

# signatrol



## SL151T

**ROBUST / HYGIENIC TEMPERATURE DATA LOGGER**

The SL151T is a battery powered, single channel, temperature data logger that records the time, date and precise temperature for retrieval and analysis. These robust data loggers are commonly used in medical, pharmaceutical, food & beverage, building management and many other industries for temperature monitoring.



## ROBUST / HYGIENIC TEMPERATURE DATA LOGGER

The high security TempIT software platform ensures that the data recorded is a true and faithful record of the actual conditions your sensitive items have been exposed to. These are essential requirements when wanting to achieve the various facets of an FDA21 CFR Part 11 validated system or, as part of a hazard analysis & critical control point (HACCP) based food safety programme.

Compliant to BS EN 12830:2018, this compact & robust data logger with a battery life of more than 5 years and data storage capacity of up to 24,576 readings, allows you to use this device in many applications. It is simple to use and can provide an initial indication, by a flashing red or green LED, to indicate whether any event has taken place during its time transit. If an event has occurred and further analysis is required or, you simply want to download the temperature data, you simply place the data logger on the wireless RF or inductive interface reader (SR150R) and within 2 minutes you have your data.

### HOW TO GET STARTED

#### 1. THE DATA LOGGER

- Choose which option you require, a higher accuracy unit ( $\pm 0.2^{\circ}\text{C}$ ) with an individual calibration certificate or, a lower accuracy unit ( $\pm 0.5^{\circ}\text{C}$ ) without a calibration certificate.

#### 2. A USB & RS232 COMMUNICATIONS/PROGRAMMING INDUCTIVE READER

With the SL151 data logger being totally sealed and crevice free, there is no possibility of having any communication ports. So, the SL150R is used to provide an inductive link between the data logger and the computer. The data logger is simply placed on top of the reader and communication takes place. Each inductive reader comes with a single machine licence of the TempIT-PRO software – Please see Page 3. Once you have these, that's it, you are good to go.

#### 3. STARTER KITS

Starter kits are available providing you with everything you need to get started.

THE KIT INCLUDES:

- 5 data loggers – select the  $\pm 0.2^{\circ}\text{C}$  with cal-certs or,  $\pm 0.5^{\circ}\text{C}$  option
- A SL150R Inductive Reader with the high security TempIT-PRO software

*These can be purchased easily via our website, phone or email and can be dispatched the same day if orders are received by 12.00 noon.*

## What else do we provide?

**Re-calibration Service** - Signatrol's Calibration Service Centre provides you with a low cost, fast 3-day turn-a-round service ensuring minimal disruption to your process. Please contact [calibration@signatrol.com](mailto:calibration@signatrol.com) for your calibration requirements.

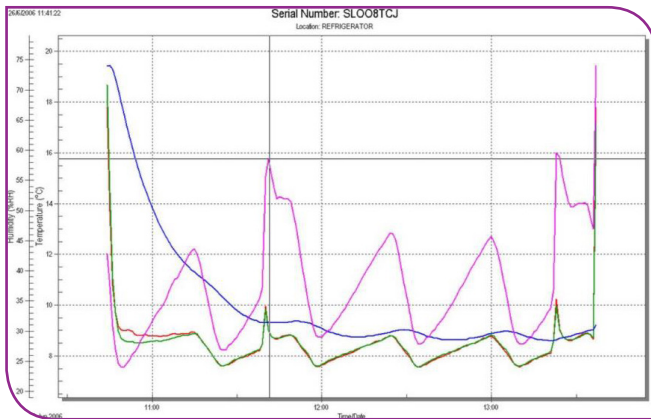
**Technical Support** - Setting up our data loggers using our intuitive software is really very simple. However, free technical support can be provided either by emailing [helpdesk@signatrol.com](mailto:helpdesk@signatrol.com) or over the phone by speaking to one of our engineers.



# TempIT SOFTWARE

## Robust & Hygienic Battery Powered Temperature Data Logging for Process / Transit Monitoring.

TempIT is our high security configuration and data analysis software. TempIT provides an inviolate record of your data that cannot be tampered with or manipulated in any way, and is available in two versions, TempIT-LITE and TempIT-PRO. In many applications, especially when data loggers are used for monitoring storage and transport conditions of drugs, pharmaceuticals, blood products or any critical or important items or cargo, it is essential that the data is a true and faithful record of the actual conditions the sensitive items have been exposed to. The TempIT-PRO software is often used as part of an FDA 21 CFR Part 11 validated system or, as part of a hazard analysis & critical control point (HACCP) based food safety programme.



## SOFTWARE SPECIFICATIONS

	TempIT-LITE	TempIT-Pro
Issuing of SL50 Series Data Loggers	●	●
View and set owner and user manifest	●	●
View graph	●	●
X-Y Zoom	●	●
Auto scale of Y axis	●	●
Change units between °C and °F	●	●
Print Graph in PDF format	●	●
Export Data in CSV format	●	●
View Data in a tabular format	●	●
Open multiple logger files and overlay on the same graph	●	●
Add comments to the graph with pointers	●	●
"Show Measure" function to calculate rate of change	●	●
Automatic Calculation of F0, A0, PU's	●	●
Automatic Calculation of Mean Kinetic Temperature (MKT)	●	●
Carry out "time above" temperature / value test	●	●
PDF Print out includes all data in tabular format	●	●
Can be used as part of a FDA21 CFR Part 11 system	●	●

### TempIT-LITE (Free of Charge)

This enables SL151 series data loggers to be issued with all the relevant parameters set, data retrieved and displayed using a powerful graphics engine.

### TempIT-PRO

This offers all the functionality of the TempIT-LITE version with the following enhancements:

- Export to spreadsheet function in CSV format
- View data in a tabular format
- Multi-trace graphing i.e. displays several data graphs on the same axis at the same time.
- Automatic calculation of mean kinetic temperature (MKT)
- Automatic Calculation of A0, F0 and Pasteurisation Units (PU's)
- Add comments to graphs
- Carry out 'time above' temperature / value test

TempIT-PRO licences are available to purchase for any number of users and is a one-off fee with no ongoing annual subscription costs. All future updates are free of charge.

### TempIT-PRO is available in three versions:

- Single machine licence: This enables TempIT-PRO to be installed on a single machine.
- Multi machine licence: This enables TempIT-PRO to be installed on up to 10 machines/PC's.  
*For more than 10 users, please contact Signatrol.*
- USB key licence: This enables TempIT-LITE to be installed on as many machines as required. To upgrade LITE to PRO on any machine, you simply insert the USB key into an available USB port. The software reverts back to the LITE version once the USB key is removed.



## ROBUST TEMPERATURE DATA LOGGER

▶ **TEMPERATURE DATA LOGGER**

▶ **TOTALLY SEALED AND CREVICE FREE**

▶ **FOOD GRADE ABS CONSTRUCTION**

▶ **5 YEAR BATTERY LIFE**

▶ **VISUAL ALARM INDICATION**

**Typical applications include food safety, where vulnerable or high value products are sensitive to incorrect environmental conditions, which in turn could cause irreparable damage to goods that might not be obvious on receipt.**

The data logger is sealed in a crevice free and robust plastic tag with no 'bug traps' connections or entries of any kind. The tag can be conveniently located in a packing case, on a pallet or attached directly to the product. This data logger is particularly suited for cold chain applications to meet EN12830:2018 for the monitoring of transport, storage and distribution of chilled food, frozen and deep-frozen food or quick-frozen food and ice cream.

*A flashing GREEN LED shows the operational status which turns to RED if an alarm condition is detected giving an operator immediate notice that the device has been exposed to an 'out of limit' condition which requires investigation.*

The SL151T has a user manifest containing all the details of the application. This could be the name of the area being monitored, the vehicle registration number, the batch number or just a description of the application. The user manifest, together with alarm thresholds, are simply downloaded to the data logger by a wireless RF / inductive interface reader.



## SL151T - ROBUST TEMPERATURE DATA LOGGER

The same wireless inductive reader retrieves the stored readings which are transferred to a suitable PC or laptop where the high security TempIT software displays all the information in an easy to read graph, showing clearly if the consignment has been subjected to any alarm conditions. The readings are stored in a format that cannot subsequently be altered or manipulated whilst the data logger also records who has read the information thereby ensuring their integrity.

### BLOOD & VACCINE APPLICATION

The SL151T temperature data loggers are also used extensively as a robust temperature indicator by the military and the medical industries. For example, when used in the transportation of blood between blood banks and between hospitals, the blood bag is placed inside an insulated box and with it the SL151T logger. Once the blood arrives at its destination, the data logger will be flashing green if the blood has been kept within the required temperature range or, it will be flashing red if it has been exposed to temperatures outside of the required limits.

This allows you to make a quick and simple on the spot decision. Alternatively, for further analysis, you can in less than 2 minutes download the data from the logger to see just how long the blood has spent outside the required temperature limits.

### UNCONDITIONAL 4 YEAR WARRANTY

Signatrol offer an unconditional warranty on the SL151T. So confident are we in the robustness of this product we guarantee it for 4 years against failure, and we will replace any unit that does fail within this period, regardless of cause!

- **CALIBRATION REMINDER**

Re-calibration reminder is provided continually 1 month before the calibration expires.

- **USER PROGRAMMABLE MANIFEST TEXT**

You can provide a project name, location, van registration no. etc., each time the data logger is used.

- **3 START OPTIONS**

The logger can be started by; A magnetic swipe, delayed time or on an alarm.

- **READER LOG**

The data logger stores the first 16 users with a date & time stamp who has read the data logger since it was last issued.

- **10-YEAR NON-VOLATILE MEMORY**

The data is stored in the data logger and can be downloaded 10 years after the battery has failed.



# SPECIFICATIONS

<b>POWER</b>	Internal battery
<b>BATTERY LIFE</b>	Guaranteed 4 years at 20°C
<b>AMBIENT TEMPERATURE RANGE</b>	-30°C to +60°C
<b>ACCURACY</b>	±0.5°C from -30°C to +60°C
<b>RESOLUTION</b>	0.02°C 12 Bit Resolution
<b>NUMBER OF READINGS</b>	24,576
<b>RESPONSE TIME</b>	T63: 3m 21s (in liquid) T90: 6m 55s (in liquid) T63: 6m 30s (in air)
<b>IP RATING</b>	IP68
<b>SAMPLE RATE</b>	30 seconds to 1 days
<b>DELAYED START</b>	Yes
<b>SOFTWARE ALARMS</b>	Yes with individual indication
<b>MATERIAL</b>	Food Grade ABS
<b>WARRANTY</b>	4 Year unconditional
<b>DIMENSIONS</b>	117mm (L) x 57mm (W) x 10mm (H)
<b>WEIGHT</b>	50g Approximately
<b>TIME TO DOWNLOAD DATA</b>	2 Minutes 8 seconds (24,576 Rdgs)
<b>CERTIFICATIONS</b>	FDA 21 CFR Part 11 & EN12830:2018

# ORDER CODES

PART NUMBER	DESCRIPTION	NATO STOCK NUMBER
SL151T	Robust Temperature Data Logger	6685-99-336-6884
SL151-KIT-USB-5	Starter kit comprising of 5pcs SL151T (without UKAS traceable calibration certificates) 1 USB Interface & TempIT-PRO Software	6685-99-265-1375
SL151A-KIT-USB-5	Starter kit comprising of 5pcs SL151T-A (with UKAS traceable calibration certificates), 1 USB Interface & TempIT-PRO Software	
SL150R	USB Communication Interface	
TEMPIT-PRO-4	Enhanced Software	

Every effort has been taken to ensure the accuracy of this specification and we reserve the right of amendment without prior notice.

