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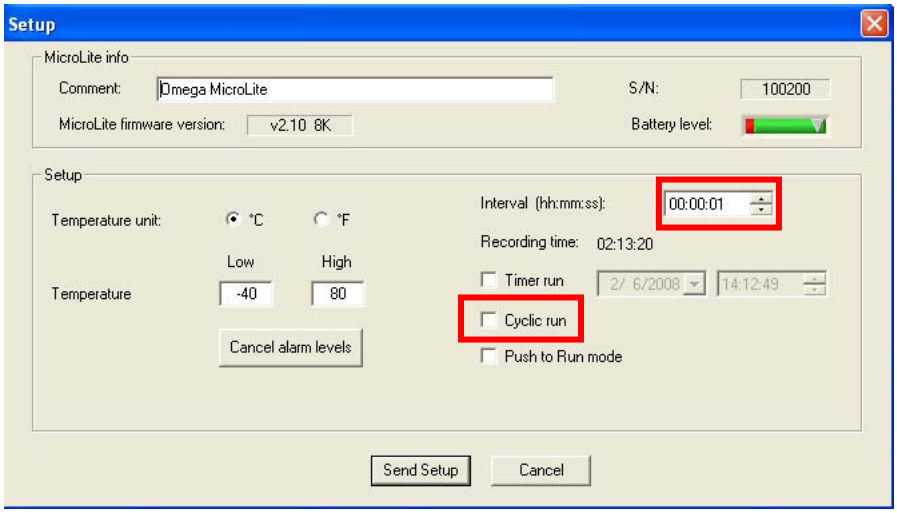
MicroLite 8K and MicroLite 16K Temperature Calibration Instructions

This document explains the necessary steps for calibrating the MicroLite internal temperature sensor.
Using the MicroLab Lite software, you will perform a one-point offset calibration. The recommended reference value is 23 °C but you may use another value if you see fit.

Pre-calibration Procedure

1. Install the MicroLab Lite software on your PC. For installation instructions, refer to the *MicroLite User Guide*.
2. Connect the logger to the PC via the USB port and wait for the logger to be automatically detected.
3. From the main MicroLab Lite window, click **Setup** 

to enter the **Setup** window.
4. Define the sampling interval (one minute is recommended). Ensure **Cyclic run** is *not* selected and cancel the alarm levels. Click **Send Setup** to configure the logger.



5. Click **Run**  to start the logger.
6. Place the logger in a temperature calibration chamber/bath. Set the chamber to 23 °C (or other value).
7. After *one hour*, remove the logger/s from the chamber/bath. Depending on the calibration chamber, you might require more than one hour for the temperature reading to stabilize.
8. Connect the logger to the PC.

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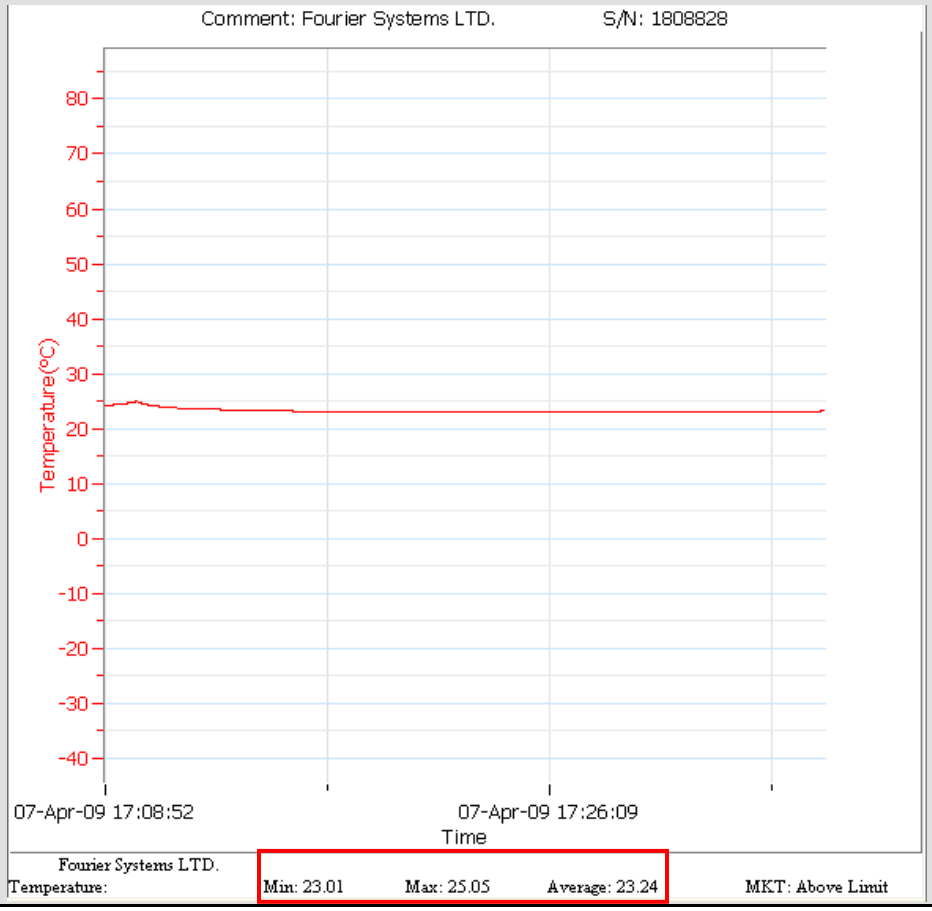
9. Click **Stop** 

to stop the logger from sampling more data.

Note: Be very careful not to press the **Run** button again before downloading the data as this will erase all data sampled in the chamber).

10. Click **Download**  to download the data from the logger to the PC. You will see the data displayed in a graph in MicroLab Lite.
11. Calculate the average MicroLite reading at the reference point you used. You need to locate the graph cursors (see text box below) over the stabilized (flat) area of the plot at each reference point.

To calculate the average value over a specific part of the plot, first mark the area using two cursors (using the **First Cursor** and **Second Cursor** buttons). Then, select **Statistics** from the **Analysis** menu in MicroLab and you will see the Average value of that marked area displayed underneath the graph.



12. After downloading data for all loggers in the batch you should build an Excel file listing the loggers according to their Serial Numbers and the recorded temperature

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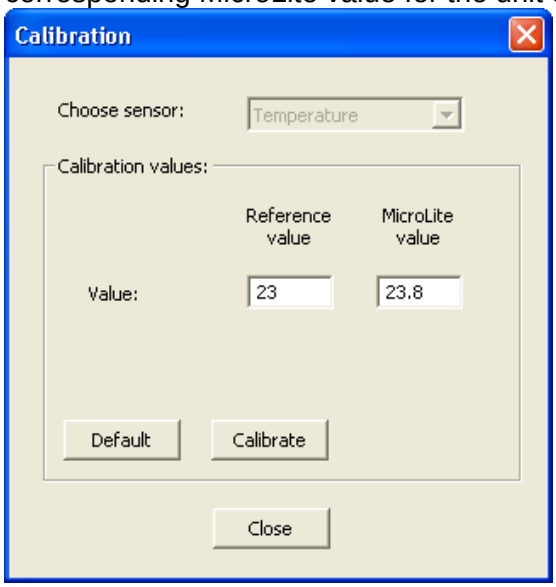
values for the corresponding point of 23 °C, for example. (The serial numbers are automatically recognized by the software during the download operation).

Calibrating the MicroLite

1. Make sure the logger is connected to the PC. In MicroLab Lite, go to **Logger > Calibration**.
2. Enter the Calibration Password: **1234**. This password protects the loggers from accidental change of the calibration values by an unauthorized user.
3. In the **Calibration** dialog box, enter the Reference value (e.g. 23 °C) and the corresponding MicroLite value for the unit currently connected to the PC.



4. Click **Calibrate**. The logger will receive the updated calibration settings.
5. Click Close.

Note: To restore the Factory default calibration values i.e. to remove the calibration you have performed on the logger, click **Default**.

Verifying the Calibration

1. Repeat the pre-Calibration procedure as described above, using the same reference point you used previously.
2. Once the logger has completed the pre-Calibration procedure, download the data to MicroLab Lite, record the post-calibration values and add to the Excel file.
3. If the read values for a specific logger deviate more than 0.3 °C (the stated accuracy for the MicroLite) from the recorded values, then perform another round of calibration and verification.
4. Please note that a further round of calibration is not expected.