

Application Note: CM-0054 Oxygen Calibration Procedure

For Maximum Accuracy at 0.0% Oxygen Concentration

Background

The UV Flux Oxygen Sensor supplied by CO2 Meter is sold individually and in several of our products that also measure oxygen:

- CM-0201 25% Oxygen Sensor Module
- CM-0054 iSense 100% CO₂ + 25% O₂ Monitor Logger
- CM-0505 Oxygen Sampling Data Logger

Although the sensor has a rated at 0.1% to 25% oxygen measurement range, several clients have asked for a procedure to achieve a 0.0% oxygen calibration for applications where a very small amount of oxygen must be measured.

Procedure

1. Download DAS software here: <http://www.co2meter.com/pages/downloads>
2. Run DAS software and connect CM-0054 to a USB port on the computer.
3. Click the icon in "Connected Devices" window.
4. Click "Configure Sensor" box.
5. In the "Configure Your Device" window, select "Data Logging" tab.
6. Set "Log Interval" to "10". Set "Pump PWM" to "1".
7. Set "Pump Period", "Wait Period" and "Integration Period" to "0".
8. Set "Pump Mode" to "Continuously ON" and click on the "Save" box.
9. Cycle power on the CM-0054 and place the CM-0054 in its operating environment.
10. Allow the CM-0054 to warm up in its operating environment for at least 1 hour before performing the "Zero Calibration".
11. Connect 100% Nitrogen to the input and flow continuously throughout the calibration process.
12. Wait for O₂ readings to completely stabilize. (This will take 3 to 5 minutes)
13. Click on "Configure Sensor" box.
14. In the "Configure Your Device" window, select "Oxygen Calibration" tab.
15. Click on "Zero Calibrate" box.
16. Allow 100% Nitrogen to flow for 2 minutes after performing "Zero Calibration" and verify the readings are stable at 0.00%