Instruction Manual

Multiple Use
High Temperature Datalogger

CE

The continuous operation time @140°C oven is suggested not to longer than 1 week time.

The operation time @134 °C autoclave is suggested not to longer than 0.5 hour.

Caution HOT while taking logger out of sterilizer.

QUICK GUIDE

Step 1:

Connect Logger to USB port of Windows computer to config the logger

Step 2:

Logger will automatically start accords to the choosen start delay time.

Step 3:

Put the logger into autoclave or any place where you need to monitor.

Step 4:

Take out the logger and wait for cooling down to room temperature.

Step 5:

Connect Logger to Windows computer again to read out the recorded data.

Introduction

Congratulations on your purchase of this multiple use high temperature datalogger.

This datalogger is designed for monitoring temperature subject to quality control requirement in laboratory and industry. Temperature measurements are saved throughout the duration of the measurement period.

This datalogger is equipped with a user defined programming function. The measurement report output is implemented using a PDF file and an Excel file, unique software and USB driver are not required. The generated PDF report contains charts and statistics.

Read through the instruction manual before using this logger. The logger is calibrated before shipment.

Product Description

① USB2.0 type C plug & play socket. USB driver is not required. PC software is also not required. Type C cable is included in package.

② LED indicator:

Status	LED indication
Power OFF	All LEDs are OFF.
Standby	Green LED dimly blinks every 5 seconds when logger is programmed to stand by and not yet start to log. The LED brightness is weaker than recording status.
Recording	Green LED blinks every 5 seconds when logging function is under going.
Recording is ended but data isn't read out yet	Green LED flashes 3 times every 5 seconds after logging function is ended but logged data isn't read out.
Low power	Red LED blinks every 5 seconds when power is low.

③High accuracy built in PT1000 sensor for temperature measuring.

④ Battery cover. This logger is operated by 1 pc 3.6V replaceable lithium battery. The battery is installed and pre-tested by datalogger manufacturer. Please always contact the shop where you purchase logger from to re-purchase this battery.

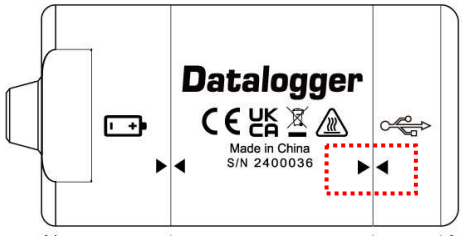
⑤Waterproof USB cover:

To provide the logger with water proof feature,

must rotate the cover to assigned alignment point. To open, use coin to rotate open, in counterclockwise direction. The enclosed cloth can help to reduce slippage.

Suggested to clean USB cover inner side and replace O-ring periodically to keep waterproof performance in best condition.

To close, rotate in clockwise direction till you match the alignment marking.



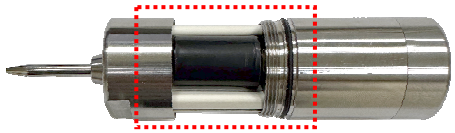
Battery install

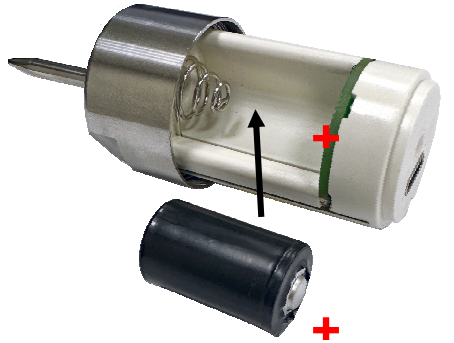
The battery is pre-installed. The battery is replaceable but not re-chargable. The provided power is enough for 1 million times records or 18 months usage, which comes first. While you see the red LED blinks, please contact the shop where you purchased datalogger from to purchase a new battery. Then, follow up below procedure to replace battery.

1.Suggest to using wrech tholding the logger in position.

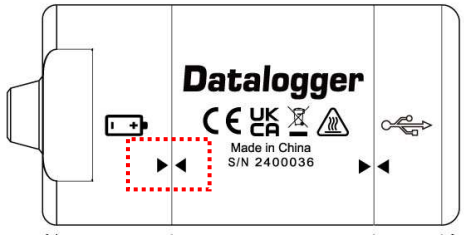
2. Rotate the middle section of logger in counterclockwise direction.

3. Remove the old battery and O-ring and install new ones. Pay attention to the battery polarity.





4. Rotate in clockwise direction till you match the alignment marking.



Operation

NOTE:

1. Adobe Reader software is required.
2. Program the logger and generate the PDF and Excel report at room temperature. For example: if the logger is removed from an autoclave, it should be allowed to return to the ambient room temperature before generating the PDF report temperature.
3. The executable file for programming the logger is named: PDF Logger Configuration Tool

Step1 **Configuring the data logger**

It is possible to make configuration changes at anytime before the logging function is started. Once the logger is started, configuration changes cannot be made unless stopping the logging first. If the logger is locked with a Password, the Password is required to make configuration changes.

-First, use coin to open the USB cover. Then, connect the data logger to a PC via USB-type C cable. The green LED stays on while the connection with computer is built.

- Windows file display window will appear.
- If the correct file folder is not open, click on Folder to view files.
- Open the file " PDF Logger Configuration Tool. exe".
- The default language is English. The user may change it to one of six alternate languages. There are English, German, French, Italian, Spanish, and Portuguese.
- User programmable parameters are as follows:

★Sampling rate

Select the sampling interval you need from 1 second to 120 minutes

★Start delay

Select the start delay from 0 min to 24 hours. For example: If the delay is 5 minutes, and the sampling rate is 5 seconds, the real time to log the first temperature measurement is 5 minutes after you pressing the “Save” button on software. All measurements after the first measurement will

be at a 5 seconds (or selected) interval.

★Unit of Measurement (UoM)

Select the unit that will be displayed on the report. The selections are Celsius or Fahrenheit

★Password

The Password function is default OFF. The user may enable it to prevent unauthorized reprogramming prior to pressing the logger starting key. A Password may have up to 16 alpha or numeric characters.

★Company Name

A user defined name, location or descriptor, can be input under Company Name. It will be displayed on the PDF report as the Title, with a maximum of 20 characters.

★Effective range

Select the effective temperature threshold values. Whether the core temperature has stayed within the prescribed range for a sufficient duration can also be known from generated report. For example: if 130 - 140 degree C is selected, it means that effective core temperature range for you is between 130 to 140 degree. You can then find the effective period time information from report after read out the data.

★Time zone

Before programming the logger, the user must assure that the PC is set for the correct time zone. The logger will auto synchronize to the time zone of the PC, when “Save” button is clicked. Time zone changes over the transit distance are not adjusted in the logged data.

The default value of above parameters are:

Sampling rate: 1 second

Start delay: 0 min Effective range:

Temp. Unit: °C 120.0 …..140.0 °C

Password: disable

Company Name: blank Language: English

Once all the programming is done, press "Save" to confirm the setting and then you may close the setup window and remove the logger from PC USB port.

Step2 Start logging

-When logger is successfully programmed, if start delay time is choose as zero minute, the logger will start to record right after you disconnect the logger from computer. Green LED shall blink once every 5 seconds.

-If choosen delay time is not zero, the green LED blinks dimly every 5 seconds to indicate the logger is in standby mode. The LED brightness is weaker than recording mode. Then, turn to normal blink every 5 seconds to indicate the recording is started.

-During the logging, the green LED blinks, If battery power is too low to maintain a normal operation, it turns to red LED blinks.

Step3 Download data

-Always wait till the logger is cooling down to room temperature.

-Connect logger to PC USB port can stop the logging.

- Open the file "PDF Logger Configuration Tool. exe

- Choose function “Convert to PDF” or “ Convert to Excel” to generate the report in preferred format. The default language is English. The user may change it to one of six alternate languages.

- Select the preference location to save the generated report to.

- The created excel report contains all data shown in PDF report except the graph.

- The logger will be turned off automatically after report is generated and no new recording trip is programmed.

- If you stop the logger but forget to download data, the logger will flash 3 times every 5 seconds. ***Since this will contunie consume power, strongly suggest downloading data as early as possible to stop LED flashing.***

- If a new recording trip is required, please be sure to go to configuration page to check the settings again and press SAVE, regardless the setting are the same or different from previous trip.

-The recorded data will be kept in logger and only be overwritten when a new recording trip is started. Any time before this, you may return to file generation feature to generate report again in any launages you preferred.

NOTE:

Note: The generated “excel” file is a tab-delimited ASCII text file which can be easily read by many programs. However, when opening the file in Microsoft Excel, a warning message may be displayed because the file is named “.csv” but the contents are like a “.txt” file. It can be safely opened.

Technical data

Model	Multiple Use High temp. logger
Temp. sensor	By PT1000 sensor
Temp. range	-40.0~140.0°C (-40.0~284.0°F)
Temp. resolution	0.1°C (0.1°F)
Temp. accuracy	+/-0.4°C
T90 Response	~20 seconds (room temp. to 90 °C)
Logging Type	Multiple use
Sampling points	48000 points
Battery Life	Battery replaceable, ~1 year time@5 second rate for full temp. range.
Meter/probe size	64(L)*31.2(Dia.)mm, probe 25.8(L)*3.5(Dia.)mm
Material	meter and probe are both SUS316
Operation time	<1 week @140 °C oven <30 mins @134 °C autoclave
Operating temp.	-40~140°C (Logging status); room temp.(PC status)
Operating RH%	Humidity < 80%
Storage temp.	-40~85°C
Storage RH%	Humidity <90%
Weight	~175g
Battery	1 PC 3.6V Lithiim battery. Installed before shipment. Replaceable
Sampling interval	1,5,10,30 seconds, 5, 10, 30, 60, 90, 120 minutes
Start delay	0, 5, 30, 45, 60, 90,120 minutes, 24 hours
Operation keys	No keys
LED indicator	REC, Low battery
Protection class	IP68
Directives	EN 61326-1:2013
Operating System	Windows only

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