DATA SHEET

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

TGP-4500

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E&OE

The Tinytag Plus 2 range of data loggers have a high reading resolution and accuracy and are housed in robust, waterproof (IP68 rated) cases that are designed for use in a wide range of outdoor and industrial applications.

The TGP-4500 is a self contained temperature and relative humidity data logger. This unit features a coated RH sensor that has good resistance to moisture and condensation, ensuring measurement reliability.

Popular Applications

- Environmental monitoring
- Glass house and poly tunnel agriculture
- Food processing and storage
- Pharmaceutical manufacture
- Logistics monitoring
- Conservation Projects

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
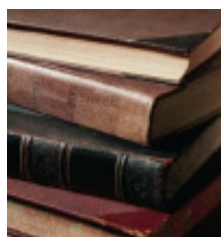
Features

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	
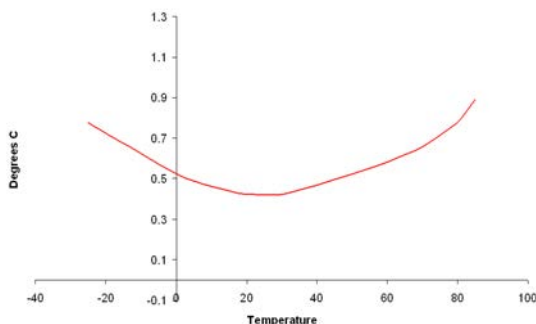
Relative Humidity

Reading Range	0% to 100% RH
Sensor Type	Capacitive
Accuracy	±3.0% RH at 25°C / 77°F
Reading Resolution	Better than 0.3% RH
Sensor Location	Externally mounted
Response Time	40 seconds to 90% FSD (current data loggers, from SN 613165)

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.
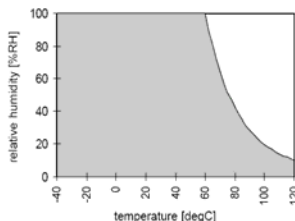
Physical Specification

IP Rating	IP68 water-proof (see notes)
Operational Range*	-25°C to +85°C (-13°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; Tekcell SBAA02P

The logger will operate with other ½AA 3.6V Lithium (Li-SOCl2) batteries but performance cannot be guaranteed.

Replacement Interval   Annually

Before replacing the battery the data logger must be stopped.

When replacing the battery, wait at least one minute after removing the old battery before fitting the new one.

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.

The coated sensor used on this unit (current product, SN 613165 and above) provides good protection from moisture and condensation, but in some cases - where the sensor becomes saturated - readings may 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, salts 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 but not with pure isopropanol or abrasive detergents, as these may damage the coating on the sensor and effect its 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.

The position of the unit's trigger start switch is indicated by the • • • label on the back of the logger. When the "Wait until trigger event" option is selected in the Tinytag Explorer software, the green LED on the unit will flash once every eight seconds, indicating that the unit is waiting to log. When a magnet passed over the label, the green LED will light briefly to indicate that the unit has been activated. Once activated, the green LED will flash every four seconds to indicate that the logger is recording.

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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 certificate of calibration, traceable to a national standard, can be supplied for an additional charge either at the point of purchase, or if the unit is returned for a service calibration.

Approvals

Gemini Data Loggers (UK) Ltd. operates a Business Management System which conforms to ISO 9001 and ISO 14001.

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Required and Related Products

To use this data logger you will require the following software:

SWCD-0040: Tinytag Explorer software

and a

CAB-0007-USB: Tinytag Ultra/Plus/View USB Download Cable

The SWCD-0040 software and CAB-0007-USB cable can be ordered together in a pack using the part number SWPK-7-USB.

Further related products:

SER-9500: Tinytag Data Logger Service Kit
ACS-5000: Tinytag Alarm Box
ACS-6000: Trigger Start Magnet

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For pricing or any further information, please contact Omni Instruments Ltd.

Measurement and data acquisition solutions

UK / Europe Office
Tel: +44 845 9000 601
Fax: +44 845 9000 602
info@omni.uk.com
www.omniinstruments.co.uk

Australian Office
Tel: +61 282 442 363
Fax: +61 294 751 278
info@omniinstruments.com.au
www.omniinstruments.com.au

USA / Canada Office
Tel: +1 866 849 3441
Fax: +1 866 625 8055
info@omniinstruments.net
www.omniinstruments.net