D A T A   S H E E T

Tinytag Ultra 2 Temperature/Relative Humidity Logger (-25 to +85°C/0 to 95% RH)

TGU-4500

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E&OE

Tinytag Ultra 2 data loggers are ideally suited to monitor interior applications where there is little or no moisture.

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

The TGU-4500 is a self contained temperature and humidity recorder.
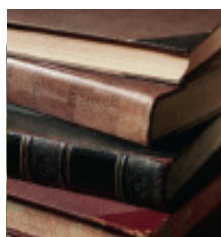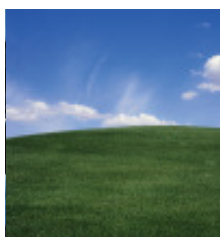
Popular Applications

- Office and housing monitoring
- Pharmaceutical manufacture
- Dry food storage
- Museum display and repository
- Incubators

Features

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

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

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**Measurement and data acquisition solutions**

Contact Details:
Tel: +44 1382 443000
Email: info@omni.uk.com

Website: www.omniinstruments.co.uk

Mailing Address: Unit 1, 14 Nobel Road, Wester Gourdie Industrial Estate, Dundee, DD2 4UH.

data sheet

Features

Total Reading Capacity	32,000 readings
Memory type	Non Volatile
Trigger Start	Magnetic Switch (from SN 602211)
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	20 mins to 90% FSD in moving air
Reading Resolution	0.01°C or better
Accuracy	
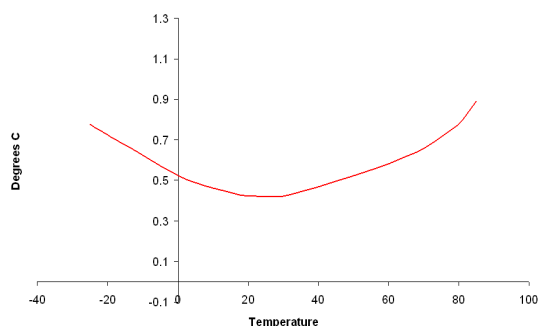
Relative Humidity

Reading Range	0% to 95% 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	10 seconds to 90% FSD

RH Sensor Working Range

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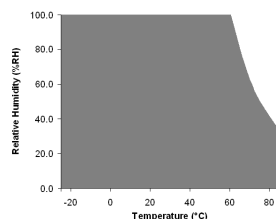
Physical Specification

IP Rating	IP53 splash proof (see notes)
Operational Range*	-40°C to +85°C (-40°F to +185°F)
Case Dimensions	
Height	72mm / 2.83"
Width	60mm / 2.36"
Depth	33mm / 1.30"
Weight	55g / 1.94oz

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

Notes

The battery fitted in this product is a single cell containing less that 1g of lithium and meets the requirements of the UN Manual of Tests and Criteria, Part III, Subsection 38.3.

Recommended Battery Types — SAFT LS14250, Tekcell SBAA02P or Eve ER14250

The logger will operate with other ½AA 3.6V Lithium 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 IP53 rating is valid only when the unit's connector cap is fitted and the unit is orientated with it's hanging tab uppermost.

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.

Trigger Start

The trigger start option allows a unit to be set up as required and then started at a later time with a magnet. 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

The following piece of 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-6000: Trigger Start Magnet

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