Tinytag Voltage, Current and Count Input Data Logger User Information

Instructions for using Tinytag Talk 2, View 2 and Plus Re-Ed voltage, current and count input data loggers

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data collection & retrieval » temperature » humidity » shock » vibration » count » voltage » current

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Warnings

- If this equipment is installed or used in a manner not specified by the manufacturer then the protection provided by the equipment may be impaired.
- This equipment is provided with a lithium battery. Danger of explosion if the battery is incorrectly fitted. Do not cut open, incinerate, recharge or expose to temperatures in excess of 100°C (212°F).
- The edge connector should be used for all terminations, do not solder directly onto the PCB itself.
- The measurement input is connected to the PC socket GND pin. If the connection to the negative (GND) input terminal is NOT at mains earth potential then the input MUST be disconnected BEFORE connecting the PC.
- Any external circuit connected to the logger should not contain a voltage source greater than 30Vdc
- This equipment should be used within the temperature range and other environmental conditions specified on its data sheet.

Required Software

The main software required to run Tinytag data loggers on a day-to-day basis; to start them recording and to view data with, is called Tinytag Explorer. Additionally, for Tinytag Plus Re-Ed users, we also supply the Re-Educator software that can be used to configure a data logger so that recorded results are displayed in the correct engineering units.

Tinytag Explorer

Details on how to use your data logger(s) with Tinytag Explorer can be found in the software's quick start guide (a copy of which is supplied with the software).

If you do not have a copy of this manual please see the software's help file, or downloaded a copy of it from our web site here:

www.tinytag.info/manuals

Re-Educator

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), a Tinytag Plus Re-Ed logger can be configured to display recorded data in the appropriate engineering units for the application it is being used in.

For more detailed information on using Re-Educator, please see the software's help file or the Re-Educator User Manual that can be downloaded from

www.tinytag.info/manuals.

TGPR-0700, 0704 and 0705 data loggers only:

The reading range of the TGPR-0700, 0704 and 0705 data loggers can be set to 2.5, 10 or 25V. Instructions on how to do this can be found to the right.

TGPR-1200 and 1201 data loggers only:

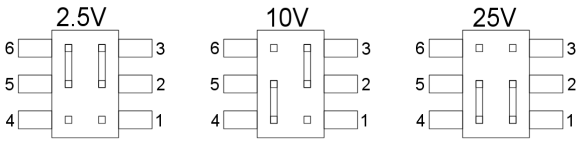
Using Re-Educator, a divide by counter - or "divisors" - can be set in the TGPR-1200 to increase the number of counts the logger can record to 65,536 per interval.

Changing the Voltage Range on TGPR-0700, 0704 and 0705 Data Loggers

Selecting the correct reading range on a voltage data logger 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.

Jumper Link Positions

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



Re-Educator Software

Once a 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.

Electrical Characteristics (General)

The **Sense Line** (if present) is an output from the logger that changes state when a reading is taken.

This line goes from 0v to +3.5V (TGPR-0704) or 0 to +3.3V (TV-4704 & TV-4804), 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 (TGPR-0704) or 10KΩ (TV-4704 & TV-4804).

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

The Reference Line is only active at the same time as the Sense line.

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

TGPR-1200 and 1201 only:

If a volt-free switch is being used that requires further de-bounce, this can be achieved by connecting a 10nF capacitor across the switch contacts.

Connection Information

TGPR-0804, TGPR-1001, TGPR-1201

The above data loggers can be used with a CAB-3246 Tinytag Current/Millivolt/ Count Input Lead or an ACS-9700 2-Pin Plug.

The connection details for the cable and plug are as follows:

CAB-3246	2-Pin Plug	Function
Blue	A	Common/0V
Red	B	Signal Input

TGPR-0704, TGPR-0705, TGPR-0805, TGPR-1002, TV-4704, TV-4804

The above data loggers can be used with a CAB-3239 Tinytag Voltage/XP Input Lead or an ACS-9703 5-Pin Plug.

The connection details for the cable and plug are as follows:

CAB-3239	5-Pin Plug	Function	TGPR-0704	TGPR-0705	TGPR-0805	TGPR-1002	TV-4704	TV-4804
Red	A	Reference	•	•	•	•		
Green	B	12V Output		•	•	•		
White	C	Sense Line	•				•	•
Black	D	Common/0V	•	•	•	•	•	•
Yellow	E	Signal Input	•	•	•	•	•	•

TK-4702, TK-4703 & TK-4802

The Tinytag Talk 2 voltage and current loggers are supplied with a CAB-3233 Talk Voltage/Current Input Lead.

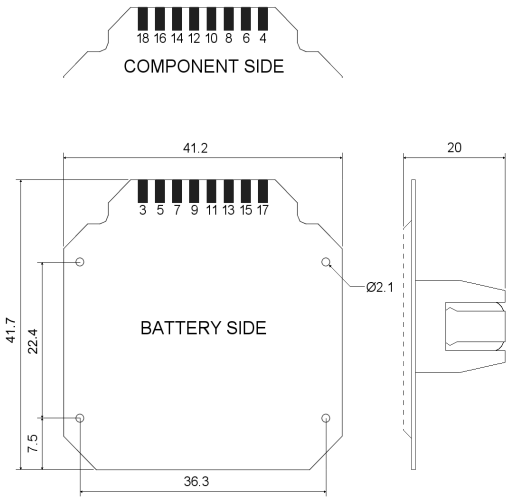
The connection details for the cable, and a 2.5mm jack plug, are as follows:

CAB-3233	2.5mm Jack Plug	Function
Yellow	Ring	Signal Input
Black	Shank	Ground/0V
White	Tip	Sense Line

TGP-4810 & TV-4810

These units should only be used with the ACS-0003 current clamp supplied with the logger.

OEM Logger Connection Information

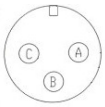


The PCB edge mates with a 0.1" IDC female edge connector, such as RS Part No. 471-317.

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: Signal Input

OEM Socket Connection Information

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



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

Electrical Characteristics (OEM)

If the supplied battery is used to power the logger:

Supply Voltage (Pad 3)	3.6V typical
Supply Current (Pad 3)	5mA

If an external source is used to power the unit, the requirements are as follows:

Supply Voltage (Pad 3)	
Minimum	3.2V
Typical	3.6V
Maximum	5.5V
Supply Current (Pad 3)	5mA (Peak)

Battery Information

Battery Type Tekcell SBAA02P, SAFT LS14250 or LST14250

Tinytag Plus Re-Ed and Tinytag Talk 2 data loggers 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.

Approvals

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

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Warranty & Disposal

- 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 the standard Terms and Conditions of Sale, a copy of which is available on request.
- **The equipment/goods are sold "as is" and with "all faults" (applies in USA). Claims under warranty should be referred to the point of sale.**
- Data loggers, accessories and batteries should be disposed of at organised facilities, where available, in line with local regulations.
- In accordance with the WEEE directive Gemini Data Loggers (UK) Ltd. will take back and dispose of any equipment purchased directly. Equipment not purchased directly should be returned to the point of sale for disposal.

Further Information

For further information on the Tinytag Plus Re-Ed and Tinytag Talk 2 data loggers, please visit our web site at:

www.tinytag.info

Full data sheets for all units, containing reading and accuracy information, can be found there, along with manuals for the software.