



# DATALOGGERS

## Setting up a Current Channel for a Light Sensor

1. Refer to calibration certificate of the light sensor and note the number of microamps per unit of light (e.g. micromol/m<sup>2</sup>/s, watt/m<sup>2</sup> or lux etc)  
  
(For example sensor SKL 310/I 26080 has a calibration figure of 0.1253 microamp/klux)
2. Work out the Full Scale Value that needs to be entered in the DataHog logger see chapters 3.2.10 and 3.2.11 of the manual.
  - A) Choose the Gain for this channel according to the current output at maximum light levels (E.g. a lux sensor will measure a maximum of 150 klux on a sunny day which in the above example is equivalent to an output around 19 microamps. Gain Code 3 will give a range of 0-20 microamps).
  - B) Look at the DataHog logger's Hardware Calibration Certificate to find the Feedback resistor value (in megaohms) associated with this Gain.  
(E.g. Gain code 3 for DataHog 26079 is associated with a resistor of 0.10066 megaohms)
  - C) Calculate - Full Scale Value =  $2.000 / (\text{microamps per light unit}) * \text{Feed back resistor in megaohms}$   
(E.g. following the above examples  $FS = 2/(0.1253 \times 0.10066) = 158.57 \text{ klux}$ )
3. Enter this Full Scale Value into the DataHog as follows:
  - A) Wake up the DataHog into Main Menu mode
  - B) Choose Option 9 set Ax+B calibration factor
  - C) Choose the software channel to be configured (this is indicated on the logger's Hardware Configuration Certificate)
  - D) Enter the Full Scale Value which has been worked out above.
  - E) Enter the zero offset as 0000
  - F) Enter the sign as +
  - G) If correct, type Y to accept.
4. Make sure that this software channel is set up with the correct Gain Code as used in the calculation for the Full Scale Value.
  - A) Choose Option A - Set channel configuration.
  - B) Enter the software channel and hardware channel (from the logger's Hardware Configuration Certificate)
  - C) Enter the Gain Code (3 in the above example)
  - D) Enter the Scale Code - choose 1 for Ax+B scaling
  - E) If correct, type Y to accept.

