TEMPSEN

USER MANUAL

TempSen® Tempod® USB Data Loggers

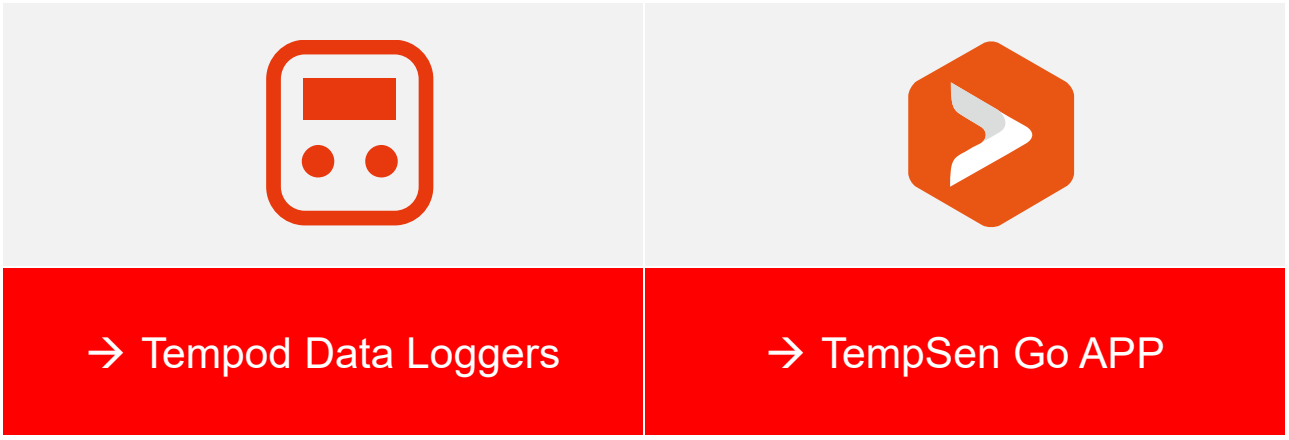
TempSen® Tempod® Bluetooth (BLE4.0) USB Data Loggers

TempSen® Go APP [IOS / Android]

UM-PDUB-181030 REV.A

TEMPSEN ELECTRONICS COMPANY

EO: sales@eofirm.com I www.eofirm.com I 0755-84200058


→ Tempod Data Loggers
→ TempSen Go APP

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TEMPOD DATA LOGGERS

Product Overview

Overview

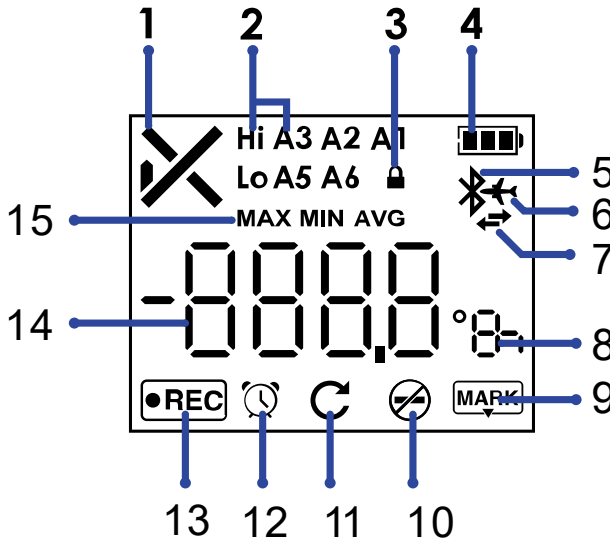
Tempod Data Loggers are innovative environment monitoring devices designed for cold chain logistics, storage monitoring, in terms of different data communication technology used, Tempod data loggers has two ranges, Tempod USB loggers and Tempod USB + Bluetooth (BLE 4.0) loggers.

Specifications - Tempod Bluetooth Data Loggers

Model	Tempod 20B	Tempod 50XB	Tempod 100XB	Tempod 200XB
Sensor	Temperature: Internal NTC sensor	Temperature: External NTC sensor probe (1m)	Temperature: External RTD sensor (1m)	Temperature: External RTD sensor (1m)
Memory Capacity	28800 readings	28800 readings	28800 readings	28800 readings
Measurement Range	-20°C...70°C	-50°C...70°C	-100°C…70°C	-200°C…70°C
Accuracy	±0.3°C (-20°C...20°C), ±0.5°C (other range)	±0.3°C (-20°C...20°C), ±0.5°C (other range)	±0.5°C	±0.5°C (-100°C...70°C) ±1.0°C (-200°C...-100°C)
Resolution	0.1°C			
Battery Life	12 months			
Connection	Bluetooth 4.0 USB 2.0			

Automatic Data File	Encrypted PDF report with embedded raw data
Protection Class	IP65

LCD Overview - Tempod Bluetooth USB Data Loggers



1. **Overall alarm status**
   - √ Ok
   - × Alarm
   - Empty, no alarm setting
2. **Triggered Alarm Zones**
   - Hi (High)
   - Lo (Low)
   - A1
   - A2
   - …
3. **AccessKey (Password) protected**
4. **Remaining Battery Indicator**
5. **Bluetooth***
6. **Flight mode***
7. **Bluetooth connecting…***
8. **Unit °C / °F / d (day) / h (hour) / m (minute) / s (second)**
9. **Time Mark**
10. **Stop button disabled**
11. **Repeat start enabled**
12. **Clock**
13. **Recording**
14. **Reading**
15. **Statistics (Max, Min, Avg)**

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Certifications & Standards

CE (non-BLE)

Test Standards: EN 61326-1:2013

FCC (non-BLE)

Test Standards: 47 CFR Part 15, Subpart B

CE

Test Standards: EN 301 489-1 V2.1.1, EN 301 489-17 V3.1.1, EN 300 328 V2.1.1, EN 62479:2010

FCC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

Attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to ope rate the equipment.

Note: This product has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. T hese limits are designed to provide reasonable protection against harmful interference in a residential installation. This product generates, u ses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interferen ce to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this product does c ause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encoura ged to try to correct the interference by one or more of the following measures:
—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.

Please take attention that changes, or modification not expressly approved by the party responsible for compliance could void the user's aut hority to operate the equipment.

Configure Tempod

Configure Tempod with TempSen Go APP

See **TempSen Go APP > Configure Data Logger**, please make sure Bluetooth function on Tempod data logger is turned on before configuration.

Configure Tempod with TempCentre Software

Connect Tempod data logger to USB port of PC, open TempCentre software, select **Configure Device** in tool bar, software would automatically start searching and connecting devices, then user could start programming of this data logger.

LCD displays "USB" when logger connected to PC.

See TempCentre Data Management Software about download, installation and operation of TempCentre software.

Configure Tempod with Online Utility

Connect data logger to USB port of PC, open Internet Browser, go to www.tempodlogger.com, the online configuration utility for Tempod data loggers, input and select configuration parameters you need, then download the configuration profile (.cfg format file) and save it into the logger created removable storage device "TempSenDisk", configuration is done.

*LCD displays "**ConF**" for configuration success when connection with PC remains. (Only applicable to non-software configuration).*

⚠ IMPORTANT	• Please only apply configuration profile to the same product model on which configuration file is created based, otherwise configuration fails and error code E102 appears on LCD. • Do not alter the configuration profile downloaded to avoid configuration error and damage to your data logger. • Configuration profile contains time zone information, so please do not use this file in areas of different time zones, or it will result in incorrect time base. • Configuration to data logger would erase all data recorded, so please make sure you have save the data before configuration. • Do not remove data logger from PC before you are prompted of configuration success.

Configuration Options

Trip Number

A unique 10 digits alphanumeric number automatically created for identifying each monitoring task.

Trip Description (Note)

A brief note entered by user for describing monitoring task an it will be shown on data report.

Logging Interval

The sampling and recording interval, optional from 1 minute to 2 hours.

Startup Mode

Manual Start

Device needs to be started by pressing **Start/Stop** button for **3** seconds.

Start Delay

Option of manual start, time to wait before recording begins after logger was manually activated, optional from 1 minute to 30 days.

Temperature Conditions

Option of manual start, pre-set temperature conditions for triggering recording after logger was manually activated, recording begins when actual temperature meets previously determined temperature conditions.

Auto Start

Device automatically starts recording on the specific date/time preset, no need to press **Start/Stop** button after configuration to device.

Alarm Settings

Alarm Mode

- No alarm setting
- High & Low alarm, 2 alarm ranges determined by 2 alarm limits.
- Multiple Alarm ranges, 5 alarm ranges determined by 5 alarm limits.
  - High alarm zones: A1 (H3), A2 (H2), A3 (H1)
  - Ideal range: A4 (No alarm will be triggered when data falls within this range)
  - Low alarm zone: A5 (L1), A6 (L2)

Alarm Type

Alarm type is to define the way to calculate violation durations.

- **Single Event**

  Alarm could only be triggered when data outside of any specific alarm limit continuously for time not less than the pre-set alarm delay time.

- **Cumulative Event**

  Alarm could be triggered once the cumulative total time that data outside of any specific alarm limit is not less than the pre-set alarm delay time.

PDF Report Settings

PDF Report Title

This report title would be used for PDF report created automatically by data logger.

Time Base

Select Time Zone and enable/disable Day Light Saving time (DST) for PDF report.

Show Data List

Data list (tabular data) will be included in PDF report is this option was enabled, please note it will take up to around 1 minute to create a PDF report with tabular data pages.

Language

Select language for PDF report.

Button Settings

Disable Stop Button

This option is used to avoid mistaken Stop Button action, once enabled, device could not be stopped by pressing **Start/Stop** button, recording stops when logging cycle completes, however, you are still allowed to stop recording through TempCentre or TempSen Go APP.

appears on LCD after Stop Button was disabled on current data logger.

Advanced Options

Repeat Start

Once enabled, user could press Start/Stop button to start logger recording again after last recording task ended, no need to re-configure data logger. The new recording all use the same configuration as last one.

appears on LCD after Repeat Start was enabled.

AccessKey

AccessKey is a 6-digit numeric password used to protect data logger from manipulation, once applied, user needs to enter correct AccessKey before programing data logger.

appears on LCD indicates AccessKey was applied to current device.

TempSen Go APP

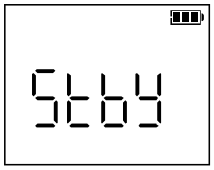
Protection level is an important option when setting AccessKey through TempSen Go App, which defines the protection scope when accessing Tempod Bluetooth data logger through TempSen Go App.

- **Level 1 (Normal)**, AccessKey is not required when connecting to or downloading data logger using TempSen Go App, but user will be prompted to enter correct AccessKey if further actions is to be conducted, including configuring, starting / stopping and time marking data logger.
- **Level 2 (High)**, user will be prompted to enter correct AccessKey when connecting to data logger using TempSen Go App, if AccessKey does not match,

Online Configuration

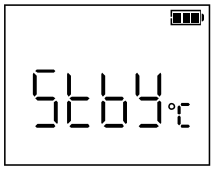
If you are going to program an AccessKey protected data logger using configuration file (.cfg format file) downloaded from online utility (see Configure Tempod with Online Utility), please make sure enter correct ***AccessKey for Verification*** during selecting configuration options, otherwise configuration will fail, LCD will show “E105” if AccessKey is incorrect or not included in configuration file (.cfg format file) applied to AccessKey protected data logger,

LCD Screens after Configured



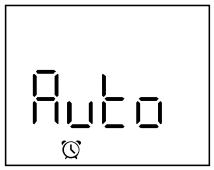
Manual Start –Start Delay

*LCD displays “**Stby**” after configured. Logger was set to start option of start deley.*



Manual Start – Temperature Conditions

*LCD displays “**Stby**” and **Temperature Unit** after configured. Logger was set to start option of Temperature Conditions.*



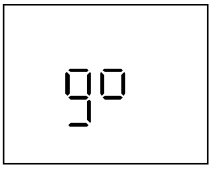
Auto Start

*LCD displays “**Auto**” and a **Clock** after configured, logger is waiting for **automatic start** on pre-set time.*

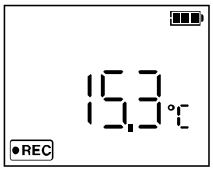
Start Recording

Manual Start & Stop

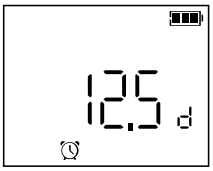
Press and hold **Start/Stop** button for **3** seconds to manually activate data logger and start recording, if logger was set to start option of Start Delay, then recording would only begin after **Start Delay** time passes.



"go" flashes on LCD reminding you to keep current button action.

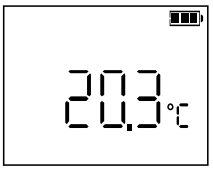


"REC" appears on down left corner of LCD indicating recording already begins.



Manual Start with Start Delay

*Start delay time and a **Clock** appear on LCD and logger begins countdown after logger was manually activated, recording begins after start delay time passed.*



Manual Start with Temperature Conditions

Logger begins to measure temperature and returns readings to LCD after logger was manually activated, recording begins when temperature meets pre-set temperature condition(s).

You could also start recording using TempSen Go App on mobile device, see TempSen Go APP

Auto Start

If logger was set to ***Start Mode > Auto Start,*** then logger would start recording automatically on pre-set date & time.

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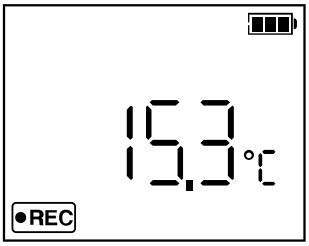
LCD Screens

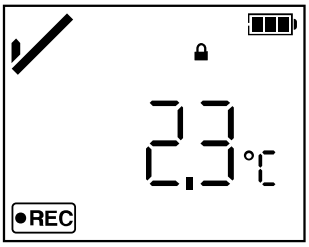
Home Screens



No Alarm Setting

Current Reading: 15.3°C

Status: Recording

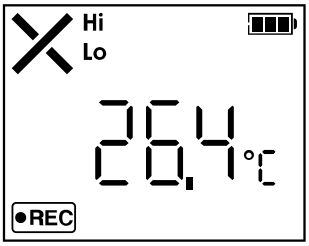


No Alarm triggered

Current Reading: 15.3°C

AccessKey enabled

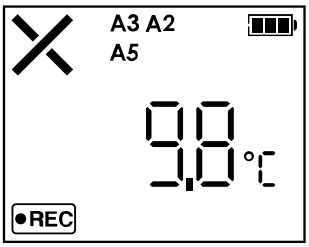
Status: Recording



Alarm triggered at alarm zones: Hi, Lo

Current Reading: 26.4°C

Status: Recording



Alarmed triggered at alarm zones: A3, A2, A5

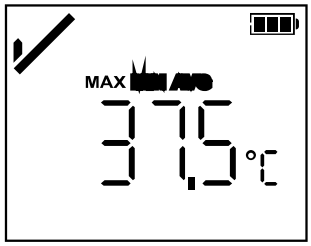
Current Reading: 9.8°C

Status: Recording

Statistics

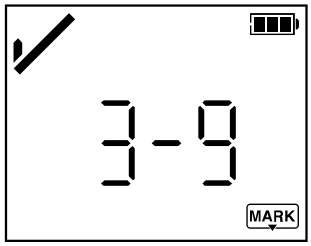
Press View/Mark button on data logger to view recording statistics.

- Max: Maximum value
- Min: Minimum value
- Avg: Average value



Max Value: 37.5°C

Time Marks

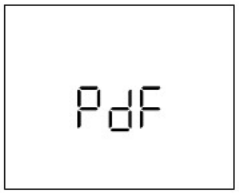


3 of 9 marks placed.

Download Data

Download Auto PDF Report

Connect Tempod logger to USB port of computer, LCD on logger shows “USB” after data logger was successfully connected and then changes to “PdF” later, which means logger is currently creating the PDF report inside logger, it may take a couple of seconds to complete, a report with tabular data pages and of 28800 readings will need 30 seconds to complete.



*LCD displays **“PdF”** indicating logger is currently generating PDF report, then changes to “**USb**” after PDF report is successfully created.*

After PDF report is created, find and open the removable storage device “**TempSenDisk”** in computer, copy the PDF report to your computer, then open and view it with PDF reader software.

The PDF report automatically created in logger is protected and encrypted from tamper, with the embedded raw data embedded, user could upload it to TempSen Cloud™ online cold chain data management platform, www.tempsencloud.com for further analysis.

IMPORTANT	Please **DO NOT** save the PDF report that you copied from logger as a new file. Please do not perform any “Save” action through PDF reader software. Otherwise, content inside PDF file will be reorganized by PDF reader software and cause raw data embedded unrecognizable. Please **DO NOT** remove data logger from USB port while it’s still in the process of creating PDF report (“PDF” on LCD indicates that logger is creating PDF report), Otherwise logger would be seriously damaged.

Logger would be ready for USB communication with TempCentre software only after PDF report is completely created.

Download Data via TempSen Go APP

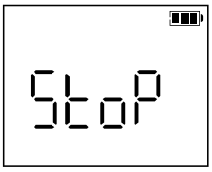
See TempSen Go APP > Download Data

Download Data via TempCentre Software

Connect Tempod logger to USB port of computer, open TempCentre program, TempSen will start searching USB ports and find device in couple of seconds, once device was found, TempCentre will begin to download data automatically, you could click on **Save** button to save data to your local data base.

Stop Recording

Press **Start/Stop** button and hold for at least **3** seconds to stop recording. Logger would stop recording either after logging cycle completes (memory full). “StoP” flashes on LCD reminding user that current button action is effective and please keep unit recording stops.



Recording Stops

“StoP” displays after recording stopped.

Time Mark

Press **View/Mark** button on data logger to place a time stamped mark, up to 9 time marks available.

You could also place time mark using TempSen Go APP, please see TempSen Go APP > Control Data Logger > Time Mark

Bluetooth

You could press both **View/Mark** and **Start/Stop** buttons on data logger to turn on or off Bluetooth signal transmission. meanwhile "on" or "oFF" blinks on LCD reminds you to keep pressing button until Bluetooth status is successfully changed.

You could choose to turn off Bluetooth on data logger via TempSen Go App on mobile device, logger with Bluetooth turned off could not be discovered by TempSen Go App.

Flight Mode

You could let Tempod Bluetooth logger enters flight mode in occasions where radio-frequency signal transmission is not allowed. Connect to Tempod Bluetooth logger via TempSen Go App, and then enable Flight mode in Device Connected page. Logger in flight mode will suspend Bluetooth signal transmission, so it will not be found or connected by TempSen Go App, but recording continues. User could have logger quit Flight Mode by turning on Bluetooth on logger manually or wake logger up remotely.

shows on LCD after flight mode was enabled, meanwhile icon disappears.

IMPORTANT	• Please note logger with remaining battery of one bar (or lower) or in Stopped or Error status could not enter into Flight mode. • Please note logger in flight mode consumes more power than normal mode and shorten battery life as result, so please DO NOT use flight mode frequently.

Wake UP

You could wake logger up from flight mode by using Wake Up function. Tap Wake Up at bottom bar of Devices page on TempSen Go App, TempSen Go will automatically wake up ALL nearby TempSen Bluetooth loggers in flight mode, loggers waken up will turn on Bluetooth service.

IMPORTANT	• Please note Wake Up function NOT applicable on all mobile devices.

Battery

Tempod data logger contains one user replaceable Panasonic CR2450 lithium battery.

Remaining Battery Indicator

	3 bars - Full
	2 bars - Good
	1 bar – Medium
	0 bar – Low, please replace battery **NOW**

Please note battery indicator may not accurately indicate the actual remaining power in battery in device, and the value of battery indicator may vary in environment of different temperature.

Replace Battery

- Please insert a coin in the groove on battery compartment cover to spin it in the direction of OPEN to open battery cover, and take battery out, then **press "View/Mark" or "Start/stop" button several times until LCD changes to blank, otherwise volume of new battery would probably not be correctly recognized within one hour after battery replacement.**
- Place a new **Panasonic CR2450** battery into battery compartment with positive side upward.
- Put cover back to compartment in the position where triangle on cover points to the triangle on logger, then spin cover in the direction of CLOSE to close battery cover

If you found logger could not correctly recognize the remaining battery after installation, please remove the battery an try above steps again.

IATA Compliance

Battery supplied with Tempod passed the Part III, SubSection 38.3 of the UN Manual of Tests and Criteria. Tempod® data logger is also certified to meet requirements in General Requirements and Section II of Packaging Instruction 970, IATA Dangerous Goods Regulations 58th Edition. Tempod® complies with RTCA-DO160G Environmental Conditions and Test Procedures for Airborne Equipment, it's allowed to used in air freight in active status.

WARNING	• Please DO NOT try to recharge or heat the battery • Please DO NOT use data logger (excluding external probe) in environment outside of -30…70°C to avoid damage to battery.

Data Results Explanations

Device Information

Serial Number

Unique identification number of data logger

Current Status

Current running status of logger

Logging Summary

Start Time

The time the first data point is recorded at.

Stop Time

The time the last data point was recorded at or recording was manually stopped at.

Trip Length

Total recording duration time, which is calculated from the first point to the last point.

MKT

MKT (Mean Kinetic Temperature) is a simplified way of expressing the overall effect of temperature fluctuations during storage or transit of perishable goods. Calculation,

$$Tmkt = \frac{\Delta E/R}{-\ln\left(\frac{e^{-\frac{\Delta E}{RT1}} + e^{-\frac{\Delta E}{RT2}} + \cdots + e^{-\frac{\Delta E}{RTn}}}{n}\right)}$$

Δ E = activation energy (standard value: 83.144 kJ/mol)

R = 8.314472 J/mol (universal gas constant)

T = temperature in degrees K

n = the number of sample periods over which data is collected

Note: ln is the natural log and ex is the natural log base.

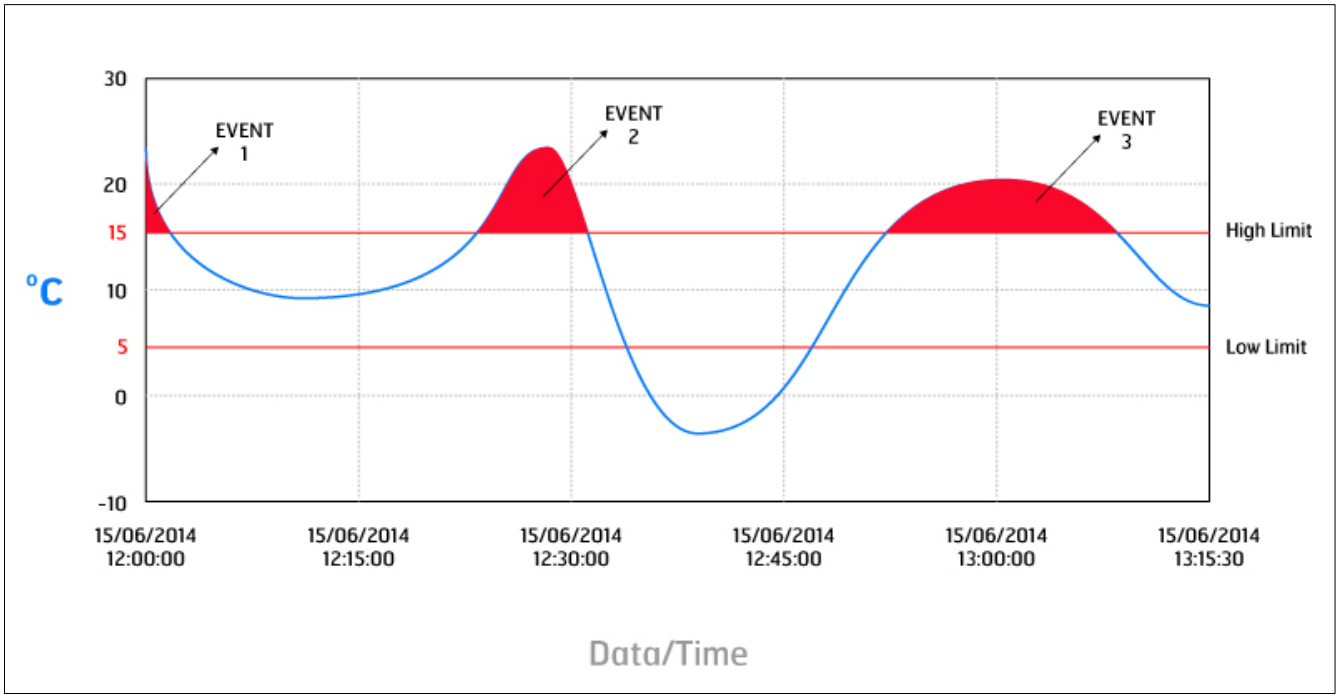
Violations and Alarms

Violation

Any readings outside of any specific alarm limit is a deemed as violation to alarm limit.

Violation Events

A consecutive series of data points outside of any specific alarm limit would be deemed as one violation event. In example below, high alarm zone has three limit violation events.



Number of violation event for each alarm zone shows in “Events” column of alarm statistics in data report.

Violation Time (Duration)

The total time that readings outside of each alarm limit, which equals to number of points out of each limit x logging interval.

Alarm First Triggered Time (First Triggered@)

The time an alarm is first triggered at.

For example, logger is set to logging interval of 1 minute, alarm delay is 5 minutes, logger is started at 09:00, and readings are all over high limit after recording begins, so first alarm will be triggered at 09:05, and this is the Alarm First Triggered Time.

ADDITIONAL INFORMATION

- LCD may function abnormally after taken out from environment down to -20°C to room temperature, please wait for few minutes for it to restore to normal status.
- To avoid damaging your data logger, please do not disconnect it from USB port while it is communicating with the computer.
- Do not use any aggressive cleaning agents or solvents to clean device.
- Data stored in data logger is retrievable even battery runs out.
- Please do not heat, microwave or recharge battery.
- Please follow local regulations when recycling or disposing of data logger.

TEMPSEN

TEMPSEN GO APP (IOS / ANDRIOD)

Overview

TempSen Go is a mobile App developed for accessing, managing TempSen Bluetooth Low Energy data loggers and data collected by data loggers from supply chain, this document describes the basic operation instruction of TempSen Go APP.

Download TempSen Go APP

You could download and install TempSen Go APP by visiting following links.

- IOS: http://itunes.apple.com/app/id1331375457
- Google Play: https://play.google.com/store/apps/details?id=com.bdl.coldchain

Function Modules

Click on icon on title bar (left top on screen) to expand main menu, and you could choose to move to any functions you want by tapping on the specific menu item.

Devices

Scan, search and connect to nearby Tempod Bluetooth data loggers

Data Files

Search, view, and export all data files saved in local database on your smart device

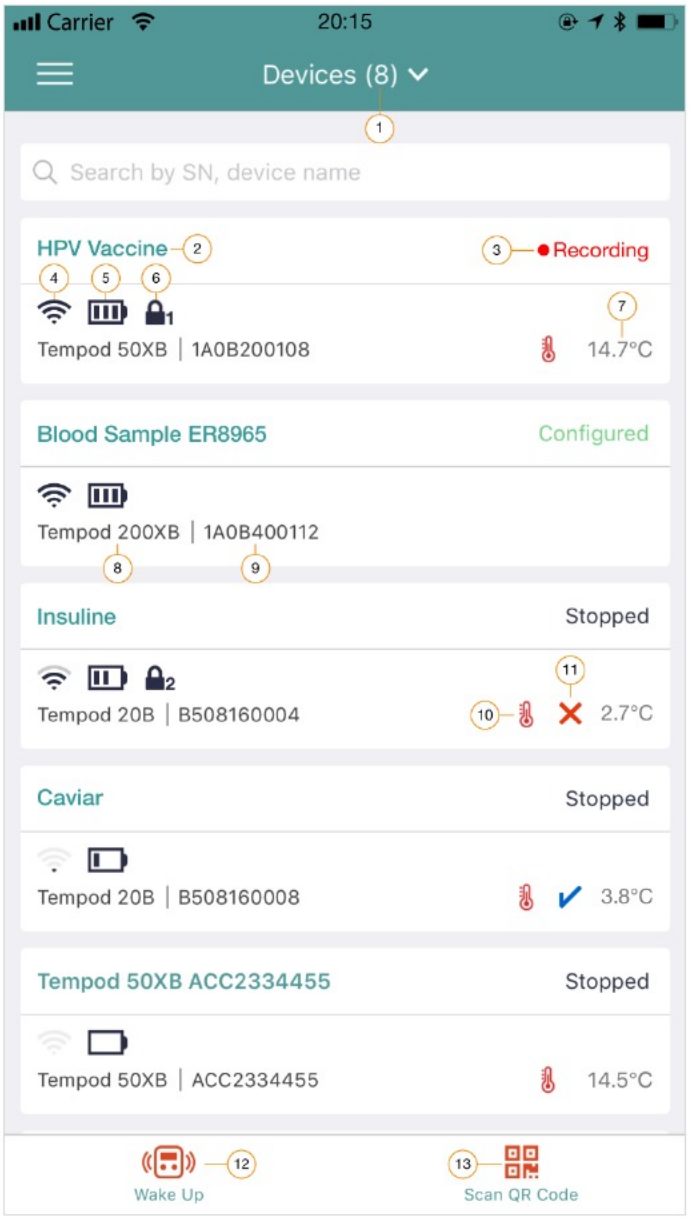
Settings

Basic setting of TempSen Go APP, including time zone, user preferences and export settings.

How to Use?

Scan and Search Data Loggers

Go to **Device** page, in this page your smart phone will automatically scan all Tempod Bluetooth data loggers within Bluetooth communication range every 15 seconds, and all loggers discovered will be displayed on this page



Devices

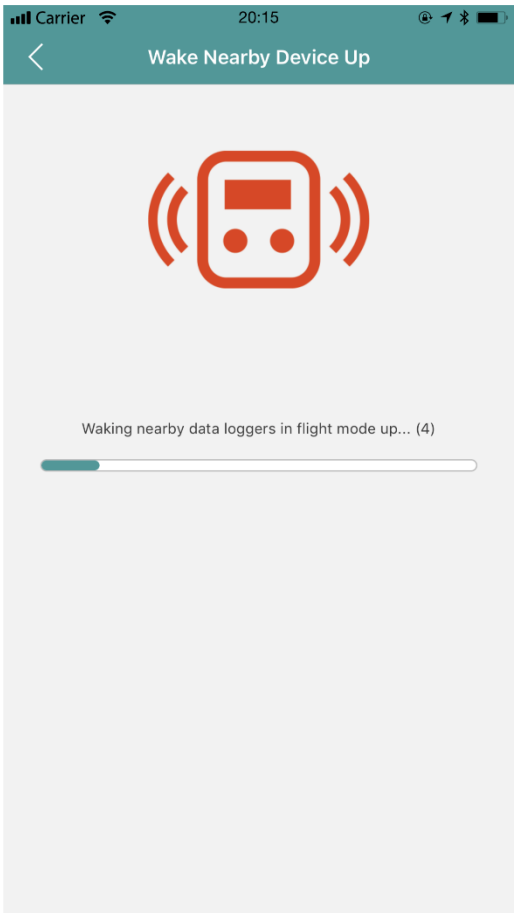
1. Number of devices found
2. Device name, it shows device model and serial is device name was not set
3. Device running status
4. Bluetooth signal strength received, more bars show here, the stronger the signal.
5. Remaining battery level
6. AccessKey protected, number to the left of lock icon represents protection level applied to current device.
7. Last reading
8. Device model number
9. Serial number
10. Temperature sensor icon
11. Alarm status
12. Wake up button
13. Scan QR code button

Please make use Bluetooth service has been turned on your smart phone, and Bluetooth on Tempod logger is also enabled, ᛒ appears on LCD of data logger means Bluetooth broadcasting is already turned on this device.

Wake Up

TempSen Go in Wake-Up mode begins to wake all nearly loggers in flight mode up, loggers waken up will turn on Bluetooth broadcasting and it will be found in seconds when scanning nearby loggers.

Waking up process will last for 15 seconds every time, and no success message will be returned during the course.

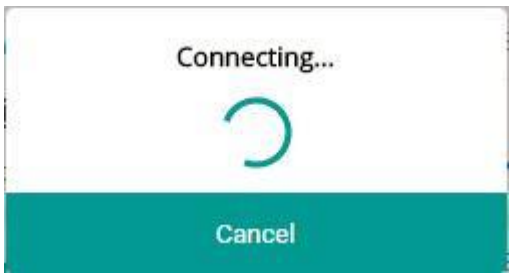


Scan QR Code

Scan QR code on front face of logger to search and then connect to this logger directly if there are many loggers nearby. Please make sure TempSen Go could access camera service on your mobile device.

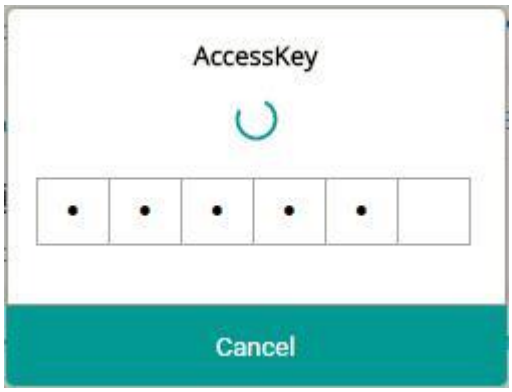
Connect to Data Logger

Tap on specific data logger listed in **Device** page to connect to this device. You will be required to be enter 6-digit AccessKey if the device was protected.



Connecting

Connection will take few seconds, and you could tap ***Cancel*** to cancel connecting attempt anytime.



Enter AccessKey

If data logger was protected by AccessKey (Protection level 2), you will be prompted to enter correct AccessKey when connecting to data logger.

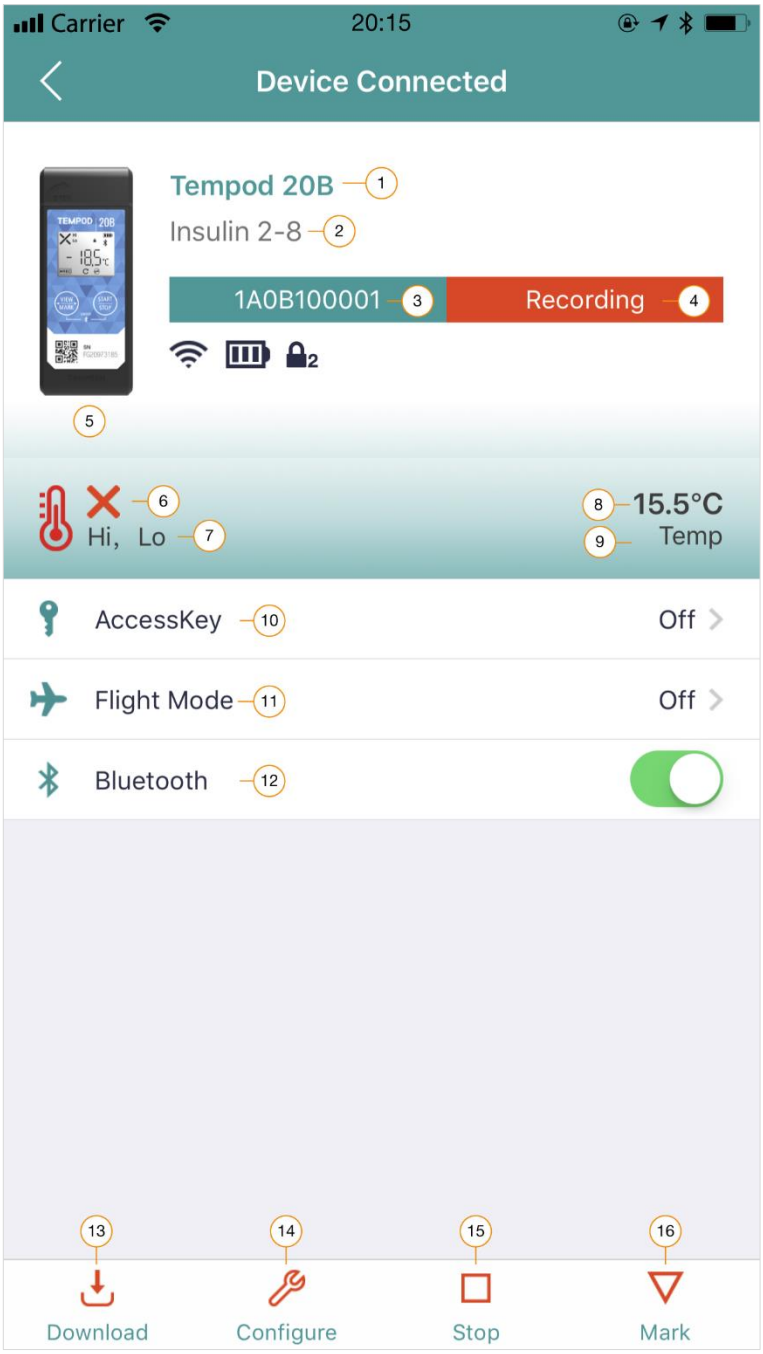
Share AccessKey

If you already logged into TempSen Cloud account, TempSen Go will check with TempSen Cloud service if AccessKey of current data logger exists and current user has relevant permissions, if yes, latest AccessKey on TempSen Cloud will be pushed to TempSen Go App and fill in the requested fields automatically.

AccessKey from TempSen Cloud may not match the AccessKey in data logger, which is resulted from new AccesKey applied to data logger was not successfully sync to TempSen Cloud after changes amde, in that case, user still needs to enter correct AccessKey manually.

Control Data Logger

You could program, start, stop data logger in after successfully connecting to data logger.



Device Connected Screen

1. Device model number
2. Device name
3. Serial number
4. Running status
5. Image of device
6. Alarm status
7. Name of alarm triggered zones
8. Current reading
9. Sensor name
10. AccessKey setting
11. Flight Mode setting
12. Bluetooth setting
13. Download button
14. Configure button
15. Stop (or start) button, tap to start or stop recording
16. Mark button

After connected, Bluetooth connection session with close after 3 minutes if no action was implemented.

AccessKey Settings

AccessKey is device password, after applying AccessKey to data logger, user needs to enter correct AccessKey when trying to connect to or control data logger through TempSen Go App or TempCentre software.

Tap **AccessKey** to set, change and remove AccessKey from current data logger, or change protection level.

Protection Levels

Protection level determines what actions could be taken when connecting to an AccessKey protected data logger through Bluetooth communication.

Level 1 (Normal)

User could connect to and download an AccessKey protected data logger without need to provide AccessKey, but AccessKey is required if user wants to perform further control actions, i.e. programming, start/stop recording…

After connecting to data logger, user needs to tap on “More Actions” button in device connected page, and then enter correct AccessKey to show all control functions.

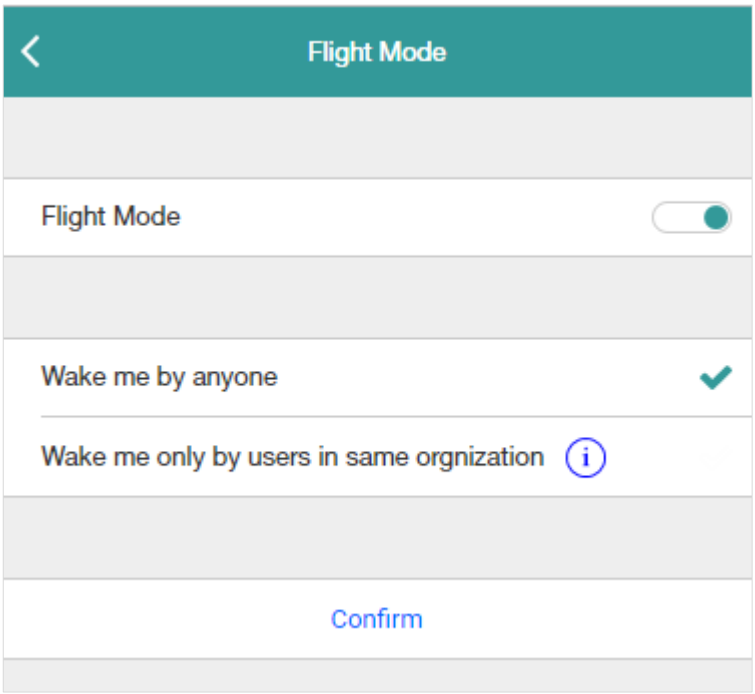
Level 2 (High)

User needs to provide AccessKey when connecting to data logger through Bluetooth connection.

AccessKey of applied to device will be automatically synced to TempSen Cloud if you already logged into TempSen Cloud on TempSen Go App, so users under the same organization with the permission of Share AccessKey will automatically receive AccessKey from cloud when connecting to this protected device.

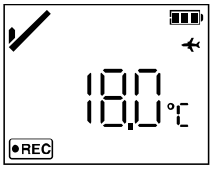
Flight Mode

Flight Mode allows logger to keep recording with Bluetooth signal transmission turned off, so no electromagnetic radiation from logger in this mode. It is very useful when deploying loggers in air cargo where electromagnetic radiation is strictly prohibited. Furthermore, Bluetooth signal of data logger could be turned on remotely through **Wake-Up** function on TempSen Go App.



Flight Mode Options

- **Wake me by anyone**
  Anyone could wake logger in flight mode up using TempSen Go APP
- **Wake me only by users in same organization**
  Only users in the same organization (company account) on TempSen Cloud could wake this logger in flight mode up.
  This option is not available until user logged into TempSen Cloud on TempSen Go App.



on LCD of logger indicates logger is currently in flight mode.

Time Mark

Tap ▽ at bottom bar in **Device Connected** page to place a time stamp into data logger.

Turn Off Bluetooth on Device

Turn off Bluetooth broadcasting on connected device remotely. Once Bluetooth was turned off, connection to device will be lost.

Configure Data Logger

Tap at bottom bar of screen to enter **Configure Device** page, in this page you could enter and select specific configuration options and apply them to data logger.

Configuration Profile

Configuration profile is record of a collection of pre-defined configurations, it's more time saving to apply configurations to data logger by loading and applying a previously saved configuration profile to data logger, and you also could save current configurations as a configuration profile for future use, please click on + on top left corner of Configure Device screen to save current configurations as configuration profile.

Please note Sync requires internet connection and user to login to TempSen Cloud at first.

Device Name

A customized nickname for data logger for better identification, up to 20 ASICII characters.

Configuration Options

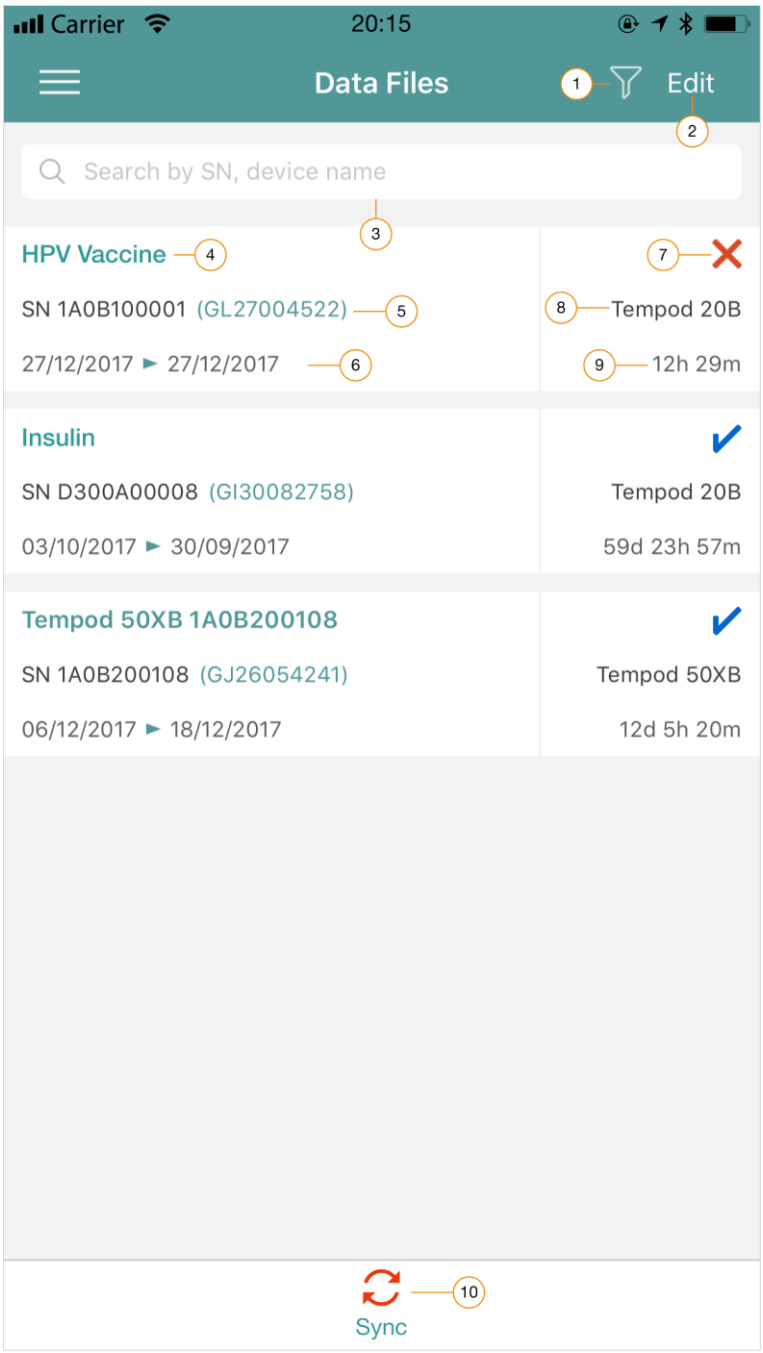
Please refer to Configuration Options for explanations of other general configuration options.

Download Data

Tap in bottom bar of device connected screen to start downloading data from data logger to your mobile device.

Data Files

Data Files page presents all data files downloaded from Tempod Bluetooth data loggers and saved in the local data base on your mobile device.



1. Filter
2. Edit, tap to delete multiple data files or export specific data file.
3. Search data files
4. Data file name
5. Serial number (trip number)
6. Recording start date > stop date
7. Alarm status
8. Device model
9. Recording duration
10. Sync button, available after logged into TempSen Cloud

Search and Filter

Enter serial number or device name as search keyword in search bar to search specific data file, and you also could tap **Filter** icon on top of screen to apply filter conditions to filter data files in database.

Delete Data

- Tap **Edit** on top right corner of **Data Files** page to enter edit mode, and then you could select data file(s) to delete.
- Tap on bottom bar in Data View screen to delete this data file.

Export Data

- Tap **Edit** on top right corner of data files screen to enter into edit mode, then you could select specific data file to export.
- Tap on bottom bar in Data View screen to export this data file.

You could export data file as PDF or Excel format, and choose to include tabular data page in these files in Settings > Report Settings

Sync to TempSen

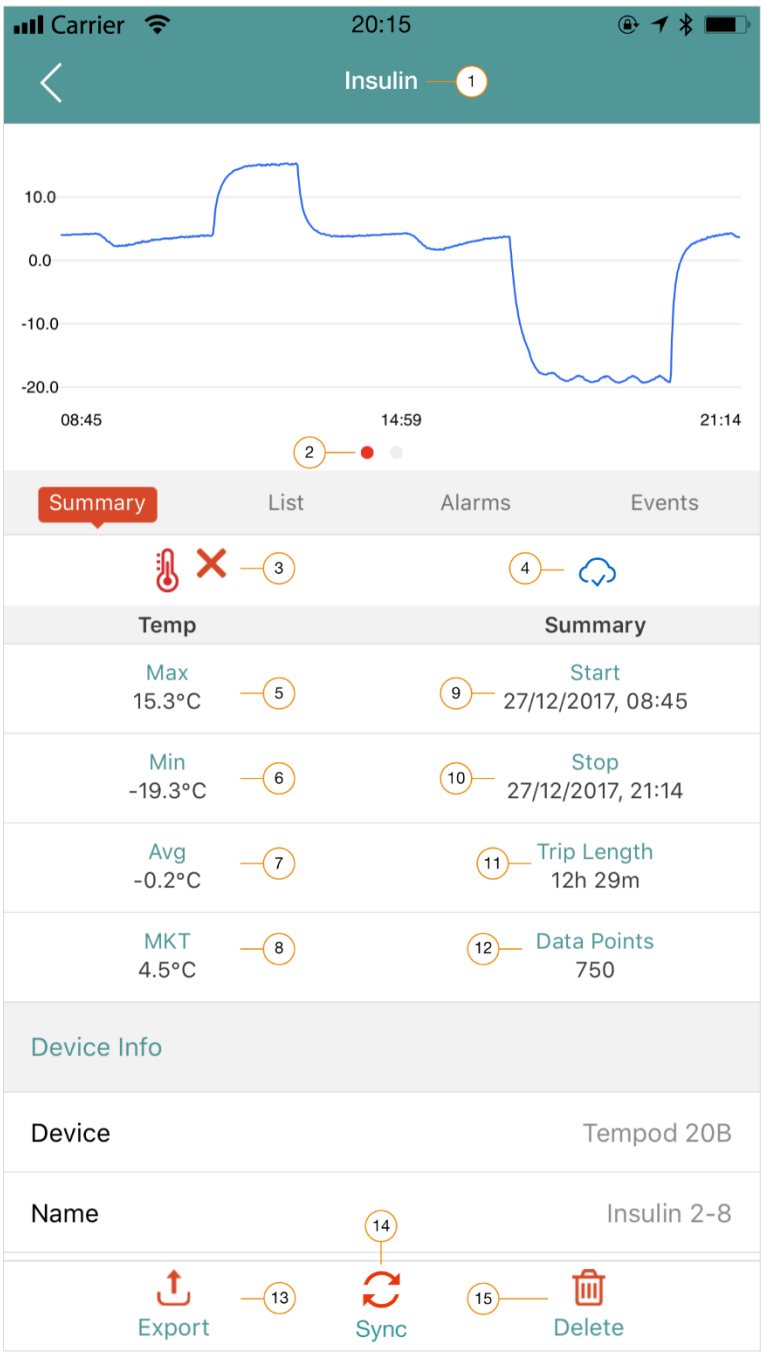
Tap **Sync** button on bottom bar of data files screen to sync all data files to TempSen cloud immediately.

Sync requires internet connection and user already logged into TempSen Cloud, Sync button is hidden if user not logged in to TempSen Cloud.

View Data

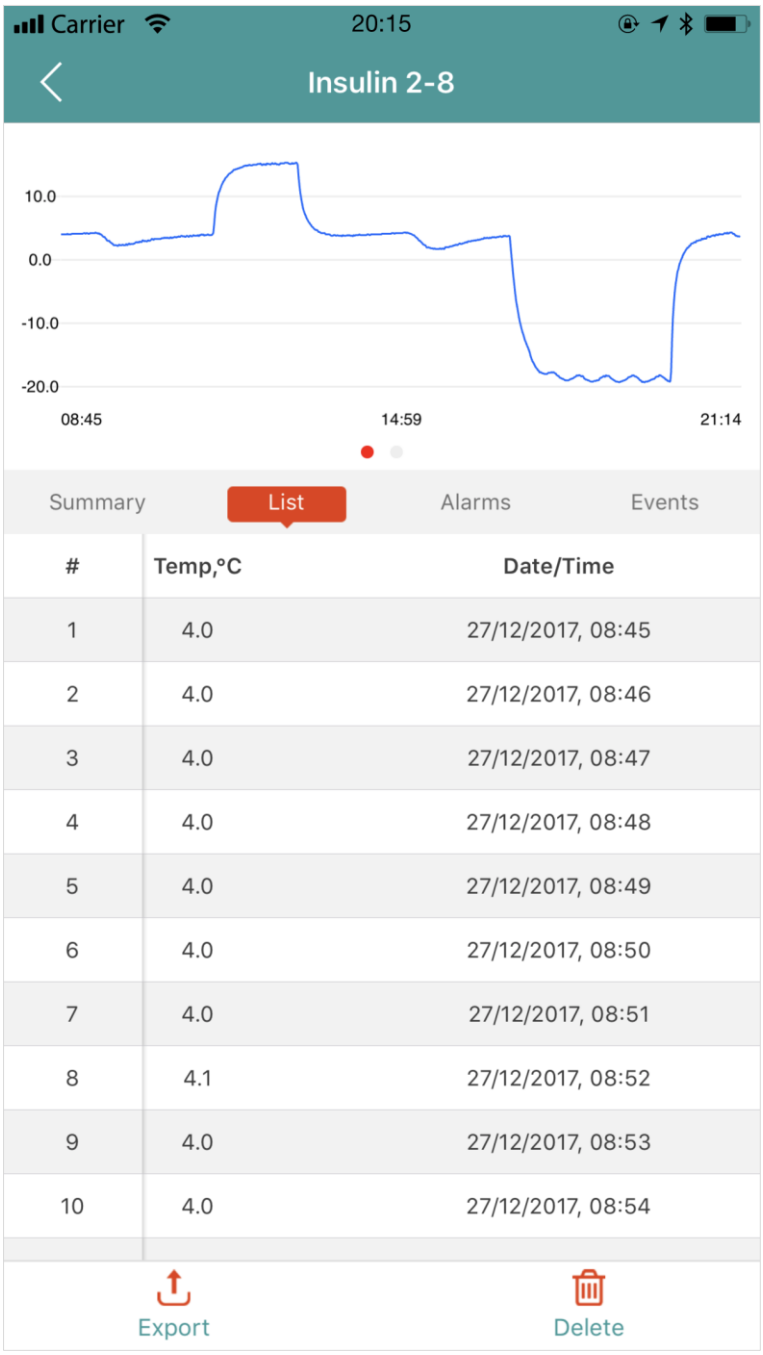
Tap specific data file to view data through different detailed views.

Summary



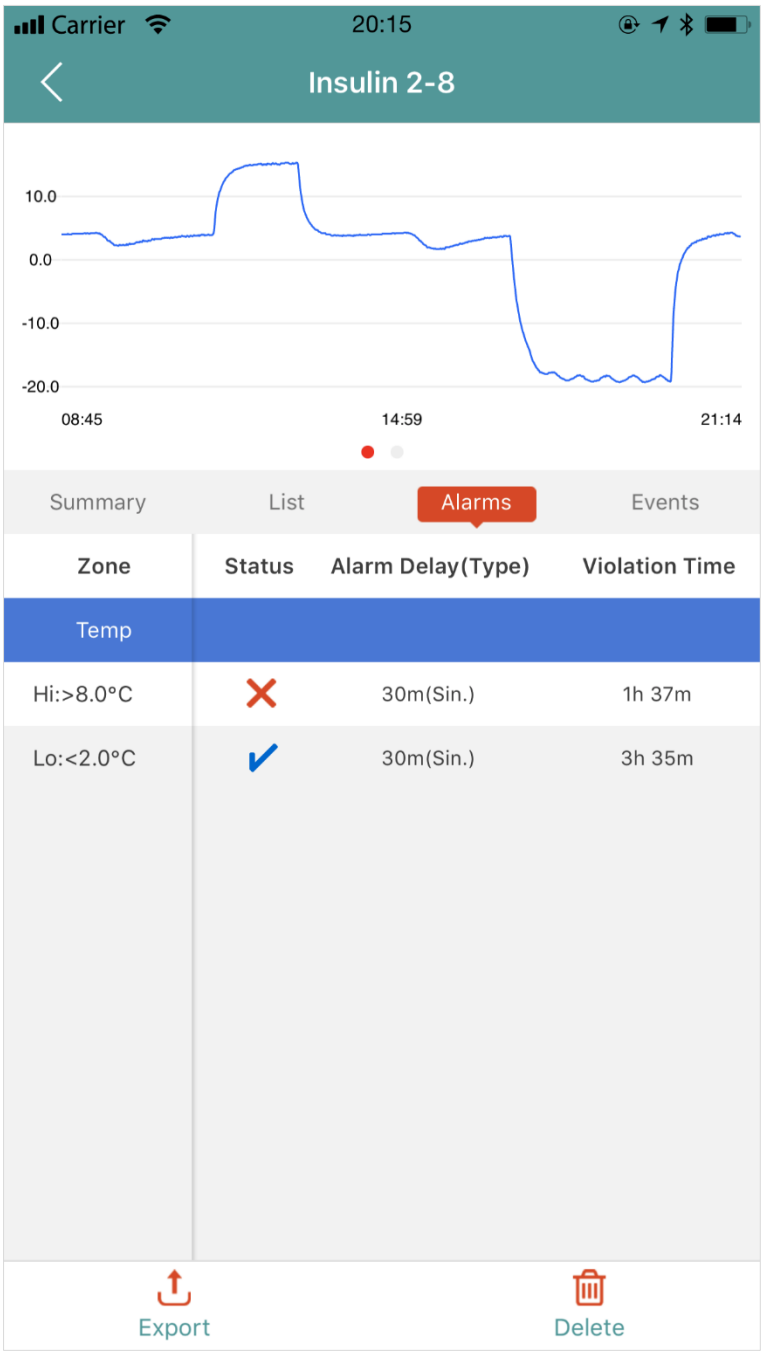
1. Data file name
2. Slide to change between thumbs of graph and map
3. Sensor Temperature + Alarm status
4. Sync status
5. Maximum value
6. Minimum value
7. Average value
8. MTK
9. Recording start time (time of first point)
10. Recording stop time (time of last point or time of recording manually stopped)
11. Trip length, duration of recording
12. Number of total data points recorded
13. Export button, tap to export current data file
14. Sync button, tap to sync current data file to TempSen Cloud (only available after logged into TempSen Cloud)
15. Delete button, tap to delete current data file

List



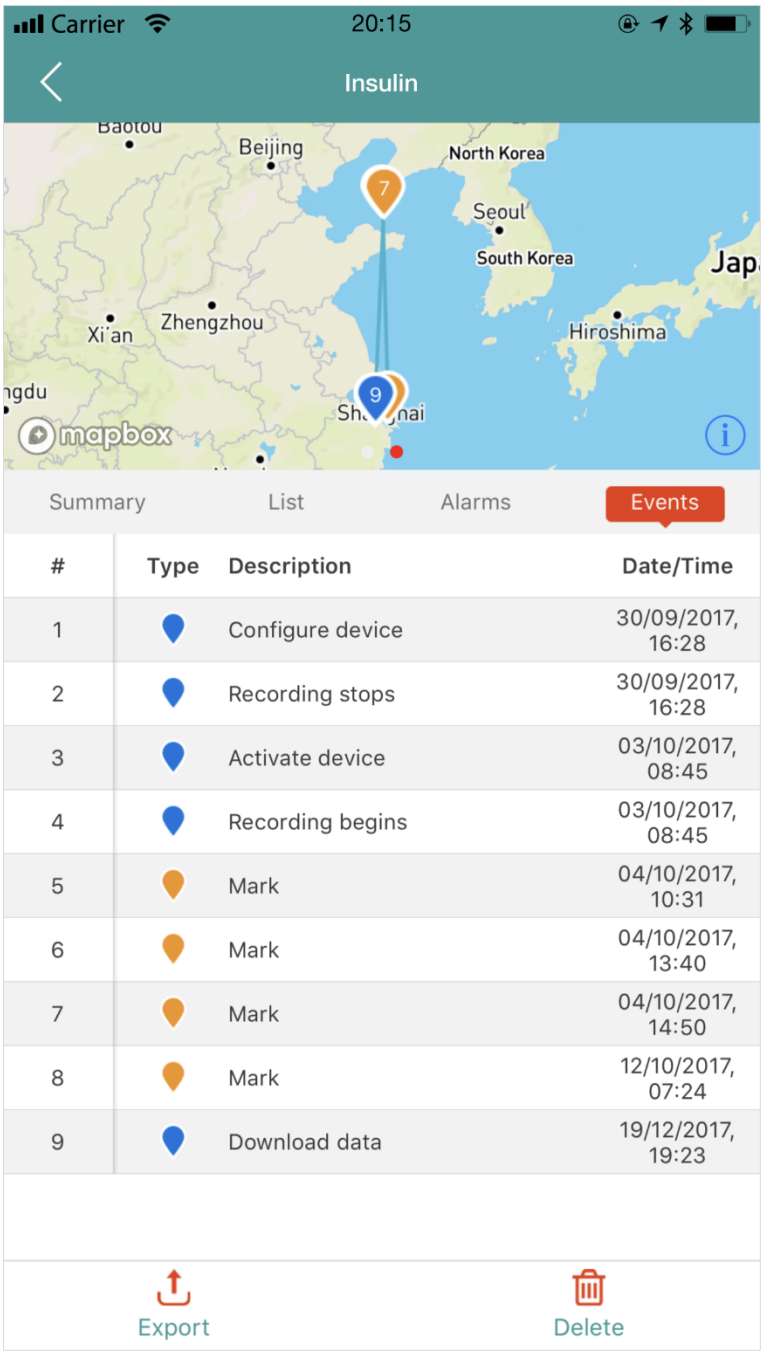
List view presents all value and data/time of each data point.

Alarms



Alarms view presents statistics of each alarm zone, slide right to view more columns.

Events

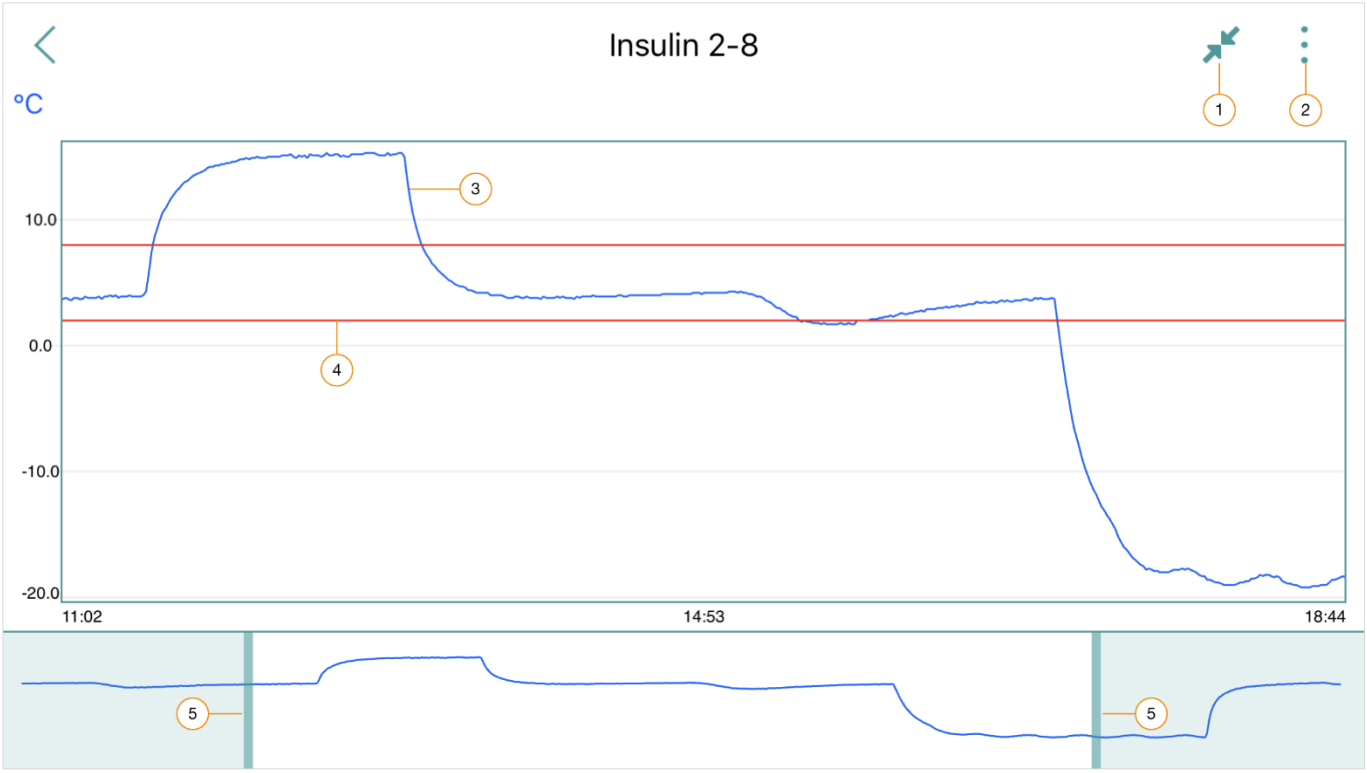


Events view presents all the date/time and location of each device action event.

Please note location information is only available when action was performed through TempSen Go App on mobile device with location service enabled.

Graph

Tap mini graph to enter into complete graph page.



1. Back to normal view
2. Graph options, tap to select to show/hide data curves and alarm limit lines.
3. Temperature data curve
4. Alarm limit lines
5. Dragging bars, drag to narrow down time range and zoom in a specific graph area

Settings

General settings of TempSen Go APP.

TempSen Cloud

User could login to TempSen Cloud account to sync data saved on the mobile device to TempSen Cloud database.

Devices

Configuration Profiles

View / Delete all configuration profiles saved.

Time Zone

Time zone for TempSen Go APP, all time data In TempSen Go APP will be rendered based on Time Zone selected here. You could enable System Default to use time zone of your local system, or you could choose to select time zone manually.

User Preferences

Temperature Unit

Set default temperature unit for temperature data presented in TempSen Go APP.

Report Settings

- Including Tabular Data in PDF report
- Including Tabular Data in Excel report

Auto Sync

If enabled, data files saved in local database on your smart device will be sync to TempSen Cloud automatically, this option is only visible after user logged into TempSen cloud. Sync function require internet connection on your smart device.

TEMPSEN

TEMPCENTRE DATA MANAGEMENT SOFTARE

Please download and install the latest version of TempCentre software from www.tempsen.com/software/tempcentre

How to download TempCentre software?

- If it's your first time to download software from www.tempsen.com, please sign up with the information required prior to downloading, then an email containing download link would be sent to the mail address you left in couple of minutes.
- If you want to download the software from www.tempsen.com again after your successful registration last time, please click "**I already signed up, download now"** button in dialog box, then software would begin to download in couple of minutes.

Installing and using TempCentre software

Please refer to TempCentre User Manual for installation and operation instructions of TempCentre software.

FAQS

Devices

Why sometimes remaining battery of Tempod logger becomes empty very soon?

Sometimes incorrect installation of battery may make logger not able to correctly recognize the remaining battery, you could try steps below to make logger correctly recognize the remaining battery.

1. Remove battery from logger
2. Press the “View/Mark” button for several times until LCD changes to blank
3. Install battery back to the logger
4. Re-program logger if LCD shows error code E009

APPENDIX

Error Codes

Error code shows on LCD (or PDF report) when ant of the following errors occurred.

LCD	PDF Report	Error Code	Description
E004	Error 0004	Error 004	Device Rest
E006		Error 006	Start time error
E009		Error 009	Start failure resulted from low battery
E101		Error 101	CFG file checksum error
E102		Error 102	CFG file error, incorrect device model
E104		Error 104	CFG file error, incompatible device version
E105		Error 105	CFG file error, missing or incorrect AccessKey
E106		Error 106	CFG file error, incorrect auto start time

WARRANTY

TempSen warrants this TempSen-branded hardware product against defects in materials and workmanship under normal use for a period of ONE (1) YEAR from shipment date. If a hardware defect arises and a valid claim within the Warranty Period, as its option and to the extent permitted by law, TempSen will either (1) repair the hardware defect at no charge, using new parts or parts equivalent to new in performance and reliability, (2) exchange the new product with a product is new or equivalent to new in performance and reliability and is at least functionally equivalent to the original product, or (3) refund the purchase price of this product. TempSen may request that you replace defective parts with new or refurbished user-installable parts that TempSen provides in fulfillment of its warranty obligation. A replacement product or parts, including a user-installable part that has been installed in accordance with instructions provided by TempSen, assumes the remaining warranty of the original product or ninety (90) days from the date of replacement or repair, whichever provides longer coverage for you. When a product or part is exchanged, any replacement item becomes your property and the replaced item becomes TempSen's property. Parts provided by TempSen in fulfillment it's warranty obligation must be used in products for which warranty service is claimed. When a refund is given, the product for which the refund is provided must be returned to TempSen and becomes TempSen's property.

EXCLUSIONS AND LIMITATIONS

This Limited Warranty applies only to the hardware product manufactured by or for TempSen that can be identified by the "TempSen" trademark, trade name, or logo affixed to it. The Limited Warranty does not apply to any non-TempSen hardware product or any software, even if packaged or sold with the TempSen hardware. Manufacturers, suppliers, publishers, other than TempSen, may provide their own warranties to the end user purchaser, but TempSen, in so far as permitted by law, provides their products "as is". Software distributed by TempSen with or without the TempSen brand name (including, but not limited to system software) is not covered under this Limited Warranty. Refer to the licensing agreement accompanying the software for details of your rights with respect to its use.

TempSen does not warrant that the operation of product will be uninterrupted or error-free. TempSen is not responsible for the damage arising from failure to follow instructions relating to the product's use.

This warranty does not apply: (a) to consumable parts, such as batteries, unless damage has occurred due to a defect in materials or workmanship; (b) to cosmetic damage, including but not limited to scratches, dents, and broken plastic on ports; (c) to damage caused with non-TempSen products; (d) to damage caused by accident, abuse, misuse, flood, fire, earthquake, or other external causes; (e) to damage caused by operating the product outside the permitted or intended uses described by TempSen; (f) to damage caused by service (including upgrades and expansions) performed by anyone who is not a representative of TempSen or TempSen Authorized Service Provider; (g) to a product or part that has been modified to alter functionality or capability without the written permission of TempSen; or (h) if any TempSen serial number has been removed or defaced.

IMPORTANT: DO NOT OPEN THE HARDWARE PRODUCT. OPENING THE HARDWARE PRODUCT MAY CAUSE DAMAGE THAT IS NOT COVERED BY THIS WARRANTY. ONLY TEMPSEN OR AN AUTHORIZED SERVICE PROVIDER SHOULD PERFORM SERVICE ON THIS HARDWARE PRODUCT.

TEMPSEN

REVISION HISTORY

Revision	Date	Details
A	2018-10-30	First version

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