TGRF-4101

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Tinytag Plus Radio Data Logger for PT100

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

ta logger that is ideal for high temperature monitoring in a

Popular Applications

Use for high temperature monitoring in:

- Industrial processes
- Food processing

This logger can also be used with third-party PT100
sensors.

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Specification / How the Logger Works

The TGRF-4101 is a battery powered, temperature radio data logger.

Reading Range	-50°C to +600°C
Sensor Type	PT100 (external probe, 3-wire)
Logger Resolution	0.02°C or better
Temperature Stability	0.005°C per degree Celsius
Logger Accuracy	

The TGRF-4101 is used with a PT100 probe and is suitable for measuring temperature up to 600°C.

When used as part of a Tinytag Connect system, it 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-4101 when used with a PB-6005 or PB-6006 probe. Using a different probe may effect the accuracy of the unit.
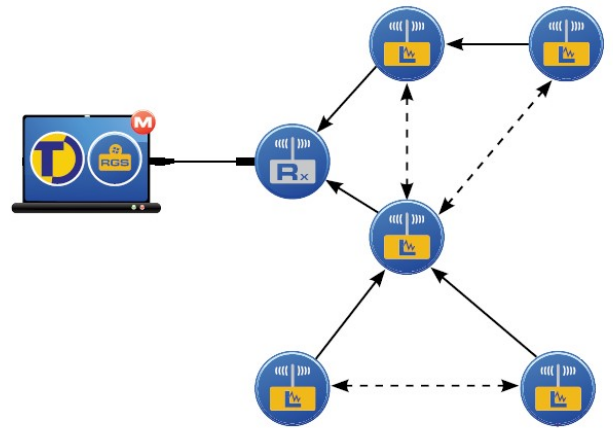
Connections

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

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

The data recorded ... the system by a Windows se... viewed across a LAN or ... software.

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

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

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

Data from multip... combined into a single graph usin...
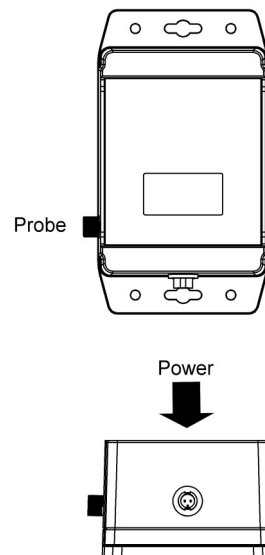
Data can be exp... use in report writing, or as a d... adsheet programs.

Antenna

Probe

Power

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Gemini
DATA LOGGERS

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www.e-berman.info

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Physical Specification

Features

Logging Interval	2 minutes to 10 days
Off-line storage Capacity*	2 weeks typical, at a 10 minute logging
Operational Range*	-20°C to +55°C
Case Dimensions (excluding antenna)	
Length/Height	114mm / 4.49"
Width	155mm / 6.10"
Depth	62mm / 2.44"
Weight (inc. antenna)	654g / 18.54oz

IP67

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).

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

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

When communications with the gateway service are interrupted, by a power failure to the computer running the gateway service or an obstacle causing a
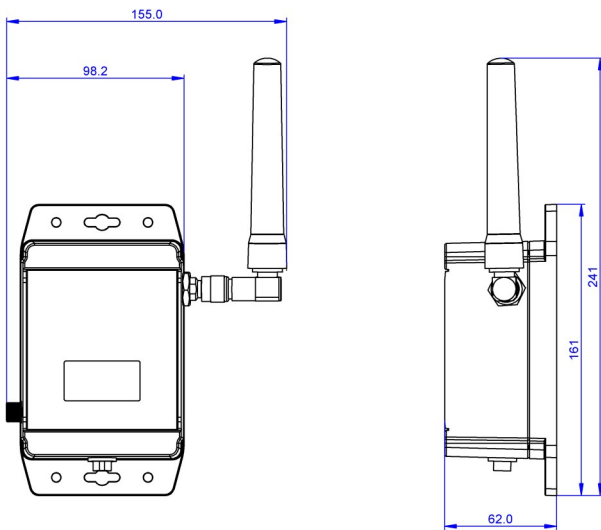
E-mail warnings can be sent when alarm limits
can be used to send SMS messages using th

Mounting Position / 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

Radio Specification

Radio Frequency	EU	869.88MHz
	AUS	917.8MHz
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.

The logger can also be positioned on a non-
conductive flat surface, such as a desk or
shelf, with but the signal will not get through, a
with no loss of performance.

These frequencies will easily penetrate absorbed
by metal, but the signal will not get vertically, 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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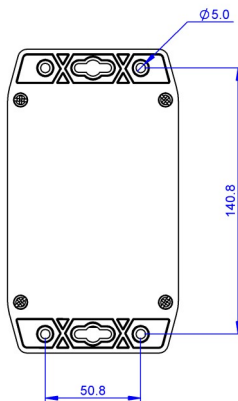
Tinytag Plus Radio Data Logger for PT100

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**.