



Ontech GSM 9040/50

Reference Manual

English

Content

- Welcome..... 5**
 - This manual 5
 - Text styles..... 5
 - Support..... 5
 - Disclaimer 5
- Overview 6**
 - Accessories 6
 - External temperature sensor 9901 7
 - Ontech IR Eye 9016 7
- Get started..... 8**
 - Content in the package 8
 - Start up the unit the first time 8
 - SIM-card 8
 - Connect the unit and turn it off 8
 - Program you password..... 8
 - Change password 9
- Using apps 10**
 - Installation and setting of the Android app 10
 - Install the app..... 10
 - Settings the first time 10
 - Installation and setting of the Android app 11
 - Install the app..... 11
 - Settings the first time 11
- Functions 12**
- Set functions 14**
 - Set the functions with an Android telephone 14
 - Set the functions with an Iphone 14
 - Set the functions with a Smartphone..... 15
- Control the unit..... 16**
 - Control with an Android telephone 16
 - Control with an Iphone..... 16
 - Controlling with SMS..... 17
- Alarms 18**
 - Alarm list..... 18
 - Store numbers in the alarm list with an Android telephone..... 18

Store numbers in the alarm list with an Iphone or other smartphone.....	18
Activate and deactivate the alarm function.....	19
Acknowledge alarms	19
Wired alarm sensors.....	19
Alarm cable.....	19
Connecting wired alarm sensors	19
Delay of wired alarms.....	20
Alarm from a wired alarm sensor.....	20
Temperature alarm	21
Temperature alarms from the unit	21
Power fail alarms.....	21
IR controller for air pumps.....	22
Mount and connect the IR Eye 9016 to Ontech GSM 9040	22
Set the air pump brand	22
Testing and controlling your air pump	23
Other functions	24
Thermostat function.....	24
Garage Opener function.....	24
Launch Garage Opener.....	24
Add a user to the list	25
Erase a user from the list.....	25
Get information of users from the unit.....	25
Overheat protection.....	25
Sensor.....	25
Others.....	26
The lamps	26
Green lamp.....	26
Red lamp.....	26
Both lamps.....	26
The push button	26
Status - SMS.....	26
Master functions	27
Factory reset.....	27
Updating the firmware.....	28
Backup battery	28
Trouble shooting guide.....	29
Tip	29

Technical specifications 30
Support..... 30
QR codes..... 30

Welcome

Thank you for chosen Ontech GSM 9040/50. We hope you will be satisfied with the product and that it will be a good help for you. This manual covers all you have to know about the product. If you want a more comprehensive manual, we recommend the “Quick Start Guide” which was delivered with the product.

This manual

This manual is not printed by us but is published on our web site. If you which to have a printed version, you can easily download and print the document. In order to make this easy the paper size is A4.

Text styles

This manual uses text styles as below:

- Text in SMS is written with bold style and grey background. Example: **1234*1*1#8#**
- In examples of SMS messages in this manual, all text strings will start with **1234** but when you send your text messages you shall use your *Password*. See below.
- Buttons to press in the Apps will be shown in bold italic style. Example: ***UPDATE***
- Functions will be shown in italic style. Example: *Thermostat*

Support

If you need support, contact our support by mail at support@ontechgsm.com.

Disclaimer

Onvako AB is not responsible for damages that may occur due to incorrect use or if the product does not work as desired.

Overview

Ontech GSM 9040 is a removable unit that controls, alarms and monitors via the GSM mobile network. The unit is powered by 230 V and starts up automatically when it is plugged into a 230 V socket. The unit is also equipped with an internal backup battery. All communication with the unit is handled with SMS. In the Android app the SMS is sending and receiving in the background.

- The unit has a 230 V outlet that can be turned on and turned off remotely. When it is turned on it can be set to automatically be switched off after a set time between 1 second and 99 hours. It can also be set to switch on when an alarm sensor is activated, the *Auto Relay* function. A special function, the *Garage Opener* switch on the 230V for one second if the incoming call matches a mobile number that is pre-set to the user list in the *Garage Opener* function.
- The unit has two wired alarm inputs. They can be set to opening (Normally Closed, NC) or closing (Normally Open, NO) function. All types of alarm sensors with either closing or opening function can be connected to the unit. For example fire alarms, PIR, magnet switches, level guards etc. The unit sends an SMS to all mobile numbers on the *Alarm list*. Up to 9 different mobile numbers can be programmed in the *Alarm list*.
- The unit has a built-in temperature sensor that has an accuracy of +/- 2 degrees C when the 230 V outlet switch is turned off. At request the temperature is reported. If a radiator is connected to the outlet 230 V the unit can be used to regulate the temperature in the room with the *Thermostat* function.
- The unit can be set to alarm if the temperature is rising above or drop below a preset temperature value. This temperature alarm can also be combined with the *Auto Relay* function so the 230 V outlet switches on if there is a temperature alarm.
- The unit is equipped with a backup battery. The purpose of this is to send an alarm if the main power fails. This alarm can be set with a delay of up to 40 minutes. If the main power is restored within the set delay, there will be no alarm sent. When the main power returns after an alarm a message about this will be sent from the unit.
- The unit can be updated to the latest firmware by downloading it from www.ontechgsm.com and connect the unit with your computer with the cable attached.

Ontech IR Controller 9050 is a package containing one Ontech GSM 9040 and an Ontech IR Eye 9016 (see below). These products connected is used to remote control air pumps for cooling and heating with the Ontech app. It is like you have your IR Remote Control for the air pump in you smartphone instead of the physical remote control. All major manufacturer of air pumps are supported.

Accessories

Ontech GSM 9040 is equipped with a short range radio in the 2.4 GHz frequency band. This is used for wireless communication with different accessories. Up to 7 wireless accessories can be connected with a unique identity, which means they can be separately operated. The working range is about 30 meters in free field, this is often enough in a normal sized one-family house.

At the present the following accessories are available:

- Ontech Relay 9015. This is an extra relay which is connected to a wall socket and it has a 230 V outlet that can be controlled through Ontech GSM 9040 (the master unit). In every Ontech Relay 9050 there is two wired alarm inputs that can be set to operate with either Normally Open or Normally closed function. There are also a temperature sensor and the software supports temperature reporting, temperature alarms and thermostat function.
- Ontech Alarmbox 9012 is a small battery powered unit containing a magnetic switch that sends an alarm if the magnetic switch is activated. The unit also has a wired input that can be connected to alarm sensors with either Normally Open or Normally closed function. Different types of alarm sensors can be connected, for example fire alarms, PIR, magnet switches, level guards etc. Either the magnetic switch or the wired inputs can be used. It also has a built in temperature sensor that upon request reports the temperature. The battery will work for approximately 3 years with normal use and the unit will also warn when the battery level is low.

External temperature sensor 9901

An external temperature sensor (not included) can be connected in the *Temp* input contact on the bottom side. The unit can be set to use either the internal temperature sensor or the external temperature sensor to control the temperature alarm or the *Thermostat* function see *Set functions* on page 14). The status message will show the value from both temperature sensors. The cable is 2 meters but can easily be extended up to ten meters.

Ontech IR Eye 9016

The Ontech IR Eye 9016 is a small IR transmitter connected with a 1,5 meter long cord to Ontech GSM 9040. It is mounted on the wall in the same room as the air pump. Then the air pump can be controlled from the Ontech apps for Android or Iphone. The function is to pre heat or cool it down before arriving to your house. Together with the other functions in Ontech GSM 9040 it gives you full control over the heating in your house, including thermostat and temperature alarms and power break alarms.

Get started

Content in the package

The package contains

- Ontech GSM 9040 with antenna
- Alarm cable
- Quick Start Guide
- Programming USB cable
- IR Eye 9016 (only in package Ontech IR controller 9050)

Start up the unit the first time

SIM-card

The unit needs a SIM-card that works in the GSM (2G) mobile network.

The size is a mini-SIM card. This card is approximately 25*15 mm. Also the size called micro-SIM can be used if a mini-SIM adapter is used.

It is important that the pin code function is disabled on the SIM-card. A pin code is often activated by the network operator. Deactivate the pin code in a mobile telephone. See the manual for the telephone.

Some prepaid SIM cards has a voice message that is played the first time the SIM-card is used. This message is blocking all the SMS function in Ontech GSM 9040 and must be removed. Put the SIM—card in a mobile phone and make a voice call that is answered and the voice message is removed.

Prepaid SIM-cards can be used. Have in mind that it is only valid for a certain period of time if it is not used and not refilled. It can also use up all money and then the Ontech GSM 9040 cannot send any message or alarm. We strongly recommend that you register the prepaid SIM-card at the network operator's web site so you can handle the card via Internet.

Connect the unit and turn it off

The unit starts up when it is connected to a 230 V power socket. The green LED will blink for approximately 15 seconds and then it connects to the GSM network the LED is constant shining green. Position the unit so the text on the front is correctly oriented, if not the temperature measurements might be affected.

If the main power is broken the internal backup battery will continue to power the unit. After one minute a message will be sent to all mobile numbers on the *Alarm list* saying the main power fails (see *Power fail alarms* on page 21).

To switch of the unit, disconnect from the main power and push the button for approximately 30 seconds.

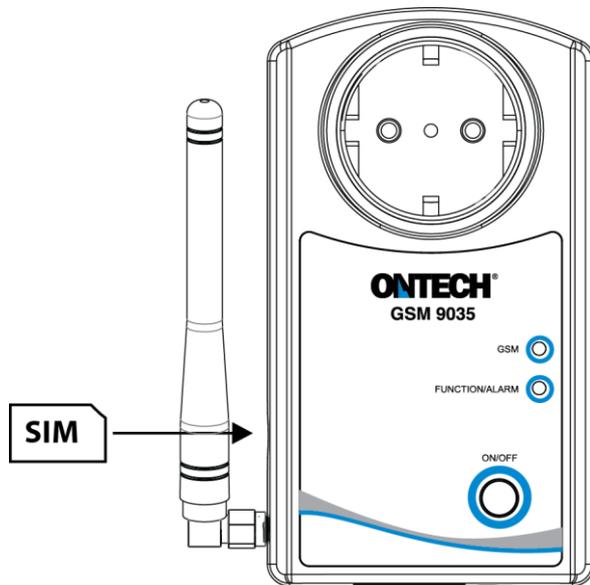
Program you password

You must decide a *Password* that is used every time you communicate with the unit. The reason is that no unauthorized person shall be able to use the unit. The *Password* contains of four digits.

1. Put the SIM-card in the unit. Position it as the drawing below shows.
2. Connect the unit to a 230 V wall socket. The green LED will blink for approximately 15 seconds and then after connecting to the GSM network the LED is steady green.
3. Send an SMS with four digits (your *Password*).

4. You will receive an SMS that tells you that the *Password* setting has succeeded. If not, see the trouble shooting chapter in this manual.

The unit is now ready for use.



Change password

If you want to change your *Password*, do as follows:

1. Send an SMS to the unit with the following message: **1234#8*8*5678#** (1234= old *Password*, 4567 =new *Password*)
2. Do not forget to change the *Password* in the Android or Iphone app if you use such to operate your Ontech GSM 9040.

Using apps

There are apps for Android and Iphone used to control and program Ontech GSM 9040 and other Ontech units.

In the Android app the functions are integrated and the user does not see the SMS sent or received. All settings are also handled in the app. The Android app can also control up to five different Ontech GSM units.

The Iphone app needs you to confirm all SMS sent. The information in the SMS received from the unit is not read into the app but is shown in the SMS. Setting of the function is made in the web browser of the Iphone.

Both apps can be used to control all master units of the Ontech system and is also compatible with older Ontech models.

N.B. The apps uses SMS and the cost for these is set by the network operator of your SIM card.

Installation and setting of the Android app

Install the app

Download the app Ontech Control from Google Play and install on your Android mobile phone according to the instructions.

You can also use the QR-code you find on last page in this manual or on the underside of the package to get fast access to the download page.

Settings the first time

If there is an alert box asking "Update my system info" select **Do not update**.

If you not are directed to the setting page when opening the app the first time:

- Click the Android general button for settings. Four choice will be shown in the lower part of the screen. Click **Settings**.

The screen *Settings for main units* is shown.

1. Click **Number of units** if you plan to control more than one Ontech GSM master unit. Make your choice of number of units.
2. Click **GSM Master 1 (Master1)** to do settings for the first master unit.
3. Click **Name** and write the name you have decided for the unit, for example Cottage. Confirm with **OK**.
4. Click **Phone Number** and write the phone number to the SIM-card installed in the Ontech GSM master unit. Confirm with **OK**.
5. Click **Password** and write the four digit *Password* you have programmed the Ontech GSM master unit (see *Program you password* on page 8).
6. If you have any accessories (see *Accessories* on page 6) so mark the ID numbers of the accessories in the list. If you do not do this, the app will automatically add all accessories it detects.
7. When you are ready, click the Android general **Back**-button

If you want to set more Ontech GSM master units, repeat step 2-7.

When all settings are done you will return to the Main Page by click Android general **Back**-button.

You are now done with the settings and the app is ready to use to control your Ontech GSM 9040.

Installation and setting of the Android app

Install the app

Download the app Ontech Control from Appstore and install on your Iphone according to the instructions.

You can also use the QR-code you find on last page in this manual or on the underside of the package to get fast access to the download page.

Settings the first time

If you not are directed to the setting page when opening the app the first time:

- Click **Settings** in the lower part of the screen.

The screen *Settings* is shown.

1. Click **Phone Number** and write the phone number to the SIM-card installed in the Ontech GSM master unit. Confirm with **OK**.
2. Click **Password** and write the four digit *Password* you have programmed the Ontech GSM master unit (see *Program you password* on page 8).
3. If you have any accessories (see *Accessories* on page 6) so mark the ID numbers of the accessories in the list.

When all settings are done you will return to the Main Page by click on the **Main**-button.

You are now done with the settings and the app is ready to use to control your Ontech GSM 9035.

Functions

Ontech GSM 9040 is a product with many functions. Below is a list of all functions.

Name	Description
- Air pump	This functions demands an Ontech IR Eye 9016 product (buy optional). With this function you can control your air pump heater/cooler from anywhere with the Ontech App for Android or Iphone. Set the brand of your air pump. See <i>IR controller for air pumps</i> on page 22.
Temperature below alarm	Temperature alarm which alarms when the temperature is falling below the set value. This alarm does not need to be acknowledged. If there is a temperature alarm, the unit will not send another alarm until the temperature has reached one degree C above the set temperature value. Example: If set temperature value is 5 degrees C, the unit will send an alarm when the temperature falls to 4 degrees. The unit will not send another alarm until the temperature has reached 6 degrees and then fallen under 5 degrees again.
Temperature above alarm	Temperature alarm which alarms when the temperature is rising above the set value. This alarm does not need to be acknowledged. If there is a temperature alarm, the unit will not send another alarm until the temperature has fallen one degree C below the set temperature value. Example: If set temperature value is 25 degrees C, the unit will send an alarm when the temperature rise to 26 degrees. The unit will not send another alarm until the temperature has fallen to 24 degrees and then rise above 25 degrees again.
Select active sensor	There is a built-in temperature sensor which controls the temperature alarms and the <i>Thermostat</i> function. You can choose to connect an optional external temperature sensor (see <i>External temperature sensor</i> on page 7) and let it control the functions.
- Alarm delay	If there is a wired alarm sensor connected to the unit or extra units the Ontech GSM 9040 will send an alarm when the sensor is activated. In some cases it can be useful to delay the sending of the alarm message. A delay of 1 to 255 seconds can be set.
- Auto relay	With this setting the 230 V outlet will be activated if an alarm sensor has been activated. It can also be set so it will turn off the 230 V outlet when there is an alarm. Example: A horn is connected to the 230 outlet. When there is an alarm the horn will start to sound. Example: A radiator is connected to the 230 V outlet. When there is a temperature alarm the outlet will turn on and the radiator will start to heat up.
- Alarm input setting	Alarm sensors like IR detectors, magnetic switches, fire alarms etc connected to the unit shall have an opening (Normally Closed, NC) or a closing (Normally Open, NO) function. The NO function is preset. If you want to use the NC function you have to set this.

- Powerfail	<p>If there is a main power failure an alarm will be sent to all numbers on the <i>Alarm list</i> after one minute failure (see <i>Power fail alarms</i> on page 21). With the <i>Powerfail</i> function you can set a time from 0 to 40 minutes before the power fail alarm message will be sent. If the power is restored within that time, there will be no message sent.</p> <p>Example: The unit is installed in an area with many short powerfails. By setting the function to for example 15 minutes, the unit will only send an alarm if the power failure is 15 minutes or longer.</p>
- Radio	The short range 2.4 GHz radio is turned on from factory. Use this function to turn off the short range radio.
- Radio channel	The short range radio communicates with the optional devices Ontech Relay and Ontech Alarmbox. It can be set to different radio channels (frequencies). Channel 0-15 can be set. It is important that all units in the system is set to the same channel.
- Units for timer	<p>You can set the 230 V outlet to turn on and then turn off after 1 to 99 hours (see <i>Control the unit</i> on page 16).</p> <p>With this function you can choose the time unit to be minutes or seconds instead of hours.</p>
- Status number	When requesting status from the unit (see <i>Status - SMS</i> on page 26) the unit replies to the phone which has sent the request. With this function you can make the unit send the status message to another number.
- Alarm, blink	When the unit is alarming the red lamp will blink. With this function you can disable the blink when the unit is alarming.
- Sensor 4-20 mA	The unit can be used to measure electric current 4-20 mA and also alarm at preset current levels. If you want to know more about this, please contact the supplier on info@ontechgsm.com

Set functions

Set the functions with an Android telephone

1. Launch the app Ontech Control.
2. If a screen appears asking "Update my system info", select **Do not update**.
3. Press the Android general button for setting. Four buttons will appear. Select **Functions**.
4. The screen *GSM Function* appears.
5. There are three tabs on the top of the page; *General*, *Alarm numbers* and *Advanced functions*
6. For programing the *Alarm list* under the tab *Alarm numbers*, see *Store numbers in the alarm list with an Android telephone* on page 18. It is necessary to program the *Alarm list* in order to receive alarm messages.
7. Under the tab *General* you find the most used functions. Make the settings by pressing the bar with the functions you want to set and enter a value or make a choice. Then press **OK**.
8. When all settings has been done scroll down to the bottom of the screen and press the **Apply** button. The new settings are now sent to and stored in the unit. The unit restarts with the new settings. All this takes about one minute. An SMS is sent to the telephone to confirm that the settings has been stored (*Settings successfully updated*).
9. If you wish to do settings under the tab *Advanced functions*, select the tab and repeat 7 and 8.
10. When all settings are done, return to the Main screen by pressing the Android general **Back** button.

Set the functions with an Iphone

1. Launch the app Ontech Control.
2. Press the button **Settings** on the lower part of the screen.
3. Press the button **SIM settings**. An alert panel appears. Select **Ontech GSM 9025 or 9035**.
4. A website named *Setting your Ontech Unit* opens in the web browser Safari. Tilt the Iphone to landscape screen position in order to make the text more easily read.
5. There are three subpages for settings: *General*, *Alarmlist* and *Advanced*. Select with the buttons at the bottom of the page.
6. For programing the *Alarm list* under the tab *Alarm numbers*, see *Store numbers in the alarm list with an Iphone or other smartphone* on page 18. It is necessary to program the *Alarm list* in order to receive alarm messages.
7. On the page *General* you will find the most used functions. Press the button.
8. Fill in your *Password* (see *Program you password* on page 8) in the field on the top of the page.
9. Then make all settings you want to do.
10. When ready, press **Create Code**
11. In the box the code will appear.
12. Open the Message app on the Iphone.
13. Create a new text message.
14. Fill in the number to the unit.
15. Paste the code in the message field.
16. Press **Send**.
17. The new settings are now sent to and stored in the unit. The unit restarts with the new settings. All this takes about one minute. An SMS is sent to the telephone to confirm that the settings has been stored (*Settings successfully updated*).
18. If you wish to do settings under the tab *Advanced functions*, press the button.

19. Repeat 8-17.

Important! If you want to change a setting of a function you must also set all other functions you earlier have set under the tab. The unit will store the information on the setting page and will not remember earlier settings. Example: If you set a temperature alarm earlier and then you want to set the alarm delay, you have to set both functions again. The unit only remembers the settings from the latest SMS sent from each page.

Set the functions with a Smartphone

1. Launch the telephones web browser. Go to the page <http://www.ontechgsm.com/set.html>.
2. A website named *Setting your Ontech Unit* opens in the web browser Safari. Tilt the Iphone to landscape screen position in order to make the text more easily read.
3. There are three subpages for settings: *General*, *Alarmlist* and *Advanced*. Select with the buttons at the bottom of the page.
4. For programming the *Alarm list* under the tab *Alarm numbers*, see *Store numbers in the alarm list with an Iphone or other smartphone* on page 18. It is necessary to program the *Alarm list* in order to receive alarm messages.
5. On the page *General* you will find the most used functions. Press the button.
6. Fill in your *Password* (see *Program your password* on page 8) in the field on the top of the page.
7. Then make all settings you want to do.
8. When ready, press **Create Code**
9. In the box the code will appear.
10. Open the Message app on the Iphone.
11. Create a new text message.
12. Fill in the number to the unit.
13. Paste the code in the message field.
14. Press **Send**.
15. The new settings are now sent to and stored in the unit. The unit restarts with the new settings. All this takes about one minute. An SMS is sent to the telephone to confirm that the settings has been stored (*Settings successfully updated*).
16. If you wish to do settings under the tab *Advanced functions*, press the button.
17. The repeat 8-17.

Important! If you want to change a setting of a function you must also set all other functions you earlier have set under the tab. The unit will store the information on the setting page and will not remember earlier settings. Example: If you set a temperature alarm earlier and then you want to set the alarm delay, you have to set both functions again. The unit only remembers the settings from the latest SMS sent from each page.

Control the unit

Control with an Android telephone

1. Launch the app Ontech Control.
2. If a screen appears asking **Update my system info**. Select this if you want the unit to send an SMS with status information to update the information in the app. If you do not want this, select **Do not update**, status info will not be updated.
3. The Main screen appears. Here you can:
 - a. Select which unit you want to control if you have set the app to control more than one unit. Press **Master 1** or the name you have set and select the unit you want to handle.
 - b. Turn on or turn off the alarm function: Press **Alarm**, select **Activate alarm** or **Deactivate alarm**. You can also do this by pressing the alarm icon.
 - c. Confirm an alarm: Press **Alarm**, select **Acknowledge alarm**
 - d. Turn on or off the 230 V outlet on the main unit and/or one or more of the extra units Ontech Relay 9010 if you have such connected to the system. Press on the unit name and select **Relay ON** or **Relay OFF**. With **Set relay** can set the time you want the 230 V outlet to be on and then turn off (timer function). Select a number 1-99. Default time unit is hours. If you want to use minutes or seconds instead you have to set this first, see *Set the functions with an Android telephone* on page 14.
 - e. Set the *Thermostat* function (see *Thermostat function* on page 24). You must have a radiator connected to the 230 V outlet. The extra relay Ontech Relay 9010 cannot be controlled by the *Thermostat* function. Press the button **Thermostat** and then select **Set thermostat** and write in your choice of temperature in degrees Celsius. If you want to disable the function, press **Thermostat off**.
4. After you have made your settings you have to send them to the unit. You can do this in two ways:
 - a. Press **Apply**. The commands are sent to the unit in an SMS and will be performed.
 - b. Press **Update**. The commands are sent to the unit in an SMS and will be performed. Then the unit will send an SMS to the telephone and the information will update the main screen in the app to be up to date, see *Status - SMS* on page 26.
5. You can check some of the function settings by selecting **Master Functions** and then select **Get Master functions**. Then press **Apply** on the main screen. An SMS is sent to the unit and the unit replies with information about the settings. These will be displayed on the screen, see *Master functions* on page 27.

Control with an Iphone

1. Launch the Iphone app
2. The Main screen appears. Here you can:
 - a. Turn on or turn off the alarm function: Press **Alarm**, select **Activate alarm** or **Deactivate alarm**. You can also do this by pressing the alarm icon.
 - b. Confirm an alarm: Press **Alarm**, select **Acknowledge alarm**
 - c. Turn on or off the 230 V outlet on the main unit and/or one or more of the extra units Ontech Relay 9010 if you have such connected to the system. Press on the unit name and select **Relay ON** or **Relay OFF**. With **Set relay** can set the time you want the 230 V outlet to be on and then turn off (timer function). Select a number 1-99. Default time unit is hours. If you want to use minutes or seconds instead you have to set this first, see *Set the functions with an Iphone* on page 14.

- d. Set the *Thermostat* function (see Thermostat function on page 24). You must have a radiator connected to the 230 V outlet. The extra relay Ontech Relay 9010 cannot be controlled by the *Thermostat* function. Press the button **Thermostat** and then select **Set thermostat** and write in your choice of temperature in degrees Celsius. If you want to disable the function, press **Thermostat off**.
3. After you have made your settings you have to send them to the unit. You can do this in two ways:
 - a. Press **Apply**. The commands are sent to the unit in an SMS and will be performed.
 - b. Tryck på **Update**. The commands are sent to the unit in an SMS and will be performed. Then the unit will send an SMS to the telephone with information of the settings, see *Status* on page 26.
4. You can check some of the function settings by selecting **Master Functions** and then select **Get Master functions**. Then press **Apply** on the main screen. An SMS is sent to the unit and the unit replies with an SMS with information about the settings, see *Master functions* on page 27.

Controlling with SMS

You can control the unit by sending SMS. Below is a list of the commands.

All SMS messages must start with your *Password* (see *Program you password* on page 8) followed by the sign #.

In the table below we use the *Password* 1234 but you change it to your *Password*.

Command	SMS-text	Comment
Turn on the 230 V outlet	1234#1*1#	
Turn off the 230 V outlet	1234#0*1#	
Turn on the 230 V outlet on an Ontech Relay 9010	1234#1*6#	Turn on the 230 V outlet in an Ontech Relay 9015 with ID 6.
Turn off the 230 V outlet on an Ontech Relay 9010	1234#0*6#	Turn off the 230 V outlet in an Ontech Relay 9015 with ID 6.
Activate the Alarm function	1234#7*1#	
Deactivate the Alarm function	1234#7*0#	
Confirm an alarm	1234#9#	
Request status	1234#8#	The unit replies with up to date information of the status, see <i>Status</i> on page 26.
Reguset Master settings	1234#8*2#	The unit replies with an SMS with Master function settings, see <i>Master functions</i> on page27.
Set the <i>Thermostat</i>	1234#2*D#	D = the degree Celsius of your choice (0-39 allowed)
Turn off the <i>Thermostat</i>	1234#2#	

Two or more commands can be written in the same SMS, just write them after each other and separate the commands with the sign #.

Example: You want to turn on the relay in the main unit and turn off the 230 outlet of the Ontech Extra Relay with ID 3.

1234#1*1#0*3#

Alarms

There are three types of alarms:

- From alarm sensors connected to the main unit or one of the optional equipment (see *Accessories* on page 6)
- Temperature alarms
- Power fail alarms

Alarm list

The unit must know where to send the alarm messages so you have to store the mobile numbers in an *Alarm list*. Up to 9 different numbers can be stored.

Store numbers in the alarm list with an Android telephone

1. Launch the app Ontech Control.
2. If a screen appears asking "*Update my system info*", select **Do not update**.
3. Press the Android general button for setting. Four buttons will appear. Select **Functions**.
4. The screen *GSM Function* appears.
5. There are three tabs on the top of the page; *General*, *Alarm numbers* and *Advanced functions*
6. Select the tab **Alarm numbers**.
7. Select the first row with Alarm number and write the first number in the *Alarm list*. Select **OK**.
8. If you want to add more numbers, repeat the procedure on the below rows.
9. When you have added all the numbers you want, browse to the bottom of the screen and select **Apply**. An SMS is now sent to the unit with the new settings. After about one minute an SMS will be sent from the unit to the telephone confirming that the setting has been done (*Settings successfully updated*).
10. When all settings is done, return to the Main screen by pressing the Android general **Back** button.

Store numbers in the alarm list with an Iphone or other smartphone

1. Launch the telephones web browser. Open the page <http://www.ontechgsm.com/set.html>.
2. A website named *Setting your Ontech Unit* opens in the web browser Safari. Tilt the telephone to landscape screen position in order to make the text more easily read.
3. There are three subpages for settings: *General*, *Alarmlist* and *Advanced*. Select with the buttons at the bottom of the page.
4. For programming the Alarm List select the tab *Alarm numbers*
5. Fill in your *Password* (see *Program you password* on page 8) in the field on the top of the page.
6. Then fill in all numbers to the *Alarm list*.
7. When ready, press **Create Code**
8. In the box the code will appear.
9. Open the Message app on the Iphone.
10. Create a new text message.
11. Fill in the number to the unit.
12. Paste the code in the message field.
13. Press **Send**.

14. The new settings are now sent to and stored in the unit. The unit restarts with the new settings. All this takes about one minute. An SMS is sent to the telephone to confirm that the settings has been stored (*Settings successfully updated*).

Important! If you want to change a number in the alarm list you must also write in all the other numbers in the *Alarm list*. The unit will only store the information in the last *Alarm list* sent.

Activate and deactivate the alarm function

When the unit starts up by connecting it to a wall socket the alarm function is not activated by default. To activate the alarm function you must send a command to the unit, see *Control the unit* on page 16. To deactivate the alarm function you must also send a command.

The power fail alarm is by default activated. If you want to deactivate it, use the command *Powerfail*, see *Functions* on page 12.

Acknowledge alarms

When an alarm has been sent after an alarm sensor has been activated you must acknowledge the alarm before the unit will send another alarm message. No alarm sensor shall be active when the alarm is acknowledged. See how to do this under *Control the unit* on page 16. You can also acknowledge the alarm by pushing the button on the unit.

Temperature alarms cannot be acknowledged. The unit automatically reset the alarm when temperature reach the set temperature plus or minus one degree.

Powerfail alarms cannot be acknowledged.

Wired alarm sensors

Different types of wired alarm sensors can be connected to Ontech GSM 9035. The unit has two alarm inputs. Default setting is Normally Open (NO). If the alarm sensors you connect are of the type Normally Closed (NC), you have to set this, see *Functions* on page 12.

Alarm cable

An alarm cable are delivered together with the unit. It is connected in the Modular 4/4 connector marked *Alarm*. Use the alarm cable to connect alarm sensors.

The four wires in the cable:

- Plus 3,8 V – Yellow
- Alarm input B – Green
- Alarm input A – Red
- Minus/ground – Black

Important! The 3.8 V output is only for the alarm circuit and cannot be used to power an alarm sensor.

Connecting wired alarm sensors

The pictures shows how the alarm sensors shall be connected. The plus wire is connected to one output of the alarm sensor relay and A or B are connected to the other output.

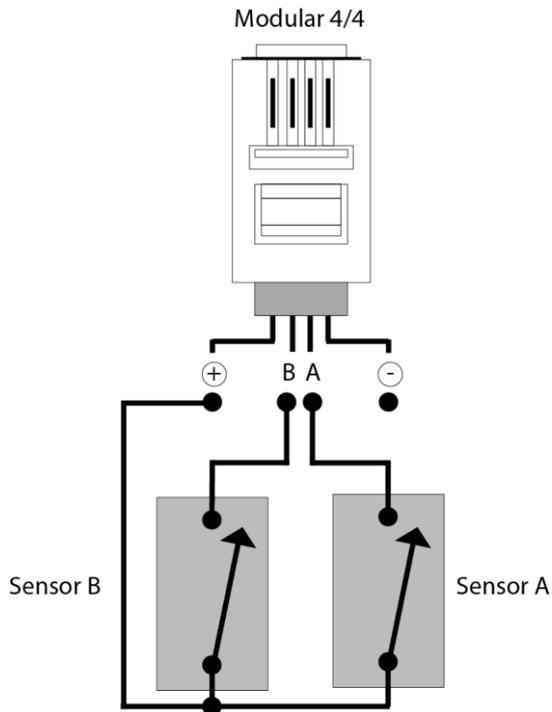


Figure 2 Two alarm sensors Normally Open

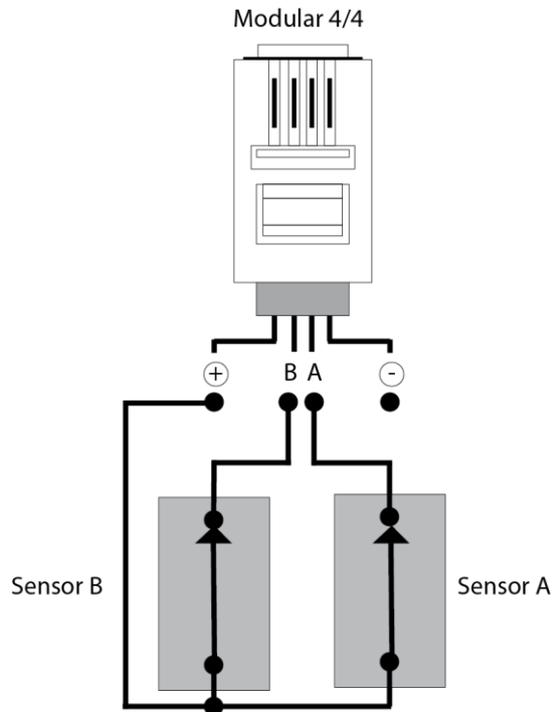


Figure 3 Two alarm sensors Normally Closed

Important! If the unit is set to Normally Closed function and only one alarm input is used, the other must be connected with a wire to the 3.8 V wire. If this is not done, the unit will interpret this as the circuit is open and thus send an alarm message.

Delay of wired alarms

You can set an alarm to send the alarm after a pre-set time. This is practical if you have an alarm sensor on your outdoor and have to open it before you can turn of the alarm, see *Set functions* on page 14.

Alarm from a wired alarm sensor

When an alarm sensor is activated an SMS will be sent to all numbers on the *Alarm list*. Android telephones with the app installed will also receive a graphic presentation in the app.

Alarm SMS

An alarm SMS contains information about the alarm.

The example in the table below says that both of the alarm inputs A and B has been activated in the main unit (ID no 1) and that the alarm sensor connected to the B input still is activated.

NB. There will be more information in the SMS.

Text in SMS – example	Explanation
Alarm:	This row will be shown only if an alarm sensor has been activated
1ab	This row indicates the unit (ID 1 in this example) and the alarm inputs (A and B in this example) that has been activated.
Inputs:	This row will be shown only if an alarm sensor has been activated
1a	This row indicates which unit ID and which alarm input that is still activated.

Alarm message to an Android telephone

If the app Ontech Control is installed there will be a voice message saying “Ontech Alarm”

On the main screen the background of the icon for the alarm will be red.

The icons for the alarm inputs (rings) will be green if the alarm sensor still is activated. The background of the icons for the alarm inputs will be red if they have been activated.

Temperature alarm

Ontech GSM 9035 can be set to send an alarm message if the temperature rise above or decrease below the set temperature value. All temperature measurements and settings will use Celsius degree.

Setting of the alarm temperature is done under functions, see *Set functions* on page 14. The value range is -30 to +40 degrees.

You can also select which temperature sensor that controls the temperature alarm, see *Set functions* on page 14.

Temperature alarms from the unit

When the temperature measured by selected temperature sensor will reach the set temperature an SMS will be sent to all mobile numbers on the *Alarm list*. Android telephones with the app installed will also receive a graphic presentation in the app.

Temperature alarm SMS

A temperature alarm SMS contains information about the alarm. The example in the table below says that the temperature set is reached.

NB. There will be more information in the SMS.

Text in SMS – example	Explanation
Alarm:	This row will be shown only if an alarm sensor has been activated
IntTemp	Indicates that a temperature alarm has been activated by the internal temperature sensor. If the text is ExtTemp instead, it is the external sensor that has triggered the alarm.
5;--	Indicates the present temperature, the first value is the internal temperature sensor, the second value (if there is any) is the external temperature sensor.

Temperature alarm to an Android telephone

If the app Ontech Control is installed there will be a voice message saying “Ontech Alarm”

On the main screen the background of the icon for the alarm will be red.

The background of the temperature value will be red to show the temperature measured by the temperature sensor.

Power fail alarms

In the unit there is an internal backup battery (see *Updating the firmware*

The latest version of the firmware for Ontech GSM 9040 can be downloaded from www.ontechgsm.com. The unit can be easily updated from a PC computer.

Updating the firmware erases all settings in the memory of the unit. All settings including the *Password* has to be set again.

1. Go to www.ontechgsm.com and download the latest version of the firmware. Save it for example on your computer desktop.
2. Unplug the unit and turn off the power by holding down the push bottom until the lamps turn off.
3. Connect the enclosed programming cable to the computer's USB connector and the other end to the mini-USB contact marked **Prog** on the bottom side of the unit.
4. Double click on the downloaded file and follow instructions on the screen.
5. Start using it by setting the *Password*, see *Program your password* on page 8.

Backup battery on page 28) that will power the unit if there is a main power failure. One minute after a power break the power fail alarm message will be sent to all numbers on the *Alarm list* with the message "*No main Power*". You can set how many minutes you want to delay the power fail alarm. Do this with the *Powerfail* function (see *Set functions* on page 14).

When the main power is restored you will receive a news message saying "*Main Power restored*".

The backup battery can power the unit 10-20 hours. When the internal battery is low a message will be sent to all numbers on the *Alarm list* saying "*Internal battery empty. Unit shuts down*". Then the unit disconnects from the GSM network and turns off.

On Android telephones with the Ontech Control app installed there will be a graphic presentation of the messages.

The power fail alarm function is activated by default and will thus work also when the general alarm function is not activated.

All wired and wireless alarms will still work when the unit is powered by the internal backup battery.

The 230 V outlet is turned off when there is a power fail. The outlet will return to the same position it had before the fail when the power is restored.

IR controller for air pumps

This function will only work if an Ontech IR Eye 9016 is connected to Ontech GSM 9040.

Ontech IR Eye 9016 is included in the Ontech IR Controller 9050 package.

Mount and connect the IR Eye 9016 to Ontech GSM 9040

- The Ontech IR Eye 9016 is mounted on the opposite wall to the Air Pump. Normal operating range is the same as for the IR Remote Control you normally use to control your air pump.
- Fix the IR Eye 9016 with a screw or with the enclosed double stick tape.
- Connect the cable to the jack labelled IR on the bottom side of the Ontech GSM 9040.
- Connect the Ontech GSM 9040 to wall socket.

Set the air pump brand

- Set the brand for your air pump (See *Set functions* on page 14).

Testing and controlling your air pump

- Test the function by using the app for Iphone or Android (see *Control the unit* page 16) and send commands for temperature, mode and fan from the main page on the app.
- If it is not working, check the position of the IR Eye 9016, maybe it is out of range.
- If the test falls out well, you are ready to use the function.

Other functions

Thermostat function

The *Thermostat* function controls the 230 V outlet with input values from the temperature sensor. If you connect a radiator or similar to the 230 V outlet and turn on the *Thermostat* function (see *Control the unit* on page 16) the unit will automatically turn on when the temperature drops one degree below the set temperature value and turn off when the temperature rise one degree above the set temperature value.

Values between 0 and 39 degrees are permitted.

The *Thermostat* function is turned off by sending a command to the unit (see *Control the unit* on page 16) or by pushing the button on the unit.

Garage Opener function

Important! Can only be operated from Android telephones with the Ontech Control app installed.

With this function you can make the unit recognize up to three mobile numbers. When any of these numbers are calling the unit the 230 V outlet will turn on for one second and then turn off without answering the call. This function can be used to open a garage gate when an approved person calls the unit.

Launch Garage Opener

Press the Android general button for settings. Four buttons will appear on the lower part of the screen. Press **Garage Opener**. If there is an alert message you can ignore it. The below screen will appear.

Row with name and telephone number

Green ring

Yellow ring



Add a user to the list

1. Press on the row for the position you want to add. You can add up to three different mobile numbers on position 1-3
2. A new screen appears.
3. Write the name and mobile number in the fields.
4. Press **Send number to GSM unit**.
5. An SMS with the settings is now sent to the unit.
6. The unit is returning an SMS that is read into the app. The ring will now turn from yellow to green and the name and number will appear on the row. This is a confirmation that the information has been stored in the unit.
7. Repeat if you want to add more users.
8. Press the Android general **Back** button to go back to the main screen.

Erase a user from the list

1. Press on the row for the position you want to add. A new screen appears.
2. Press **Erase position from unit**
3. An SMS with the settings is now sent to the unit.
4. The unit is returning an SMS that is read into the app. The name and number will disappear on the row. The ring is still green. This is a confirmation that the information has been stored in the unit.
5. Repeat if you want to erase more users.
6. Press the Android general **Back** button to go back to the main screen.

Get information of users from the unit

If you are not sure about which information the unit has stored you can retrieve it.

1. Press on the row for the position you want to retrieve information about. A new screen appears.
2. Press **Get position from unit**
3. An SMS with the settings is now sent to the unit.
4. The unit is returning an SMS that is read into the app. The information will show on the row.
5. Repeat if you want to retrieve information of other positions.
6. Press the Android general **Back** button to go back to the main screen.

Overheat protection

For security reasons the 230 V outlet will turn off if the measured temperature inside the unit will rise above 70 degrees C. An SMS with the message "Overheated" will be sent. If this happens, check the relay and the connected equipment carefully.

Sensor

Ontech GSM 9040 is prepared to measure current 4-20 mA or voltage 0-10 V and report the value back to user and can also be set for sending alarm messages at preset values.

Special adapters connected to the external temperature sensor contact is needed to use this function.

Contact Onvako AB on info@ontechgsm.com for more information.

Others

The lamps

Ontech GSM 9040 has two lamps

Green lamp

Constant light – indicates that the unit is connected to the GSM network.

Blinking – the unit is searching the GSM network.

Red lamp

Off – 230 V outlet is turned off.

Constant light – 230 V outlet is turned on.

Blinking – an alarm sensor has been activated and the alarm has not yet been confirmed.

Both lamps

Blinking – the SIM card does not work. See *Trouble shooting guide* on page 29.

The push button

Turn on and turn off the 230 V outlet

Turn off *Thermostat* function if activated.

When disconnected from main power, press the button for 5 seconds and both lamps start to blink.

Release the button. The unit disconnects from the GSM network and turns off.

Status - SMS

Request for a status SMS is made by sending an SMS as follows:

1234#8# (1234=your *Password*) or by pressing **UPDATE** in the apps for Android and Iphone.

The unit return an SMS

In the app for Android telephones the information is read into the app and is shown graphically.

The SMS contains some of the information below, depending of the status of the u nit.

Text in SMS – example	Explanation
*Ontech 9040 – Ver 36	* indicates that the alarm function is activated. Ver 36 is the software version.
Alarm:	This row appears only if there is an alarm unconfirmed.
1ab	Indicates the unit (in this example ID1) and the alarm inputs that has been activated (A and B)
IntTemp	Indicates that a temperature alarm has been activated by the internal temperature sensor. If the text is Exttemp instead, it is the external sensor that has triggered the alarm.
Inputs:	This row appears only if there is an active alarm sensor.
1a	Indicate the unit and alarm sensor input that still is active.
Units:	
1*; 2; 3/21	Indicates which components there is in the system. ID1 is the main unit and will always appear. ID 2 in this example is an extra Relay Ontech Relay. 3/12 indicates an Ontech Alarmbox 9012 with ID3 is connected to the system and that its temperature is 21 degrees C. An * after the ID number indicates that the 230 V outlet is turned on.
Temp:	
20; 20,5	Indicates the present temperature, the first value is the internal temperature sensor, the second value (if there is any) is the external temperature sensor.
Tstat:	

OFF	Thermostat, OFF= turned off. If it is activated a value 0-39 will be shown. This is the set thermostat temperature.
-----	---

Important! Under *Units*: is shown the extra units (Ontech Relay 9010, Ontech Relay 9015 and Ontech Alarmbox 9012) that is connected to the main unit with the short range radio. If these units loose contact with the main unit it can take up to one hour before this information is shown in the status SMS.

Master functions

Request of some of the settings is made by sending an SMS as follows:

1234#8*2# (1234=your *Password*) or by pressing **Master functions** on the main screen in the apps for Android and Iphone.

The unit returns an SMS.

In the app for Android telephones the information is read into the app and is shown under *Master functions*.

Information about the following will be shown:

- The time the information was retrieved
- The model and software version
- Radio Channel
- Power fail setting (delay in minutes)

Under *Units* the settings for the Master GSM Unit is shown on line 1 and for the other units on the following lines.

The information for the master is interpreted as follows:

Example:

1/INT/<10/>30/30s/ON/NO

Unit 1/alarm below temp 10/alarm above temp 30/alarm delay 30 s/Autorelay ON/Normally Open setting for alarm inputs.

For the other units the information is interpreted as follows:

Example:

2/INT/<10/>30/

Unit ID/ alarm below temp 10/alarm above temp 30/

Factory reset

Factory reset erases all settings in the memory of the unit. All settings including the *Password* has to be set again.

1. Disconnect the unit from the main power socket.
2. Press the push button and turn the unit off.
3. Wait at least 60 seconds.
4. Press down the button.
5. Connect the unit to the main power socket while still holding the button down.
6. The red lamp blinks 8 times.
7. Release the button.
8. The unit has now been restored to factory settings and starts to search for the GSM network.
9. Start using it by setting the *Password*, see *Program you password* on page 8.

Updating the firmware

The latest version of the firmware for Ontech GSM 9040 can be downloaded from www.ontechgsm.com. The unit can be easily updated from a PC computer.

Updating the firmware erases all settings in the memory of the unit. All settings including the *Password* has to be set again.

6. Go to www.ontechgsm.com and download the latest version of the firmware. Save it for example on your computer desktop.
7. Unplug the unit and turn of the power by holding down the push bottom until the lamps turns off.
8. Connect the enclosed programming cable to the computers USB connector end the other end to the mini-USB contact marked **Prog** on the bottom side of the unit.
9. Double click on the downloaded file and follow instructions on the screen.
10. Start using it by setting the *Password*, see *Program you password* on page 8.

Backup battery

There is a backup battery in the unit that power the unit in case of a main power failure. One minut after a main power failure an SMS is sent to all mobile numbers on the *Alarm list* with the message "*No main Power*". You can set how many minutes delay you wish before the SMS is sent. See the *Powerfail* function on page 14. When the main power is restored a new SMS with the text "*Main Power restored*" is sent.

The backup battery can power the unit for 10-20 hours. When the battery is low an SMS will be sent to all numbers on the *Alarm list* with the text "*Internal battery empty. Unit shuts down*". Then the unit will disconnect from the GSM network and turn off.

In Android telephone with the Ontech Control app installed these messages will be presented graphically.

When the unit is powered by the backup battery the 230 V outlet is turned off.

When the main power is restored the 230 V outlet will go back to the position it had before the power failure.

The alarm functions are still activated during a main power failure.

Warning

- Risk of explosion if battery is replaced by an incorrect type.
- Dispose of batter shall be done according to local enviroment regulations.

Trouble shooting guide

Symptoms	Reason	Solution
Both lamps are blinking when the unit is connected to the main power	The unit cannot read the SIM card	SIM card missing Pincode protection on SIM card not disabled Welcome message from network operator active on SIM card. Disable by ringing on time with the card in a telephone.
The unit do not return status request	Prepaid card has no money	Refill the pre paid SIM card
An alarm message is sent even if the alarm sensors are not activated	One alarm input open in Normally Closed mode	If Normally Closed is set and only one alarm input is used, the other has to be connected to the 3.8 V.
The unit cannot connect to extra units Ontech Relay and Ontech Alarm box	Wrong radio channel set Short range radio disabled	Check all units in the system has the same radio channel set. Check that the short range radio function is turned on.
The unit do no respond on commands	No <i>Password</i> set Wrong <i>Password</i> Wrong mobile number	Check that correct <i>Password</i> is set and that the mobile number is correct.

Tip

- If the unit do not respond on SMS check if it is connected to the GSM network by making a voice call to it. If it is connected to the GSM network it answer the call with a short beep. If so, check if there is money left on the prepaid SIM card.
- If you are using a prepaid SIM card we strongly recommend you to register it on the website of the network operator. You will then be able to check the amount on the card and if needed, refill it.
- Let us know if you have any tip, mail at info@ontechgsm.com

Technical specifications

GSM	Dual band GSM 900/1800 MHz
GSM subscription	All, even prepaid. Operator must operate the GSM network and not only 3G.
Relay	One branch switch, 230V/16A
Short range radio	Frequency 2,4 GHz, Power 1 mW
Alarm inputs	Two alarm inputs that can be set to Normally Open or Normally Closed.
Backup battery	Built-in 4,2V Lithium Polymer 1100 mA
Power consumption	Idle <0,5 W, Maximum 4 W
Temperature operating range	-40°C to +45°C
Temperature sensor tolerance at 25 degrees C	Internal temperature sensor +/- 2°C (230 V outlet not activated). External temperature sensor +/- 1°C
Analogue input	For external temperature sensor or 4-20 mA measure adapter
Certified	Compliance EMC, LVD and R&TTE directive

Support

If you have problems with your unit, contact the product support by email at support@ontechgsm.com or your local distributor or dealer.

QR codes



Ontech Control for Android



Ontech Control for Iphone



Settings for Smartphones

