to the main menu.
8. Repeat steps 2 to 7 for each UV sensor input to be configured.
9. Press ESCAPE to return the DataHog2 to logging mode.
10. Write the new Full Scale Values and Zero Offset counts on the Hardware Configuration Certificate for your future record.

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