Models:
ITL Innotech Temperature Logger

Innotech Temperature Logger

Overview
The ITL Innotech Temperature Logger is a convenient temperature recording device housed in a keyring style enclosure which also doubles as a small electronic torch. Graphical presentation of logged temperature data is provided through a simple to operate Microsoft® Windows application. High speed data transfer from the ITL to a computer is through a Mini-USB to USB cable.

Features
- 1 year of battery life
- > 1 year of temperature data logging storage space
- Built in temperature sensor with 0.1°C temperature resolution, across an operational range of 0°C to 50°C
- User configurable log intervals, anywhere from 1 minute up to 12 hours between automatic temperature readings
- Ability to generate extra instantaneous temperature readings at the click of a button
- Fast log data transfer to a computer via a USB cable
- Simple to use with single button operation
- Small physical size and housed in a tough, high impact resistant, plastic keyring style enclosure
- Includes a handy electronic torch with long-life lamp LED
- Battery is user replaceable

Battery life estimate is based on:
- A total of 24 hours of torch operation
- Log interval set to 1 minute
- Ambient temperature of $0 < t_{amb} < 30°C$

Approvals
The ITL Innotech Temperature Logger conforms to the requirements for RCM labelling.

Applications
The Innotech ITL's applications include:
- Monitoring air conditioning performance
- Personal space comfort level monitoring
- Monitoring the storage temperatures of non-frozen perishable goods during transportation

Specifications
Battery
Contains a lithium battery, Dispose of Properly (in accordance with local regulations).
- Type: Lithium Battery
- Nominal voltage: 3.6VDC 1.2Ah

To avoid the risk of explosion, replace battery with the correct type.

Connections
- Mini-USB to USB connector

Temperature Ratings
- Storage: 0°C to 50°C non-condensing
- Operating: 0°C to 50°C non-condensing

Enclosure/Mounting
The ITL Innotech Temperature Logger is housed in a keyring style enclosure, and is moulded from flame retardant plastics recognised by UL as UL 94-V0.

Colour: Grey.
Dimensions (max): 36 mm(w) x 17 mm(h) x 70 mm(d).

Functionality

The Innotech Temperature Logger continuously logs temperatures at the user defined interval. These temperature readings are stored within the device's log.

Once the log is full, the newest temperature readings will overwrite the oldest temperature readings.

The ITL is able to store approximately 250,000 temperature readings. The estimated time to completely fill the log is based upon the rate at which the log is written to. The table below summarises the log rate versus time to fill the log relationship:

Log Rate	Time to Fill the Log
1 min	6.3 months
2 mins	1.0 year
5 mins	2.6 years

Available log time is an estimate, and is based on the potential battery life.

Torch Operation

Holding down the button on the data logger will turn on the torch LED. If held for longer than 4 seconds, the torch LED will be automatically turned off.

Manual Temperature Logging

"Double Clicking" the button will force an extra instantaneous tagged temperature reading to be measured and stored. The data logger will acknowledge the double click event by flashing the LED for a short period.

USB Operation

To extract the logged data, connect the Innotech Temperature Logger to your computer via the supplied USB cable.

While communicating to the Innotech Temperature Logger with the LogMATE software, the battery consumption is increased. To ensure maximum battery life, the Innotech Temperature Logger should be disconnected from the USB port after use.

Battery Replacement

The battery of the Innotech Temperature Logger can be replaced by the user. Before opening ensure you have the correct replacement battery ready.

Ensure there is a complete backup of the ITL logging data prior to replacing the battery.

Be aware that the sensitive electronics could get damaged by electrostatic charges while handling in which case warranty is void.

When inserting the battery ensure the orientation (polarisation + / -) is correct. Incorrect orientation of the battery may damage the Innotech Temperature Logger and cause excessive heat produced by the battery.

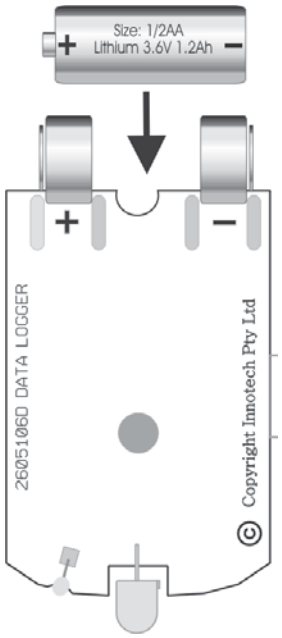
Contains a lithium battery, Dispose of Properly (in accordance with local regulations).

To replace the battery please follow steps below:

1. Undo the screw which holds the case together.
2. Open the temperature logger's case by lifting up the bottom cover (lid with no button on its side).
3. Lift up the printed circuit board (PCB) together with the old battery.
4. Slide the old battery out of the battery clip.
5. Insert a new battery into position with its polarity correctly positioned according to the "+" and "-" indication marks on the PCB.

When the battery is inserted correctly the LED flashes for approximately three seconds.

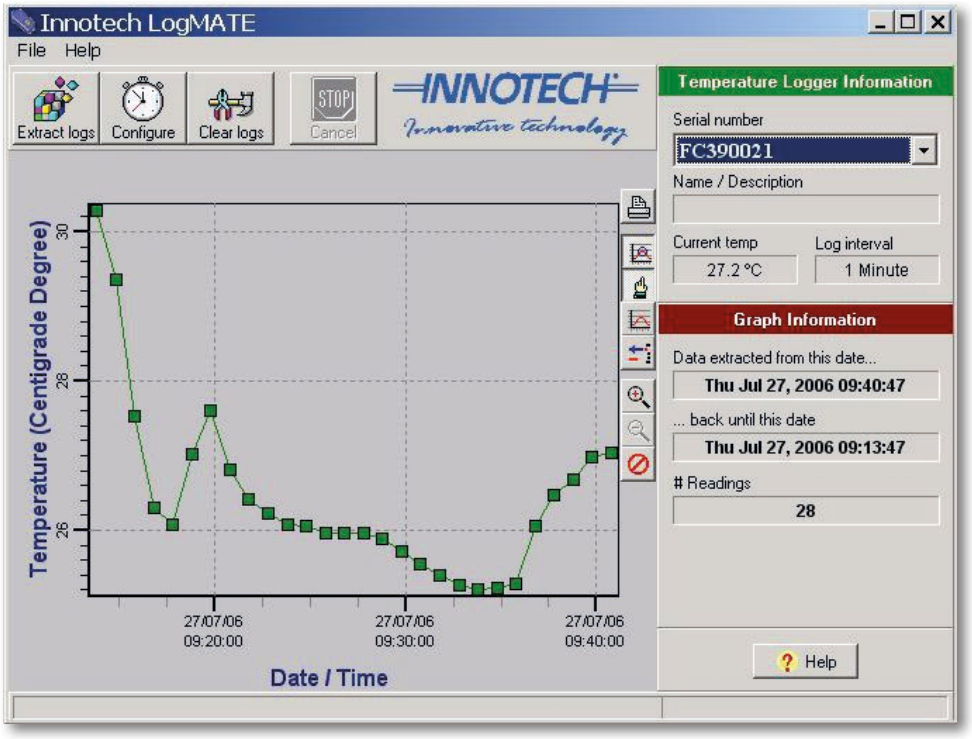
6. Combine the PCB and inserted battery into the top cover with the tactile switch facing down.
7. Fasten the screw gently while holding the case together.



Graphing Application: LogMATE

The graphing application LogMATE is used to configure the temperature logger, as well as extracting and displaying the logged temperature information.

A typical screen shot is shown below:



If a temperature logger is connected to the computer USB port, the graphical application will automatically detect its presence and display and continuously update the information shown in the “Data Logger Information” section of the screen.

Extracting Log Data

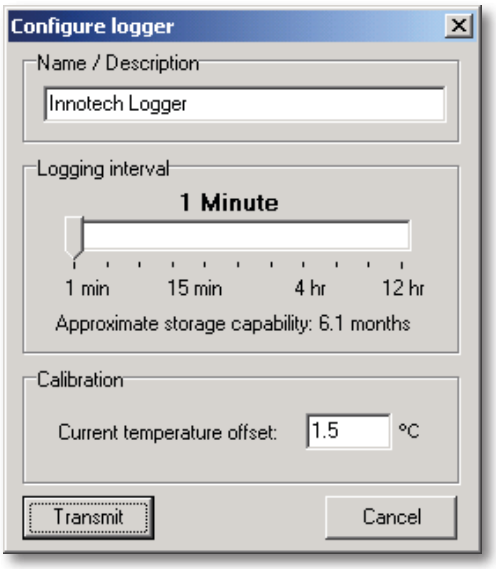
Pressing the “Extract Logs” button will start the retrieval of the logged data from the temperature logger to the graphical application. During the extraction process, the “Graph Information” section will be updated to show progress information.

Note: The created log file is of Innotech.IGF type. It can be opened in InnoGraph. Therefore, please ensure the filename does not contain any special characters including white spaces.

Logger Configuration

To change the name associated with this logger, configure the temperature logging interval, or adjust the calibration of the temperature sensor, press the "Configure” button. The dialog box shown here will be displayed:

Note: Changing the log interval will automatically clear the existing logged temperature data.



Clearing the Log

If it is required to clear the existing data that is stored in the temperature logger, press the “Clear Logs” button from the main window.

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