Tinytag

DataSheet

Tinytag CO_2 Logger

- 0 to 2,000 or 5,000ppm
- Self-calibrating
- High accuracy
- Cost-effective

With an increasing number of air conditioned and environmentally controlled buildings, the need for checking CO_2 levels is becoming an increasingly important part of building monitoring. The Tinytag CO_2 data logger is a cost-effective way of monitoring air quality.

Poor air quality in schools and workplaces is often linked to low concentration levels, poor performance and sometimes sickness.

Measuring carbon dioxide levels indoors gives an indication of air quality and the effectiveness of any ventilation systems.

The Tinytag CO_2 data logger allows the monitoring of carbon dioxide levels in a room and builds up a clear profile of gas concentrations over time.

Used widely in building monitoring and HVAC applications, the unit is a cost-effective way of checking if an area is correctly ventilated.

Gemini DATA LOGGERS

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Tinytag CO_2Logger

Features

- **0 to 2,000 and 5,000ppm versions** - two models of the Tinytag CO_2 data logger are available. The TGE-0010 has a range of 0 to 2,000ppm and is commonly used for school and workplace monitoring where carbon dioxide levels are judged to be too high if they exceed 1,500ppm. The TGE-0011 has a range of 0 to 5,000ppm and is used in more specialised applications.
- **Self-calibrating** - the logger uses a self-calibrating NDIR sensor. This uses an infrared source to accurately measure the carbon dioxide concentrations in an application. Over time, the properties of the infrared source will change, so the sensor uses a second infrared source, that is only powered up occasionally, to calibrate the first. This patented measurement technique allows for excellent long-term accuracy and stability.
- **Discreet case** - housed in a discreet, neutral coloured, low profile case, the logger can be wall mounted for unobtrusive use in office and workplace applications.
- **Compare data** - using the Tinytag Explorer software, data from the CO_2 data logger can easily be combined with data from other loggers in the Tinytag range that record temperature, humidity and various other parameters.
- **No-power warning** - the CO_2 data logger uses a mains power adaptor (supplied) to power its sensor. In the event of a power failure, a red LED on the front of the unit will flash to warn the user that there is a problem.

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CO_2 Logger

Specification

Features

Total Reading Capacity	32,000 readings
Memory type	Non Volatile
Delayed Start	Relative / Absolute (up to 45 days)
Stop Options	When full After n Readings Never (overwrite oldest data)
Reading Types	Actual, Min, Max
Logging Interval	1 min to 10 days
Offload	While logging
Alarms	1 fully programmable; latchable (a second alarm can be programmed at the expense of the "no-power" warning)

Reading Specification

Sensor Type	NDIR Infra-red CO_2 sensor
Response Time t_{63}	< 195s
Temperature Dependence	2ppm CO_2/°C
Long Term Stability	20ppm / year (typical)
Reading Resolution	0.1 ppm
TGE-0010 Accuracy	< ± (50ppm +2% of measuring value)
TGE-0011 Accuracy	< ± (50ppm +3% of measuring value)

The accuracy figures quoted above are at 25°C (77°F) and 1013mbar.

A warm-up time of 5 minutes is required to achieve values specified above.

Physical Specification

Working Temperature Range	-20°C to +60°C (-4°F to +140°F)
Case Dimensions	
Width	85mm / 3.35"
Height	100mm / 3.94"
Depth	26mm / 1.03"
Weight	100g / 3.53oz

Power Specification

The unit is supplied with a mains adapter that comes with UK, EU and US AC connectors.

Back-up Battery Type CR2325

Before replacing the battery the data logger must be stopped.

Data stored on the logger will be retained after a battery is replaced.

The unit also has a +18V DC screw terminal connection on its circuit board that can be used to power the unit from a separate supply if required.

Approvals

Gemini Data Loggers (UK) Ltd. operates Quality and Environmental Management Systems which conform to ISO 9001 and ISO 14001. The scope of these systems covers the manufacture, design and supply of data loggers and their associated software, accessories and services.

nqa. ISO 9001 Registered nqa. ISO 14001 Registered CE

Part Numbers

TGE-0010: Tinytag CO_2 data logger (0 to 2,000ppm)
TGE-0011: Tinytag CO_2 data logger (0 to 5,000ppm)

To use these data loggers you will also require a copy of the Tinytag Explorer software and a USB download cable.

The following starter kits contain a CO_2 data logger, a copy of Tinytag Explorer and a USB download cable.

TGE-0010-SPK: Tinytag CO_2 Starter Kit (0 to 2,000ppm)
TGE-0011-SPK: Tinytag CO_2 Starter Kit (0 to 5,000ppm)

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