

Webportal user guide

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Introduction

The ThermiT product – Main modules and sensors

Temperature measurement

- every hour – all year!

ThermiT is the solution for automatic wireless temperature surveillance for self-monitoring, server room surveillance etc. ThermiT eases the workload involved in registering temperatures in freezers, refrigerators and so on. Also, temperature measurements are always available, if food control pays a visit.

ThermiT ApS is a Danish company who produces and sells main modules and wireless temperature sensors. All readings from the sensors are sent to central servers at ThermiT every hour, day and night.

Customers have access to their own data and graphical overview of readings through a web interface, and can create alarms on individual sensors, making it possible to receive text messages and e-mails when something is wrong. Customers can also subscribe to daily and weekly PDF reports sent by e-mail.

Customers can create users who have responsibility for daily marking temperatures as checked and validated on the web site, making it possible to ensure and prove that temperatures are monitored daily. A complete history of daily checks is available on the website.

Word Definitions

- **Area** = Term for the location or unit in which a sensor is placed, e.g. a refrigerator, freezer compartment, cold store etc.
- **Main Module** = The device that receives data from sensors and sends it to the Thermit servers. There is 2 Types of modules one GSM-module and another is WiFi-Module
- **Sensor** = The device that measures temperatures in an area.
- **Web Portal** = The website on which data is presented, and where customers can create alarms etc.

GSM Main Module

- a. Main modules have a receiver module that continuously receives data from sensors. Data consists of a sensor number and a temperature measurement, and is stored temporarily in the main module's memory.
- b. The main module has a built-in GPRS module with a SIM card. The module automatically connects to a server every 60 minutes and delivers the latest received sensor readings before send to the server.
- c. Using a SMS command, the main module can be configured to send data to the Thermit servers in smaller intervals (at least 10 minutes). SMS commands are found in section "SMS commands".
- d. Using a SMS command, it is possible to force the main module to send all accumulated data immediately. Data will be visible on the web portal within 10 minutes.
- e. Place the main module free of obstacles and ensure the antennas are not covered in any way. A good place is on a top shelf. This ensures the GPRS connection to the Thermit servers is as stable as possible.
- f. Do not place the main module and sensors in areas where other devices are using the 433 MHz radio band, such as walkie-talkies and pagers.
- g. The main module will blink a red light approximately once every second to indicate that the main module has a GPRS connection, and is able to receive sensor readings.
- h. The main module will show a constant red light when processing an incoming configuration SMS, or when accumulated sensor readings are sent to the Thermit servers. Under normal circumstances, the main module will be in this mode for no more than a couple of minutes each hour.
- i. If the main module shows a constant red light for more than 10 minutes, then the main module most likely has problems sending data to the Thermit servers. Disconnect the power supply from the main module, and reconnect again after a couple of minutes.
- j. If the main module still shows a constant red light, it must be returned for a replacement.
- k. The main module can be used in vehicles by connecting it to the vehicle's 12V (**not** 24V) power supply, e.g., through the cigarette lighter socket.

WiFi Main Module

- a. Main modules have a receiver module that continuously receives data from sensors. Data consists of a sensor number and a temperature measurement and is stored temporarily in the main module's memory.
- b. The main module has a built-in WiFi module. The module automatically connects to a server every 60 minutes (Can be adjusted between 15 to 240 min.) and delivers the latest received sensor readings before send to the server.
- c. To adjust the modul to send data to the ThermIT servers in smaller intervals (down to minimum 15 minutes). Go to the Mobile App for configuration of that.
- d. Place the main module free of obstacles and ensure the antennas are not covered in any way. A good place is on a top shelf. This ensures the WiFi connection to the ThermIT servers is as stable as possible.
- e. Do not place the main module and sensors in areas where other devices are using the 433 MHz radio band, such as walkie-talkies and pagers.
- f. The main module will blink a blue light approximately once every second to indicate that the main module has a WiFi connection and is able to receive sensor readings.
- g. If the main module shows a constant blue light for more than 10 minutes, then the main module most likely has problems sending data to the ThermIT servers. Disconnect the power supply from the main module and reconnect again after a couple of minutes.

Sensor information

- a. Sensors are battery driven, and send radio signals to the main module every 10 minutes containing the sensor number and measured temperature.
- b. Sensors are water splash tight.
- c. Sensors must, to the extent it is possible, be placed in the centre of an area with the antenna pointing upwards.
- d. If sensors are to be placed in closed metal containers, in water, or other materials blocking the radio waves, sensors with extended antennas are available (0.5m, 1m and 2m antennas available). The extensions makes it possible to move the antenna out of the area in which the sensor is placed (e.g. 1 metre under water), but it does not increase the signal power.
- e. Sensors have a range of 40m. in open air. Placing sensors and main modules with obstacles between them, such as walls, will reduce the range.
- f. Sensors must never be placed close to magnets or large motors such as generators.
- g. Sensors can be attached using the included metal clamp or cable ties.
- h. Sensors can be placed in a vehicle's trailer and can then send signals to a main module placed in the vehicle itself.
- i. Sensors do not store any readings in memory. The current temperature is sent every 10 minutes to whatever main module within reach.
- j. Sensor battery life is 5 to 7 years. (3 Years warranty)

SMS Commands for GSM Main module

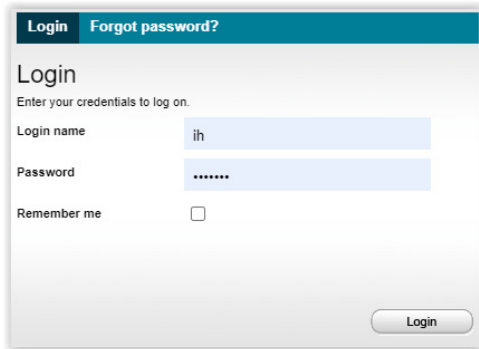
Certain aspects of the main module configuration can be altered by sending a text message to the main module. The following commands are available via SMS.

Notice! USERID and PASSWORD is only to be used if the phone company requires this to access their APN. These commands are not used in normal operation.

1. Force the main module to send accumulated readings to the server immediately.
 - a. Send SMS containing **SND** (SND must be in capital letters)
2. Change send interval
 - a. Send SMS containing **ITV interval** (interval = minutes between 10 and 240) Default = 60 min. ITV must be in capital letters.
3. Change APN
 - a. Send SMS containing **APN internet** where internet is the access point name of the wanted phone company. If the wanted phone company is TDC, Telenor or another with the same APN, you will normally not be required to change anything.
4. Change USERID
 - a. Send SMS containing **USE test** (USE in capital letters). Notice that if user id must be empty for the wanted phone company, it is not necessary to send this command, unless it has previously been changed.
5. Change PASSWORD
 - a. Send SMS containing **PAS test** (PAS in capital letters). Notice that if password must be empty for the wanted phone company, it is not necessary to send this command, unless it has previously been changed.

Logging on to the web portal

<http://system.thermit.dk>



The screenshot shows a web browser window with the Thermit login page. At the top, there are two tabs: "Login" (selected) and "Forgot password?". Below the tabs, the heading "Login" is followed by the instruction "Enter your credentials to log on.". There are three input fields: "Login name" with the text "ih", "Password" with masked characters "*****", and "Remember me" with an unchecked checkbox. A "Login" button is located at the bottom right of the form.

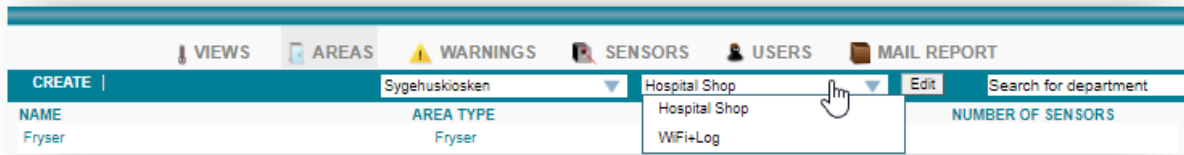
Enter your username and password.

If you have forgotten your password, you can recover it using the “forgotten password” tab.

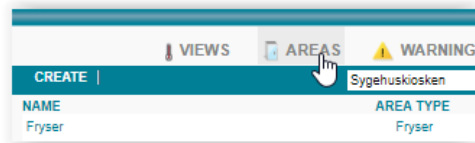
Enter your registered e-mail address in the field, submit the form, and wait a few minutes for an e-mail explaining the procedure to reset your password.

Creating areas

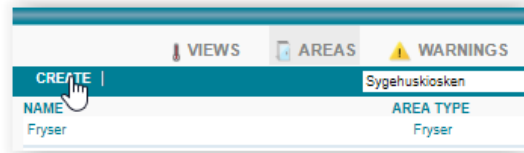
1. When logged in, you may choose the department you want to configure, using the drop down field next to field containing the company name. For now, the new department has been named the same as the main module IMEI, so pick the correct area by comparing this number to the main module.



2. To create new areas, press the “Areas” button in the top menu.



3. When “Areas” has been selected, this window is shown. Press “Create” to create a new area.



4. This window will be shown

Create Area

Name

Area Type

Industry

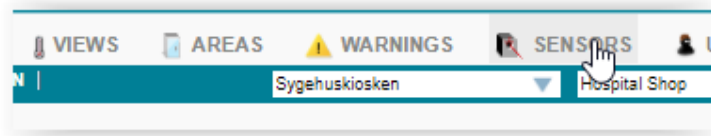
In the “name” field, the name of the area you want to identify is written (see image for example).
 Select an appropriate “Area Type” using the drop down.
 Area types have predefined average temperatures which are used when creating alarms.
 Pick a fitting “Industry” in the drop down field.
 Press the “Create” button to create the area.

5. Repeat step 3 and 4 until all areas have been created.

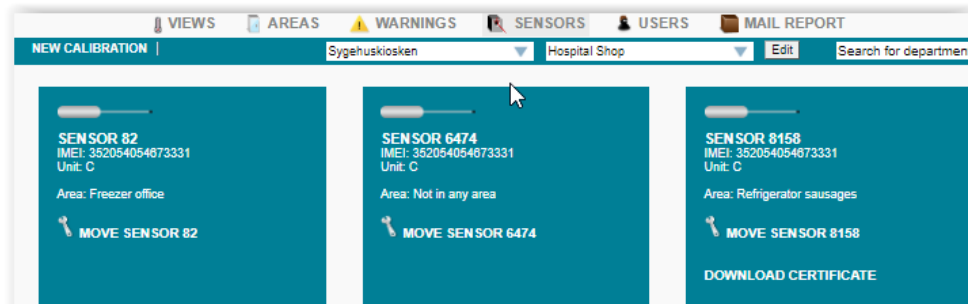
Tip! When moving sensor physically, always remember to move them in the web portal!

Adding sensors to areas

1. Press the "Sensors" button.



2. Find the sensor you want to move or create.



3. Press the "MOVE SENSOR" link on the sensor you want to add to an area.

Move sensor 563

Area:

Select an area which the sensor should be added to, by using the drop down.

- Not in any area
- Diverse
- Stue
- Soveværelse
- 1
- 2
- 3
- 4
- 5
- 6
- 7

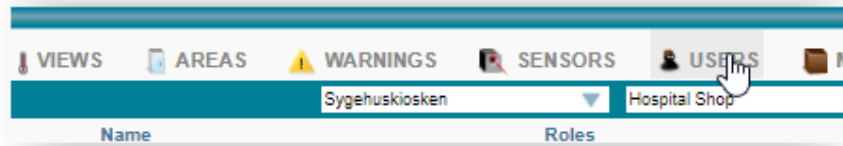
When selecting an area, notice that some of the items cannot be chosen, as they are groups, not areas. Only lines with a prefixed dash ("-") are actual areas, wherein the sensor can be added.

Then click the "save" button.

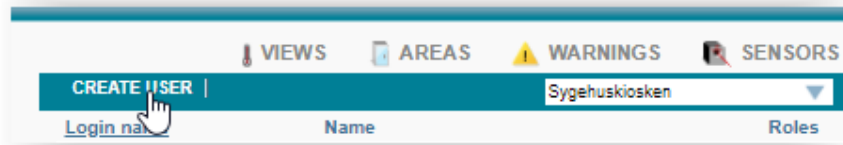
4. Repeat step 2 and 3 for all sensors.

Creating users

1. Push the “Users” button.



2. Push the “Create User” button.



3. Fill in the fields in the dialog.

Create user

Login name:

Name:

Password:

Retype Password:

Roles:

Email:

Phone:

Language:

Time zone:

Select department:

Chose a short username (login name) in the user name field.

Enter the user’s full name in the name field

Type the wanted password in both password fields.

Pick the wanted role in the Role drop down.

Enter the user’s e-mail, which will be used for alarms and PDF reports.

Enter the user’s mobile phone number in the phone field. Add country code to the number with prefixes zeros and + (e.g. +0044 for United Kingdom, see image for example)

Enter Language code for your preferred language

Enter TimeZone for the country you are living in.

Finally chose the department the user should have access to. Notice that departments have a prefixed dash (“-”). Lines without this dash are groups, and they cannot be used.

The “Department Leader” role can create additional users within the departments he has access to, and can attach sensors to areas, as well as move them to new ones.

The “User” role can see data, and validate temperatures, write reports and setup and maintain own alarm settings per sensor.

The “Egenkontrol” user can only read data and write out reports

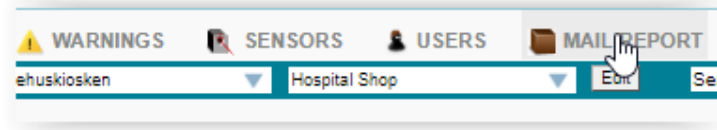
View Data

Look the document “Temperature Data viewing”

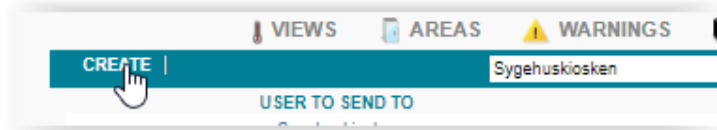
Reports

Automatically daily/weekly PDF reports on mail

1. Push the "Subscriptions" button, to get to the following page



2. Push the "Create" button .



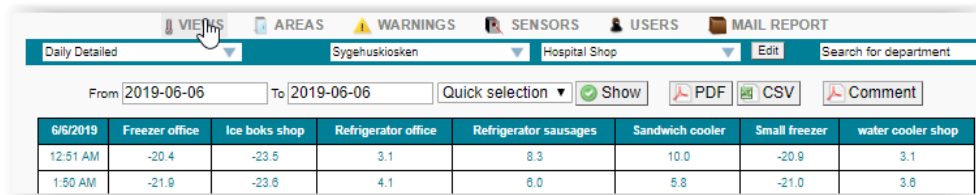
3. Chose the wanted report in the "Cycle between reports" dropdown field

A screenshot of a 'Create' dialog box. It has a title bar 'Create'. Inside the dialog, there are two dropdown menus. The first dropdown is labeled 'Cycle between reports' and has 'Choose report' selected. The second dropdown is labeled 'User to send to' and has 'Choose user' selected. At the bottom of the dialog, there are two buttons: 'Cancel' and 'Create'.

4. Choose the recipient in the "User to send to" field. The User must present in the system.
5. Press "Create" to activate the automatically report creation.
6. Repeat step 1 and 2 for all wanted users and reports types.

Print reports manually

1. Push the “VIEWS” button and select the <Daily detailed> submenu under the “VIEWS” button in the drill down field.



The screenshot shows the THERMIT web interface. At the top, there is a navigation bar with buttons: VIEWS, AREAS, WARNINGS, SENSORS, USERS, and MAIL REPORT. Below this, there is a dropdown menu for 'Daily Detailed' and a search bar for 'Sygehuskiosken'. Below the search bar, there are date fields for 'From' (2019-06-06) and 'To' (2019-06-06), a 'Quick selection' dropdown, and buttons for 'Show', 'PDF', 'CSV', and 'Comment'. Below these fields is a table with temperature data.

6/6/2019	Freezer office	Ice boks shop	Refrigerator office	Refrigerator sausages	Sandwich cooler	Small freezer	water cooler shop
12:51 AM	-20.4	-23.5	3.1	8.3	10.0	-20.9	3.1
1:50 AM	-21.9	-23.6	4.1	8.0	5.8	-21.0	3.6

2. Select the Date in the “From” field and select the Date in the “To” field, that you want to have the report from.
3. Press the “PDF” button for PDF report
4. Press the “CSV” button if you want a Comma separated file to work with in Excell sheet
5. Press the “Show” button if you just want to se the selected period on screen.