Gemini DATA LOGGERS

Tinytag

DATA SHEET

Tinytag Plus 2 Dual Channel Temperature/Relative Humidity (-25 to +85°C/0 to 100% RH)

TGP-4500

Issue 1
19th August 2005
E&OE

The workhorse of the Gemini range the Tinytag Plus 2 data loggers are housed in robust, waterproof (IP68) rated cases that are designed for use in harsh and outdoor applications.

Tinytag Plus 2 data loggers have a high reading accuracy and resolution, large memories, a fast offload speed and a low battery monitor.

The TGP-4500 is a self contained temperature and humidity recorder.

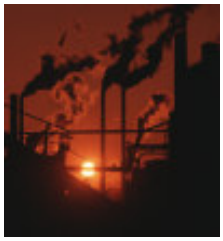
Popular Applications

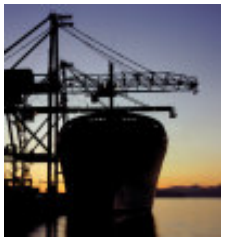
- Environmental monitoring
- Food processing and storage
- Pharmaceutical manufacture
- Logistics monitoring
- Museums and art galleries

Features

- Temperature and relative humidity recorder
- 32,000 reading capacity
- High accuracy
- High reading resolution
- Fast data offload
- Robust, waterproof case
- Low battery monitor
- User-replaceable battery





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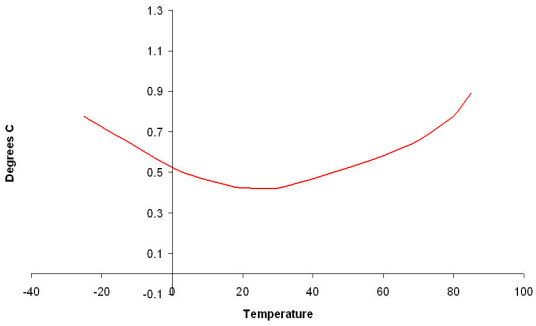
Features

Total Reading Capacity	32,000 readings
Memory type	Non Volatile
Trigger Start	Magnetic Switch
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 sec to 10 days
Offload	While stopped or when logging in minutes mode
Alarms	2 fully programmable; latchable

Reading Specification

Temperature

Reading Range	-25°C to +85°C (-13°F to +185°F)
Sensor Type	10K NTC Thermistor (Internally mounted)
Response Time	25 mins to 90% FSD in moving air
Reading Resolution	0.01°C or better
Accuracy	



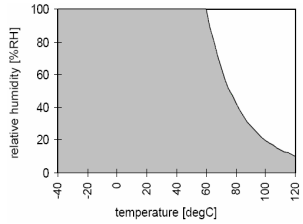
Relative Humidity

Reading Range	0% to 100% RH
Sensor Type	Capacitive
Accuracy	±3.0% at 25°C / 77°F
Reading Resolution	Better than 0.3% RH
Sensor Location	Externally mounted
Response Time	10 seconds to 90%

RH Sensor Working Range

The working range for the RH sensor is shown in terms of relative humidity / temperature limits.

Although the sensor will not fail beyond these limits, the accuracy will deteriorate.



Physical Specification

IP Rating	IP68 water-proof (see notes)
Operational Range*	-40°C to +85°C (-40°F to +185°F)
Case Dimensions	
Height	34mm / 1.34”
Width	57mm / 2.25”
Depth	80mm / 3.15”
Weight	110g / 3.9oz

*The Operational Range indicates the physical limits to which the unit can be exposed, not the reading range over which it will record.

Notes

Battery Type	SAFT LS14250 or LST14250 3.6v ½AA Lithium Cell
Replacement Interval	Annually

Before replacing the battery the data logger must be stopped.

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

If used at low temperatures the data logger should be allowed to warm to room temperature before it is opened to avoid condensation forming inside the unit.

The IP68 rating is valid only when the unit’s connector cap is fitted and is valid to a depth of 15m (50ft). The IP68 rating does not apply to the unit’s RH sensor.

If moisture forms on the unit’s RH sensor readings will become unpredictable. Once the sensor has dried out, and provided no residue is left behind, the unit should return to normal reading within 30 minutes.

Any dust or residue that is allowed to build up on the RH sensor will affect the unit’s reading accuracy.

The sensor may be cleaned with de-ionised water or pure isopropanol, but not with abrasive detergents, as scratches or residue will affect the accuracy.

The RH sensor will resist small amounts of the following chemicals: formaldehyde, ammonia, carbon monoxide, sulphur dioxide, ethylene oxide, hydrogen chloride, hydrogen fluoride, hydrogen peroxide, nitrogen dioxide, methyl chloride, chlorine, freon, methanol, ethanol, isopropanol and ozone.
It also offers resistance to ultraviolet rays.

Salt solutions may cause permanent damage as crystals forming within the porous layers affect moisture levels there.

Calibration

This unit is configured to meet Gemini’s quoted accuracy specification during its manufacture.

We recommend that the relative humidity channel should be checked once every six months, and the temperature channel annually, against a calibrated reference meter.

A UKAS traceable certificate of calibration can be supplied for an additional charge either at the point of purchase, or if the unit is returned for a Service Calibration.

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Approvals

This equipment complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause any harmful interference, and (2) the device must accept any interference received, including interference that may cause undesired operation.

This product is manufactured by Gemini Data Loggers (UK) Ltd to BS EN ISO9001:2000 (Certificate No. 6134) and is approved to EN61326:1998 with any standard leads supplied.

Required and Related Products

To use this data logger you will also require:

SWCD-0040: Tinytag Explorer software (version 4.2 or above recommended).

and a

CAB-0007: Tinytag PC Serial Download Cable

Further related products:

CAB-USB: USB to Serial Converter
SER-9530: Tinytag Plus/IS Service Kit
ACS-6000: Trigger Start Magnet

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