Applies to: **TGP-1200 Tinytag Plus Re-Ed OEM Count**
TGP-1201 Tinytag Plus Re-Ed Count

Tinytag Count Data Loggers

This document gives general information on the Tinytag count data loggers including what they record and common applications the units are used in. More detailed technical information on these data loggers can be found on their product data sheets.

General

What does a Tinytag count logger record?

Tinytag count data loggers record the number of pulses they see on their input during each logging interval.

By default, units can count up to 255 pulses per logging interval, and the logger can store 64,000 such intervals.

The number of counts a logger can record per logging interval can be extended using "divisors" allowing a count of approximately 65,000 counts per interval if required.

The logging interval can be adjusted by the user from once a second to once every ten days.

The loggers can record counts from a volt free contact (such as a reed switch), or from a 0-10V DC signal on a high to low transition.

The maximum frequency of counts the unit can record is 50 counts per second.
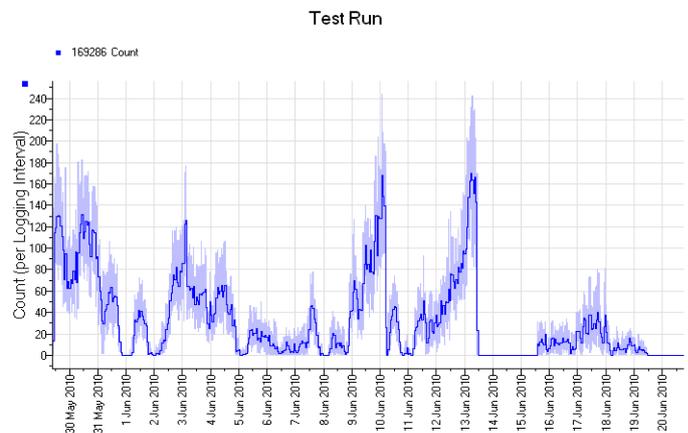
Common Applications

Tinytag count data loggers are typically connected to third-party sensors and used to record their output. Some typical applications include:

Utilities Meter Monitoring

It is quite common for water, gas and electricity meters to have pulsed outputs. Tinytag count loggers can be used to record these outputs both as a back up for the main meter and also to show when a utility is being used.

Flow Meters

Similar to utility meter monitoring, count loggers can be attached to third-party sensors to record air and water flow.

Weather Monitoring

Anemometers and tipping bucket rain gauges can be used to record windspeed and rain fall.

Object Counting

Count loggers are commonly used to count items as they pass a sensor, whether this is people entering a building, parcels on a conveyor belt or even bats leaving a roost!

Selecting an Appropriate Logging Interval

When using a count data logger, you need to ensure that you set an appropriate logging interval for your application so that you do not miss any counts.

If the maximum number of counts for a given period exceeds 255, then you will need to select a shorter logging interval or use divisors.

For example:

If you have a flow meter that outputs a maximum of 900 pulses per hour, a logging interval of 15 minutes may be suitable to capture all of your data.

Alternatively, you could set a logging interval of once every hour and program the data logger with a divisor of 4, which will allow the unit to record up to 1020 counts per hour.

When using divisors the reading resolution of the logger will be the divisor/2 so using the above example the accuracy of the readings in this case will be ±2 pulses per interval.

If you are only expecting one or two counts per minute, however, rather than setting your logger to an interval of once a minute, in the hopes of capturing every pulse individually, you could set the unit to record once an hour to give you an hourly total of the counts seen by the logger.

If you do not know the output rate of your sensor, a brief test run with the sensor is advised to determine this before you start recording.

Note, if you are using a count logger to see when a count occurred, the logger will only be as accurate as the logging interval you select.

Data Display Options

Count input data loggers are started, and the readings from them viewed, using the Tinytag Explorer software.

Units can also be configured to show readings in the appropriate units for the application they are being used in using the Re-Educator software.

Re-Educator is used in the initial set up of the count data logger to effectively turn it into a logger for the property being recorded. As well as allowing the user to configure loggers with appropriate units, the software also allows results to be scaled so that one pulse can equate to a set quantity.

The Re-Educator software is also used to program divisors, allowing a count logger to record more than its default 255 counts per interval.

Further Information

Further information on Tinytag Plus Re-Ed count data loggers can be found on the unit's product data sheets that can be downloaded from:

http://www.geminidataloggers.com/logger-datasheets

If you should have any questions that are not covered by the above, please contact your supplier or Gemini Technical Support.

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