

# signatrol

## SL54TH & SL54TH-A Instruction Sheet

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**Warning: Please install the TempIT software BEFORE connecting the USB interface to the computer.**

### Introduction

The SL54TH button data logger is designed to provide an accurate record of temperature and relative humidity exposure and is ideal for the monitoring of sensitive goods in transit and in process applications.

The PC operating software, TempIT-Lite is free to download from our web site alternatively; the button 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 64 characters of manifest information are held within the logger for easy identification and data retrieval.

### Communicating with the SL54TH

The SL54TH connects via the holder and cable to the USB port of a PC. Place the button into the holder and power up the PC, launch the TempIT software. Ensure the correct device type and port are selected in the Device screen (Options>Configuration>Device) - Refer to the TempIT Quickstart guide supplied with the data logger.

### Operating Procedure.

The standard button operation is a two stage procedure comprising of the issue, whereby all the relevant operating parameters are downloaded to the button and recording is initiated. The second stage is where the data are downloaded from the logger 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 logger button is then clicked which sends the configuration data to the button. More details can be found in the Help within TempIT under the quick start guide.

**WARNING: Issuing the logger erases all data currently stored in the button; ensure it is saved prior to issue.**

To preserve battery life, the data logger should be issued with sample rate of 24 Hours when not in use. Also, setting the memory mode to stop when full, instead of wrap when full will ensure the logger stops reading once full.

### Alarms

Four temperature alarms are provided, one high and one low for both temperature and relative humidity. The alarm set-point is entered prior to issue.

The alarms are 'armed' when the first reading is taken unless delayed start is selected. If the delayed start function is selected the alarm becomes immediately active as soon as the future start Date / time is reached. The temperature channel supports an additional function, "Start logging on alarm". In this mode the temperature alarms are armed instantly upon issue, but readings will not be stored until an alarm condition has occurred.

### Manifest

There are two manifest areas; owner and user. The owner manifest is only entered once, when the logger is issued for the first time. The owner manifest remains within the logger for its entire life and cannot be modified. The owner manifest is normally used to record details of the owner and / or the date purchased.

The user manifest can take up to 64 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.

### Data Download

Readings are stored within the button 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 TempIT-Pro. a data-table can also be displayed). You will have the option to view temperature, relative humidity and dew point although if TempIT-Lite is being used, only two of the three types of reading can be shown at once. Upgrading to the Pro version will remove this restriction. When a single channel is viewed, alarms appear highlighted in red and blue. 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. Mid-journey data can be saved and at the end of the journey any new data will be appended to the mid-journey data.

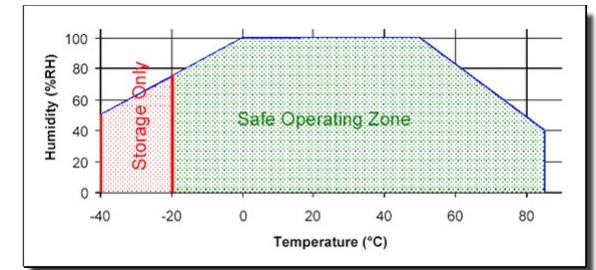
### Battery Life

The SL54TH means an operational life of approx 5 years with a 10 minute sample rate and an operating temperature of +20°C. This reduces to 125 days with a sample rate of 10 seconds at +20°C.

We would recommend you disable the sampling or set the sample rate to a high value when the data logger is not in use

### Operating Limits

The following graph shows the operating and storage conditions for the SL54TH data logger. Increasing the sample time and reducing the temperature exposure will increase life significantly.



To preserve battery life:

1. Select the longest scan interval consistent with the application
2. Select 8 bit rather than 11 bit mode, if 8 bit is sufficient.
3. Do not leave the button logging in 'Wrap when full' mode when not in use
4. Do not leave the button at elevated temperatures when not in use
5. If using the trigger start, make sure the sample rate is set for a long time if the trigger point is unknown as the data logger continues to take readings in this mode even if the readings are not stored away.

### 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 the correct port and device type have been selected in the software.

Ensure that no other software is loaded that is taking control of the port

No communication with button:

Ensure logger is placed in the holder

More details can be found in the Help within TempIT

Specification	SL54TH / SL54TH-A
Power	Internal Battery (Non serviceable)
Battery Life	Dependant up on Sample Rate and ambient temperatures. Typically 5 years at 10 minute sample rate.
Ambient Temperature	-40°C to +85°C - Storage -20°C to +85°C - Operating
Temperature Accuracy	±0.5°C from -10°C to +70°C See datasheet outside this range
Relative Humidity Accuracy	±5% - SL54TH ±2% - SL54TH-A
Temperature Resolution	0.5°C - Low resolution mode 0.07°C - Hi resolution mode
Relative Humidity Resolution	0.64%RH low resolution mode 0.04%RH high resolution mode
Total Number of Readings	8192 low resolution mode 4096 high resolution mode
Delayed Start	Yes, Up to 1 Year, 1 minute resolution
Sample Rate	2 second to 24 hours By default TempIT will suppress sample rates below 30 seconds.  To enable faster samples rates go to options>configuration and disable "Suppress fast sample rates".
Software Alarms	Yes
Case Material	305 Stainless Steel
Warranty	1 Year
Dimensions	6mm High x 17mm Diameter

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

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