

User Guide

Online



The English language is used for the original instructions.
Other languages are a translation of the original instructions.
(Directive 2006/42/EC)

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1 Introduction

1.1 About this document



This user guide is only valid when read online. As it describes how to operate software it will change in parallel with the development of the software. It is therefore important that the user downloads the latest edition of this guide from www.thermia.se

1.2 Remote access via Internet

With the accessory Thermia Online you can control and monitor your heat pump via any smart phone, computer or pad, wherever you are. You can for instance lower the indoor temperature when you are away and increase it in time for you to come home. If you come home earlier than expected, you see, using Online, to that the house is as nice and warm as you want it to be.

You can always check how your heating system works and what temperature you have at home. If something needs to be fixed, you - or your installer if you contracted it - immediately get information about it through Online. Notice may be obtained by e-mail and / or notification in your mobile. You are also able to control and monitor multiple installations if necessary, for example, if you have a summer home with a heat pump or have relatives who need help.

Thermia Online can be connected to your existing broadband so no extra cost will be charged. In cases where no wired internet connection is available it is possible to solve the connectivity by adding an independent 3G/4G-modem (any vendor). Online mobile app is available for both iPhone and Android.

Thermia Online is connected to your heat pump via the internet. Do you already have a connection in place, your Thermia installer plug in the heat pump to this. This solution means no running costs for data traffic. If you do not have internet access (like a summer house), we recommend to get this via an external 3G/4G-router - any supplier.

Due to that all the data sent from the heat pump is stored on an external server, you can at any time access Online - log in from any smartphone, computer, pad, wherever you are in the world. It also means that there is no restriction for the number of users for your Online application.

You download the app for Thermia Online on the App Store (iPhone) or Google Play (Android). The system works for all heat pump models in the Thermia current residential range, and Diplomat Duo Optimum.

The system requirements are described in chapter System Requirements.

1.3 Important information

- Before changing the control unit setup, you should first find out what these changes mean.
- For possible need for servicing, please contact your installer.
- Only qualified personnel may install, operate, and carry out maintenance and repair works of the heat pump.
- The front of the heat pump may only be opened by qualified service personnel.

2 Components

2.1 Components, Thermia Atec

The following components are installed in your Thermia Atec heat pump:

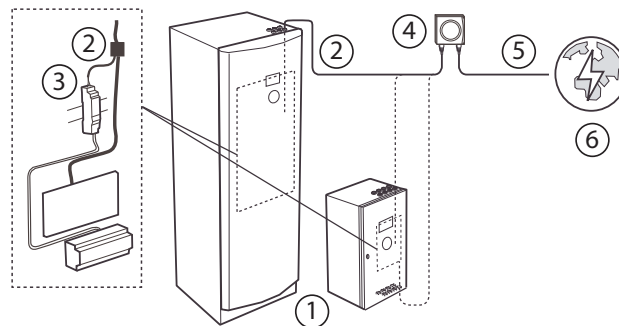


Fig. 1: Heating system with Thermia Atec and Online components

- 1 Heat pump
- 2 Connection cable*
- 3 ACDC + rail*
- 4 DCM*
- 5 Patch cable TP Cat 6
- 6 Internet options

* Included in Online accessory

2.2 Components, Diplomat

The following components are installed in your ThermiaDiplomat or Diplomat Duo heat pump:

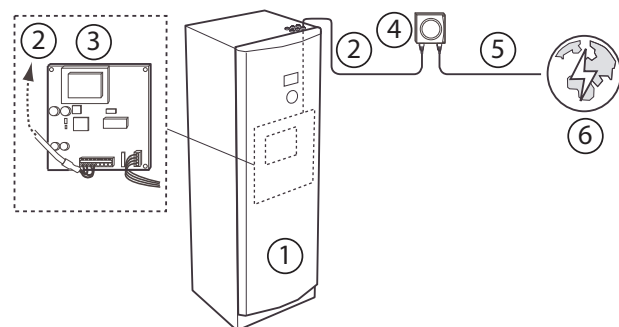


Fig. 2: Heating system with Thermia Diplomat and Online components

- 1 Heat pump
- 2 Connection cable*
- 3 Gateway*
- 4 DCM*

- 5 Patch cable TP Cat 6
- 6 Internet options

* Included in Online accessory

3 Communication

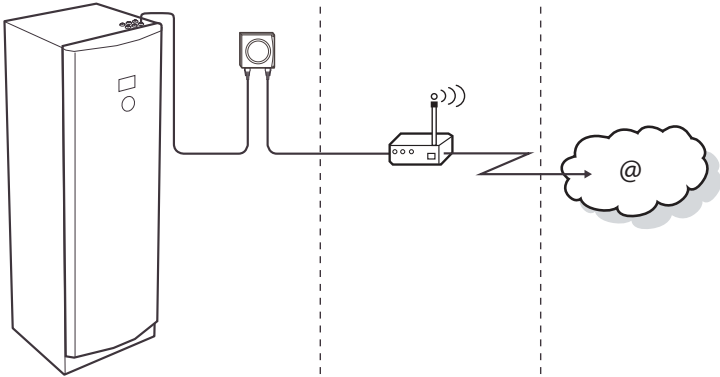
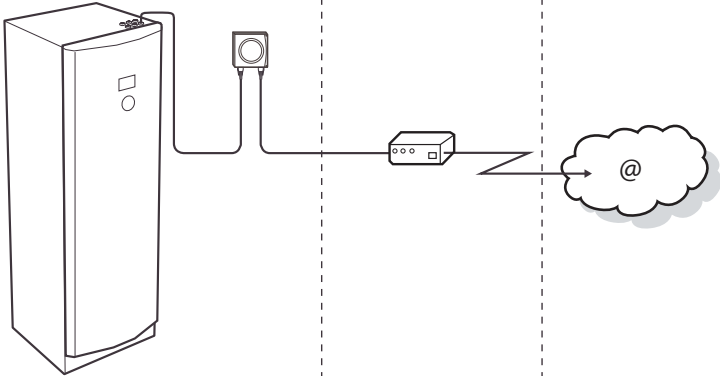
3.1 Communication

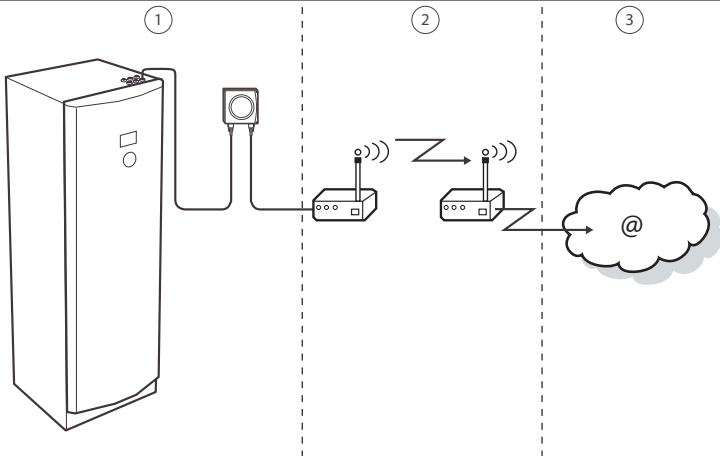
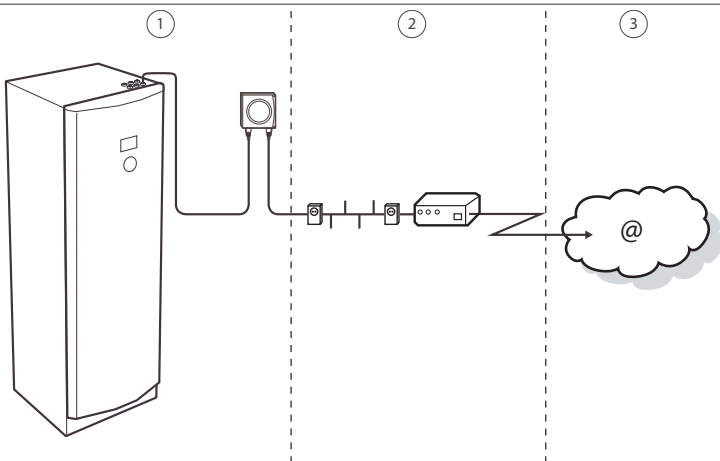
Since Thermia Online is based on communication over Internet, of course this connection is required. The connection can be divided into two main categories:

- **Mobile**
- **Wired**

Mobile means that you are connected through a 3G/4G router containing a SIM card, and thus communicating over the mobile network. In this case, it is important that a sufficiently strong GPRS signal is available where the router's antenna is located. Check with the prospective provider of mobile broadband that there is coverage in the area where Thermia Online is to be installed.

Wired connection means that you are connected to the Internet through any form of cable or fiber. The connection between the heat pump, the different connection options, and responsibilities are shown in the figure below.

Internet solution	Connection alternatives		
Mobile broadband	①	②	③
			
LAN	①	②	③
			

Internet solution	Connection alternatives
WLAN	
EI-LAN	

Legend:

- 1 Supplier responsibility
- 2 Customer responsibility
- 3 ISP responsibility

4 LED indicators

4.1 LED indicators, Atec

The unit that in one end is connected to the heat pump and in the other end to an Internet connection, is called DCM.

It is equipped with small diodes placed in the corners, red at the bottom and green on top. These diodes have a predefined flash system showing the status of the connection. The table below explain this.

Heat pump display 	LED indicator 	Meaning
Ring (long flash)	Long red	No IP-address from router DHCP
Ring (short flash)	Short red	DCM does not get a DNS address from router
Ring (lit), dot (long flash)	Constant green - Long red	Online-server does not respond
Ring (lit), dot (short flash)	Constant green - Short red	Server does not recognize the DCM (the installation)
Ring (lit), dot (lit)	Long green	Everything OK
Ring (lit)	Constant green	Everything OK

4.2 LED indicators, Diplomat, Diplomat Duo

The unit that in one end is connected to the heat pump and in the other end to an Internet connection, is called the DCM.

It is equipped with small diodes placed in the corners, red at the bottom and green on top. These diodes have a predefined flash system showing the status of the connection. The table below explain this.

LED indicator 	Meaning
Long red	No IP-address from router DHCP
Short red	DCM does not get a DNS address from router
Constant green - Long red	Online-server does not respond
Constant green - Short red	Server does not recognize the DCM (the installation)
Long green	Everything OK
Constant green	Everything OK

5 Internet in business domains

5.1 Internet in business domains

For the Thermia Online accessory to work, it takes either a direct Internet connection or a NAT-router/firewall. DHCP must be enabled on the router. If there is a proxy server (often used by larger companies/organizations), there is currently no support for this type of connection.

6 Features

6.1 Functions

- To make changes in the heat pump settings, use Online, where you log in with the customer data that you received in an e-mail during installation. Communication goes via Internet to the Online Server. Online Server processes the settings you have changed in the application and sent from your computer.
- DCM unit, connected to the heat pump, receive data using the Internet connection.
- The device communicates with the heat pump's control unit and makes sure that the settings you requested changes in the heat pump control. DCM also sends regular information about the heating system status to the Online Server.
- You can whenever you want, login to Online to see the current status and history of your heating system

There are some basic features in the Online web application:

- Current status of the heat pump
- Monitor events and alarms
- Controlling and regulating settings (eg calendar control "away mode")
- Contact support

After logging into the application, you'll see an overview of the current heat pump values and settings. Later in this manual you will find more specific information about the application and instructions on how to change settings, monitor events and alarms, and how to contact support.

7 Getting started on the web

7.1 Getting started on the web

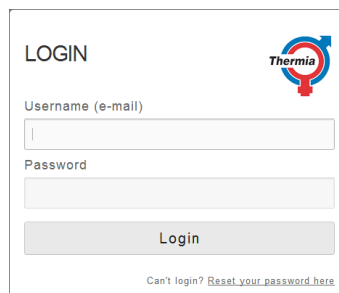
The Online application must be run in a browser, according to the system requirements (see chapter System Requirements).

You will get your login details from an e-mail in connection with the installation.

You can find Thermia Online at the following URL:

To log in:

1. Start your web browser; enter the URL above into your browser's address bar.
2. Enter your username and password and click **Login**.



The login page features the Thermia logo in the top right corner. Below the 'LOGIN' heading, there are two input fields: 'Username (e-mail)' and 'Password'. A 'Login' button is positioned below these fields. At the bottom, a link reads 'Can't login? [Reset your password here](#)'.

Fig. 3: Login page

The <username> and <password> will be sent to the e-mail address specified in your reseller contact info at Thermia.

After logging in, an overview is opened showing your heat pump. You can change your password in the application, but keep in mind that there must be at least four characters and that it distinguishes between upper and lower case.

When finished in Thermia Online, log out to prevent unauthorized use of the system. If you forget this, you will be automatically logged out after 20 minutes. Logout by clicking the **Logout** link at the right-hand side of the basic view at the top of the start page.

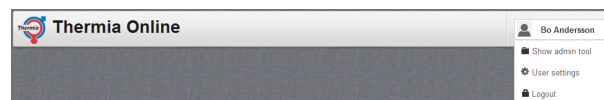


Fig. 4: Logout page

7.1.1 Start page

The first window that appears after login is the Online start page. This page contains the following:

- Your login account (<user name>)
- A pull-down menu
- Any existing installations
- Search box supplemented with selected criteria (offline/alarm/event)
- A tab menu
- Information panes
- Selected model of existing installations

Thermia Online				 <user name>	▼
Existing installations				User settings Logout	Search box
Status	Events	Details	Calendar		
Temperatures					
Events					
Active calendar functions					
<Your model>					

Tab menu

The tab menu contains the following 4 tabs:

- Status
- Events
- Details
- Calendar

Pull-down menu

On the right hand side, there is a pull-down menu with the following options:

- User settings
- Logout

User settings

Under this menu item there are two tabs:

- Personal details
- Password

Personal details

The first tab contains your personal details where you insert your first and last name, the language that the Online applications will use and the **Time zone** you are in. More details about time zone and calendar settings are found in chapters describing the **Calendar** tab.



The Time zone setting is important as it controls some calendar functions.

Tab text	Input example
First name	<First name>
Last name	<Last name>
Language	English
Timezone	(UTC+01:00) Amsterdam, Berlin

Tab. 1: Personal details

Password

The other tab handles your password for Online. In this dialog box you can change your old password to a new one.

Tab text	Input example
Old password	1234ABCD
New password	2345ABCD
Confirm new password	2345ABCD

Tab. 2: Password

Logout

This menu item is used when you logout from Thermia Online.

7.1.2 Status tab

The **Status** tab contains the following 4 information pages that give you a quick overview of your heating system:

- Actual temperatures
- Reported events
- Active calendar functions
- Your model
- Retailer information

Actual temperatures

This page displays an overview of the relevant pump information and quick sets of temperature changes.

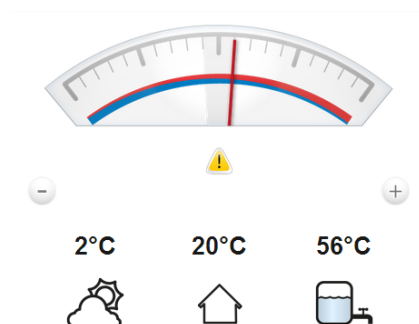


Fig. 5: Actual temperatures

The room setpoint (setpoint = the desired room temperature). If the temperature not is reached, the curve has to be adjusted which is done by the installer. See the heat pump manual.

The center position of the meter corresponds to 20° C. See the figure below.



Fig. 6: Center position = 20° C

Alarm and event information is displayed with icons and descriptive text. Events can be acknowledged directly from the application while alarms can only be acknowledged from the heat pump display.



You have 2 new events



You have 1 unread alarm



Installation is offline

The room setpoint temperature is changed by using the $\oplus$ or $\ominus$ buttons. The result of the reduction is shown on the meter set point.



Reduction of desired room temperature.
One click means one degree reduction. The result of the reduction is shown on the meter set point



Increase the indoor room setpoint.
One click means one degree increase. The result of the step-up is shown on the meter setpoint

9°C

Outdoor temperature measured by the outdoor sensor.



20°C

The property actual indoor temperature. Default value is set to 20° C if not a room sensor is installed. If one is present, the actual measured is shown



51°C

The hot water temperature. If the facility don't have a boiler, no value is shown.



Tab. 3: Changing room setpoint

Reported events

Showing the last 5 events

	ALARM ACTIVATED: Has not been able to resume connection with DCM	2012-09-30 20:58	▼
	Connection to heat pump is lost	2012-09-30 19:57	▼
	Alarm deactivated: Has not been able to resume connection to DCM	2012-09-30 19:48	▼

	Connection to heat pump resumed	2012-09-30 19:48	▼
	Connection to heat pump is lost	2012-09-30 19:18	▼

Tab. 4: 5 last events

Each event can be studied in detail by clicking on the arrow at the right end of the line. When this is done, the event is acknowledged and disappears from the Start page overview.

Active calendar functions

This pane summarizes the possibly created date / time-controlled temperature changes that has been done. These are set up under the **Calendar** tab and is described later in this manual (Section 6)

	Reduced temperature from 2012-11-06 16:36 To 2012-11-07 16:36	 Remove
	Reduced temperature from 2012-11-06 23:17 To 2013-11-06 23:17	 Remove
	Reduced temperature from 2012-11-06 20:07 To 2013-11-06 20:07	 Remove
	Reduced temperature from 2012-11-06 23:17 To 2013-11-06 23:17	 Remove
	Reduced temperature from 2012-11-06 23:17 To 2013-11-06 23:17	 Remove

To remove one or more calendar entries, click **Remove**.

7.1.3 Event tab

The Event tab consists of the following two panes:

- E-mail notifications
- Event list

E-mail notifications

The upper part is given the option to register the e-mail addresses to which you want to get their events and alarms reported. Thus, one can specify more than one recipient of the information. Removal of the receiver is done by clicking the **X** on the right-hand side of the address.

Event list

The bottom part line up all the events that occurred in the heat pump and these are acknowledged by expanding the line by clicking ▼ icon. The times are given assumed to timezone specified in the **Personal Details** settings. The logging interval is 1 minute, but worth noting is that if the unit loses contact with the internet, the internet server reports that after an hour of no communication reestablished. The details of the Event list is shown in the table below.

Label	Time	Type	ID	Source	
Connection to heat pump resumed	2012-10-26 15:21		68029	Online	▼
Connection to heat pump is lost	2012-10-26 15:20		6707	Online	▼
Connection to heat pump resumed	2012-10-26 15:19		5998	Online	▼
Connection to heat pump is lost	2012-10-26 15:17		5767	Online	▼
Connection to heat pump resumed	2012-10-26 15:16		5312	Online	▼
Connection to heat pump is lost	2012-10-26 15:165		5310	Online	▼

The Event list columns

- Label = The event or alarm
 Time = Time of the event or alarm
 Type = Color Blocked symbol categorization type as below



Alarm



Event



Icon Acknowledge alarm or event

- Id = Internal database identity
 Source = What triggered the alarm or event
 ▼ = Click to see the row details

7.1.4 Detail tab

For all the details on this tab refers to the heat pump manual. The different categories can be expanded by clicking the symbol to the right in each block.

Temperatures		Operational status	
Operational time		Heating curve	
Heat pump		Heating curve or pool	
Hot water		Immersion heater	
Software versions		Calibration	

Tab. 5: Detail pane

7.1.5 Calendar

Calendar					
		Start date	End date	Atec	Diplomat
Local time on the heat pump	Fetch			x	x
Value at reduced heating effect				x	x
Reduced temperature		2012-12-25	2012-12-26	x	x
Hot water block				x	
Silent mode				x	
EVU mode				x	

- By clicking **Fetch**, the calendar date is set to the date that the heat pump is expected to have. If this time is different from what time it is where you are, this "time shift" will be taken into account. The function is there because the heat pump lacks internal clock and this will give you the opportunity to put a relative time, regardless of what time zone you are located in (eg on holiday).

The time zone is specified in the settings in the main menu (at the top right corner of the browser window). More on this later.

- The indoor setpoint during the temperature change period (set point = the desired room temperature). Unless the temperature is reached, the curve is adjusted (see the heat pump manual). Meter center position corresponds to 20°C. A click on a button is equivalent to one degree change.



Fig. 7: Reduced heating effect

Here is the range in which the 4 category change will take effect. Up to 8 different occasions for 4 different categories can be registered.

Reduced temperature			
	Start date:	2012-11-07 13:30	
	End date:	2012-11-08 13:30	
			Save

Tab. 6: Example, reduced temperature

In the example below, two occasions have been added to the calendar:

Mon	Tue	Wed	Thu	Fri	Sat	Sun
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13 Reduced temperature 1	14	15	16	17	18
19	20	21	22	23	24	25
26 Reduced temperature 1	27	28	29	30	1	2

Tab. 7: Calendar occasions

If the heat pump is not connected to the Internet at the moment, the calendar can not be set. The following message will be displayed in the browser lower right corner.

Installation is offline (no connection between server and DCM)	
Unable to process request, please check your input	
[close all]	

To remove a registered calendar entry, click .

Reduced temperature			
	Start date:	2012-11-07 13:30	
	End date:	2012-11-08 13:30	
			Save

Tab. 8: Removing a registered calendar entry

7.1.6 Registered heat pump installations

All heat pumps that are registered to the logged in user are displayed as clickable icons. When an heat pump icon is clicked, the button expands and shows more information details.

 <Installation name>	 <Installation name>
--	--

The icons symbolize the different types of heat pumps, such as Thermia Atec or Thermia Diplomat. The indicator on the right hand side of the heat pump icon displays the status of the pump as follows:



Heat pump is online



Heat pump is offline



Heat pump has event(s)



Heat pump has alarm (s)

8 Getting started with mobile and the pad

8.1 Getting started with the mobile and the pad

If you have a mobile with Android or Ios, a Thermia Online app can be downloaded from Google Play (Android) or the App Store (iPhone).

Your login details are the same as on the web and you get them by email in connection with the installation.

The Online app looks like the picture below, and consists of a notification area, a status area, and 8 buttons.

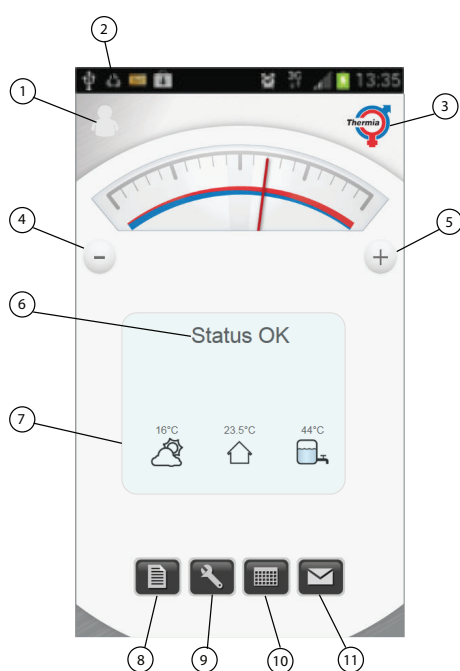


Fig. 8: Online App

- 1 Tap on this symbol and you will see your installations (if you got more than one). Here is also the logout option.
- 2 Notification area. If an event or an alarm occurs, it will show up here.
- 3 The "Logo". Tapping means that you will return to the start screen.
- 4 Minus button. Tap for decreasing the indoor set point 1°C
- 5 Plus button. Tap for increasing the indoor set point 1°C
- 6 Status message.
- 7 Status area. Showing set point for room temperature, actual outdoor temp, in door temp (if room sensor is available, else 20°C) and hot water
- 8 Events. The same symbolism of the icons as in the web interface.
- 9 Details. Here you can control and monitor a number of heat pump settings.
- 10 Calendar. Activation and deactivation of calendar controlled value changes
- 11 Your model. A link to an information page about your heat pump model, phone number, and e-mail address to your installer. A click on the phone number activates your phone function and calls directly. A click on the e-mail address will open your E-mail application with the predefined address.

9 System requirements

9.1 System requirements

Thermia Online is an HTML5-based web production.

This of course means some system limitations and we have chosen to support the four most popular browsers.

These are (in no particular order):

- Internet Explorer (latest version)
- Mozilla Firefox (latest version)
- Google Chrome (latest version)
- Apple Safari (latest version)

Other system requirements are that Javascript must be enabled and your browser must accept cookies.



The login process is cookie based. These cookies live a short time before they expire. If the system clock on the login computer, phone, or pad differs more than 5 minutes, the cookie will be too old and login will fail.

10 Comments

10.1 Communication

Simplified one can describe the communication between the pump and the Internet as follows:

The control board in the heat pump communicates with an expansion card (in the Online case with a gateway card). The Gateway card communicates in turn with the so-called DCM unit (the square white box). In the box there is a small memory, the first time the DCM unit is powered it starts looking for an address on the internet. Then if an internet connection is available the DCM start transmitting data including its unique MAC address. If the address is registered on the server, you can as an administrator or installer log on to the heat pump profile.

10.2 Administration

For end users or heat pump owners to login to the heat pump data it requires that an administrator or an installer link the installation (MAC address) to the user. User identity to be used is their e-mail address. This is so that when the link is done, the login information is sent to the end user or heat pump owner's address.

10.3 Permission profiles

In the system/application there are three levels of permissions available.

Global	Members in this profile can utilise all the features that the website has. Thus: Adding and changing installers, installations and users. This profile also allows the ability to change device id in the DCM (required if the device is changed (historical data associated with the device can also follow)).
Installer	Members in this profile can utilise all the features that the website has, even those who normally is hidden under the "Service" menu. Adding installations, connect installation to the new device (DCM) or remove devices. Adding users and link them to installations or installers . Installers can be given service or admin privileges.
User	Can manage and control the same features available on the heat pump display and change settings for their account, such as change the language and reset passwords.

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