Tinytag Plus Radio Data Logger for PT1000 Probe

a logging products designed for outdoor and industrial use.
hat forms a robust data network that allows a user to see
cross a LAN or the Internet.

ta logger that is ideal for low temperature monitoring in a

Popular Applications

For low temperature monitoring in:

- Freezers and cryogenic applications
- Industrial processes
- Laboratories and research

This logger can also be used with third-party PT1000 sensors.

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Reading Logger Works

The TGRF-4201 is a battery powered, temperature radio data logger.

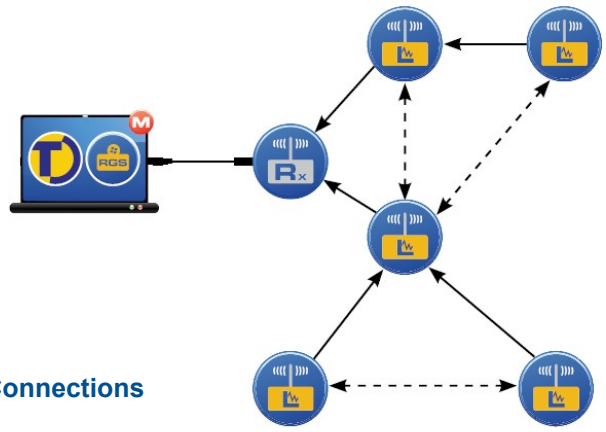
Reading Range	-200°C to +408°C
Sensor Type	PT1000 (external probe, 3-wire)
Logger Resolution	0.01°C or better
Temperature Stability	±0.01°C at constant temperature
Logger Accuracy	

The TGRF-4201 is used with a PT1000 probe that is suitable measuring down to -200°C.

It is part of a Tinytag Connect system that requires a receiver and the Connect version of the Tinytag Explorer software.

After the installation of the software and the configuration of the receiver, the logger is turned on and will establish itself as part of the mesh network the system creates.

The graph below is the accuracy of the TGRF-4201 when used with a PR-7002 probe. Using a different probe may effect the accuracy of the unit.



Connections

The typical range of the logger on a clear line of sight is 200m

The logger is the ...l, anything from once every

The data recorde... ng the system by a Windows se... viewed across a LAN or ...ect software.

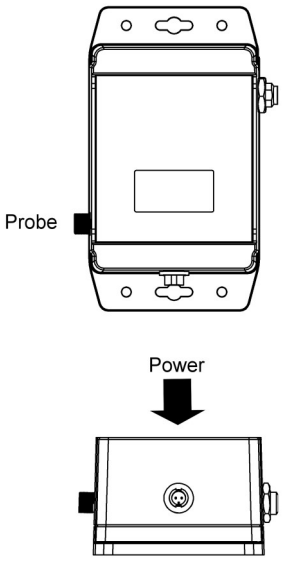
If a logger canno... eason, it will record locally un...

The logger can b... an be sent when the limits e...

Data recorded by ...able of readings. There ... about the recording run an...

Data from multip... ombined into a single graph usir...

Data can be exp... se in report writing, or as a d... adsheet programs.



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Gemini DATA LOGGERS

Tinytag Plus Radio Data Logger for PT1000 Probe

Features

Logging Interval	2 minutes to 10 days
Off-line storage Capacity*	2 weeks typical, at a 10 minute logging interval

Data loggers can be set to record in intervals of once every 2 minutes or greater (by default the logging interval is set to once every 10 minutes).

When radio communications are good, data is transmitted immediately and stored by the gateway service.

When communications with the gateway service are interrupted, by a power failure to the computer running the gateway service or an obstacle causing a

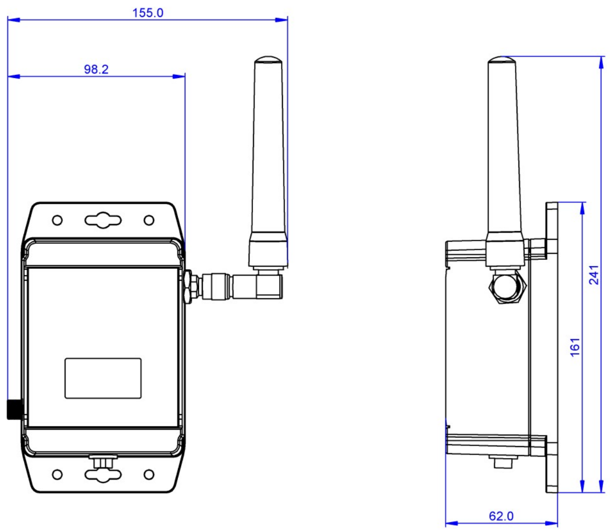
E-mail warnings can be sent when alarm limi...

can be used to send SMS messages using th...

Physical Specification

IP Rating	IP67
Operational Range*	-20°C to +55°C
Case Dimensions (excluding antenna)	
Length/Height	241mm / 9.49"
Width	155mm / 6.10"
Depth	62mm / 2.44"
Weight (inc. antenna)	554g / 19.54oz

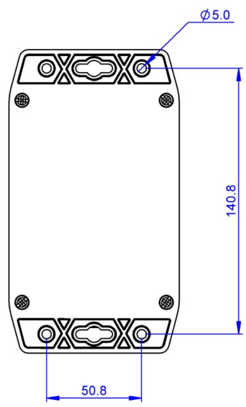
*The Operational Range indicates the physical limits to which the unit can be exposed.



Mounting/Positioning Instructions

The logger can be wall mounted or placed on its back on a flat surface, such as a shelf.

The logger's back-plate has mounting holes, as shown.



The logger can also be positioned on a non-conductive flat surface, such as a desk or a shelf, with its antenna positioned vertically, with no loss of performance.

Radio Specification

Radio Frequency	**EU**	869.88M
	AUS	917.8MH
Radio Power	**EU**	<5mW (-
	AUS	<3mW (-
Radio Range		200m, ty
Radio License		SRD lice

The logger uses FSK modulation, with +/-32 k

These frequencies will easily penetrate most be reduced to between 30% and 80% (howev increased, maybe up to double the nominal ra and roofs etc.).

Although the radio waves cannot penetrate a iron sheds etc.) the signal will often still get th windows and air vents etc.

These frequencies are very slightly absorbed problem, but the signal will not get through a fruit or bottled water, for example.

The advantage of the mesh network is that lo ranges will often be able to relay data though transmit further.

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Power Information

Battery Power

Battery Type 2 x Duracell Industrial ID1400 C (LR14) 1.5V (supplied)

The logger will operate with other C cell batteries but performance cannot be guaranteed.

Battery Life Typically 12 months

When the logger's batteries start to run flat, a low battery warning will be displayed in the Tinytag Explorer Connect software and the LED on the front of the logger will flash red. The low battery warnings will start to flash when the logger has approximately two weeks of battery power remaining.

Before replacing batteries the logger must be turned off.

Alkaline batteries should always be replaced in pairs.

Data stored in the radio system will be retained after batteries are replaced.

A lithium battery powered version of the logger is also available, that provides a wider working temperature range and a longer battery life. Please contact your supplier for further details.

Mains Power

The logger can also be powered from the mains using a plug-in power supply.

If the power supply is interrupted, the logger's batteries will power the logger and continue recording until the supply is restored.

Note: This logger should only be used with an ACS-0044 Tinytag Plus Radio power supply.

Calibration

This logger is configured to meet Gemini's quoted accuracy specification during its manufacture.

We recommend that the calibration of this unit should be checked annually against a calibrated reference meter.

A 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.

Warranty

This product carries a manufacturing defects warranty of 12 months from the date of purchase. Units returned under warranty will be repaired or replaced at the manufacturer's discretion. This warranty does not cover mishandling, modification or battery replacement and is subject to our standard Terms and Conditions of Sale, a copy of which can be found at **www.tinytag.info**.