

USER AND INSTALLATION INSTRUCTIONS

CTS400/CTS602 BY NILAN



Gateway WiFi

Version 1.40 - 01.11.2023
MB Gateway WiFi GB

 **NILAN**
HEATING AND COOLING SYSTEMS

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General information

Product description

Nilan User App

This App can control those of Nilan's ventilation units and heat pumps that have a CTS400 or a CTS602 control system. If the unit does not include a Gateway, you will have to purchase one as an accessory. You connect the Gateway to the Modbus input of the unit. When you enter settings from the App, it may take a few seconds before the changes are registered by the unit.

The communication from the App to the Gateway takes place via a secure cloud connection. This allows you to access the Nilan unit from anywhere in the world as long as you have internet connection.

Initial setup

Sequence of steps in the setup process

This section explains the sequence of the individual steps in the setup process. They must be completed before you can use the User App.

1. Connect the Gateway to the Modbus connection of the ventilation unit - see installation instructions.
2. Connect the Gateway to an electrical outlet - see installation instructions.
3. Check the "online" light. If it flashes continuously, the Modbus connection has been established.
4. Check that the status light is red. If not, press and hold the mode button for 10 sec. The Gateway will now be in "Access Point" mode
5. On your mobile phone, access your WiFi settings and add the network of the Gateway by using the code 1141_Gateway - see installation instructions.
6. Connect the Gateway to the local network. **ATTENTION: Cannot be connected to 5 GHz networks.**
7. The Gateway will restart and log on to your local network. It is connected when the light of the "online" button stays on.
ATTENTION: Troubleshooting - Typical errors are incorrect password or name of network - try again.
8. Attach the user - see installation instructions.

Installation instructions

Gateway

Connections overview



1. 230V connection (wire included)
2. Reserved for future connections
3. Connection to the Modbus connection of the unit
4. Activating acces point mode (10 sec. press)
5. Lights up when the Gateway is in access point mode
6. Light to check connection

Electrical connection

Using the supplied cable, connect the Gateway to 230V.



Connecting gateway to your Nilan unit

General information

You will be able to communicate with your Nilan unit once the gateway has been connected to the Modbus communication of the unit. The connection to the individual unit may vary, depending on its control system, control panel, software version and age.

Below you will find a list of products and software versions that you can connect to Nilan Gateway. If the software version on your unit is outdated, you will need to get an engineer or technician to update the software. If your unit has a different control system to the ones listed, you will not be able to connect it to a Nilan Gateway.

				
	CTS400	CTS602/CTS602i	CTS602/CTS602i	CTS602Light
All Comfort ventilation units - residential	SW 1.0 or newer	SW 2.24 or newer	SW 1.6.6.0 or newer	SW 1.1.15.0 or newer
All other ventilation units with heat pumps - residential	N/A	SW 2.38r or newer	SW 1.6.45.0 or newer	N/A
All Comfort ventilation units - commercial	N/A	SW 2.38r or newer	SW 1.6.45.0 or newer	N/A
All VPM/VPL ventilation units - commercial	N/A	SW 2.38r or newer	SW 1.6.45.0 or newer	N/A
All VPR ventilation units - commercial	N/A	SW 2.38r or newer	SW 1.6.45.0 or newer	N/A

LAN cable types:

Please note that there are different types of LAN cables with RJ45 plugs.



Standard cable from Nilan. All the following illustrations regarding installation are shown with A cables.

B cables may occur. On the following illustrations regarding installation, green/white are replaced with orange/white.



ATTENTION

Do not use a crossover cable. The cable length must be max. 20 m.

Connection to units with a CTS400 control system

All ventilation units with a CTS400 control system are equipped with an RJ45 port.

If no other external connection has been connected up to the ventilation unit, you can simply run an RJ45 cable from the Modbus input on the Gateway to the RJ45 port on the ventilation unit. The connection is now complete.



The location of the RJ45 port on the ventilation unit can be found in the installation instructions for the individual unit.

If external units have been connected up, this is likely to have been done via a connection box. In that case, connect the RJ45 cable to the Gateway. Then cut off the RJ45 connector at the other end of the cable and, following the diagram below, connect the cable to the connection box.



The illustration shows the process when using a type A LAN cable

Connecting type A LAN cable to CTS400 connection box

- Green/white - GND (1)
- Blue/white - Modbus - (5)
- Blue - Modbus+ (4)

Connecting type B LAN cable to CTS400 connection box

- Orange/white - GND (1)
- Blue/white - Modbus - (5)
- Blue - Modbus+ (4)

Connection to units with a CTS602 control system with 6-pole plug

Older ventilation units with a CTS602 control system are equipped with a 6-pole plug for the control panel. Consult the instructions for your ventilation unit to establish what kind of port it has.

The 6-pole plug looks like this:

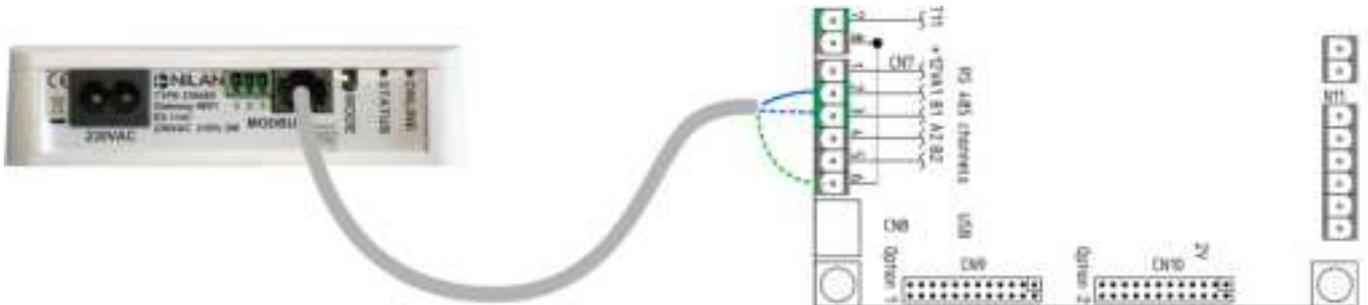


If this is the type you have, a cable should be run directly to the circuit board in the ventilation unit. We recommend that this is done by a Nilan engineer or technician.



WARNING

Disconnect the power supply for the ventilation unit before opening the unit doors. You can now connect the gateway to the circuit board.



The illustration shows the process when using a type A LAN cable

Connecting type A LAN cable to CTS602 circuit board

Blue - Modbus+ (2/CN7 - A1)
Blue/white - Modbus - (3/CN7 - B1)
Green/white - GND (6/CN7)

Connecting type B LAN cable to CTS602 circuit board

Blue - Modbus+ (2/CN7 - A1)
Blue/white - Modbus - (3/CN7 - B1)
Orange/white - GND (6/CN7)

In the installation instructions for the individual unit you can find information about the location of the circuit board in the ventilation unit and how to run the cable to it.

Connection to units with a CTS602 control system with 8-pole plug

Some ventilation units with a CTS602 control system are equipped with an 8-pole plug for the control panel. You can connect Modbus in that. Consult the instructions for your ventilation unit to establish what kind of port it has and where it is situated.



The illustration shows the process when using a type A LAN cable

Connecting type A LAN cable to CTS602 8-pole plug

Blue/white - Modbus - (7)

Blue - Modbus+ (6)

Green/white - GND (1)

Connecting type B LAN cable to CTS602 8-pole plug

Blue/white - Modbus - (7)

Blue - Modbus+ (6)

Orange/white - GND (1)

Connection to units with a CTS602 control system with RJ45 port

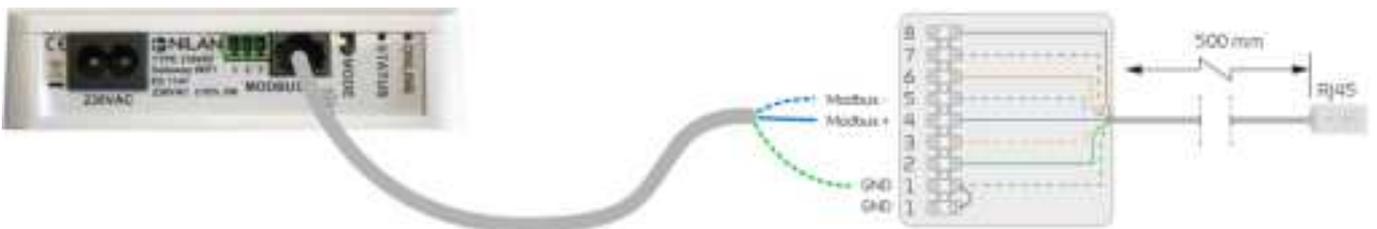
Some ventilation units with a CTS602 control system are equipped with an RJ45 port. Consult the instructions for your ventilation unit to establish what kind of port it has.

If no other external connection has been connected up to the ventilation unit, the port will hold an RJ45 plug with shunt. Remove this and insert a splitter cable instead. Connect the RJ45 plug with shunt to one of the ports at the end of the splitter cable. Connect the gateway to the other port.



The location of the RJ45 port on the ventilation unit can be found in the installation instructions for the individual unit.

If external units have been connected up, this is likely to have been done via a connection box. If that is the case, connect the RJ45 cable to the gateway. Then cut off the RJ45 plug at the other end of the cable and connect the cable to the connection box. Follow the diagram below.



The illustration shows the process when using a type A LAN cable

Connecting type A LAN cable to CTS602 connection box

Blue/white - Modbus - (5)
 Blue - Modbus+ (4)
 Green/white - GND (1)

Connecting type B LAN cable to CTS602 connection box

Blue/white - Modbus - (5)
 Blue - Modbus+ (4)
 Orange/white - GND (1)

Connection to units with CTS602 control system - commercial

Some commercial ventilation units have a connection box on the outside of the unit. On others you have to connect Modbus directly on the circuit board. Consult the instructions for your ventilation unit to establish what kind of port it has.



The illustration shows the process when using a type A LAN cable

Connecting type A LAN cable to CTS602 connection box - commercial

- Blue/white - Modbus - (7)
- Blue - Modbus+ (6)
- Green/white - GND (1)

Connecting type B LAN cable to CTS602 connection box - commercial

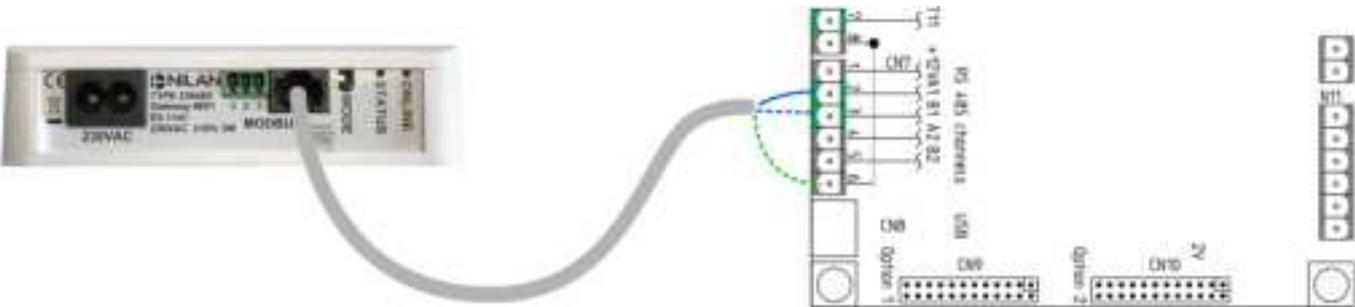
- Blue/white - Modbus - (7)
- Blue - Modbus+ (6)
- Orange/white - GND (1)

In this case, a cable should be run directly to the circuit board in the ventilation unit. We recommend that this is done by a Nilan engineer or technician.



WARNING

Disconnect the power supply for the ventilation unit before opening the unit doors. You can now connect the gateway to the circuit board.



The illustration shows the process when using a type A LAN cable

Connecting type A LAN cable to CTS602 circuit board

- Blue - Modbus+ (2/CN7 - A1)
- Blue/white - Modbus - (3/CN7 - B1)
- Green/white - GND (6/CN7)

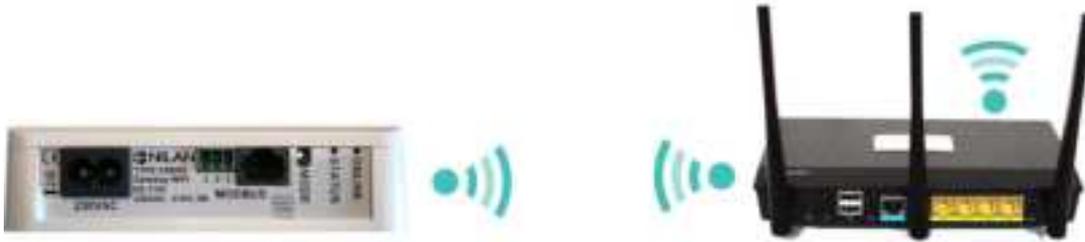
Connecting type B LAN cable to CTS602 circuit board

- Blue - Modbus+ (2/CN7 - A1)
- Blue/white - Modbus - (3/CN7 - B1)
- Orange/white - GND (6/CN7)

The location of the circuit board in the ventilation unit can be found in the installation instructions for the individual unit.

Connecting to the internet

Using an WiFi connection, you connect the Gateway to a router with internet connection.



Once the Gateway is connected to a power supply, it enters status mode and serves as an Access Point. If there is no light in Status Mode, the Mode button must be pressed for 10 seconds, and it will then enter Status Mode.

Checking connections



1. The ONLINE indicator makes it possible for you to check the connections by using the following code:
 - When connecting 230V - the light will flash for 5 sec.
 - When connecting Modbus communication - the light flashes continuously
 - When connecting a Router - the light comes on and stays on
 - When connecting a Router without Modbus communication - the light does not come on
2. The status light is constantly red when there is a WiFi connection and the Gateway becomes Access Point Mode.

Download Nilan User App

You can download Nilan User App from Google Play or App Store. Before you can use the app, you will need a Nilan Gateway. You also need to have it connected up as indicated in the present instructions under Installation instructions.



Find the app and open it. Press "Attach unit".

Then, key in the ID number printed on top of the Gateway.



ATTENTION

The Nilan Gateway must be connected up to the ventilation unit before you can use the app.

Connect the Gateway to your router



Access the WiFi settings on your mobile phone and select the following network: "1141_Gateway". If a password is required, enter: "1141_Gateway".



When connection to the Gateway has been established, the Nilan User App will open. Once the end user agreement has been accepted, press "Configure WiFi Gateway".



Tap Refresh device list. There may be some waiting time before the list is updated.



Subsequently, the number of the Gateway connected will appear.



Enter your network name under: SSID, password under Password and press Save. Only enter letters from the English alphabet.



The Gateway is now connected to your local network and you will now be able to connect the Gateway to the User App - see page 3: Setup.

Setting up the Nilan User App

Create user on the App



Create user by keying in the email address that you want to attach to the gateway/unit.



Press "OK". You have now been set up as a user.



It is now possible to delete the user, to get a new access code via email, or to log out.



ATTENTION

If you move out of the dwelling, remember to delete the profile so that a new user can be created for the unit.

Set up multiple users for the App



You can attach multiple users to the App.

Set up multiple user for the same Gateway/unit, e.g. access for husband and wife.

You do this by attaching Gateway ID, and key in email address and password connected to the Gateway.

Add more units/Gateways to the App



You can attach several units/Gateways to the App.

Before connecting more units to the App, you must log out and log in again with the existing username and password.

Under settings, press add ID, and key in the Gateway number and the email address of the user.

User manual

Nilan User App

Introduction

The following instructions are general and apply to all Nilan ventilation units. Some of the shown functions and settings may therefore not exist on your ventilation unit. The user settings that are applicable to exactly your ventilation unit will more or less correspond to those displayed in the Nilan User APP on your phone.

If you require a detailed description of individual functions and settings, you can download the software instructions for your ventilation unit from our website.

Explanation of main screen items



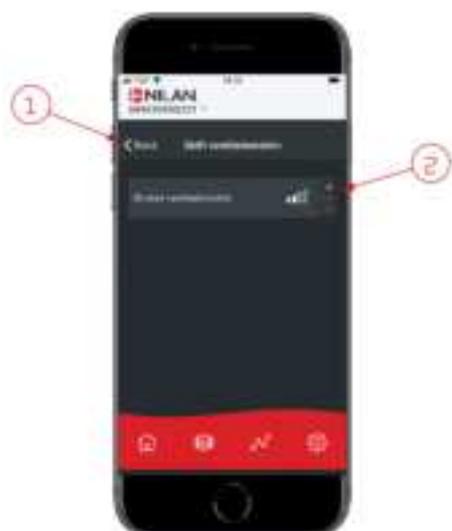
1. On the main screen under the Nilan logo, you will see the number of the connected Gateway.
Under settings, you can name the ventilation unit e.g. Home or Holiday home. The name will then be displayed instead.
If you have more than one ventilation unit connected to the APP, you will be able to see to which unit the shown data apply.
Next to the number is a WiFi icon that is green when there is connection to the unit, and red if the connection is interrupted.
2. Here you can see the items that are relevant to your ventilation unit. If there are too many items to fit the screen simultaneously, the rest will be below the displayed items. You can access these by using your finger to scroll up.
If you press one of the items on the screen briefly, a settings menu will appear.
3. Shortcut key to return to main screen.
4. If you press this icon, you will see a list of all current and relevant data.
5. If you press this icon, you will get to a page where you can see a trend curve for relevant data.
6. Pressing this icon will take you to settings where you will be able to add more ventilation units.
7. The alarm icon will be displayed if an alarm is triggered on the unit. By pressing the icon, you will get an outline of the most recent alarms.
If more ventilation units are connected to the same APP, you will have to go into settings and select unit in order to see to which unit the alarm applies.

Temperature



1. Press "back" to return to the previous page.
2. You can set the room temperature by scrolling up or down with your finger on the icon. When the ventilation unit is operating in heating mode, the thermometer is red. In cooling mode it is blue, and during neutral operation orange.
3. The icon for heating settings may be displayed if you have installed an after-heating element. Press this icon to access heating settings.
4. Here you can see the current room temperature.
5. Here you can see the desired room temperature.
6. The cooling icon will be displayed if the unit has active cooling via a heat pump. Press this icon to access the cooling settings.
7. If you scroll up the items with your finger, a menu appears where you can select from the options AUTO, HEAT and COOL.

Ventilation



1. Press "back" to return to the previous page.
2. Here you can set the fan speed level you want. The fan speed level that you have selected may differ from the one displayed on the main screen. This is because the unit is able to override the set fan speed level, e.g. at high/low humidity.

Domestic hot water



1. Press "back" to return to the previous page.
2. If you scroll down with your finger, you can read off the current temperature of the hot water.
3. You can set the domestic hot water by scrolling up or down with your finger on the icon. It is indicated under the thermometer when the unit is producing domestic hot water. The colour inside the thermometer changes in accordance with the temperature. A temperature >40°C is red, 30-40°C is orange, and <30°C is blue. Then you can see whether there is enough hot water for a bath.
4. Here you can see the current setting of the hot water temperature.
5. Press this icon to access more settings.
6. Press here to deactivate the production of hot water. You can reactivate the hot water production by using your finger to scroll up the thermometer and select the desired water temperature.



The settings icon (5) gives you access to settings related to supplementary electric heating and anti-legionella measures.

1. Press "back" to return to the previous page.
2. Here you can choose at what temperature the supplementary electric heating should be activated in order to help heat the domestic hot water.
3. Here you can deactivate the supplementary electric heating.
4. Here you can turn off the anti-legionella treatment. You can also set a particular day during the week for anti-legionella treatment.

Air humidity



1. Press "back" to return to the previous page.
2. Here you can set the value for low level of humidity between 15- 45%.
3. Here you can set the fan speed level for low humidity between level 1 - 3. You can also deactivate the function.
4. Here you can set the fan speed level for high humidity between level 2 - 4. You can also deactivate the function.
5. Here you can set the maximum time at high humidity.
6. Press this icon to access more settings.



1. Press "back" to return to the previous page.
2. Here you can set the temperature to prevent low outdoor temperature between -20 - +10°.
3. Here you can set the fan speed level to prevent low humidity between level 1- 3. You can also deactivate the function.

CO₂ settings



1. Press "back" to return to the previous page.
2. Here you can set the value for normal CO₂ level between 400 - 700.
3. Here you can set the value for high CO₂ level between 650 - 2500.
4. Here you can set the fan speed level between level 2 - 4. You can also deactivate the function.



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