

Applies to: TGE-0010 Tinytag CO₂ Logger (0 to 2,000ppm)
TGE-0011 Tinytag CO₂ Logger (0 to 5,000ppm)

Tinytag CO₂ Data Loggers

This document gives general information on CO₂ monitoring and the Tinytag CO₂ data logger, including how they record and common applications in which the units are used. More detailed technical information on these data loggers can be found on their product data sheets.

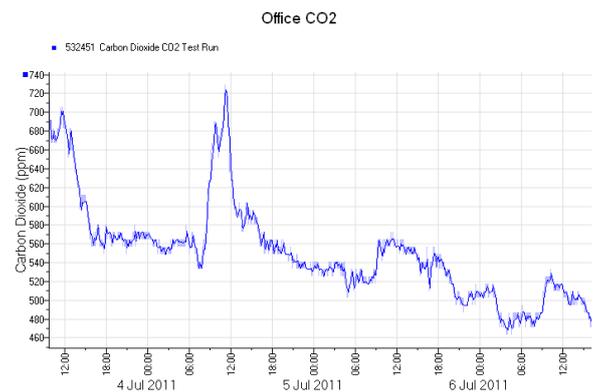
Why Monitor CO₂?

Carbon dioxide levels are widely used as an indication of the air quality in a building. As they rise, they can cause low concentration levels in occupants and in some cases lead to health problems. Measuring the CO₂ levels in a room can help to determine how well an area is ventilated and the efficiency of any air conditioning systems present. Also, some countries set limits on the carbon dioxide levels allowed in workplaces and schools, making it a legal requirement to monitor CO₂ concentrations.

What Levels of CO₂ Can I Expect To See?

Typically, the average concentration of CO₂ in the Earth's atmosphere is about 390 parts per million (or ppm).

The concentration of CO₂ in a workplace or school is typically 600 to 700ppm above this level, and 1,500ppm is often specified as a maximum comfortable level, although levels of up to 5,000ppm are allowed in some instances.



How Does the Tinytag CO₂ Data Logger Measure CO₂ Levels?

Tinytag CO₂ data loggers use a self-calibrating Non-Dispersive Infrared (NDIR) sensor to measure CO₂ concentrations in an application.

Over time, the properties of the light source used to do this will change, so the sensor uses a second light source, that is only powered up occasionally, to calibrate the first.

This patented measurement technique allows for excellent long-term accuracy and stability, giving a typical drift of just 20ppm a year.

Common Applications

Tinytag CO₂ data loggers are typically used to record in the following applications:

Office and workplace monitoring - The monitoring of office and workplaces for both comfort and health is commonplace, especially in HVAC applications where air conditioning and environmental control systems are in use.

Schools monitoring - In a number of countries, including the UK, the amount of carbon dioxide children can be exposed to during a school day is defined, and in some countries, such as Sweden, the monitoring of levels is a legal requirement.

Further Information

Further information on Tinytag CO₂ data loggers can be found on the unit's product data sheets that can be downloaded from:

<http://www.gemindataloggers.com/logger-datasheets>

If you should have any questions that are not covered by the above, please contact your supplier or Gemini Technical Support.

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