INSTRUCTION MANUAL ENY-PV MANAGER

02/12/2024

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1 BEFORE YOU START

What you need to start:

1. PC*.
2. The software folder.
3. ENY-PV unit.
4. Ethernet cable
5. Router or access point (optional)

*Regarding point 1, minimum requirements for the PC are not available yet. Currently, the provisional minimum requirements are:

1. Windows 7 os or higher
2. resolution of 1280x720 or better.
3. AccessDatabaseEngine - 2007 ODBC. You will find it in the software folder. Generally, it is already installed on the PC.

1.1 AccessDatabaseEngine - 2007 ODBC

You will find it in the software folder.

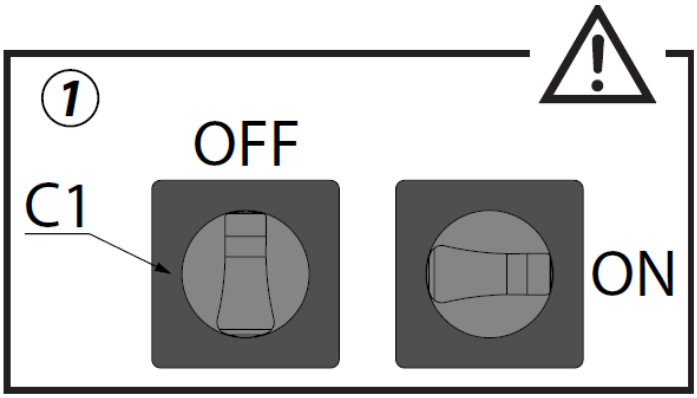
…\210217 - ENY-PV Manager 0.992\Release\AccessDatabaseEngine - 2007 ODBC.exe

Launch the executable and follow the instructions.

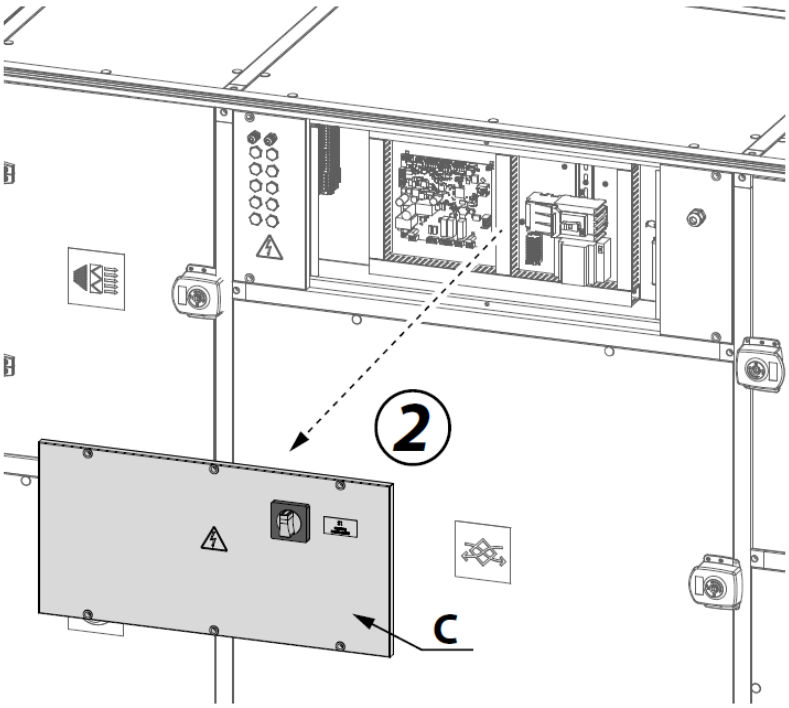
2 ACCESS TO THE BOARD

To access the electrical panel, it is necessary to:

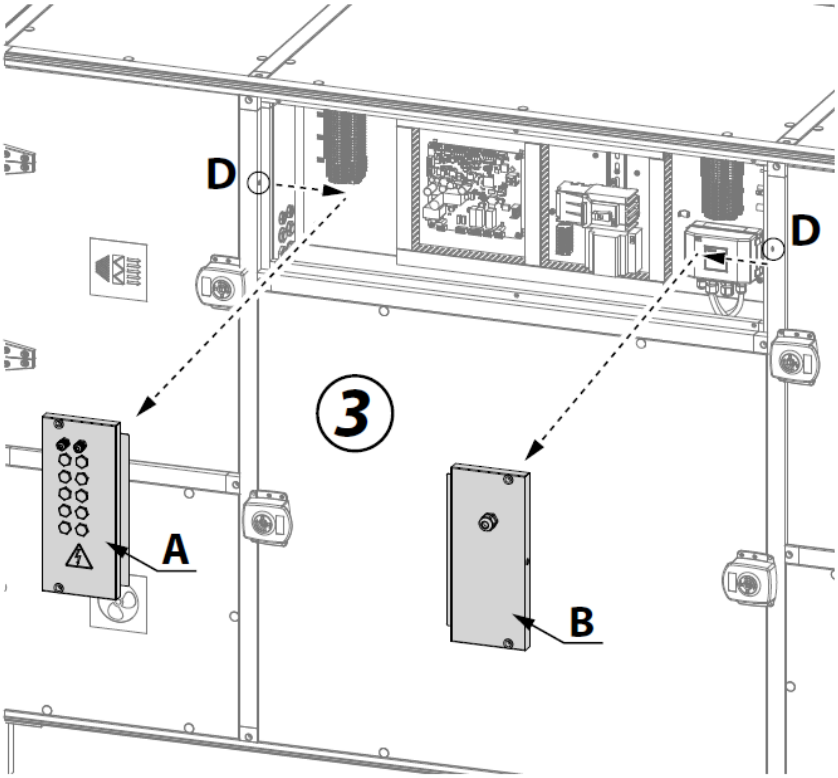
1. Make sure that the C1 switch (C1 and C2 if the unit has an electric pre heater) is in the OFF position.



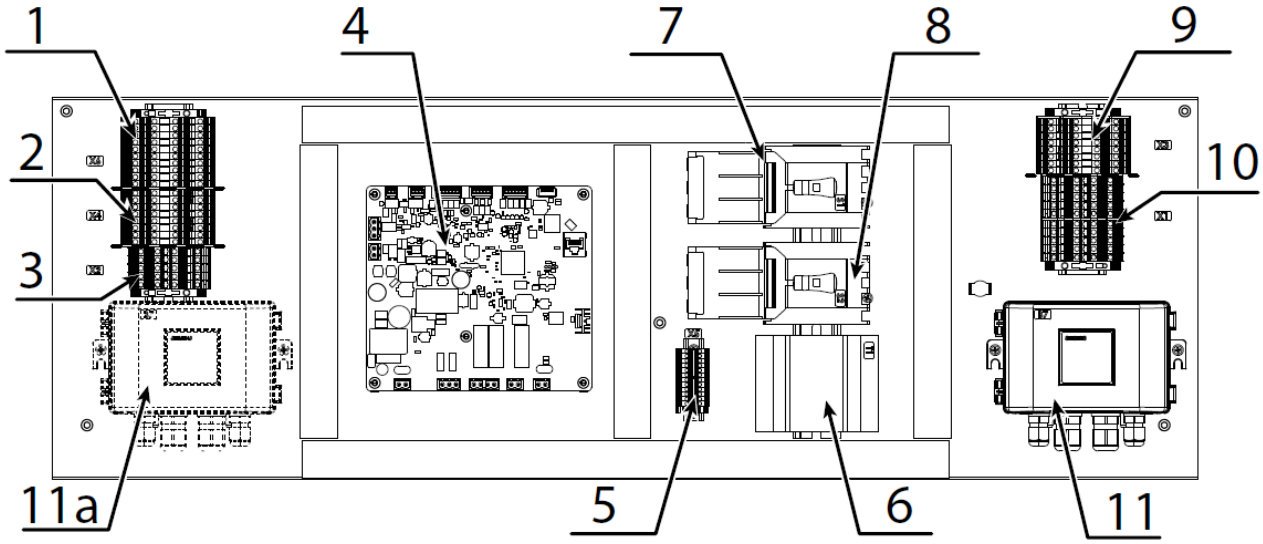
2. Remove the inspection panel “C”



3. Remove the inspection panels "A" and "B". Pay attention to the fixing pin D during the disassembly operation.



2.1 Electrical panel



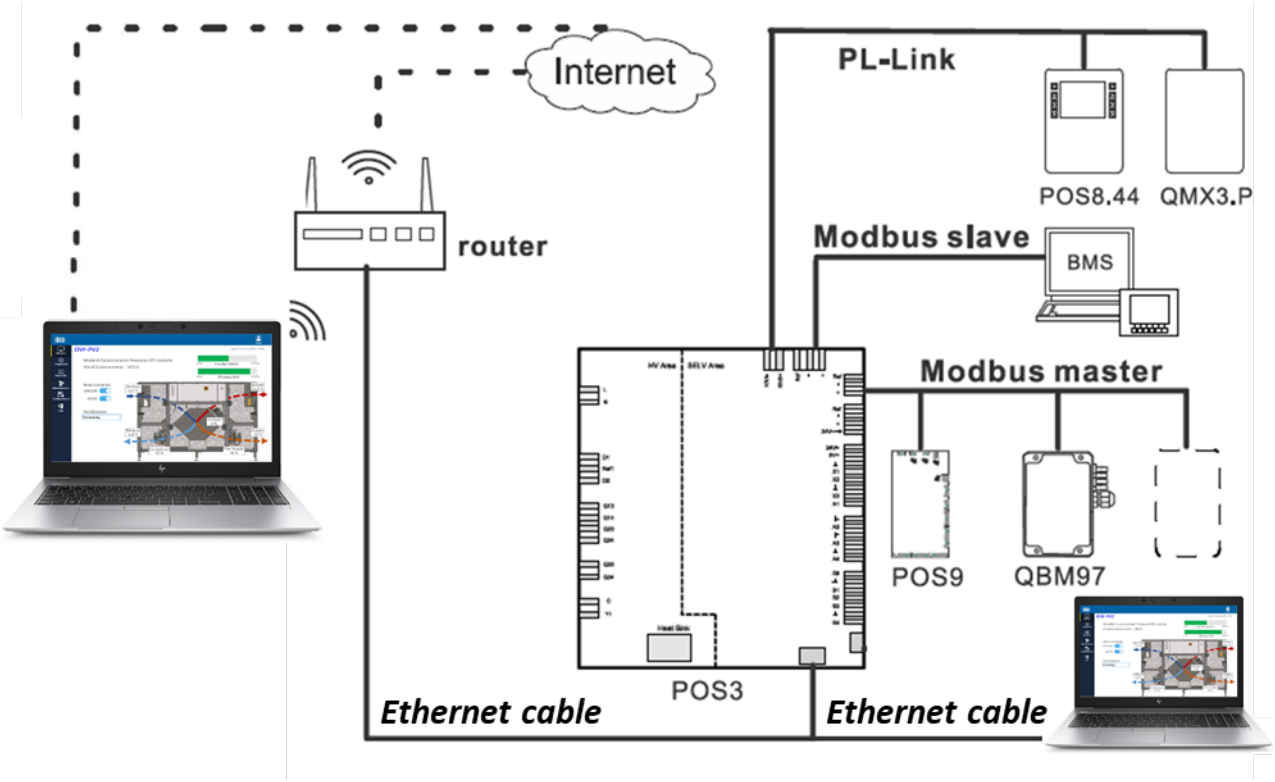
1. Terminal block X6
2. Terminal block X4
3. Terminal block X2
4. Board
5. Terminal block X5
6. 24V power supplier
7. General protection switch
8. Electric preheater protection switch
9. Terminal block X3
10. Terminal block X1
11. Differential pressure sensor

11a. Differential pressure sensor

3 CONNECTION TO THE UNIT

It is possible to connect the PC to the unit in two different ways:

1. Wired connection
2. Wi-Fi connection



3.1 Wired connection (recommended)

Connect the Ethernet cable to the PC port and to the Board port.

3.2 Wi-Fi connection

Connect the Ethernet cable between the Board and the Router or between the Board and an Access Point (Ex: TP-Link TL-WR802N).

Connect the PC to the Wi-Fi network.

ATTENTION: the software speed in the read and write operations depend on the Wi-Fi signal power and on the used hardware.

4 ENY-PV MANAGER

4.1 Launch the software

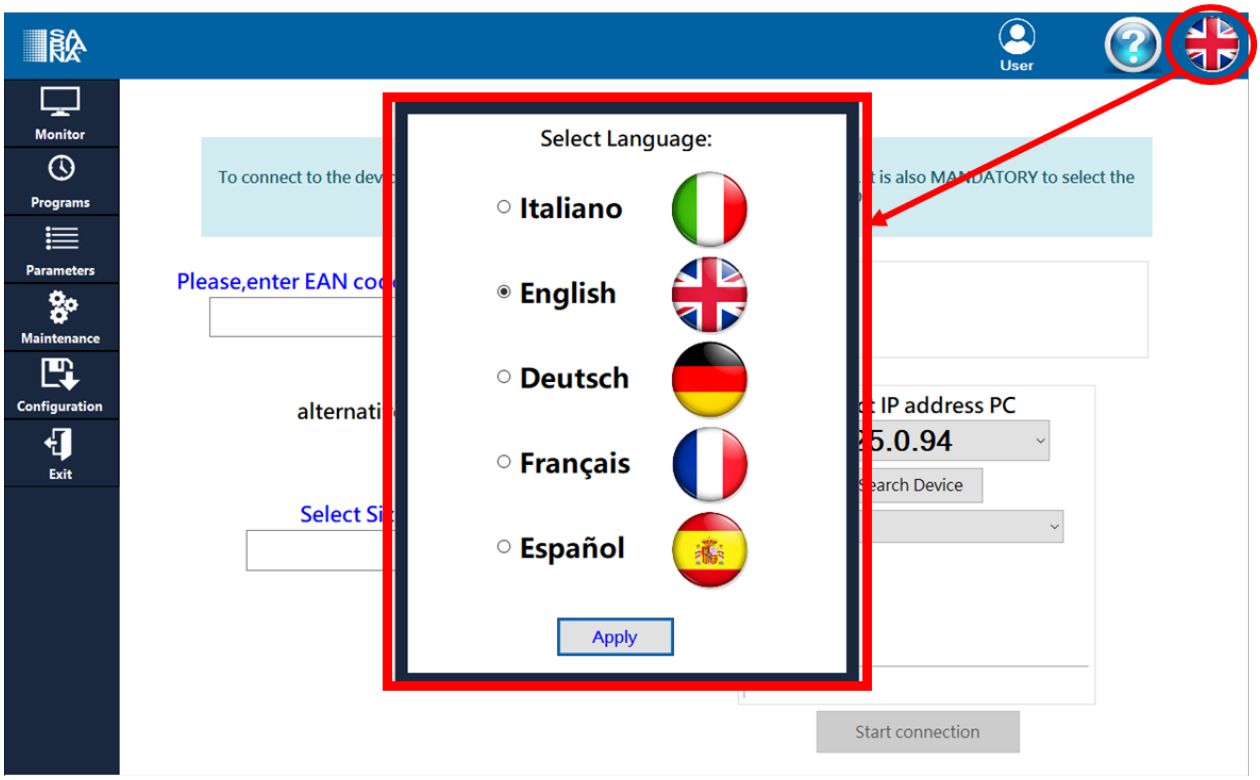
The software does not need an installation on the PC, just run the executable "ENYPVManager.exe" to start.

…\210217 - ENY-PV Manager 0.992\ENYPVManager.exe

4.2 General settings

4.2.1 Language button

It is possible to change the software **language** clicking on the Language Button at any time during the software use.



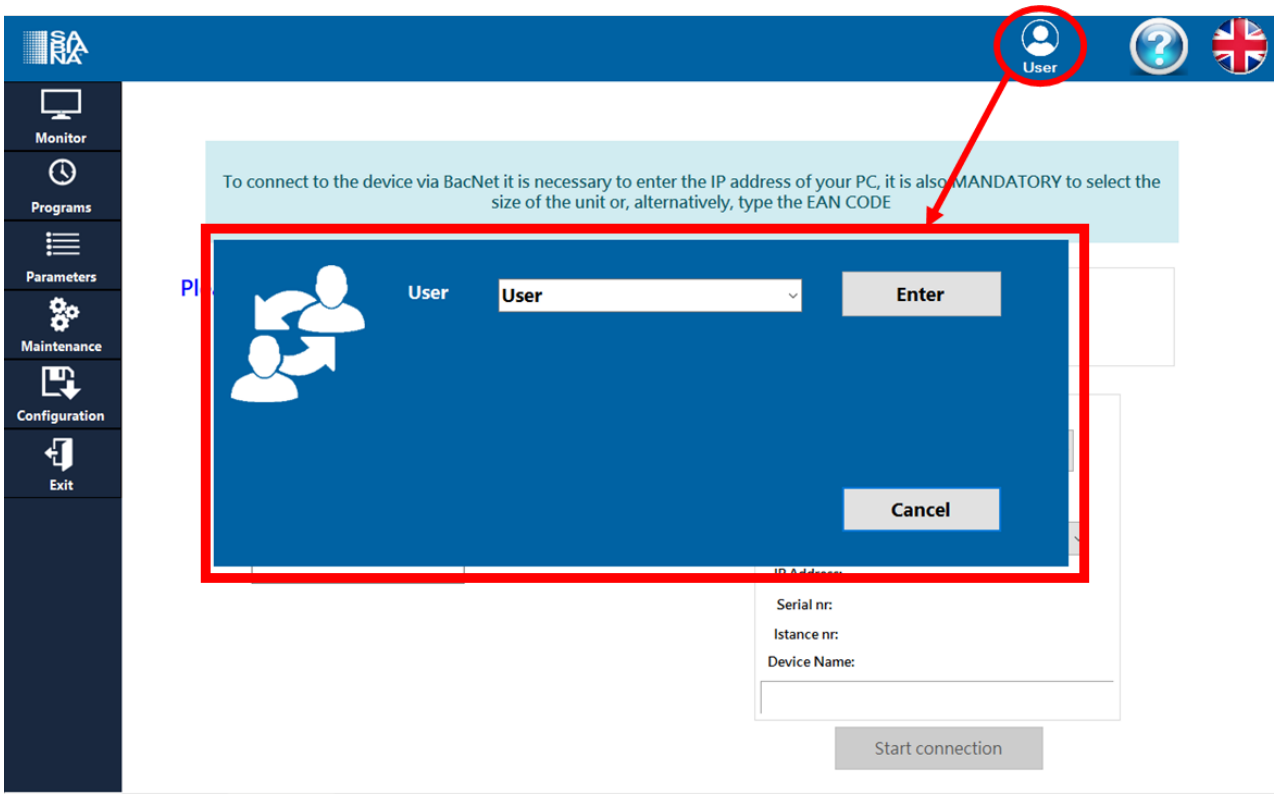
Currently only English and Italian are available.

4.2.2 User type button

There are three different user levels:

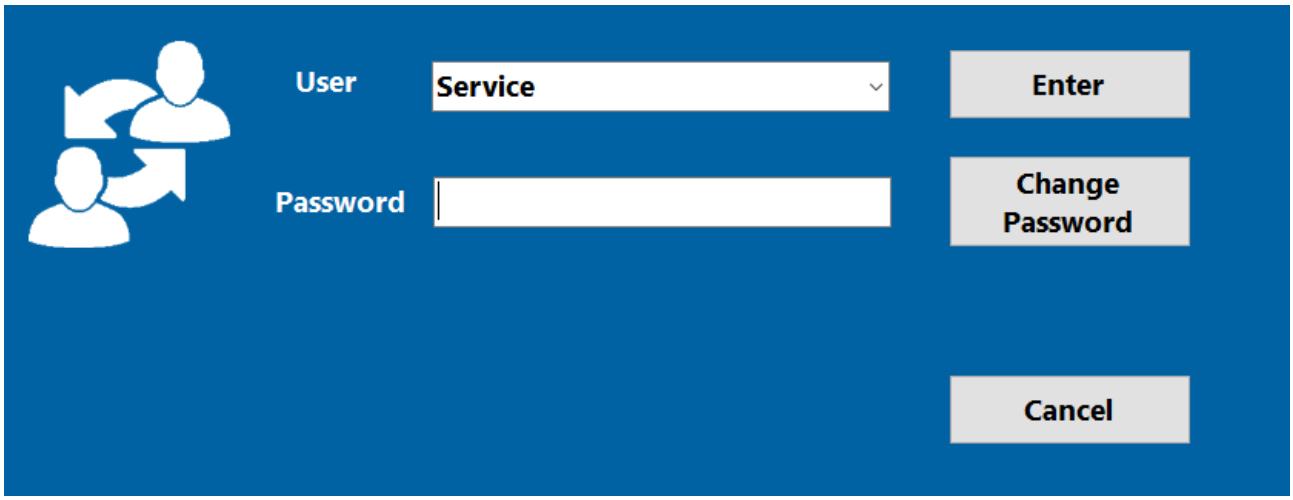
- **User** → without password. It is not possible to change the configuration of the unit. Reduced amount of editable parameters.
- **Service** → With password. It is possible to change the unit configuration. Higher amount of editable parameters than User type. It is possible to select for each parameter if it will be visible for User type or not.
- **Developer** → Currently only for software developer.

It is possible to change the user type clicking on the User Button at any time during the software use.



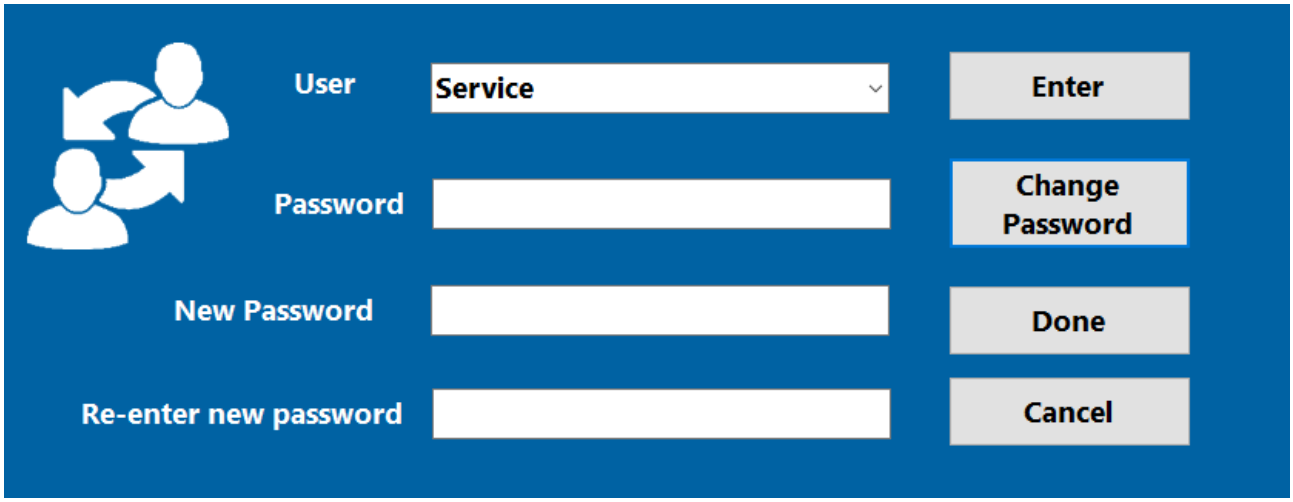
Clicking on the User button, the highlighted window appears.

The User type “User” is free. There are other 2 User types, Service and Developer. A password is required to log as Service or Developer.



The standard password for the **Service** user type is: **sabiana**.

It is possible to click on “Change Password” to set a new password.



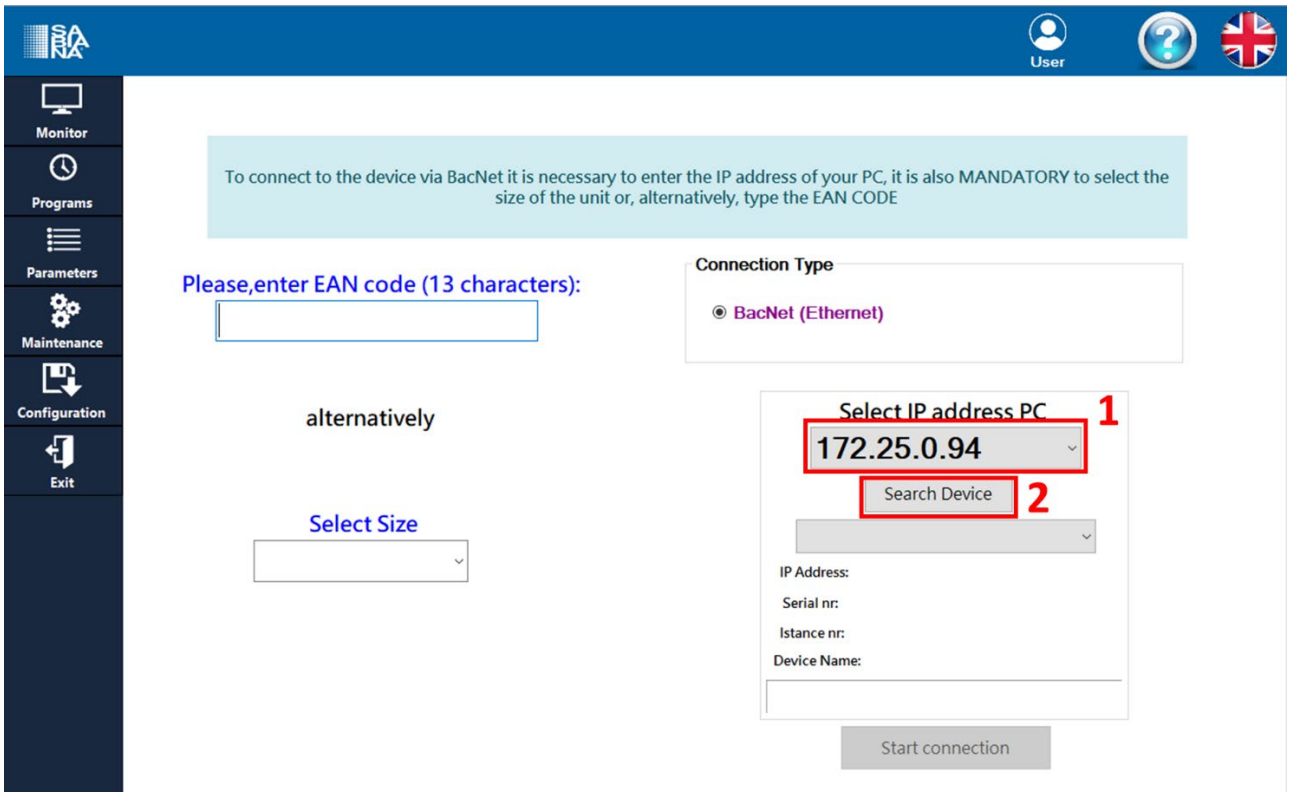
To change the password it is necessary to insert the current one.

4.2.3 Help button

The Help button shows this manual on the PC.

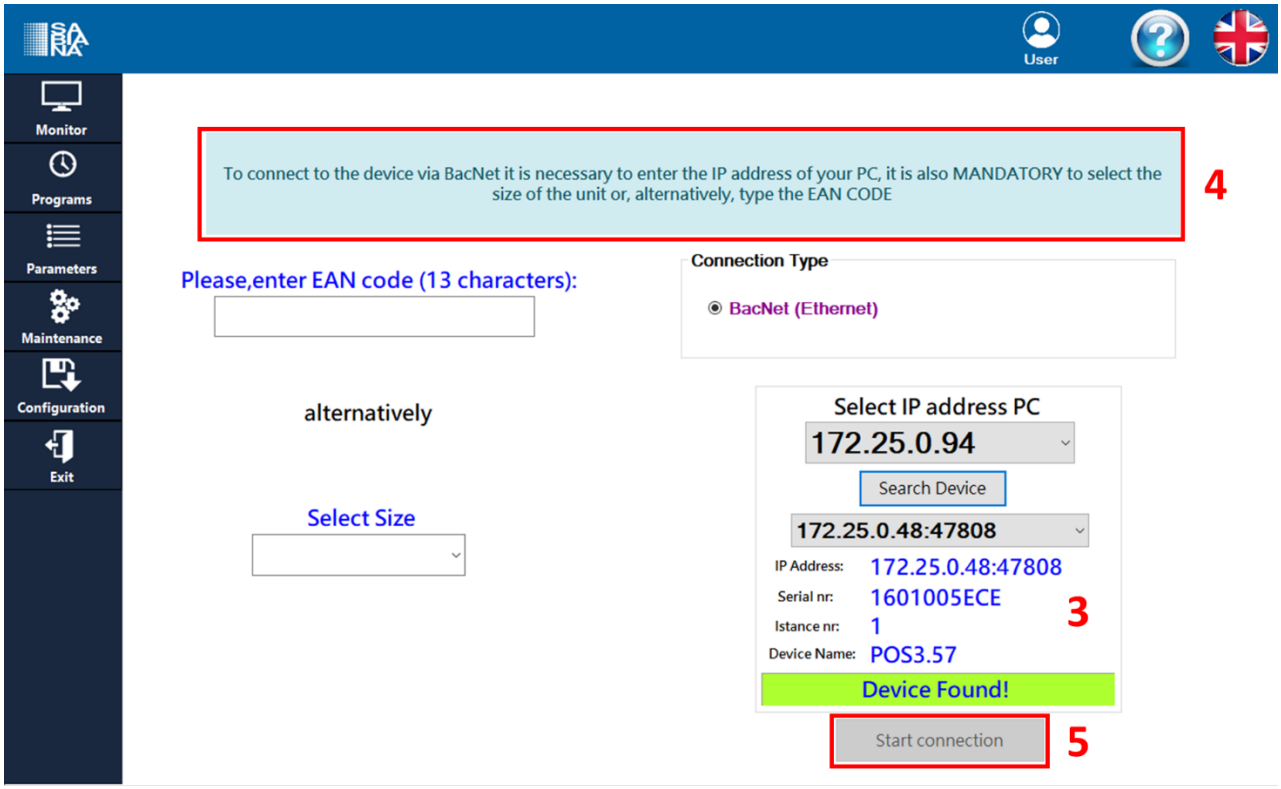
4.3 Find the unit

Before this step, be sure that you have properly connected the PC to the unit.



1. **Select the IP address** of the Port you are using to connect to the unit with the pull-down menu.
   Generally, just one IP address is present in the menu. If there is more than one IP address and you want to know which one you have to choose, you could use the guide at the end of this paragraph.
2. **Click "Search Device"** to start the scanning of the network.

4.4 Connection to the unit



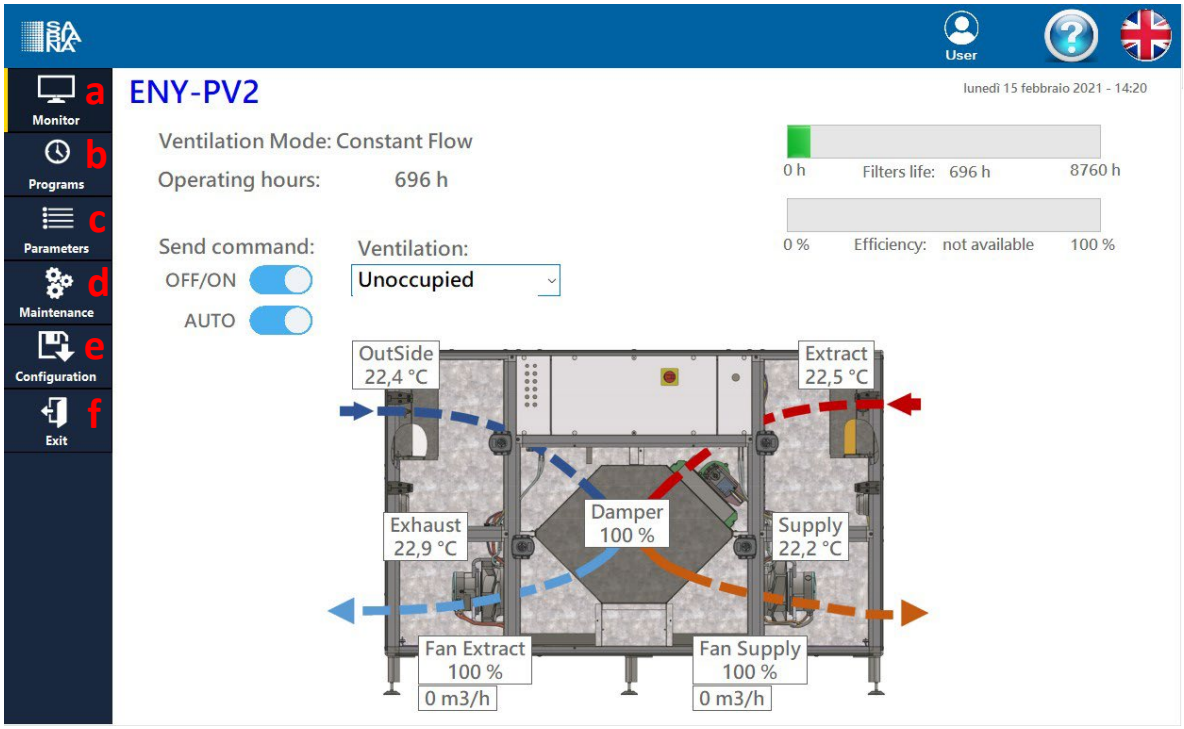
3. If a board is found in the network its data appears.
4. **Enter the EAN** code that is on the label on the unit side **or select the unit size**. This is necessary to enable the following steps.
5. **Press the "Start Connection"** button to connect to the unit.

ATTENTION: IF NO UNIT IS FOUND AFTER PRESSING THE "START CONNECTION" BUTTON, DISABLE YOUR COMPUTER'S FIREWALL.

ON SOME DEVICES, FIREWALLS MAY BLOCK COMMUNICATION OVER ETHERNET

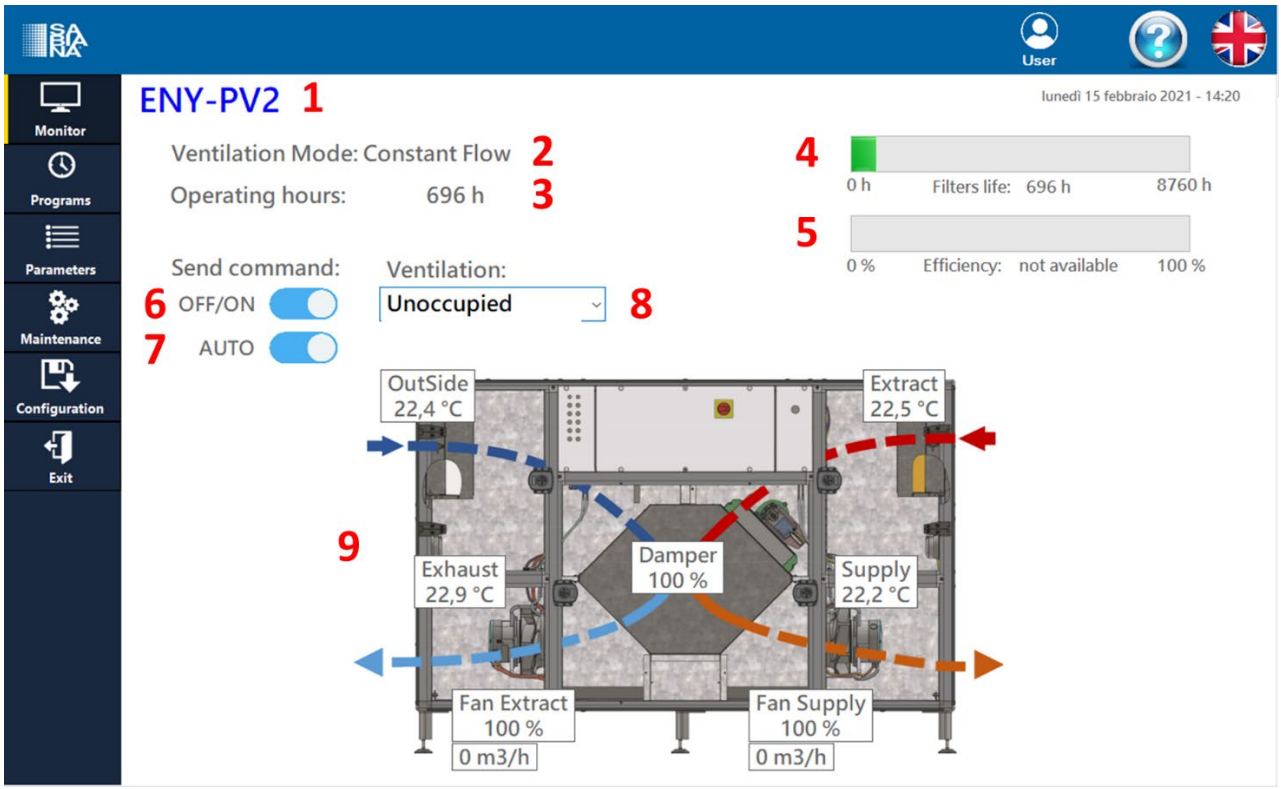
4.5 Pages

After clicking the “Start connection” button the “Monitor” page opens. From now all the pages on the left side of the software are enabled.



a. **Monitor** → shows the **current operation status**, the live value of different parameters, status of filters. It is possible to **change the ventilation mode** (Comfort, Economy, Unoccupied and Protection), the **AUTO mode** (AUTO is the SCHEDULER controlled mode) and the ON/OFF (protection mode manually forced).
b. **Programs** → In this page you can change the **time scheduling**.
c. **Parameters** → In this page, you can **modify the unit parameters** (setpoint of flow rate, pressure, temperature and so on).
d. **Maintenance** → The **error codes** are shown. It is possible to reset filters life and calibrate the Differential pressure sensor.
e. **Configuration** → This page is not openable by user type “User”. You can **configure accessories** on the unit like IAQ probes, humidity probe, post treatment and pre-treatment devices. It is possible to upload a new configuration made by factory.
f. **Exit** → It closes the software.

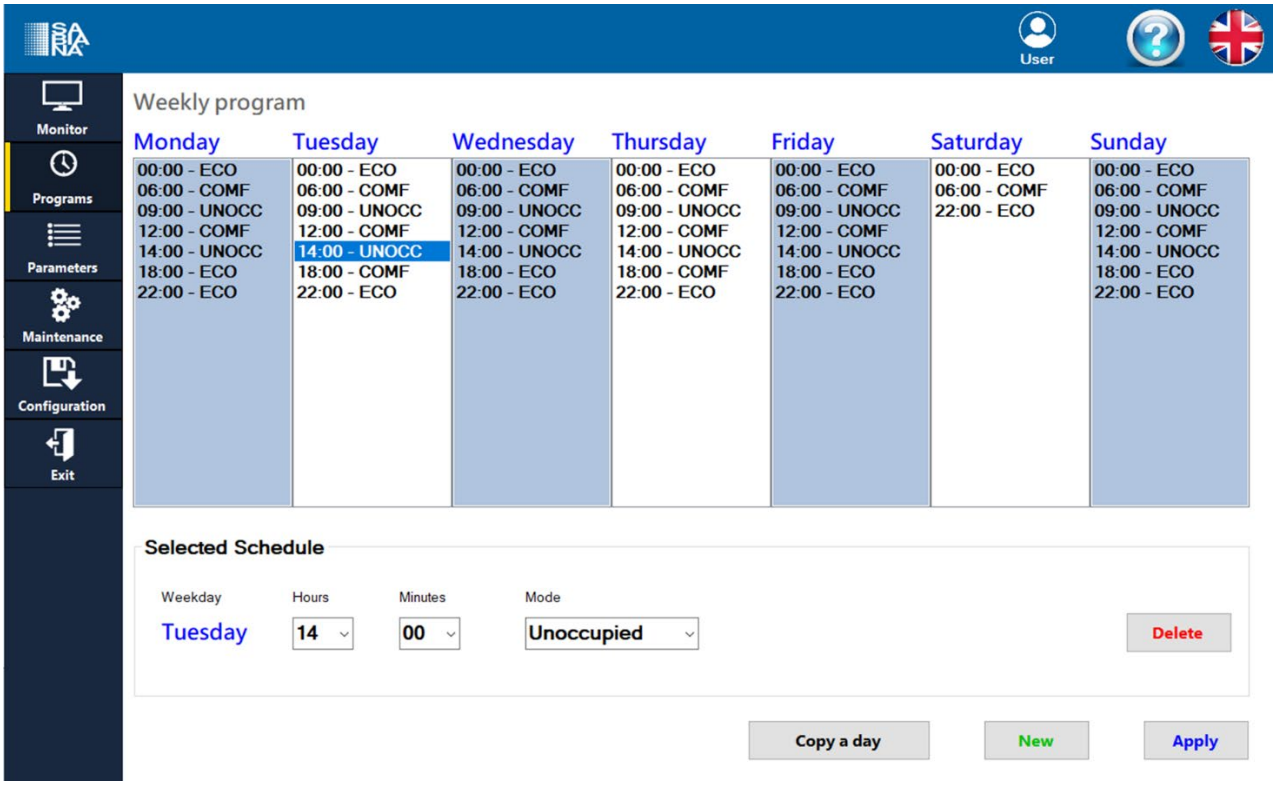
4.5.1 Monitor



1. **Unit size**
2. **Ventilation mode** → Constant Flow or Constant Pressure
3. **Operating hours** → Cumulative operating hours. This value does not reset when the filters life is reset.
4. **Filters life** → The maximum value 8760 is indicative. The filters replacement depends on the pressure switch alarm.
5. **Efficiency** → When available, the efficiency value is shown. “not available” appears when the damper is open or the preheater is configured.
6. **OFF/ON** → this button activates the “Away mode”. The “Away mode” is a manually forced protection mode.
7. **AUTO** → the button activates the “AUTO” mode based on the time scheduling.
8. **Ventilation** → the pull-down menu changes the ventilation mode.
   ATTENTION: When the AUTO mode is active and the ventilation mode is changed manually, the unit switches from AUTO mode to MANUAL mode.
   When the unit is in MANUAL mode and the AUTO mode button is clicked then the ventilation mode changes to the one referred to the time scheduling.
   When the AUTO mode is active and the AUTO button is clicked then the MANUAL ventilation mode used by the unit is the same as the previous AUTO mode.
9. **Unit image**

4.5.2 Programs

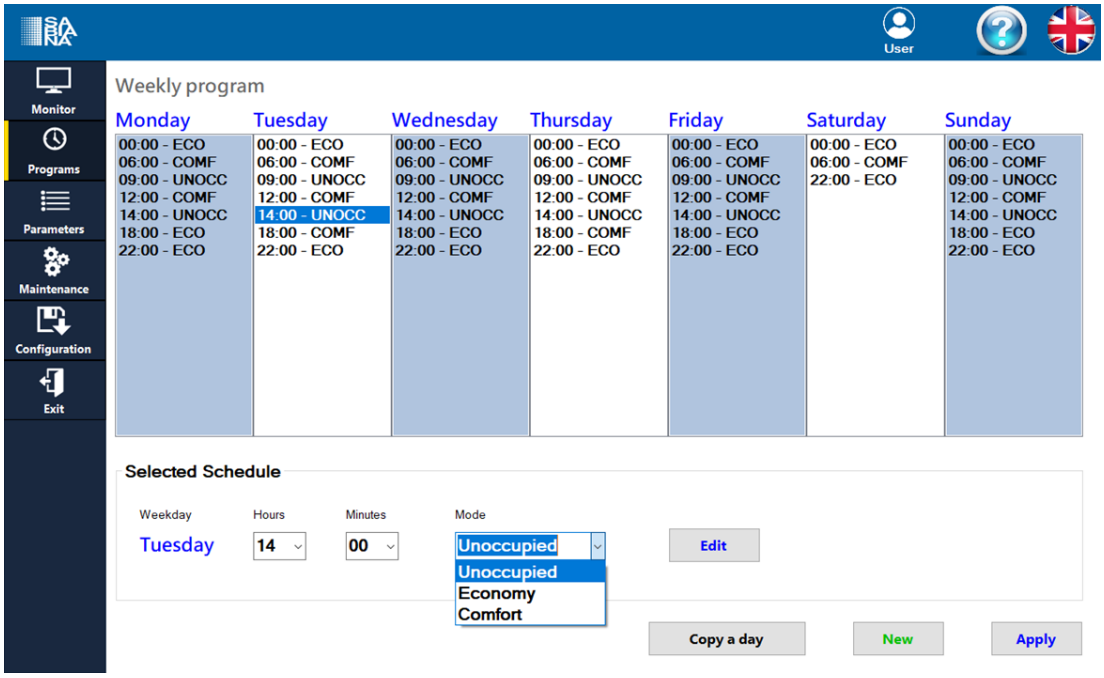
There are different ways to **modify the time scheduling**. In any case, to apply the modification it is NECESSARY to click the button APPLY before changing the page. If the APPLY BUTTON is not clicked all the modifications ARE NOT SAVED.



Clicking on a schedule, it is possible to delete it using the “Delete” button.

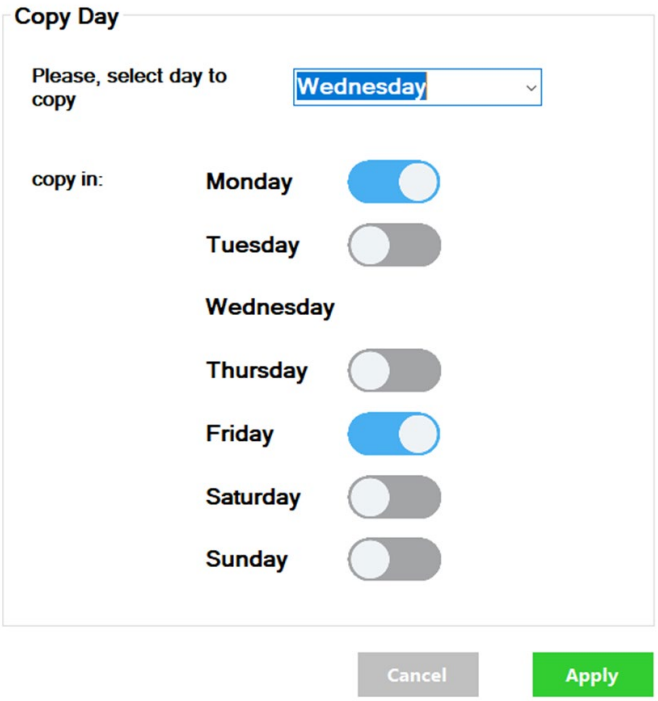
4.5.2.1 Modify schedule

Clicking on a schedule it is possible to change time and mode. When something changes, the “Modify” button appears. Click on the “Modify” button to apply the modification.



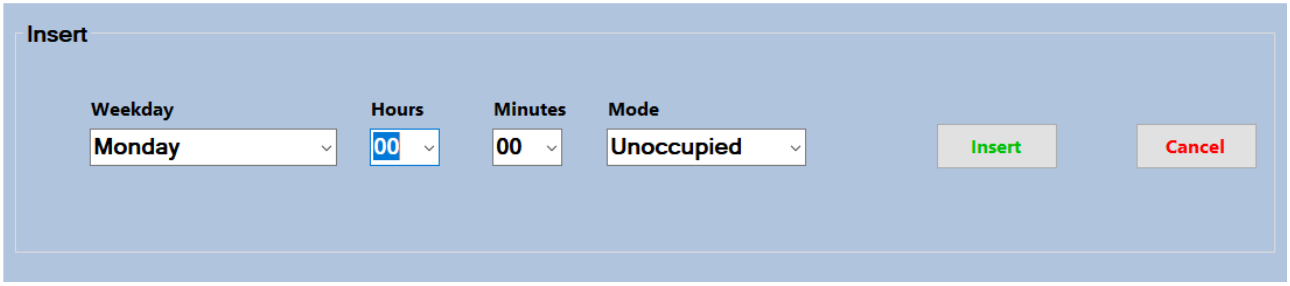
4.5.2.2 *Copy a day*

Clicking on “Copy a day” the window shown on the left appears. It is possible to select a day to copy its time scheduling onto other days schedules. Click apply to save modification.



4.5.2.3 *New schedule*

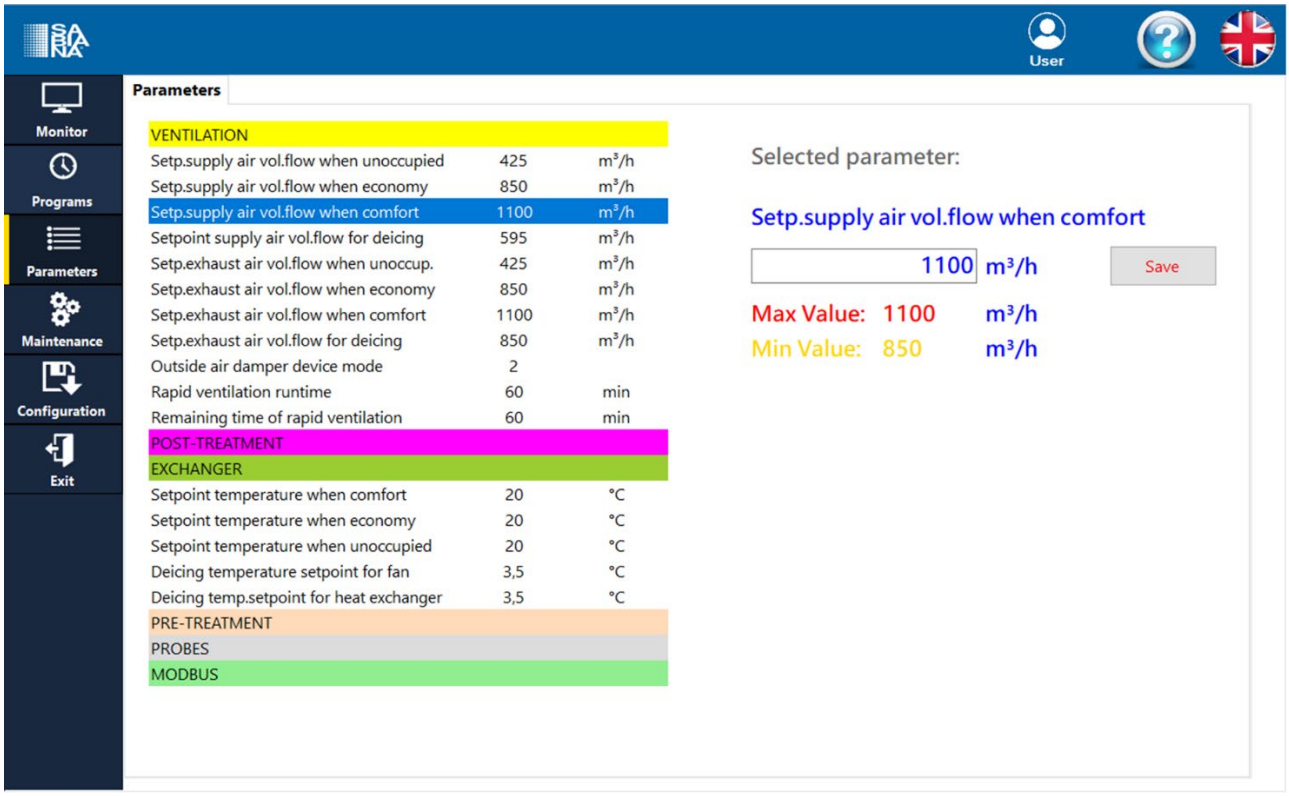
It is possible to add a new schedule by clicking on the “New” button, then the following window appears.



After choosing the schedule, click on “Insert”.

4.5.3 Parameters

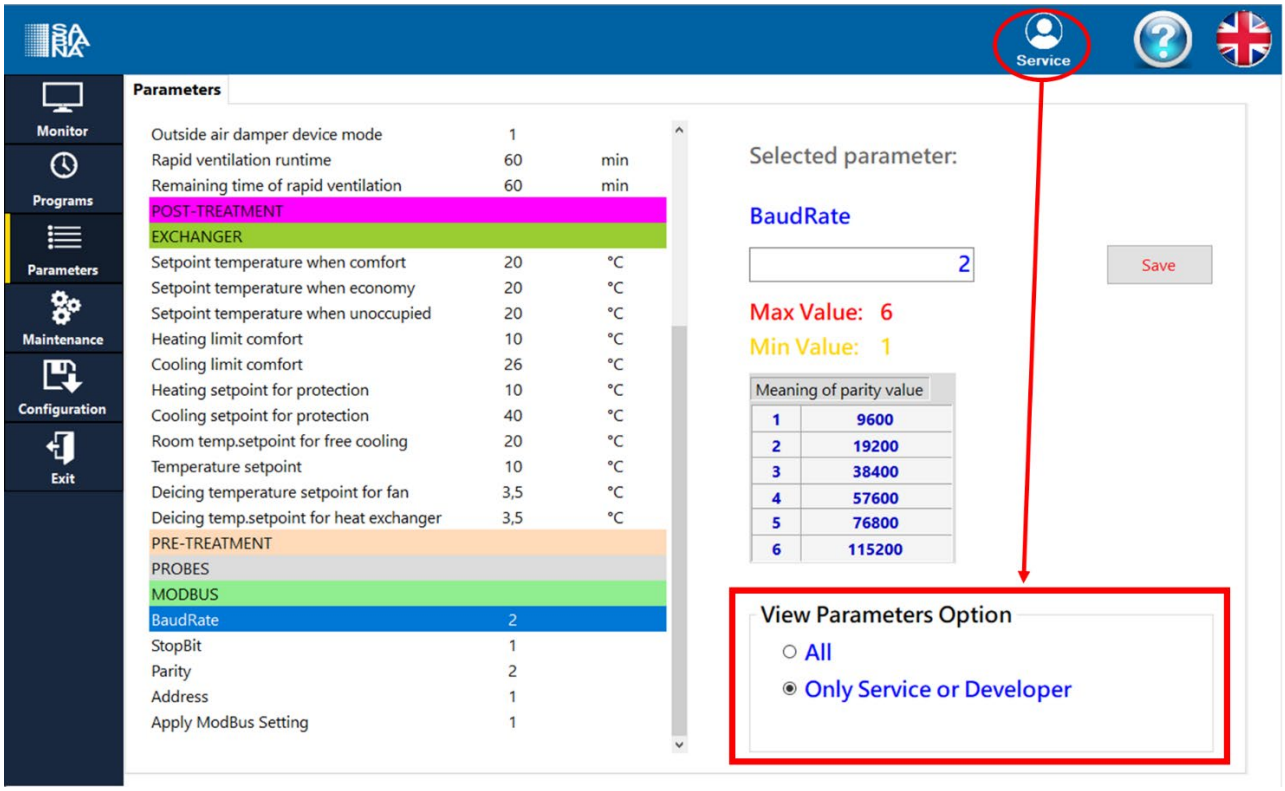
4.5.3.1 User view



Follow the instructions below to change a parameter:

1. **Select a parameter** on the list.
2. The parameter will be highlighted and the maximum (red) and minimum (yellow) admissible values are shown on the right side. **The present value (blue) is editable**.
3. It is possible to **change the present value (blue) by writing in the box** and clicking on the **“Save” button**.

4.5.3.2 Service view



If the user is logged as **Service** the software shows more parameters than the User ones. It is possible to change the view option for each parameter. By clicking on the “All” option the parameter will be visible also for User. By clicking “Only Service or Developer” the selected parameter becomes visible only for the “Service” type.

4.5.3.3 Modbus settings

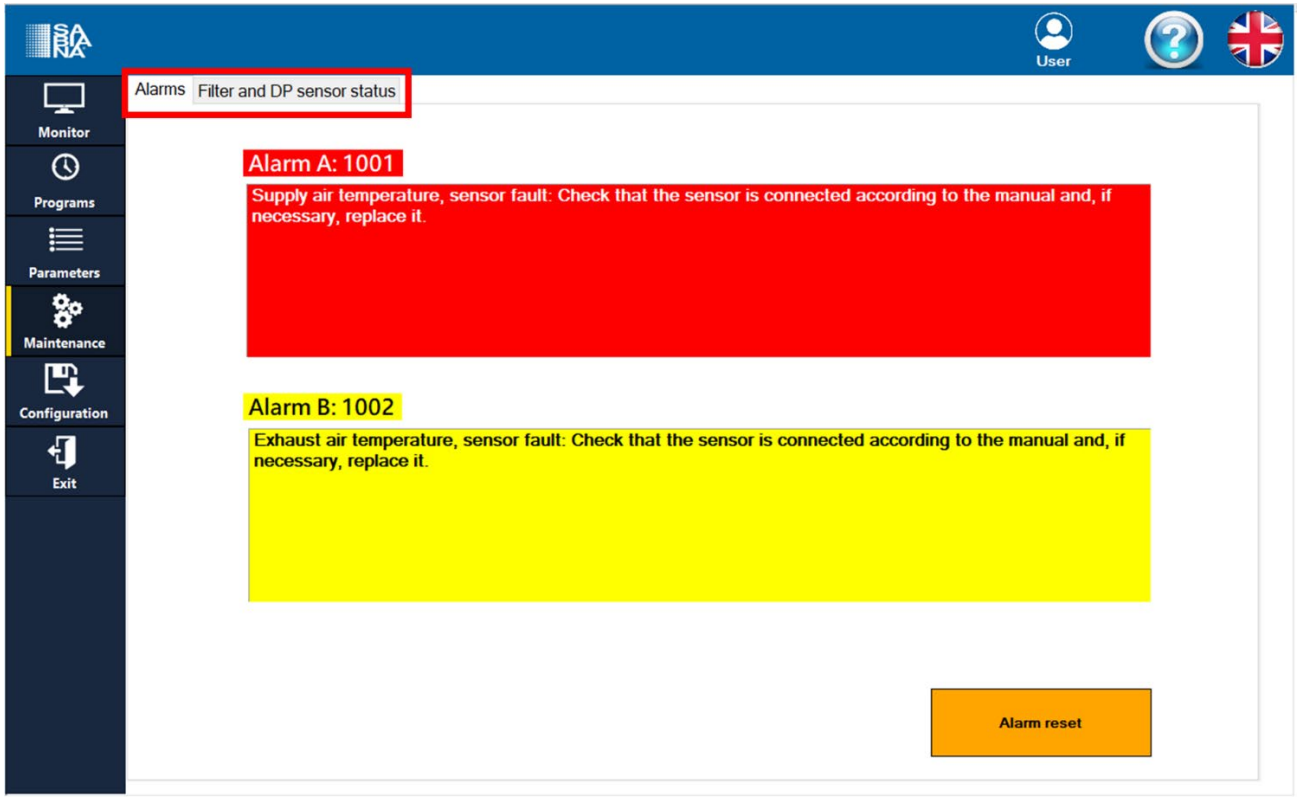
It is possible to change the Modbus communication settings:

- **Baud Rate**
- **Stop Bit**
- **Parity**
- **Address**

To apply the new configuration it is NECESSARY to change the parameter “Apply Modbus Setting” value from 1 to 2. The value will automatically return to 1 to indicate that the change has been applied.

Modbus connection wiring is shown in the instruction manual. Modbus registers table has to be requested and obtained from Sabiana.

4.5.4 Maintenance



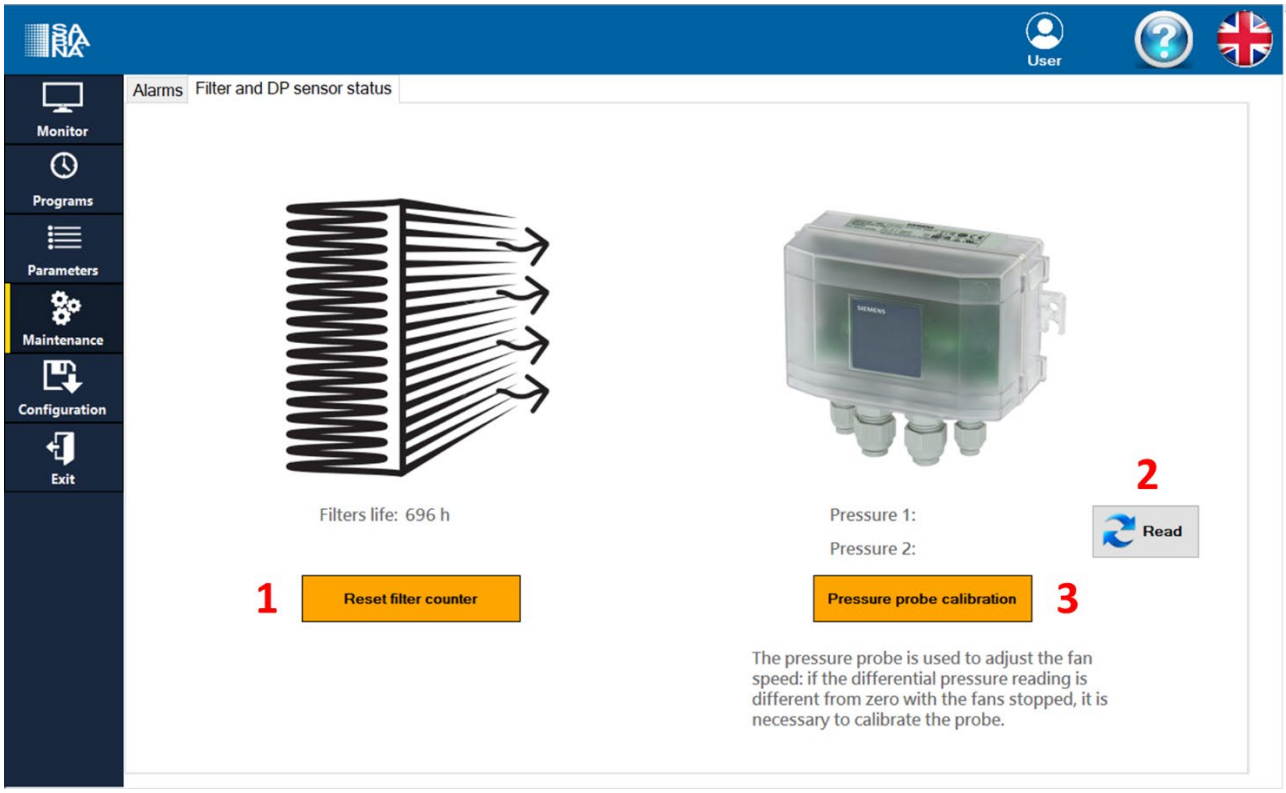
The Maintenance page is composed by two under pages:

- **Alarms**
- **Filter and DP sensor status**

4.5.4.1 Alarms

In this page the alarm codes and descriptions are shown. Clicking on “Alarm reset” it is possible to reset the alarms. If the causes of the alarms are not solved yet, the alarms do not disappear.

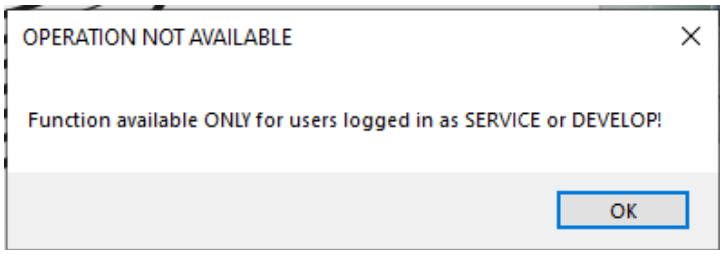
4.5.4.2 *Filter and DP sensor status*



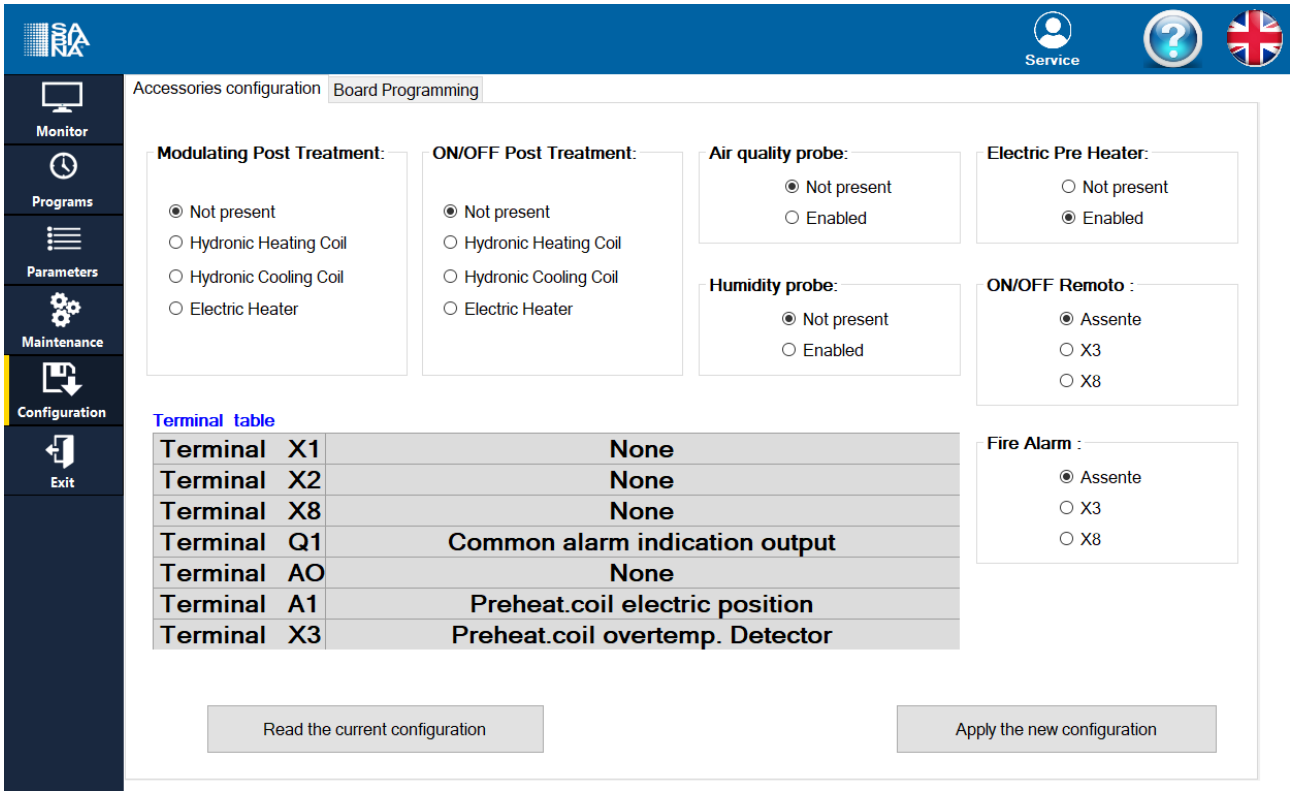
1. **Reset filter counter** → When filters are replaced it is possible to reset filters counter. The filters life reset is not necessary because the replacement logic does not have a time limit, but it depends on the pressure switch alarm. The counter reset is used just to show the real functioning hours of the filters.
2. **Read** → Clicking on the “Read” button the values read by the pressure sensor are shown. The pressure sensor may lose initial reference during its life. In this case, clicking on “Read” in PROTECTION mode (fan stopped), values different from 0 will be shown. Therefore, it is possible to calibrate the sensor by following step 3.
3. **Pressure sensor calibration** → Clicking on “Pressure sensor calibration” the sensor sets the new initial reference.
   ATTENTION: if this procedure is made without having stopped the fans the functionality of the unit will be compromised.

4.5.5 Configuration

ATTENTION: The page is not available for “User” type.



4.5.5.1 Accessories configuration



In this page **it is possible to configure the accessories** for the unit:

- **Modulating Post Treatment:**
  - Hydronic Heating coil
    0-10V control signal + Temperature probe
  - Hydronic Cooling coil
    0-10V control signal
  - Electric Heater
    0-10V control signal + Temperature switch
- **ON/OFF Post Treatment:**
  - Hydronic Heating coil
    24V relay + Temperature probe
  - Hydronic Cooling coil
    24V relay
  - Electric Heater
    24V relay + Temperature switch
- **Air quality probe / Humidity probe:**

  - 0-10V input signal
- **Electric Pre Heater:**
  - 0-10V control signal + Temperature switch
- **Remote ON/OFF contact:**
  - NO contact (normally open) configured on X3 terminal (see wiring diagram)
  - NO contact (normally open) configured on X8 terminal (see wiring diagram)

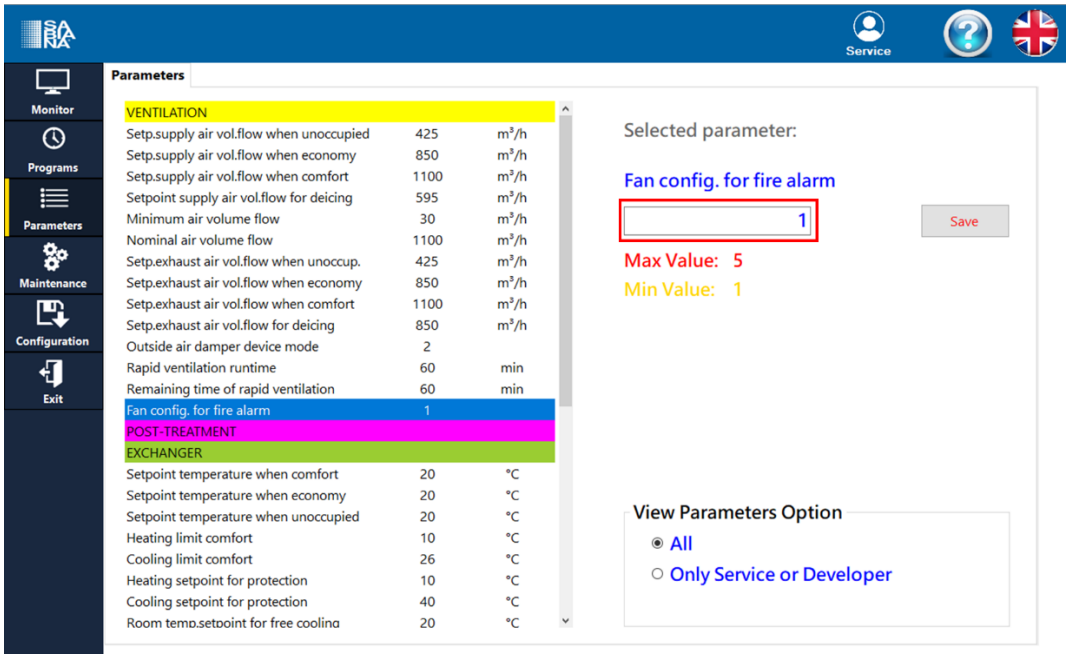
  ATTENTION: X3 and X8 terminal are used also for other accessories, e.g. the post and pre treatment functions. For each terminal is possible to configure only one function.

- **Fire Alarm contact:**
  - NO contact (normally open) configured on X3 terminal (see wiring diagram)
  - NO contact (normally open) configured on X8 terminal (see wiring diagram)

  ATTENTION: X3 and X8 terminal are used also for other accessories, e.g. the post and pre treatment functions. For each terminal is possible to configure only one function.

  In the “Parameters” Page is possible to select between 5 different fan behaviour in case of Fire Alarm. Changing the parameter “Fan Config. Fire Alarm” in the “Parameters” Page it is possible to chose:

  1. Only Alarm signal (Alarm 2002). Fan working at the set ventilation mode.
  2. Alarm signal (Alarm 2002). Both fans are stopped.
  3. Alarm signal (Alarm 2002). Extract fan set at 100%. Supply fan is stopped.
  4. Alarm signal (Alarm 2002). Supply fan set at 100%. Extract fan is stopped.
  5. Alarm signal (Alarm 2002). Both fans are set at 100%.

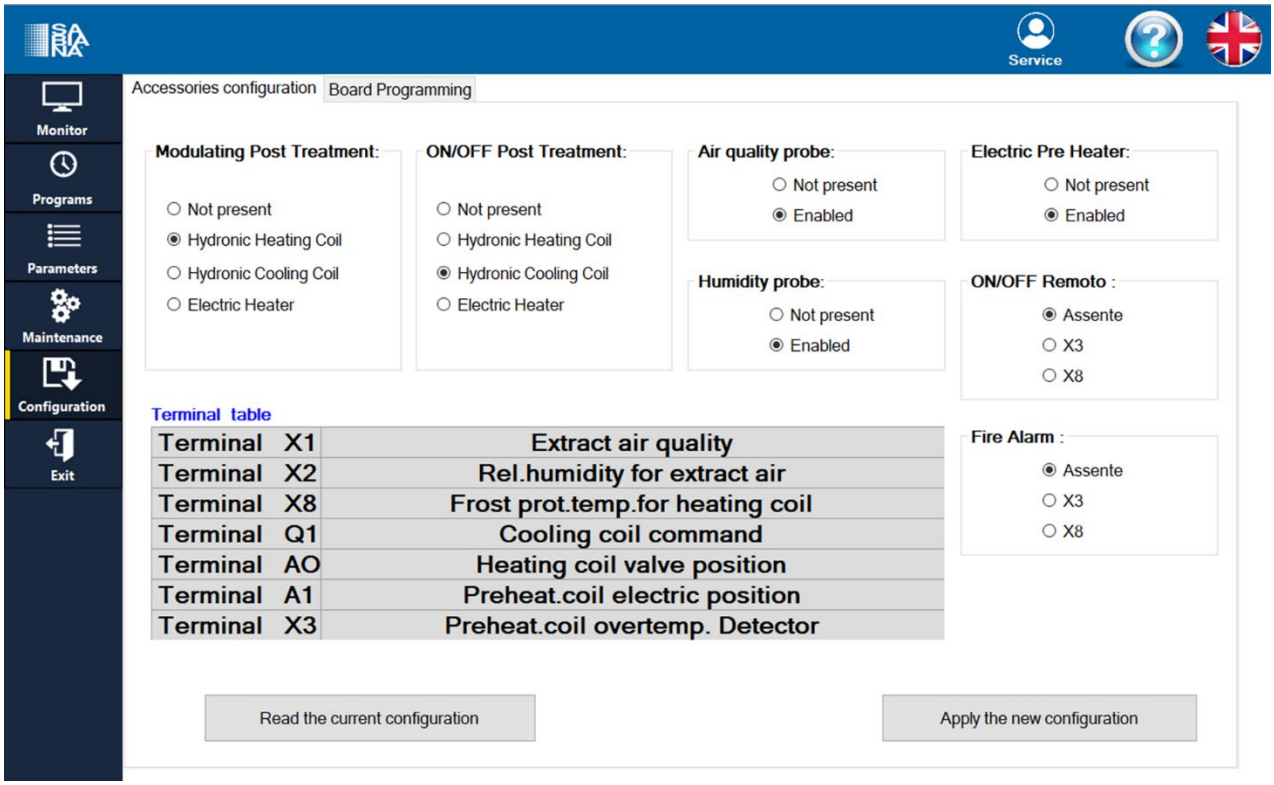


The “Terminal table” shows the terminal configuration based on the accessories selection. All the wiring information are available in the instruction manual.

If the software does not allow the selection of a configuration, it is because it conflicts with a selection already made. For example, it is not possible to configure two hot post treatments, one of which is modulating and one is ON / OFF.

Similarly, it is not possible to configure the remote ON/OFF or Fire Alarm functions if the X3 and X8 terminals are already used by other funciotns.

Allo stesso modo non è possibile configurare le funzioni di ON/OFF remoto o Fire Alarm se i morsetti X3 ed X8 sono già utilizzati da un'altra funzione.

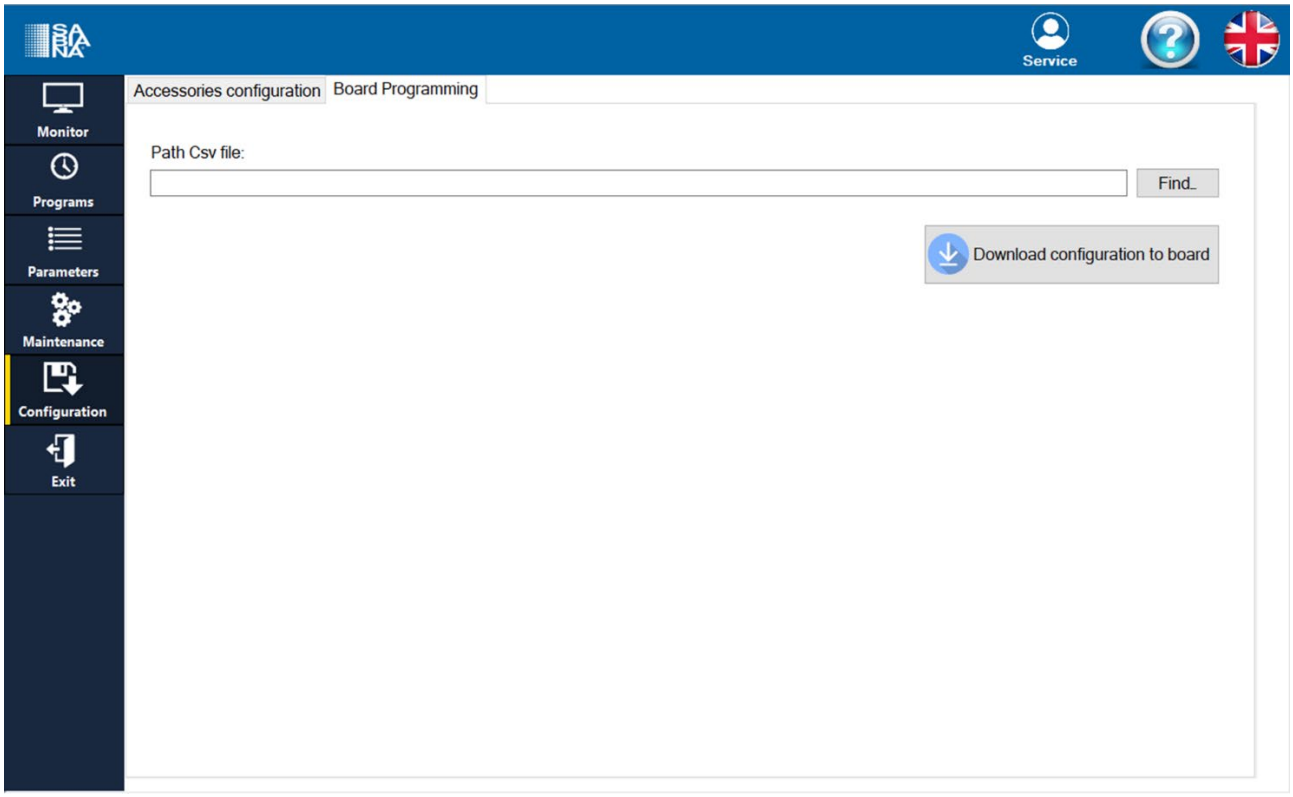


The terminal table shows the terminal configuration based on the selected accessories. Wiring information can be found in the instruction manual.

Click on the text to select the accessories.

1. **Apply the new configuration** → click it to apply the configuration and wait until the end of the process (3 minutes required).
2. **Read the current configuration** → by clicking on it, the page shows the actual configuration.

4.5.5.2 *Board Programming*



It is possible to use a file to upload a completely new configuration into the board. **These files are sent from the factory only when it is necessary.**

4.5.6 Exit

Clicking on the "**Exit**" button, the software closes.

5 HOW TO FIND THE IP ADDRESS

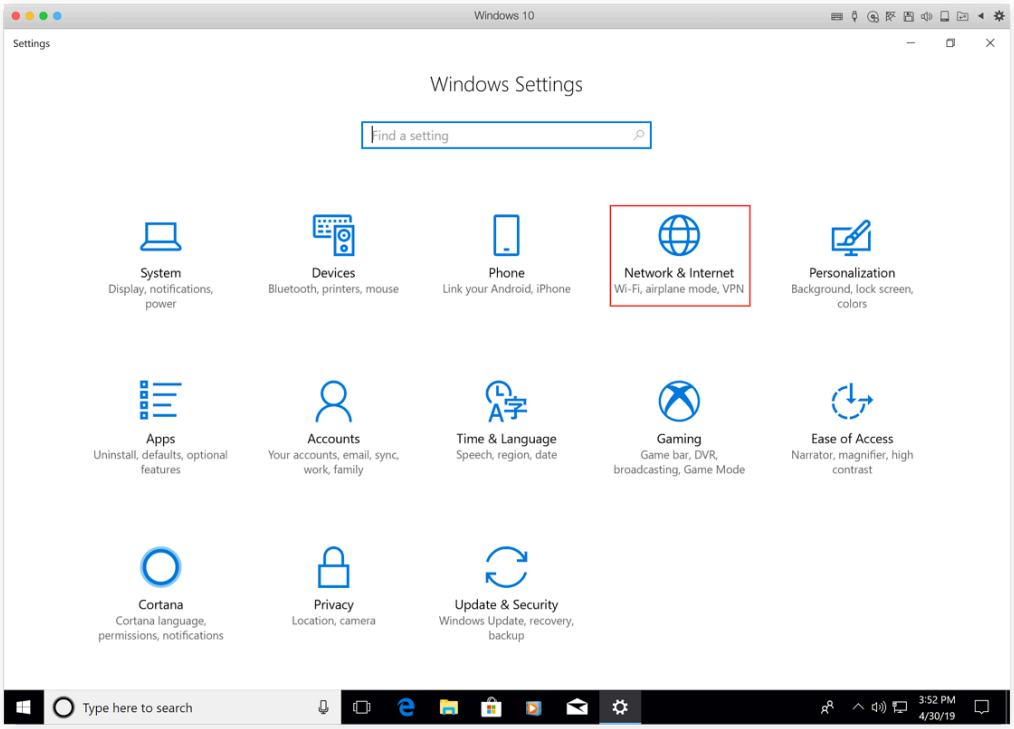
It's simple to find your local IP address (the one on your local network, usually assigned by your router). It usually takes just a few clicks, but those clicks are different depending on which version of Windows you're using.

5.1.1.1 Windows 10

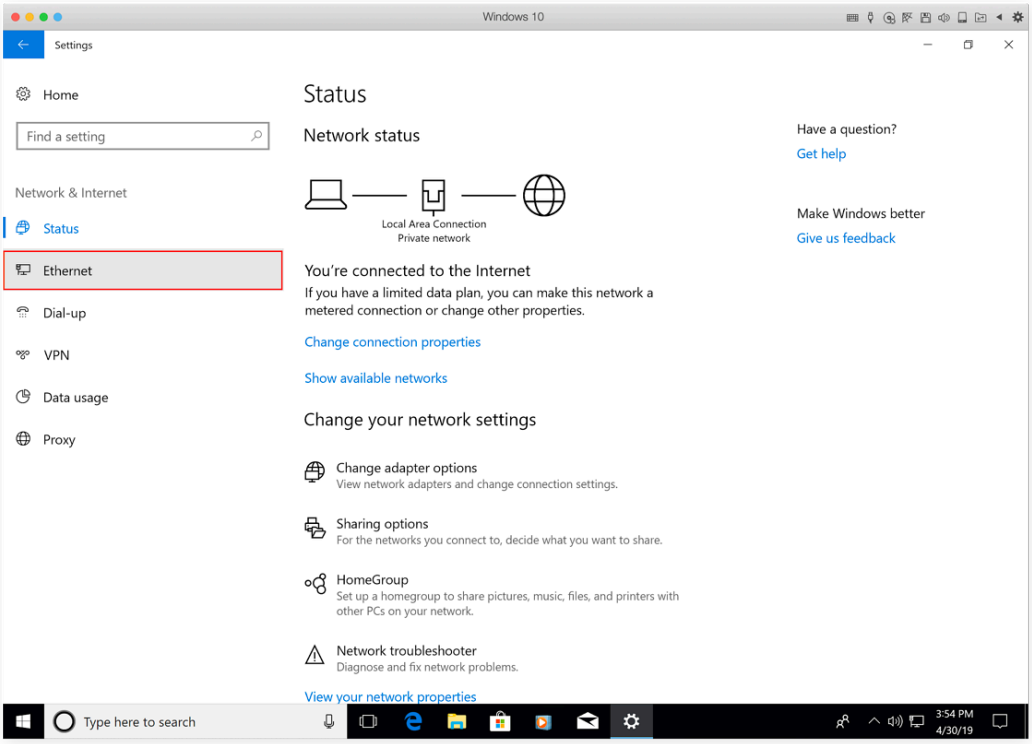
***Here's how to find your local IP address in Windows 10**:*

1. *Right-click on the Windows logo in the lower-left corner of your screen and select "Settings."*

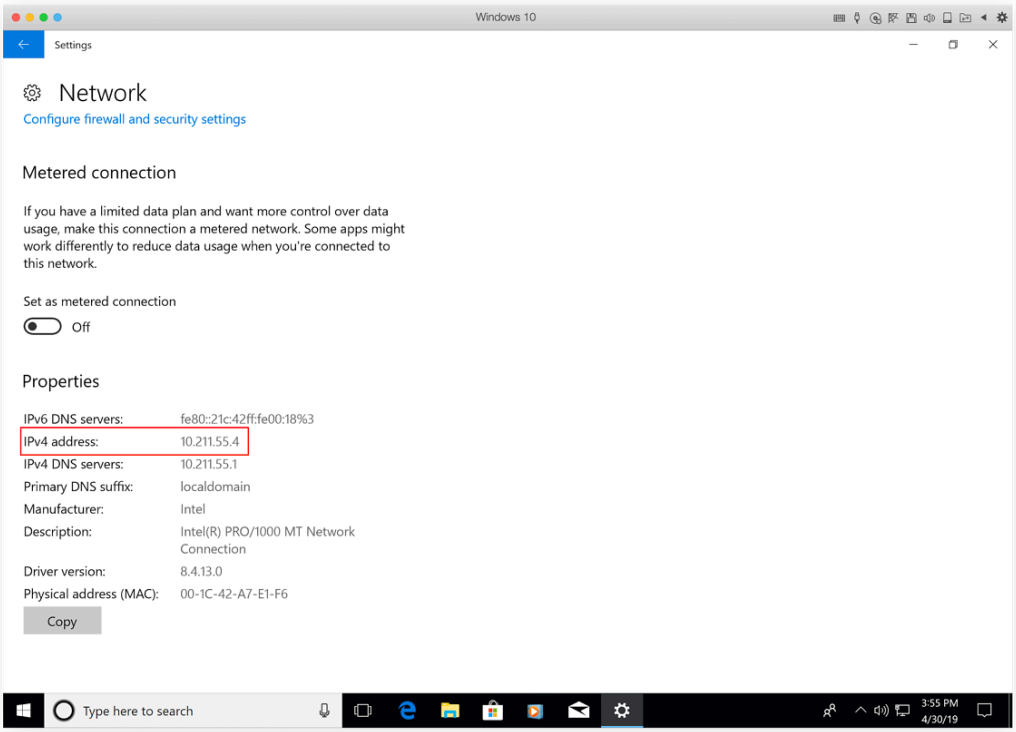
2. *Click "Network & Internet."*



3. *Select "Wi-Fi" or "Ethernet" in the left-hand menu, depending on whether you're connected wirelessly or via an ethernet cable.*



4. *Click "Network" in the center column. Your IP address will appear in the next window, in the entry "IPv4 address."*



5.1.1.2 Windows 8/8.1

***Here's how to check your local IP address in Windows 8 or Windows 8.1**:*

1. *Click the Network Connection icon and select "Open Network and Sharing System."*
2. *Double-click "Wireless Network Connection." Or, if you're using a wired connection, double-click "Local Area Connection."*
3. *Click "Details" and your IP address will appear.*

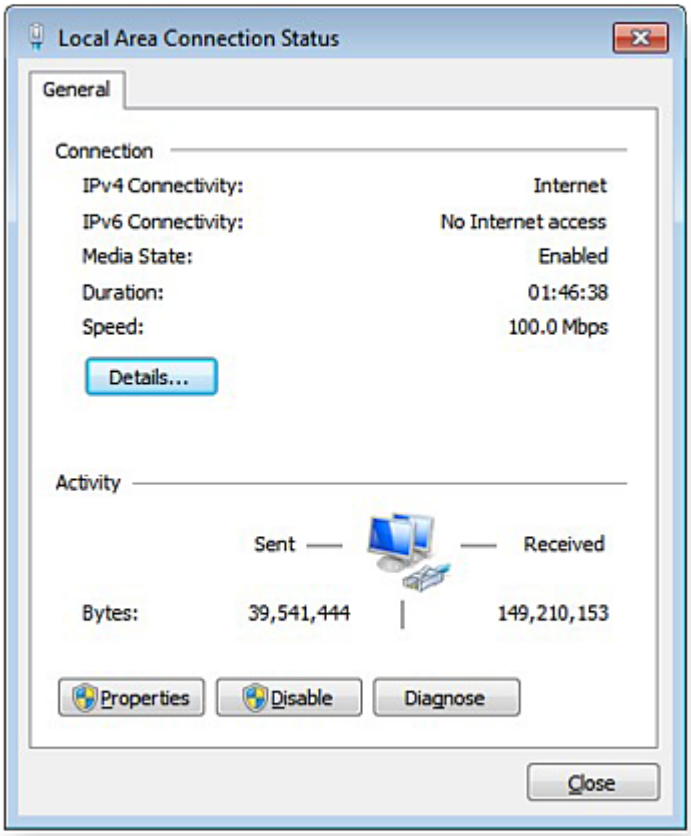
5.1.1.3 Windows 7

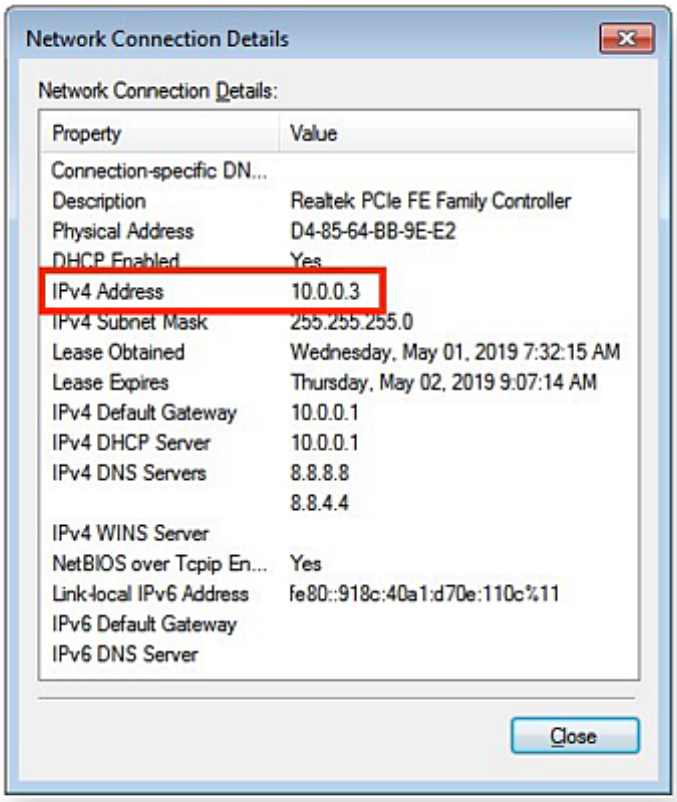
***Here's how to find your computer's local IP address in Windows 7**:*

1. *Click the Network Connection icon and select "Open Network and Sharing Center."*

2. *Double-click "Wireless Network Connection" or "Local Area Connection" for wired connections.*

3. *Click “Details” and your IP address will appear.*





5.1.1.4 Windows Vista

Here's how to find your computer's local IP address in Windows Vista:

1. *Open the Windows Start menu and right-click "Network."*
2. *Click "Properties."*
3. *Click "View Status" to the right of "Wireless Network Connection," or "Local Area Connection" for wired connections.*
4. *Click "Details" and look for the IP address in the new window.*