

### SL130T Data Logger Instruction Sheet

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#### Introduction

The SL130T data loggers are designed to provide an accurate record of temperature exposure in washing machines and sterilisers. They are housed in a PTFE enclosure which is safe for use in food type application and which provides a thermal barriers to prevent the electronics from overheating.

Up to 16000 records can be stored in the logger which uses the powerful TempIT-Lite software package, running on a PC, to download the configuration and to retrieve the data. High and Low alarms can be set with a programmable time period for which the alarm limit must exceed before it is recognised as an alarm. Any alarm condition detected is clearly shown on the chart.

The PC operating software, TempIT-Lite is free from our web site alternatively, the SL130 can be used with the TempIT-Pro package to provide greater functionality. Both versions provide a powerful yet easy to use graphing package as well as a platform to set up and issue the logger. Up to 450 characters of manifest information are held within the logger for easy identification and data retrieval.

#### Software requirements

TempIT4-Lite or TempIT4-Pro operating software

#### Installing the software

Insert the Tempit software disk into the CD drive which will auto run and guide you through the installation procedure. If downloaded from the web site, use explorer to highlight the setup.exe file and double click on the file.

The software will install as TempIT-lite. This can be upgraded to TempIT-Pro software platform by inserting the appropriate enabling code which can be obtained from Signatrol service department.

The software contains a comprehensive 'HELP' function to help guide you through the functions.

#### Communicating with the SL130T

The SL130T has an infra red communications link, situated under the screwed end cap, that is designed to communicate with a SL120R Reader. Plug the receiver into the relevant comms port ( RS232 or USB depending upon the version). Remove the end cap and place the SL130 end down on the reader in the area outlined. Power up the PC and run the operating software. Launch the TempIT software.

#### Operating Procedure.

The standard tag operation is a two stage procedure comprising of the issue, whereby all the relevant operating parameters are downloaded to the Tag and recording is initiated. The second stage is where the data are down-loaded from the Tag to the PC via the reader and are displayed on the Tempit software.

#### Issue

The relevant parameters are entered into the operating software such as sample rate, alarm parameters etc. The issue tag button is then clicked which sends the configuration data to the Tag. More details can be found in the Help within TempIT under the quick start guide.

WARNING: Issuing the tag erases all data currently stored in the tag, ensure it is saved prior to issue.

#### Alarms

Two time/temperature alarms are provided, one high and one low. The alarm setpoint is entered prior to issue together with time for which the temperature must be in alarm before the tag recognises it as an alarm. The alarms are 'armed' the first time the temperature goes into the non-alarm state. e.g if the ambient temperature is 20 °C when the Tag is issued and the high alarm is set for 8 °C, the alarm will not be primed until the first time the measured temperature falls below 8 °C.

#### Manifest

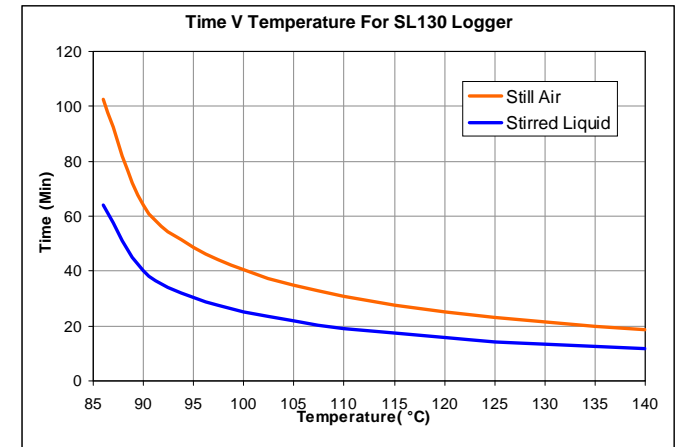
There are two manifest areas; owner and user. The owner manifest is entered once only the first time it is issued and remains within the lag for its entire life and is normally used to record details of the owner. The user manifest can take up to 450 characters of manifest data which can be entered and stored within the logger and can be changed for every journey. Manifest data can be free typed at issue and may be used to record such things as the shipment number, the licence number of the truck, the security tie serial number, the drivers name etc.

#### Cycle Time

The SL130 can be used continuously at temperatures up to 85 Deg. C and at higher temperatures, up to 140 deg. C, for limited periods. The following chart shows the length of time that it can be operated at temperatures in excess of 85 Deg. C. Two charts are shown, one is for operation in still air and the second for operation in a stirred liquid.

The time v temperature calculation can be also performed using a free software tool available on request.

Note: The PTFE cage which surrounds the sensor in order to protect it softens with temperature and may become distorted. This has no effect on the operation of the logger or the sensor protection is affords. When cooled, the cage can easily be manipulated by hand to its original shape.



#### Repeat Operation

The above charts assume a starting temperature of 24 Deg. C. If a run has recently been completed then the logger must be allowed to cool to this temperature before a second run can begin.

Prior to use ensure that the cap is fitted and screwed firmly in place

#### Data Download

Data are stored within the Tag and can be downloaded by clicking the Download Icon. More details can be found in the Help within Tempit under the quick start guide. Once data are downloaded it is immediately presented on the screen as a graph (In the case of the TempIT-Pro a data-table is also displayed). Alarms appear highlighted in red. The Data are not saved at this point and if required data can be saved and printed using the appropriate icon. It is recommended that data are always saved.

It may be necessary to allow the logger to cool down before data can be downloaded.

#### Security Tie

The SL130 is equipped with a small ring mounting hole. This is designed to accept a standard security tie which is used to ensure that the logger is not tampered with. The security ties are for single use and must be cut off to remove. Each tie has a unique serial number which should be noted and/or programmed into the Tag manifest. In this way, the user can be sure that the Tag has not been moved from its intended location without the operator knowing. Spare security ties are available from Signatrol Ltd.

#### Previously Stored Data

Previously stored data can be displayed by selecting file and double clicking on the appropriate file. More details can be found in the Help within Tempit.

## Troubleshooting

No communications with reader:

Check red light in the reader is on, if not check connections and check that the correct comm. Port has been selected in the software.

No communication with Tag:

Ensure Tag is end down on the reader in centre lining up with graphic

More details can be found in the Help within TempIT

## SL13T Specifications @ 25°C

Power Internal Battery:	Typical Battery Life 5 Years
Ambient Temperature Range:	-30°C to +140°C (Time limited above +85°C)
Accuracy:	±0.46°C
Resolution:	0.06°C
Number of Readings:	8192 (Stop when full)
Sample Rate:	2 seconds to 24 Hours
Ingress Protection:	IP68
Software Alarms:	Yes
Manifest Text:	450 Characters
Delayed Start:	Yes
Case Material:	PTFE
Calibration Interval:	12 months recommended
Warranty:	1 Year
Dimensions:	45mm Dia x 126mm Length.



This Apparatus conforms with:-The protection requirements of Council Directive 89/336/EEC on the approximation of the laws of Member States relating to electromagnetic compatibility (Article 10 (1)), as amended by Council Directives 92/31/EEC, 93/68/EEC and changes.

STANDARD:- BS EN 61326:1998 IEC 61326:1997 Electrical Equipment for measurement, control and laboratory use EMC requirements.

## IMMUNITY

ANNEX A (Industrial Locations)EMISSIONS CLASS B

**Disclaimer:** Whilst we at Signatrol Ltd take pride in the performance and accuracy of our products, any product can and will fail. It is therefore recommended that all products are regularly checked for performance and calibration and that any application which involves the health and/or safety of persons, animals or other living organisms should have a secondary system and the Customer should not rely on the data from the product alone.

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