Gemini DATA LOGGERS

Tinytag

DATA SHEET

Tinytag Plus Re-Ed OEM Voltage Input Logger (0-2.5/10/25V)

TGPR-0700

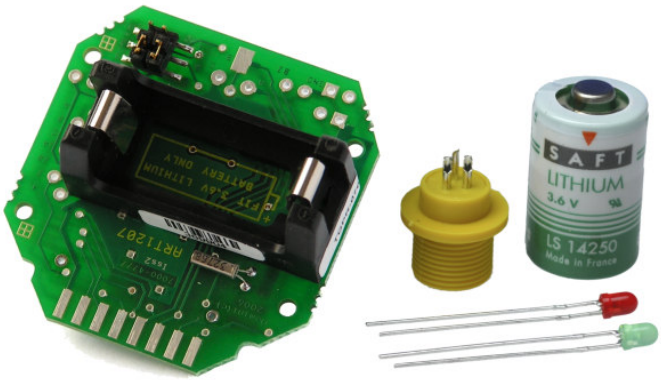
Issue 13
14th August 2009
E&OE

A voltage input data logger that is supplied un-cased so that it can be built into custom applications.

This logger can measure voltages up to 25V DC and can be connected to many industry standard devices, such as CO2 sensors and current clamps, enabling the logging of a wide range of process parameters.

Popular Applications

- Battery condition monitoring
- Customised data logging:
  - CO_2
  - Pressure
  - Flow Rate
  - Light
  - Power (with a current clamp)



Features

- Voltage input data logger
- 64,000 reading capacity
- User-programmable logging interval
- 2 user-programmable alarms
- Delayed start options
- 3 stop options
- User-replaceable battery



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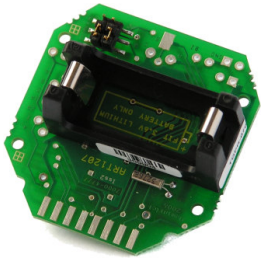
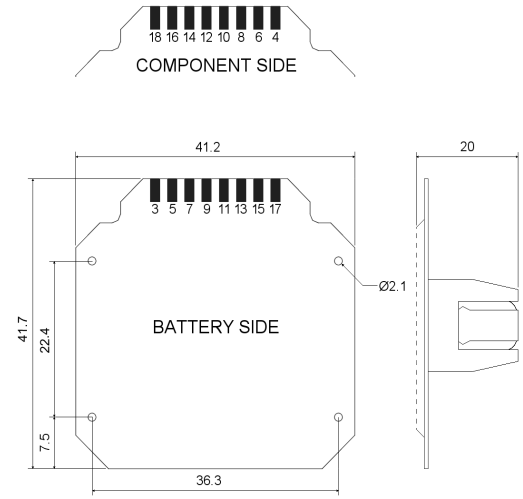


Features

Total Reading Capacity	64,000 readings (current product); 16,000 readings (below SN 503205)
Memory type	Non Volatile
Delayed Start	Relative / Absolute (up to 45 days)
Stop Options	When full After n Readings Never (overwrite oldest data)
Logging Interval	1 sec to 10 days
Offload	While stopped or when logging in minutes mode
Alarms	2 fully programmable; latchable

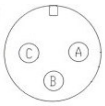
Connection Information



The PCB edge mates with a 0.1" IDC female edge connector, such as RS Part No. 471-317.

Battery Side	Component Side
3: Battery +Ve (3.6V)	4: Do Not Connect
5: Green LED Anode	6: Red LED Anode
7: RS232 Logger Transmit (Tx)	8: Do Not Connect
9: RS232 Logger Receive (Rx)	10: Sense Line*
11: Do Not Connect	12: Reference Line*
13: Do Not Connect	14: Do Not Connect
15: Do Not Connect	16: Do Not Connect
17: Power and Signal GND (0V)	18: Voltage Signal Input

Communication Socket *(supplied)* as viewed from behind.



A: RS232 Logger Receive (Rx)
B: RS232 Logger Transmit (Tx)
C: Power and Signal GND (0V)

*See Notes.

Physical Specification

Operational Range*	-40℃ to +85℃ (-40℉ to +185℉)

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

Reading Specification

0 to 2.5V Range

Maximum Input	3.5V
Max. input current	±1µA (typically ±0.4µA)
Resolution	10mV
Accuracy	±10mV ±0.5% reading

0 to 10V Range

Maximum Input	14V
Input Impedance	400kΩ
Resolution	40mV
Accuracy	±40mV ±1% reading

0 to 25V Range

Maximum Input	35V
Input Impedance	1MΩ
Resolution	100mV
Accuracy	±100mV ±1% reading

Notes

Battery Type Tekcell SBAA02P, SAFT LS14250 or LST14250;

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

Replacement Interval Every two years

Before replacing the battery the data logger must be stopped.

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

Battery and 2 LEDs are supplied, but not fitted to the PCB.

The Reference line is an output from the logger that provides a 2.5V (100µA max) reference voltage for external application, if required.

The Sense Line is an output from the logger that changes state when a reading is taken.

This line goes from 0v to +3.5V, for approximately 50mS, whilst a reading is being taken (the line goes back to 0V when the reading cycle is complete).

The Sense Line has an impedance of 100KΩ.

The Reference and Sense Lines do not need to be connected for the data logger to record correctly.

Using the Re-Educator software, which is supplied on the Tinytag Explorer CD, or can be downloaded free of charge from our web site (www.tinytag.info/downloads), the unit can be configured to display recorded data in the appropriate engineering units for the application it is being used in.

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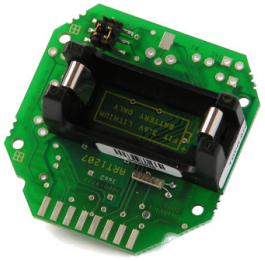


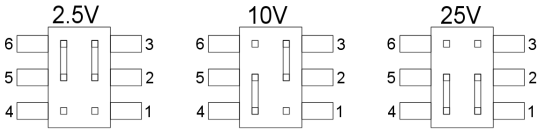
Changing the Voltage Range

As supplied, the TGPR-0700 is set to record using the 2.5V reading range.

Changing the reading range to 10 or 25V is a two step process that requires the moving of jumper links on the unit and the selection of the correct reading range using Re-Educator software (which is supplied on the Tinytag Explorer CD, or can be downloaded free of charge from our web site (www.tinytag.info/downloads).

Jumper Link Positions

Set the jumper links to select the required reading range as shown in the diagrams below:



Re-Educator Software

Once the unit's jumper links have been set to the correct position, the correct reading range needs to be selected using the Re-Educator software.

- Connect to the data logger and select the appropriate tab for the reading range required, from the bottom left of the screen.
- Next check the **Preferred** menu option (this should grey-out) and then click on the **Write** button.
- On the "Write Information to Logger" screen that then appears, simply click **OK** with the **Write new algorithms** box checked.

When the write process is complete the data logger will be ready for use.

Calibration

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

We recommend that the calibration of this unit should be checked 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.

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.

Gemini Data Loggers (UK) Ltd. operates a Quality Management System which conforms to ISO 9001. The scope of the system covers the manufacture, design and supply of data loggers and their associated software, accessories and services.

Required and Related Products

To use this data logger you will also require one of the following pieces of software:

SWCD-0040: Tinytag Explorer software or
SW-0500: Easyview Pro software

Further related products:

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

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