ONTECH®
CONNECTING THINGS

Ontech GSM 9025

Reference Manual

English

Content

Welcome

Thank you for chosen Ontech GSM 9025. 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 9025 is a mobile unit that controls, alarms and monitors via the GSM mobile network. The unit is powered by 9-30 VDC and starts up automatically when it is powered. A power adapter 13.8 V is delivered with the unit. 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 sent and received in the background.

- The cabinet is equivalent to standard IP 65 and thus made for outdoor usage.
- The unit has a potential free 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 relay 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 relay is turned off. At request the temperature is reported. If a radiator is connected to the relay 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 set temperature value. This temperature alarm can also be combined with the *Auto Relay* function so the relay 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.
- A GPS-receiver (optional) can be connected to the unit. At request it reports position, speed and direction. A GPS fence can be activated. It alarms when the unit is removed from its original position.

Accessory units

Ontech GSM 9025 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 9010. 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 9025 (the **master** unit). In every Ontech

Relay 9010 there is two wired alarm inputs that can be set to operate with either Normally Open or Normally closed 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.
- GPS-receiver. There is a number of GPS-receivers compatible with Ontech GSM 9025. Consult Ontech web site for more information, www.ontechgsm.com.

External temperature sensor

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 *Function settings* on page 15). The status message will show the value from both temperature sensors. The cable is two meters but can easily be extended to up to 10 meters.

Cut the connector on the temperature sensor and remove about 3 mm of the insulation on the leads. Connect the leads to Terminal A connectors *Temp* and *GND***.**

Get started

Content in the package

The package contains

- Ontech GSM 9025 with antenna
- Power Adapter 13.8 V with EU and UK plugs
- Quick Start Guide

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 pincode function is disabled on the SIM-card. A pincode is often activated by the network operator. Deactivate the pincode 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 functions in Ontech GSM 9025 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. The communication with the unit can also use up all money and then the Ontech GSM 9025 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.

Connecting the unit and shutting it off

The unit is activated when it is connected to the power adapter or an external power source. The green LED will blink for approximately 15 seconds before connecting to the GSM network. It will then show a constant green light. Position the unit so the text on the front is correctly oriented, otherwise the temperature measurements might be affected.

If the main power source is compromised in any way the internal back up battery will continue to power the unit. A message will be sent after 1 minute to all the registered mobile phone numbers on the alarm list with information that the main power has failed (See *Power fail alarms* on page 23). To turn the unit off, simply disconnect the unit from the main power source and hold down the main button on the unit for approximately 30 seconds.

Installing the unit

1. Connect the antenna to the unit.
2. Place the unit where you want to install it and attach it with two screws in the lower screw holes. The antenna should be facing down.
3. Open the unit by unplugging the two screws that is positioned on the sides of the bottom of the unit.
4. Carefully pull off the “plastic hood” from the unit to be able to reach the SIM- card holder. Be careful when pulling the shell off because there is a possible risk that the flat cable might lose its attachment.

5. Open the SIM-card holder by dragging it down until there is a click.
6. Fold up the upper part.
7. Insert the SIM-CARD in the upper part (the up folded part). The cut corner shall be positioned in the upper left corner when the upper part is folded down
8. Fold down and drag the upper part up until there is a click. The SIM-card is now locked into position.
9. Open the screw cap by turning it counter clockwise.
10. Pull the cables through the screw cap.
11. Connect the number of units that you wish to use:
    a. Power. Terminal A, 12VDC. Use either the power adapter or a 12V accumulator or both. Plus (white cord) is connected to the connector "+12-24VDC". Minus (black cord) is connected to the connector "GND". 24VAC does work, though it might damage the unit if the higher voltage than 27VAC is connected to the unit. **Important. Do not connect to a power source at this stage. This might cause damage to the equipment.**
    b. Relay. Terminal B. If you want "Normally Open Relay" (Closing relay) use connector 2 and 3. If you want "Normally Closed Relay" (breaking relay) use connector 1 and 3. Maximum load is 230VAC 10A. **Important. If you shall connect main power, contact a professional electrician.**
    c. Alarm. Terminal A. Alarm A is connected to connector "+3.8V" and "A". Alarm B is connected to the connector "3.8V" and "B".
    d. External temperature is connected between "Temp" and "GND"- connectors.
    e. Connect the GPS receiver to terminal "C".
12. When all the cables are in place, simply turn the screw cap clockwise to create a tight seal. You can also use plastic tape around the bundle of cables to create a thicker and tighter seal.
13. Pull the hood over the unit and make sure that no cords are pinched or jammed. Put the screws back into their positions. Also attach a screw in the hole on top of the hood.
14. Connect the power cable to the accumulator and/ or the power adapter to the mains.
    a. Make sure that the green lamp starts to flash for about 15 seconds. This indicates that the unit is searching and is trying to connect to a GSM network.
    b. The unit is connected to the GSM network when the green lamp is showing a constant green light and the unit is now ready for use.

Notice. If the green and the red lamp keeps flashing this means:

- No SIM card is inserted.
- The PIN code of the SIM card has not been deactivated.
- The SIM card has not been inserted properly.

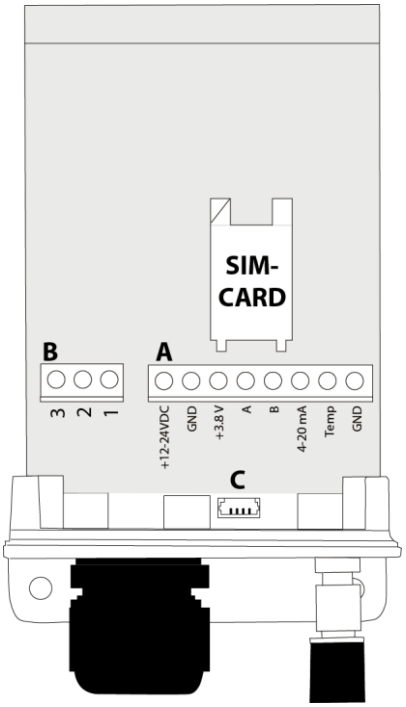
Choose a Password

To communicate with the unit you must choose a password. This is to make sure that no unauthorized should be able to connect to the unit. The password contains four digits.

1. Create a password by sending an SMS to the unit with four digits. These four digits is stored within the unit and is your password. This is to guarantee the units confidentiality.

2. You will receive a return SMS from the unit confirming that the programming of your password has succeeded. If not, try again.

The unit is now ready to use.



Change Password

Requires version R33 or a higher version of the software.

If you wish to change your unit's password:

1. Send an SMS to the unit with following content: **1234#8*8*5678** (1234= your old password, 4567= your new password.
2. Don't forget to change the settings in the app for Androids or IPhone if you are using one to control your Ontech GSM 9025.

Using apps

There are apps for Android phones and IPhone to remotely control your Ontech units.

In the Android app the functions are completely integrated and is not showing the SMS created or received. All the settings can be changed and modified in the app. The Android app can also handle up to twenty different Ontech GSM main units.

The IPhone app requires you to confirm the SMS and is pressing the send button manually. The receiving of the SMS happens manually and the information cannot be read into the app automatically. The change of settings is made through the iPhone internet browser (Safari).

Both apps are compatible with the Ontech GSM main units and older versions.

Important. The apps are using SMS and the price for these are according to your mobile subscription or prepaid card.

Installation and settings of the Android app

Installing the app

The app is available on Google Play and is called Ontech Control. Download it and follow the instructions given to install the app on your Android phone. You can also use the QR code on the back of this manual or of the bottom of the box to quickly get to the right page for downloading.

First time settings

When you start up the app and receive the message *"Update my system info"* choose ***Do not update.***

If the settings menu does not show when you open the app, proceed as following:

- Press your phones general button for settings (If you cannot find it, see *Trouble shooting guide* on page 30). You will be give four different options on the screen. Press **Settings.**

When you have entered the page *Settings for main units:*

1. Press **Number of units** if you wish to control more than one Ontech GSM main unit. Select how many units you want to control.
2. Press **GSM Master 1 (Master1)** to set the first main unit.
3. Press **Name** and name your main unit, example; *Ski lodge* or *Summer House*. Confirm by pressing **OK.**
4. Press **Phone number** and type in the phone number to your Ontech GSM units SIM card. Confirm by pressing **OK.**
5. Press **Password** and type in your four digit password that you have assigned to your Ontech GSM unit (See *Choose a Password* on page 8). Confirm with **OK.**
6. If you have any slave units (See *Accessory units* on page 5) make sure you tick the box referring to the ID number for the slave. If you don't do this, the app will add all the units it will find automatically.
7. When you are finished press the Android **back** button.

If you wish to set more GSM master units, repeat number 2-7 above.

When all the settings are done, return to the main page in the app by pressing the general Android phone **back** button.

The settings are now finished and you are ready to use your app to control and manage your Ontech GSM 9025.

Installation and setting of the iPhone 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 Choose a Password* on page 8).
3. If you have any accessories (see *Accessory units* on page 5) 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 9025.

Functions

Ontech GSM 9025 is a mobile product with many different functions that can be programmed. Below you will find a list of available functions. **Ver.** refers to the software version where the function is available.

Name	Description	Ver
Temperature Below Alarm	The temperature alarm will alert you when the temperature around your unit falls below the selected temperature. If the alarm has been triggered the unit will not reset until the temperature will increase above the given temperature. Example: If the selected temperature is 5 degrees and the temperature falls below that, the unit will alert you. The unit will not alarm again before the temperature has been at least up to 6 degrees.	32
Temperature Above Alarm	Temperature alarm can also alert you when the temperature reaches above the selected temperature. If the alarm has been triggered the unit will not reset until the temperature will drop down to below the given temperature. Example: If the temperature has been set on 25 degrees, the unit will alert you when it reaches 26 degrees. The unit will not alarm again until the temperature has dropped down to at least 24 degrees.	32
Select Active Sensor	The Ontech GSM 9025 contains an internal temperature sensor which is used to control thermostats and temperature alarms. You can choose to connect an external temperature sensor to the unit (See *External temperature sensor* on page 6) and let it control temperature alarm and thermostat instead.	32
Alarm Delay	If an alarm sensor is connected to a unit or an extra unit it will send an alarm directly when the alarm sensor is triggered. In some cases it is desirable to delay the alarm. You can choose to delay the alarm between 1 and 255 seconds. This delay function is often used at doors that is alarmed.	32
Auto Relay	This function will make the relay activate if an alarm has been triggered. Can also be set to be turned off when an alarm is triggered. Example: An alarm horn is connected to the relay. When the alarm is triggered the horn is activated and will sound. Example: A temperature alarm has been triggered. When the temperature goes below the set temperature a radiator that has been connected to the relay activates.	32

Alarm Input Settings	Alarm units such as IR detectors, magnet switch and fire alarms, etc that is connected to the Ontech GSM 9025 must have a closing (Normally Open, NO) or breaking (Normally Closed, NC) function. You must choose NO or NC when connecting an alarm to the unit. NO is preset.	32
Powerfail	If a power failure should occur, an alarm will be sent one minute after to all the phone numbers on the *Alarm List* (See Power fail alarms on page 23).	32

	With *Power Failure* you can choose a time between 0 and 40 minutes before an alarm message will be sent to you. If the power comes back within that given time, the alarm message will not be sent. Example: The unit is installed in a place with a lot of short power failures. By setting the *Power Failure* to 15 minutes, the unit will only alarm if the power has been gone for more than 15 minutes.	32
Radio	When the unit is delivered the short range radio is activated. If you want you can turn it off as it may save you some power.	32
Radio channel	The short range radio that is used to communicate with the extra accessories Ontech Relay 9010 and Ontech Alarmbox 9012, can be set to different radio frequencies. Channels 0- 15 can be set. It is important that the main unit is set to the same channel as the other units in the Ontech system in order to communicate with each other.	32
Units for timer	You can set a delayed deactivation of the relay when you have activated it between 1 and 99 hours (See *Controlling the unit* on page 17). With this function you can select 1-99 minutes or 1-99 seconds instead.	32
Battery message	When the battery is low an alarm message will be sent to all the numbers on the alarm list. If you don't want to keep receiving this message you can simply turn it off.	33
Status number	When requesting a status from the unit (See *Status - SMS* on page 27) it will normally be sent to the phone that requested it. With the function *Status* the unit will instead send the status to a specific phone number of your choice.	32
24V Voltage	If you are powering your unit with a 24V accumulator you must activate the 24V setting to receive battery alarm when the voltage from the accumulator drops.	33
Alarm, flashing	When the units alarm is activated a red light will start to flash. With this function you can simply turn the flashing light off when the alarm triggers.	32

GPS fence	This functions lets you activate and set the area on a so called GPS fence. If the unit moves outside this area the alarm will activate and alert all the phone numbers on the alarm list.	32
Sensor 4-20mA	The unit can be used to measure and alarm at different levels of current between 4-20 mA. If the unit are going to be used in such ways, please contact the provider at info@ontechgsm.com	32

Function settings

Set the functions with an Android telephone

1. Launch the app Ontech Control.
2. If a screen appears ”*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 20. 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 20. 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 *Choose a 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 button of the page.
4. 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 20. 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 *Choose a 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 smartphone.
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.

Controlling with an Android phone

1. Open the app Ontech Control.
2. If you receive a message telling you "*Update my system info"* then choose **Do not update.** Choose this if you wish to make the unit send a SMS with a status that is scanned into the app. This will make you able to see the current status.
3. You will now reach the main page. Here you can:
    a. Choose which unit to control if you have set the app to control more than one unit: Press **Master 1** (Or the name you have chosen) and choose which unit you would like to work with.
    b. Turn on or turn off the alarm function: Press **Alarm,** choose **Activate alarm** or **Deactivate alarm**. You can also do this by pressing directly on the icon.
    c. Reset an alarm: Press **Alarm** and choose **Acknowledge alarm.**
    d. Turn on or turn off a relay on the main unit or 230V output on any of the extra relays Ontech Relay 9010 if you have one connected to the system: Press on the current unit and choose **Relay ON** or **Relay off.** With the function **Set relay** you can set the relay to go and off automatically after a certain time (timer function). Set a number between 1- 99. The unit is preset on hours. If you would like to choose minutes or seconds as a unit you must first change that under functions (See *Set the functions with an Android telephone* on page 15).
    e. Set the *Thermostat function*. This requires that you have a radiator connected to the relay on the main unit (See *Thermostat function* on page 25), extra relay Ontech Relay 9010 cannot be controlled with this function) Press the button **Thermostat** and then **Set thermostat** and specify a degree between 0 and 29 degrees. If you would like to disconnect the thermostat, simply press **Thermostat off.**
    f. GPS function. Press the **GPS function** and then **Get GPS Position** to receive the position, direction and speed of the unit.
4. After you have chosen the commands you must send these to the unit. You can do this in two different ways:
    a. Press **Apply.** The commands will be sent in a SMS and implemented.
    b. Press **Update.** The commands will be sent in a SMS and implemented. After that the unit will send back a SMS to the phone that will be scanned into the app. The main page on the app will then be updated with the current information from the unit (See *Status - SMS* on page 27).
5. You can control certain settings on the unit by pressing **Master Functions** and choose **Get Master Functions**. Then press **Apply** on the main page. A SMS will be sent to the unit that will reply with a SMS that will show the current settings. These settings will then be shown on the screen (See *Master functions* on page 28).

Controlling with an iPhone

1. Open the app Ontech Control.

2. You will now reach the main page. Here you can:

    a. Turn on or turn off the alarm function: Press **Alarm,** choose **Activate alarm** or **Deactivate alarm**. You can also do this by pressing directly on the icon.

    b. Reset an alarm: Press **Alarm** and choose **Acknowledge alarm.**

    c. Turn on or turn off a relay on the main unit or 230V output on any of the extra relays Ontech Relay 9010 if you have one connected to the system: Press on the current unit and choose **Relay ON** or **Relay off.** With the function **Set relay** you can set the relay to go and off automatically after a certain time (timer function). Set a number between 1- 99. The unit is preset on hours. If you would like to choose minutes or seconds as a unit you must first change that under functions (See *Set the functions with an iPhone* on page 1515).

    d. Set the thermostat function. This requires that you have a radiator connected to the relay on the main unit (See *Thermostat function* on page 25), extra relay Ontech Relay 9010 cannot be controlled with this function) Press the button **Thermostat** and then **Set thermostat** and specify a degree between 0 and 29 degrees. If you would like to disconnect the thermostat, simply press **Thermostat off.**

    e. GPS function. Press the **GPS function** and then **Get GPS Position** to receive the position, direction and speed of the unit.

    f. After you have chosen the commands you must send these to the unit. You can do this in two different ways:

    g. Press **Apply.** The commands will be sent in a SMS and implemented.

    h. Press **Update.** The commands will be sent in a SMS and implemented. After that the unit will send back a SMS to the phone that will be scanned into the app. The main page on the app will then be updated with the current information from the unit (See *Status - SMS* on page 27).

    i. You can control certain settings on the unit by pressing **Master Functions** and choose **Get Master Functions**. Then press **Apply** on the main page. A SMS will be sent to the unit that will reply with a SMS that will show the current settings. These settings will then be shown on the page (See *Master functions* on page 28).

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 *Choose a 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 9010 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 9010 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 *Status - SMS* on page 27.
Reguset Master settings	**1234#8*2#**	The unit replies with an SMS with Master function settings, see Master functions on page 28.
Set the *Thermostat*	**1234#2*D#**	D = the degree Celsius of your choice (0-29 allowed)
Turn off the *Thermostat*	**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 relay of the Ontech Extra Relay with ID 3.
1234#1*1#0*3#

Alarm

There are three types of alarms:

- From alarm sensors connected to the main unit or one of the optional equipment (see *Accessory units* on page 5)
- 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 arew 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 programing the Alarm List select the tab *Alarm numbers*
5. Fill in your *Password (*see *Choose a 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 *Controlling the unit* on page 17. 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 *Controlling the unit* on page 17. 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 and Battery alarms cannot be acknowledged.

Wired alarm sensors

Different types of wired alarm sensors can be connected to Ontech GSM 9025. 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).

Connecting a wired alarm

The alarm sensor is connected to terminal A (See picture on page 9).

On the picture below it is shown how the alarm sensors should be connected. The plus cable is connected to one of the sensors output connectors and input A or B is connected to the other.

Important! The 3.8V output is only made for the alarm wire and not for powering an extern alarm sensor.

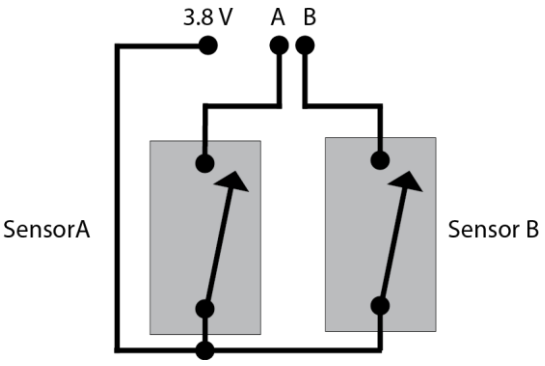


Figure 2 *Two alarm sensors with closing function*

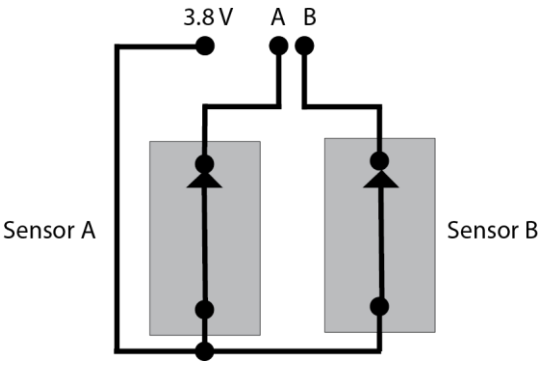


Figure 3 *Two alarm sensors with breaking function*

Important! If the unit is set to alarm at a breaking function (Normally Closed) and only one alarm input is used, the other alarm input must bridge to the positive input. If not the unit will assume that an alarm sensor is activated and will trigger the alarm.

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 *Function settings* on page 15.

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 9025 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 *Function settings* on page 15. The value range is -30 to +40 degrees.

You can also select which temperature sensor that controls the temperature alarm, see *Function settings* on page 15.

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 *Backup battery* on page 29) 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 minute you want to delay the power fail alarm. Do this with the *Powerfail* function (see *Function settings* on page 15).

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* with the text "*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 not is 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.

GPS alarm

The GPS alarm is a function that will alarm when the unit has moved outside a specific area. This area is circle based and has a radius of at least 50 meters. The radius can also be multiplied (50m, 100m, 150, etc.).

At www.ontechgsm.com you will find information regarding which GSM receiver that is compatible with our products. In most cases an adapter is necessary. The adapter is connected to plug C (See picture on page 9)

With the function *GPSFENCE (*See *Function settings* on page 15) you can set the size of the area you wish to guard. The unit will alarm when the unit is moving outside the area for more than one minute after it has been activated.

Other functions

Thermostat function

The *Thermostat* function controls relay with input values from the temperature sensor. If you connect a radiator or similar to the relay and turn on the *Thermostat* function (see *Controlling the unit* on page 17) 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 29 degrees are permitted.

The *Thermostat* function is turned off by sending a command to the unit (see *Controlling the unit* on page 17) or by pushing the button on the unit.

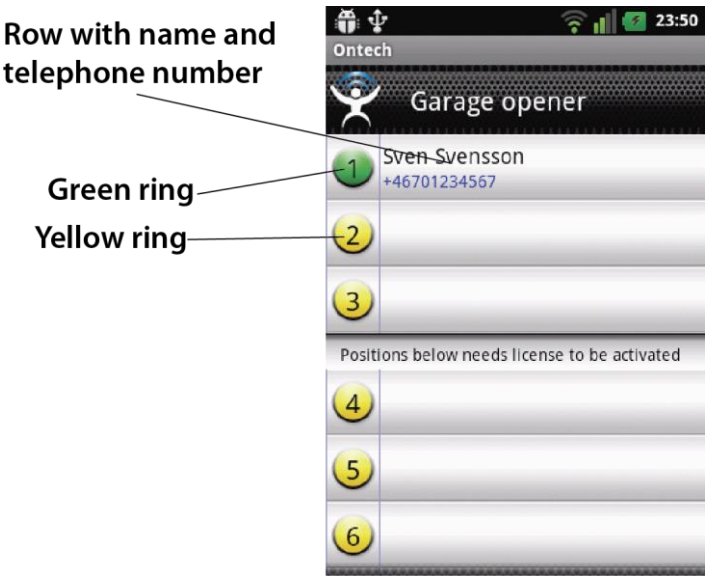
Garage Opener function

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 relay 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.



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 relay 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 9025 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.

GPS function

Ontech GSM 9025 is prepared to connect to a GPS receiver. Receivers with a DIN contact of the type PS/2 is connected to a **Ontech GPS adapter** that is connected to terminal C (See picture on page 9).

In the Android app you will find the GPS button on the main page. By pressing the button **Get GPS Position** you will receive the unit’s position, speed and course. In the Android app the position will also presented on a map.

Information can also be retrieved by sending an SMS with the following content to the unit: **1234#8*1#.** The unit will return with information of position, speed and direction.

The GPS function can be used to set a GPS alarm (See *GPS alarm* on page 23).

Others

The lamps

Ontech GSM 9025 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 – the relay is turned off.
Constant light – the relay 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 30.

The push button

Software version R32:
Turn on and turn off the relay.
Turn off *Thermostat* function if activated.
Press for 30 seconds to turn the unit off.

Software version R33 or higher
Turn on and turn off the relay.
Turn off *Thermostat* function if activated.
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 9025 – Ver 32	* indicates that the alarm function is activated. Ver 32 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 0-29 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*.

The SMS contains the following information:

Text in SMS – example	**Explanation**
*Ontech 9025 – Ver 32	* indicates that the alarm function is activated. Ver 32 is the software version.
Temp sens: INT	Indicates the temperature sensor that controls the temperature alarms and the *Thermostat* function. INT=internal, EXT= external
Temp below: 5	The example shows that the unit will send an temperature alarm if the temperature drops below 5 degrees C.
Temp above: OFF	The example shows the temperature alarm above a value is not activated. Otherwise the value in degrees C will be shown.
Alarm delay: 0	The example shows that no delay has been set. Otherwise the delay in seconds will be shown.
Auto relay: No change	With this function activated the 230 V outlet will be turned on every time the unit is sending an alarm. If the function is activated the text will be: *Relay ON*.
Alarm input: NO	Anger inställning för larmingångar. Se vidare *Wired alarm sensors* on page 21.
Power fail: 1	Indicates the delay of the power fail alarm in minutes. See *Power fail alarms* on page 23.
Radio channel: 0	Shows the set channel on the short range radio
Ver: 32	Shows software version.

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 *Choose a 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 15. 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.

Powering with Alternating Current

The unit can also be powered with 24 ACV .

The connection is made on connection terminal A to connector “+12- 24VDC” and “GND”.

Important! No higher voltage than 27 VAC may be connected. This may cause damage to the unit.

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 onte 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 *Password* set Wrong *Password* Wrong mobile number	Check that correct *Password* is set and that the mobile number is correct.
Cannot find the general Menu button in the Android app		Press the three squares in the upper right corn

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	Potential free 230V/10A
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.
Power	9-30 VDC or 24VAC. Power adapter 13.8 V is included.
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 +55°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 are experiencing difficulties with the unit, don't hesitate to contact our support on the address support@ontechgsm.com or with a letter to Onvako AB, Datavägen 14A, 43632 Askim, Sweden

QR-codes

Ontech Control for Android

Ontech Control for iPhone

Settings page for Smartphones

CE

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