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TempIT Quickstart Guide

Warning: If using the USB interface, please install the TempIT software BEFORE connecting the USB interface to the computer.

Introduction

TempIT-Pro is not a separate software package, the Lite version is installed first and a registration code is entered to convert it to the full Pro version or a USB key is purchased that will also unlock the Pro functions whenever the USB key is present in the computer.

Installation

Insert the TempIT CD into your CD drive. The software should automatically start. If not, use Windows explorer to locate and run the file setup.exe from the CD.

Follow the on screen instructions.

TempIT Requirements

Operating System:
- Windows XP (32bit) Service Pack 3
- Windows Vista (32 & 64bit) Service Pack 2
- Windows 7 (32 & 64bit) Service Pack 1
- Windows 8 (32 & 64bit)

Processor Speed:	1GHz or Faster
Machine RAM:	1GByte or more
Hard Disk Space:	100MByte minimum free space.
1 Free USB Port.	

Operating for the first time

Once the software has been installed you will be asked to enter a password. This password is used if you decide to enable the security facilities that are turned **off** by default. Enter a password and make a note of it.

Configuration

Once a password has been entered you will be presented with the configuration window. Select the "device" tab:
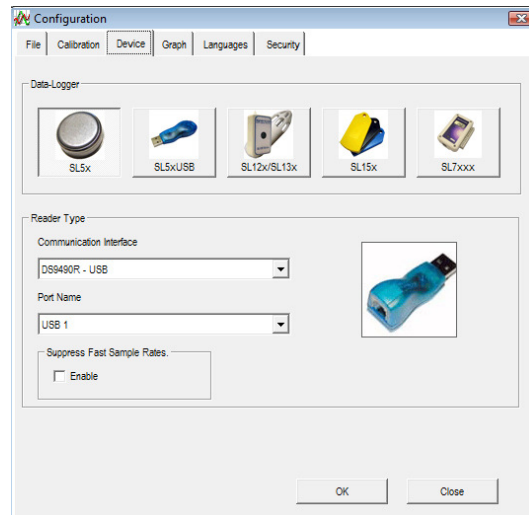
Select the correct logger type by clicking on one of the three buttons.

Select the correct interface to connect the logger to the computer and make sure the port name matches the same port that you are going to connect the reader to.

The **Graph** tab contains the functions that will determine how the data is presented. For TempIT-Pro users use the tree view to enable "Time above temperature", F0, A0, PU calculations.

The **Calibration** tab lets you specify when to display the calibration reminder for the data logger. By default this value is set to 12 Months. Every time the data logger is issued, TempIT will check to see if the data logger requires calibration. If the data logger requires calibrating, the software will warn you of this but not stop you using the data logger.

The Calibration tab also contains the **Passcode**. This is not to be confused with the password entered when the software was started for the first time. The passcode is used to ensure only authorised versions of the software can issue the data logger. Unless you are intending to

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use the passcode facility, we strongly suggest you do not alter this number. If you do change the number please ensure you take a note of the new number.

Click on the OK button to close the configuration window.
Connect the reader / interface lead to the computer.
Place the data logger on or in the communication interface / reader.

The type of interface depends on the model being used.
The SL50 series button loggers need to be clipped into the interface with the etched face down.
The SL5XUSB data loggers are self contain do not require any additional interface leads or readers.
The SL150 series data loggers should be placed on the reader in any orientation.
The SL7000 series data loggers use a conventional USB lead.

Issuing the data logger

The process of setting up the data logger is called issuing. During the issuing process you can specify how often the data logger takes a reading. You can specify alarm levels that appear on the graphs. These alarm points activate the alarm lights on the data loggers that have visible alarms.

Click on the issue logger button:

Or, select "Issue Logger" from the "Logger Operations" menu.

TempIT will now communicate with the data logger and if communication is successful you will be presented with the data logger issue screen.

The first tab is the **General Setup** tab.
In the general setup tab you can give the data logger a 9 digit identification number. You can use this to identify individual logger if you have more than one.

You can also set the sample rate in this tab. The sample rate is the time between readings. The four boxes above the sample rate show when the logger will be issued and when the memory will become full. As you change the sample rate, you will notice the time and date when the logger becomes full also changes. Ensure you choose a sample rate that allows enough time for whatever you are monitoring.

Some data loggers allow you to specify what happens when the memory is full. There are two options:

Stop When Full - In this mode, the data logger will stop taking readings when the memory is full. Anything that happens to the data logger after this point will not be recorded.
Wrap When Full - In this mode, when the memory is full, the data logger will throw away the oldest reading and then take a new reading. Providing you with a rolling window. Please note, once the oldest reading has been deleted, it is permanently lost. In either case, issuing the data logger clears the stored data.

The next tab is the **Alarm / LED Blink** tab. This is where alarms levels are entered. You can also enter a time period that the alarm condition can exist for before the alarm is actually tripped.

For data loggers with visible and audible alarms, you can also determine how often they flash / beep. The shorter you have these parameters, the more effect you have on the battery life of the product. Try to keep these as long as you can.

The **Delayed Start** tab is used for specifying an exact time and date when the data logger should start taking readings. If this feature is disabled or not available, the data logger will start taking readings as soon as it is issued. Not all data loggers support the delayed start feature.

The **Manifest Text** tab allows you to enter a few lines of text that describes what you are monitoring. This could be a batch number, the name of the product being measured or even the registration number of a vehicle. You can of course leave these fields empty.

The **Engineering** tab is used to configuring the process (mA or Voltage) input data loggers. In this tab, the scaling is entered to convert the process input to real engineering units.

Click on the "Issue Logger" button.
You will now be presented with a summary window which will explain all of the options you have chosen. If you are happy with this, click on the "Accept Settings" button. Clicking on the Cancel button will take you back to the issue screens.

The software will then configure the data logger as per your instructions and logging will start - unless you have used the delayed start option, in which case, logging will start at the time you specified.
Please note, issuing the data logger erases any stored information.

Retrieving Stored Data
The process of getting the stored data from the data logger is called "reading" the data logger. This can be started from the "logger operations" menu or by clicking on the read logger icon:

Place the data logger on to or in to the reader and click on the read logger icon. All the stored data within the data logger will be transferred to the computer and presented as a graph. The information is still in the data logger until the data logger is re-issued. Remember, if wrap when full memory option is used, the oldest reading is lost when a new reading is taken.

Viewing Data
Once the data have been read from the data logger the information is presented as a graph of the measured parameter against time. If the Pro version of the software is being used, you cal also see the data in a tabular format.
You can now analyse the data by moving the cursor around the screen. The area immediately above the graph shows the value and data and time of the cursor whilst in the graph area. It is possible to **zoom** in to a particular part of the graph by holding down the left button on the mouse and dragging a square around the area you wish to see in more detail.

TempIT-Pro
TempIT-Pro is available in two formats. The first is using a USB key. When the key is present in the USB slot on the compute, the Pro functions are enabled.

The second option is a "single machine license". To upgrade to TempIT-Pro you need to obtain a licence key from your supplier. As TempIT-Pro will only work on the computer it is registered for, you must supply your supplier with the "Unique Machine Key". This can be found in the **Help** menu under **License**. Your supplier will then be able to give you the License key for you to enter. TempIT will then restart as the Pro version.

In the Pro version of the software you have the following additional functions:

- View data in a tabular format
- Export data to a spreadsheet in txt or csv format
- Overlay multiple files into one graph.
- Calculate mean kinetic temperature (MKT)
- Calculate A_0
- Calculate F_0
- Calculate PU
- Time Above Temperature Test (Pass/Fail)
- Add Comments to the graph
- Change descriptor function

To view the data in a tabular format, click on "show table" in the control panel on the left hand side of the screen. Clicking on "hide table" will revert back to the default graphical view. You can resize each window by left click and holding on the bar that separates the windows.
Right clicking your mouse on the main graphing area allows you to change the graph descriptor - an area under the serial number that can be used to describe what is happening in the graph below. Right clicking in the main view also provides the facility to add comments and arrows. Once you have added a comment, you can move the comment by single clicking and holding down the left hand mouse button. The arrowhead is moved by double clicking and holding down the mouse button.

F0 and A0 Calculations
F0 is the sterilisation time to ensure that whatever micro-organisms are contained within the process sample are reduced to an acceptable limit.
Suppose that we are looking for a F0 of 12 minutes i.e to obtain the required Final Lethal Ratio the sample needs to be held at 121.11°C for 12 minutes. A data logger is used to plot the actual sterilisation cycle. With the graph on the screen, click on 'Show Measure' on the control panel. Two vertical bars appear that can be moved by clicking the curser on them and then dragging. The start bar should be placed at the start of the cycle, the right hand bar can then be dragged across the graph and the F0 at the point of placement is shown in the table. As you can see F0 is in minutes and increased as the bar is dragged to the right until the temperature falls below 90°C and which no further sterilisation takes place. (Note the F0 value only updates when the mouse click is released). When 12 Minutes is seen, the sample will have been sterilised to the required level. This can be considerably less time that waiting for the sample temperature to rise to 121.11°C and holding it there for 12 minutes and allowing it to cool, thus saving time and energy and hence costs.

A0 is exactly the same as F0 but in this case instead of the equivalent temperature being normalised to 121.11°C it is normalised to 80°C. This is used in lower temperature systems such as washer sterilisers etc. You can also email the graph as an image providing your computer has email facilities.

Once you have finished analysing the data you can save the data for future reference by clicking on the save icon.

For more detailed instructions, please refer to the manual supplied on the CD.