BUTLER PRO

Warnings

⚠ This instruction is an integral part of the booklet of the appliance on which is installed. Please consult this booklet for general warnings and fundamental safety rules.

⚠ For a rapid and right assembly of the components follow carefully the sequences described in the various sections.

Description

Butler Pro is the complete system control unit without display for installation in the electrical panel of the heat pump or home.
It can be used to set and manage the entire system using smartphone, tablet or computer through an Internet connection.
Butler Pro is provided in two versions:
- Accessory fitted and tested at the factory
- Separately supplied accessory

Functions

Integrated functions:
- Control of up to 10 independent climate zones and 31 elements
- Management of the radiant heating system and radiators
- Room temperature control
- Summer and winter climate control
- Daily and weekly time programming of individual zones
- Regulation and programming of air renewal and purification

- Regulation and programming of domestic hot water production
- Customisable comfort profiles: temperature, fan speed, etc.
- Display of heat pump consumption (with Energy Monitor kit installed, optional accessory)
- Remote management via app
- Remote service management for displaying and modifying functional parameters

Connectivity:
- Ethernet port for connecting to the Internet via the router in the installation
- 3 RS485 ports (Modbus RTU) for connecting devices on a serial line via AWG22 two-wire shielded cable

Coding

ESW737II: Butler Pro

Accessories to be ordered separately

GR1128II: 12 V DC power supply

Standard supply

The accessory is supplied as follows:

Accessory fitted and tested at the factory
1 Butler Pro complete with power supply, wiring and On-Off button
1 Instruction sheet

Separately supplied accessory
1 Butler Pro
1 Instruction sheet
3 Circuit-closing resistors

Installation of the separately supplied accessory

The module must be installed in a suitable control cabinet and mounted on a 35 mm DIN rail.
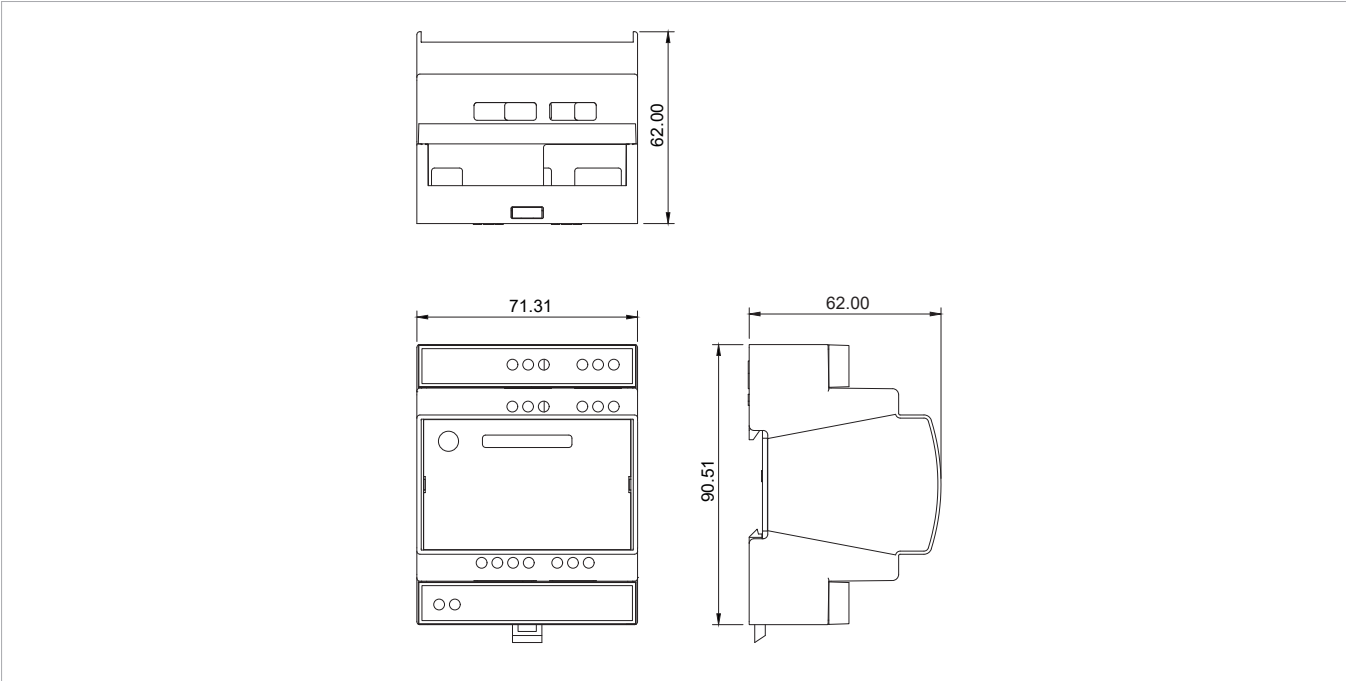
Electrical connection of the separately supplied accessory

The electrical connection of the separately supplied accessory Butler Pro must be established directly on the device.

Connection terminals

COM 1	Heat pump connection
COM 3	Accessory connection (Energy Monitor, etc.)
COM 2	Terminal network connection (fan coil units, zone controls, etc.)
L1	Status LED
OUT1	Potential-free output
OUT2	Potential-free output

IN1	Potential-free input
IN2	Potential-free input
LAN	Local network Ethernet connection
SRV 1	Not used
L2	Not used
SD	Not used
USB	Not used
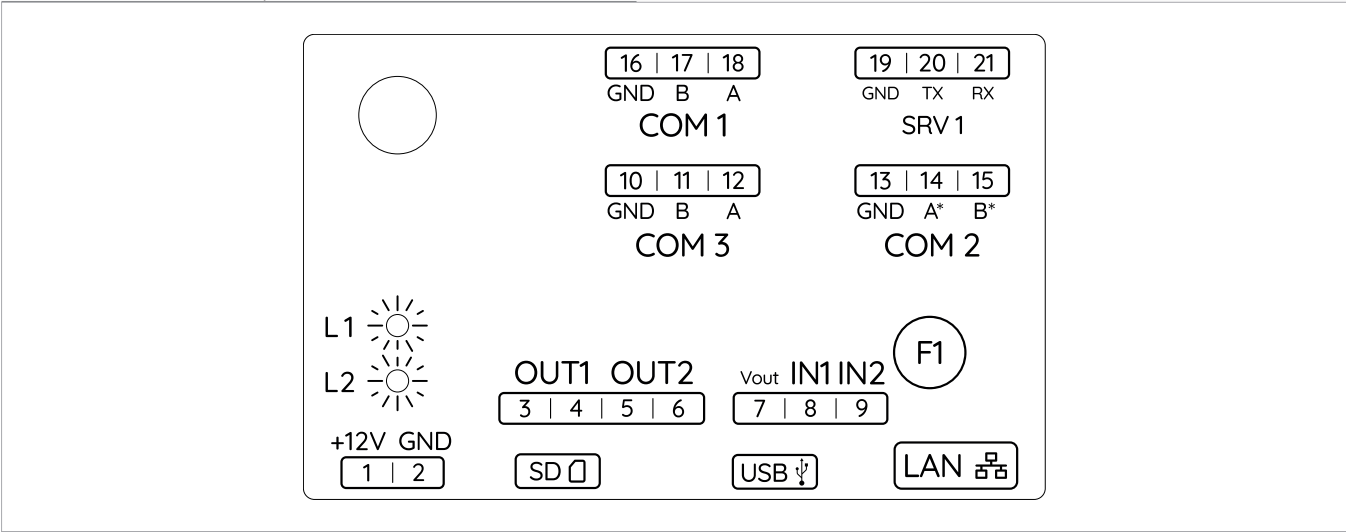
Description of contacts

1 - 2: 12-24 DC < 5 W power supply connection.

17 - 18: heat pump connection.

14 - 15: terminal network connection (fan coil units, zone controls, etc.).

11 - 12: accessory connection (Energy Monitor, etc.).

20 - 21: not available.

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3 - 4:   potential-free output contact connection.

5 - 6:   potential-free output contact connection.

7 - 8:   potential-free input.

7 - 9:   potential-free input.

Meaning of the LEDs

The LED flashes to indicate its status:
- **STATUS OK**: 1 green flash per second, product in operation
- **STATUS ERR**: 2 quick green flashes every 5 seconds, error concerning the product
- **STATUS RST**: 4 quick green flashes every 10 seconds, product partially reset
- **STATUS RSFULL**: 3 quick flashes every 10 seconds, product completely reset
- **STATUS RSTNET**: 2 quick green flashes, network reset

Connection diagram

1.	Butler Pro	**5.**	MZS single zone module
2.	Heat pump	**6.**	Electronic board on the machine
3.	Wall-mounted thermostat series	**7.**	Energy monitor
4.	Terminal electronic board	**8.**	Jumper RTU
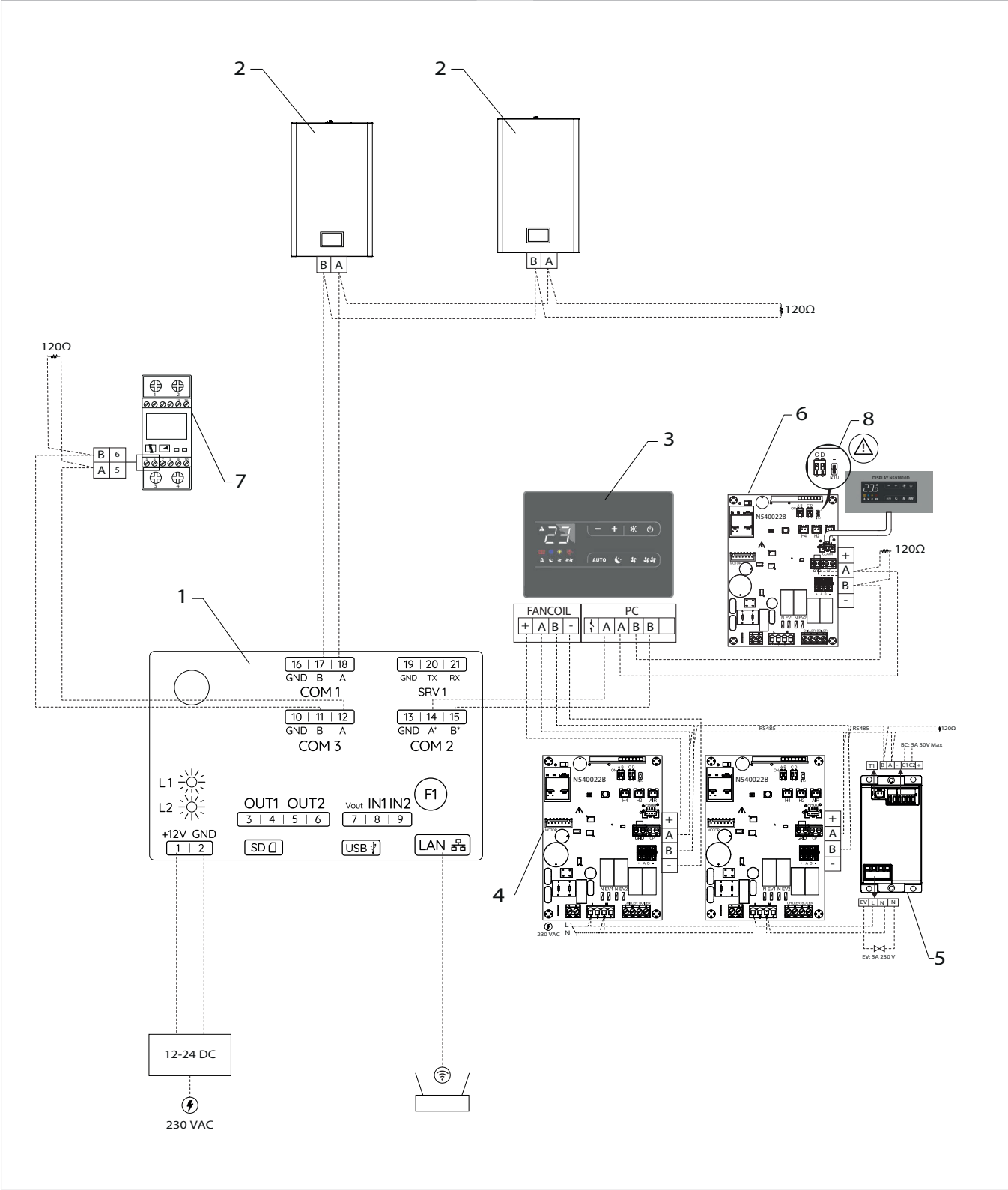
⚠ In case of connection with kit ESE645 - ESE648 - ECA644 - ECA647 must be positioned the RTU jumper provided.

⚠ Only Butler Pro is supplied in this version. The installer is responsible for any further components.

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Compatibility for terminal controls and generators

Generators (heat pumps, VMC)	
STØNE	all versions
eHPoca	
3in1	Only versions with INN-RDC-02 control
3in1 incasso	
Terminals (fan coils)	
Controls on the machine	ECA644II
	ECA647II
Wall-mounted control panels	EDA649II
	EDB649II
Electronic boards	ESE645II
	ESE648II

Electrical connection of the accessory fitted and tested at the factory

The electrical connection of Butler Pro the accessory fitted and tested at the factory must be established on a terminal block located in the electrical cabinet of the machine.

Connection terminals

A2-B2	COM 2. Terminal network connection (fan coil units, zone controls, etc.)
A3-B3	COM 3. Accessory connection (Energy Monitor, Wattmeters, etc.)

Connection diagram

1.	Terminal block for wiring
2.	Wall-mounted thermostat series
3.	Terminal electronic board
4.	MZS single zone module
5.	Electronic board on the machine
6.	Energy monitor

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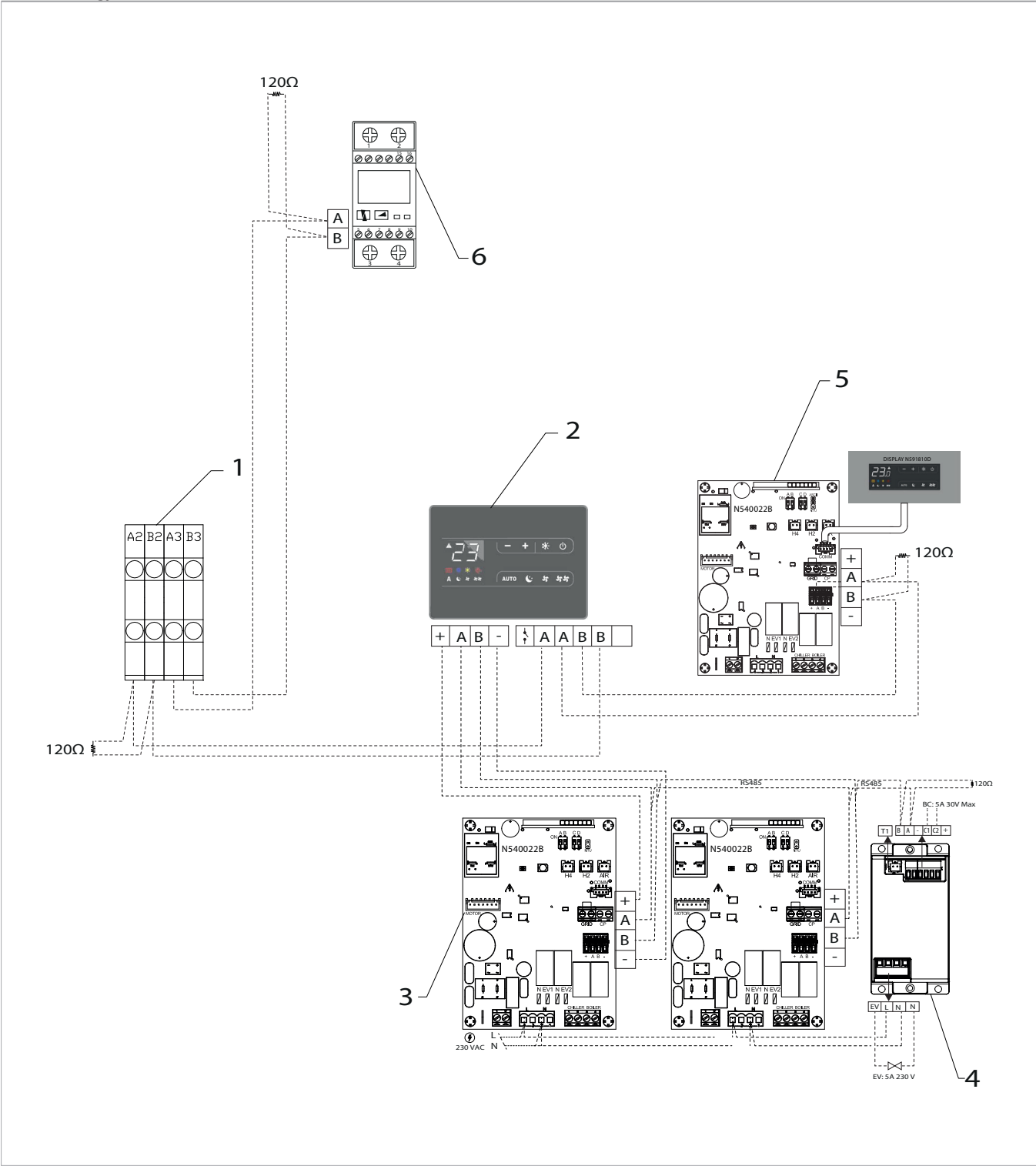
Connection

For the connection:
- remove a portion of the insulation from the end of the cable
- follow the indication on the connection diagram
- insert the cable into the spring terminal
- insert the cable completely

⚠ The spring terminals allow the connection of rigid or flexible cables with sections from 0.2 to 1 mm². For cables provided with lugs with plastic collar the maximum section is reduced to 0,75 mm².

For RS485 serial connection:

⚠ Use a two-core cable suitable for RS485 serial connection with a minimum cross-section of 0.35 mm².

⚠ Keeping the bipolar cable separate from power supply cables.

⚠ Chase out the wall in order to minimize the length of the leads.

⚠ Complete the line with the 120 Ω resistance.

⊖ It is forbidden make "star" connections.

Set-up

To connect
- use a network cable
- connect the LAN port to a PC
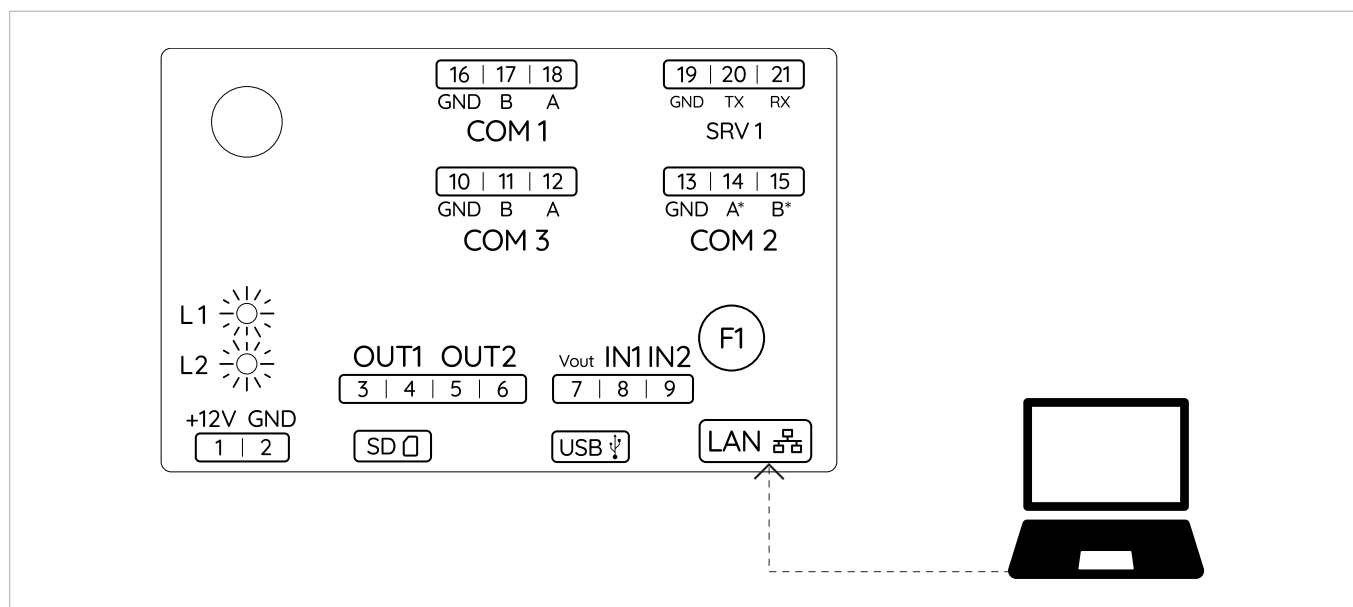
Configuring the connection on the PC

⚠ Before proceeding with the configuration, it is advisable to take note of the current network settings to be able to restore them at the end of the procedure.

⚠ Restore previous network settings after the procedure is complete.

⚠ The following steps apply to Windows 10 operating system. The procedures listed below may vary according to the operating system you are using.

Procedure for Windows
- *On the Start menu*
- select the gear icon to access the Settings menu
- select Network and Internet
- *On the side menu*
- select Ethernet
- select Unidentified network/identification in progress...
- *IP Settings, IP Assignments*
- select Edit
- *The screen for changing IP settings will be opened*

- select Manual
- IPv4
- fill in the configuration data

Configuration data:
- IP address: 10.154.132.2
- Subnet prefix length: 24
- Gateway: 10.154.132.1
- DNS: not necessary

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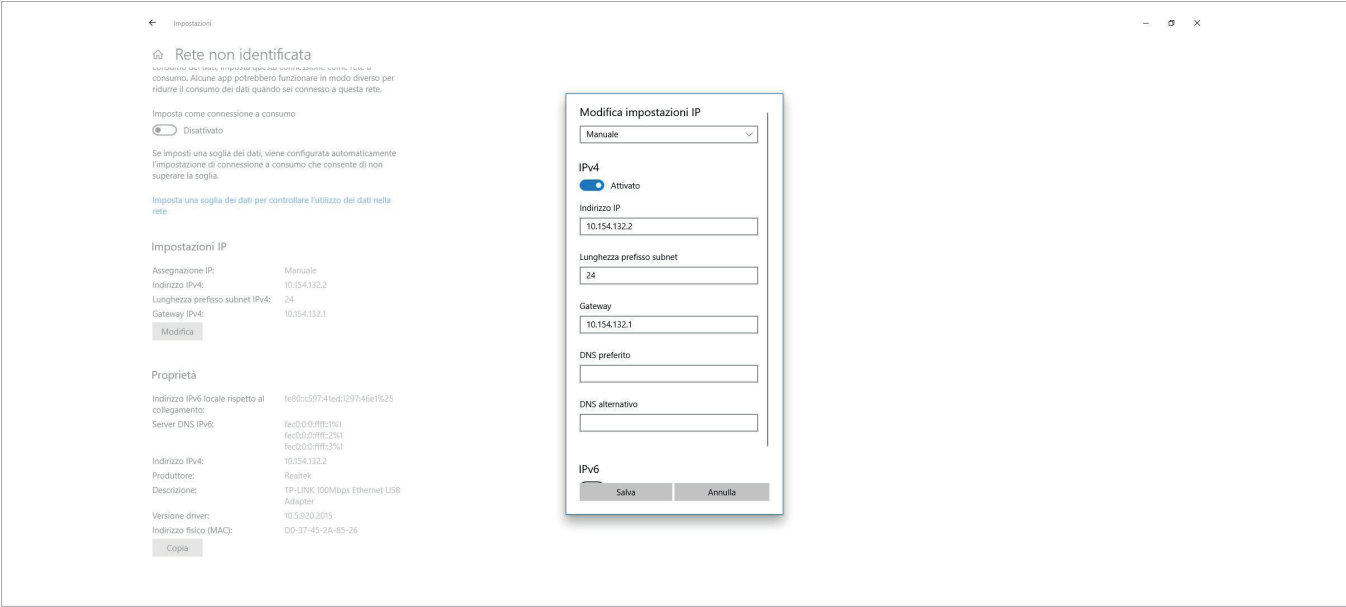
Procedure for MacOS

From Applications
– select System Preferences
– select Network
On the side menu
– select the LAN connection
The screen for changing IP settings will be opened

– select Configure IPv4: Manually
– fill in the configuration data

Configuration data:
• IP address: 10.154.132.2
• Subnet mask: 255.255.255.0
• Router: 10.154.132.1
• DNS: not necessary
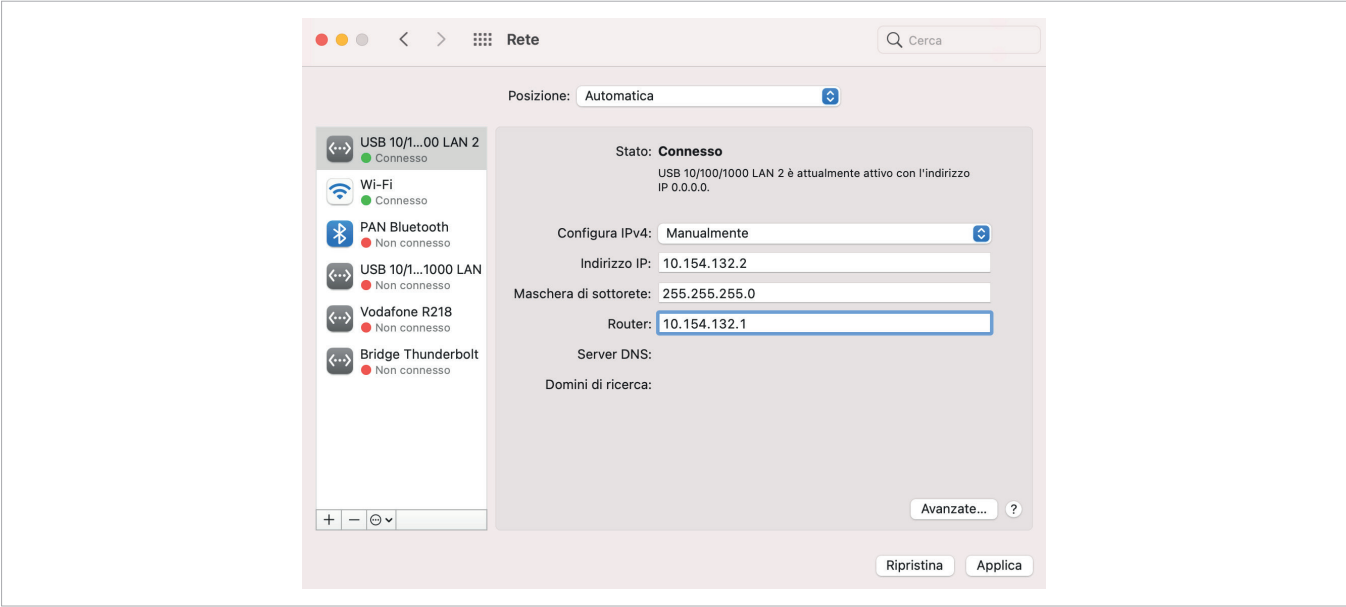
Connecting to the product

– open a browser on the PC
– enter the connection address

Connection address:
• http://10.154.132.1
The device is connected
The device search screen appears

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Add a new device

Automatic search

When searching for all connected devices present.

Let's go

Add manually

In case the device should be configured manually.

Let's go

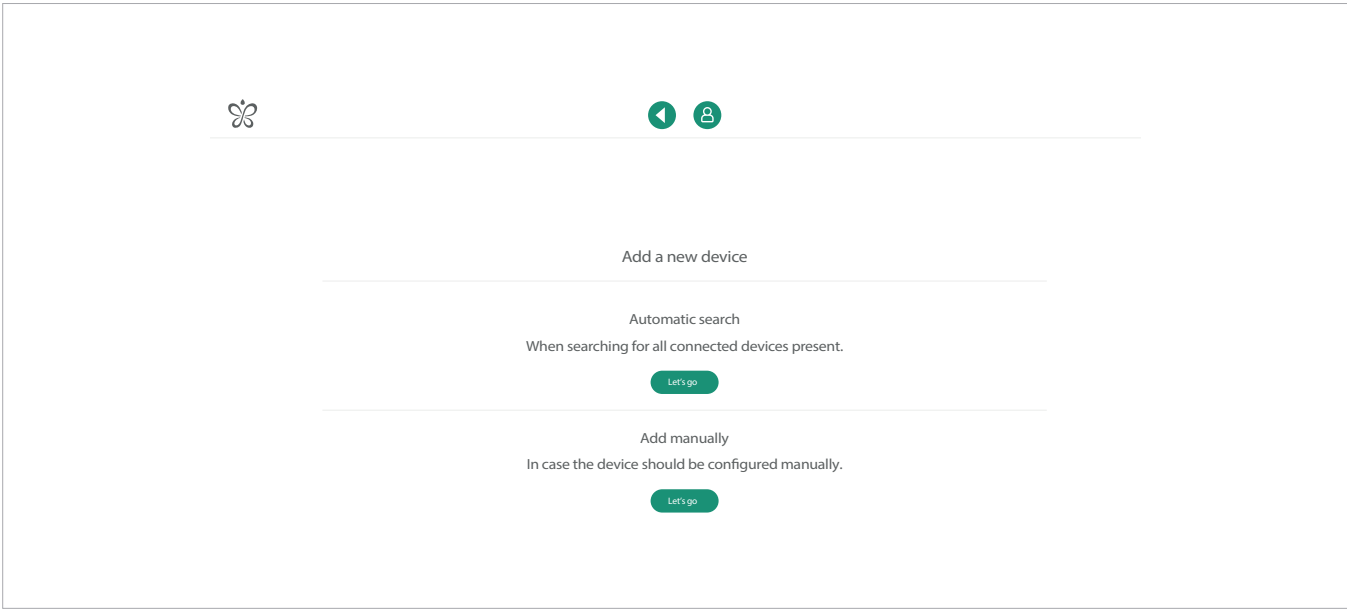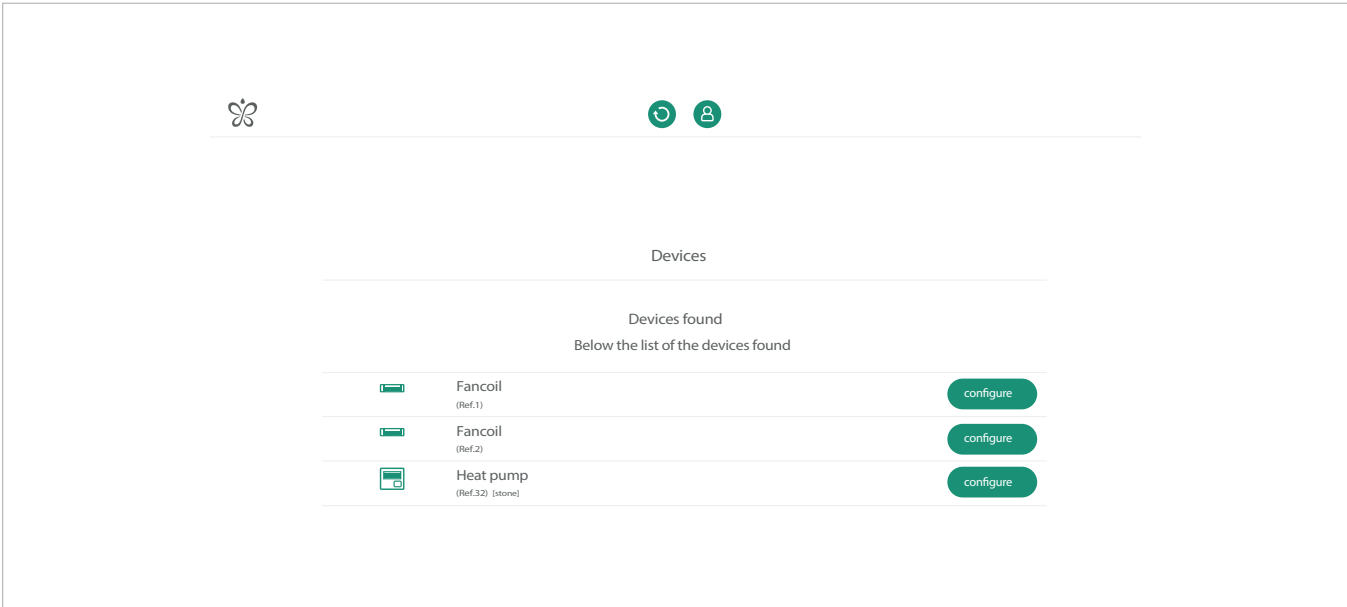## To add a device

⚠ Check that the Modbus addresses of the units are set correctly before proceeding with the configuration of the fan coil units. Refer to the specific manuals of the devices.

– select Automatic search
– press Start
  The system searches for connected compatible devices.

Equipment is divided into two types: generators and terminals. For identification, refer to the table "Abbinamento prodotti" 5.

Devices

Devices found

Below the list of the devices found

	Fancoil (Ref.1)		configure
	Fancoil (Ref.2)		configure
	Heat pump (Ref.32) [stone]		configure

Generator configuration
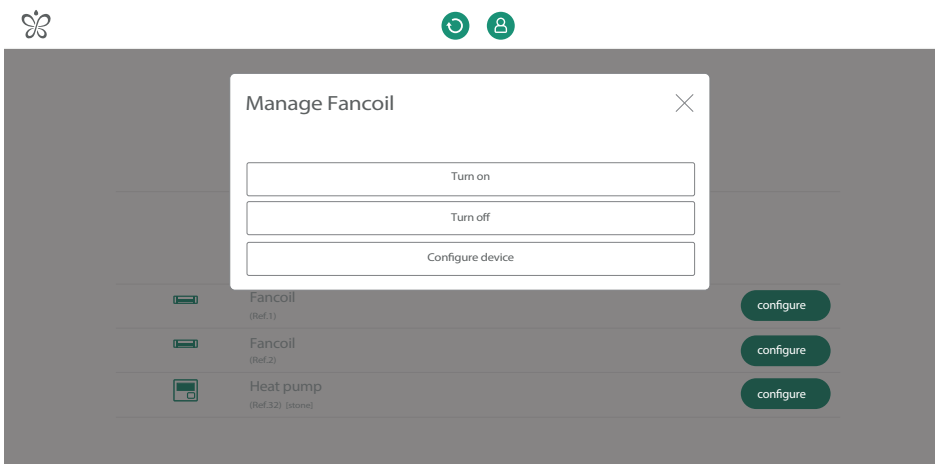
– press Configure
– enter the name you want to give the device
– save
  The device is configured

– press OK to return to the list of devices to be configured
– repeat the operation for each device

Terminal configuration

– press Configure
  The Manage Fan Coil Unit screen will appears. This can be used to select On or Off and view which of the fan coil units you are configuring.

After identifying the device
- select Configure device to continue
- select the room where the device is located or add a new room
- enter the name you want to give the device
- save
  The device is configured

- press OK to return to the list of devices to be configured
- repeat the operation for each device

⚠ Use on/off to visually identify the device you are configuring.

⚠ All added devices are matched to the default Calendar with Comfort setting by default.

⚠ (Ref.1) refers to the Modbus address of the set device.

Configuration

⚠ Refer to the manual **InnovApp** for how to search for devices connected via WiFi.

Generators working temperature configuration

You must log in as an installer to carry out the configuration.
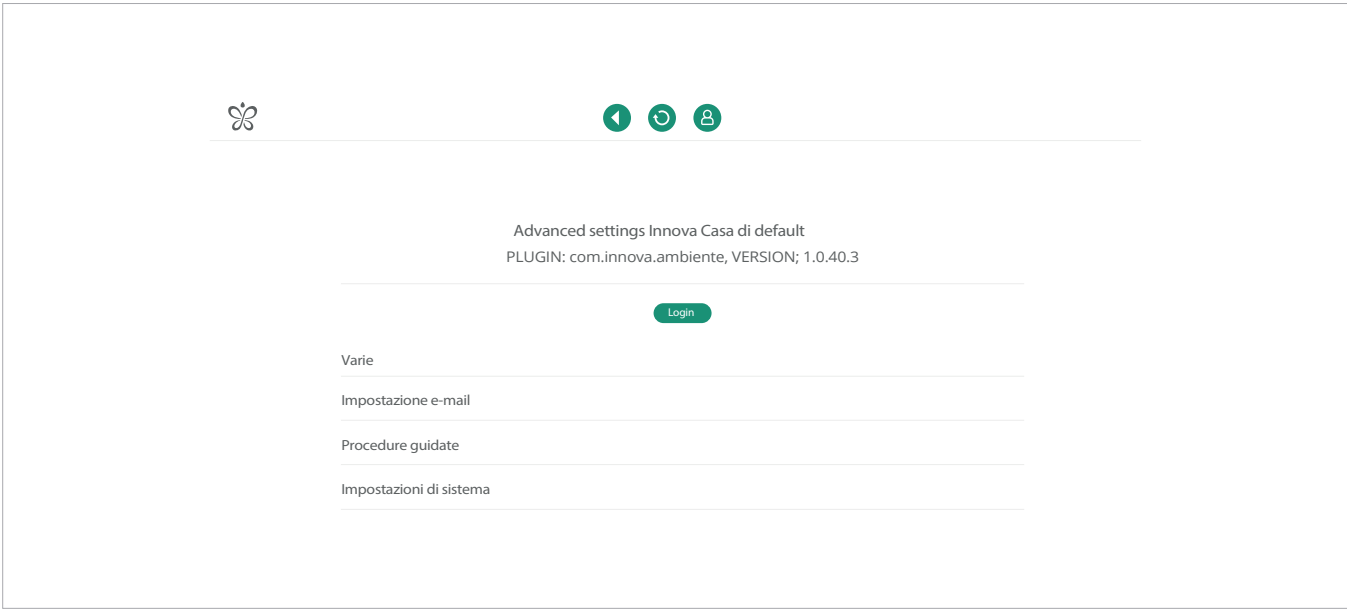
Access to Advanced settings

From the Settings menu ⚙
- select Advanced settings
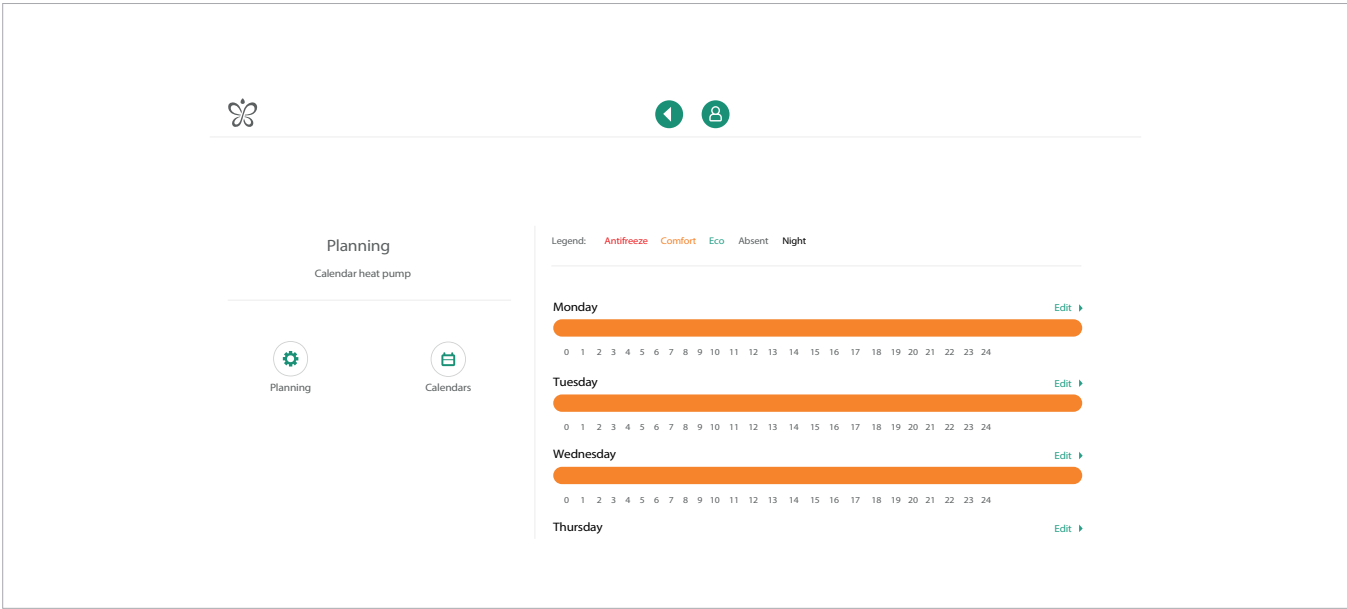- login
  Login *as installer*

Credentials
• Username: setup
• Password: innova

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Advanced settings Innova Casa di default
PLUGIN: com.innova.ambiente, VERSION; 1.0.40.3

Login

Varie

Impostazione e-mail

Procedure guidate

Impostazioni di sistema

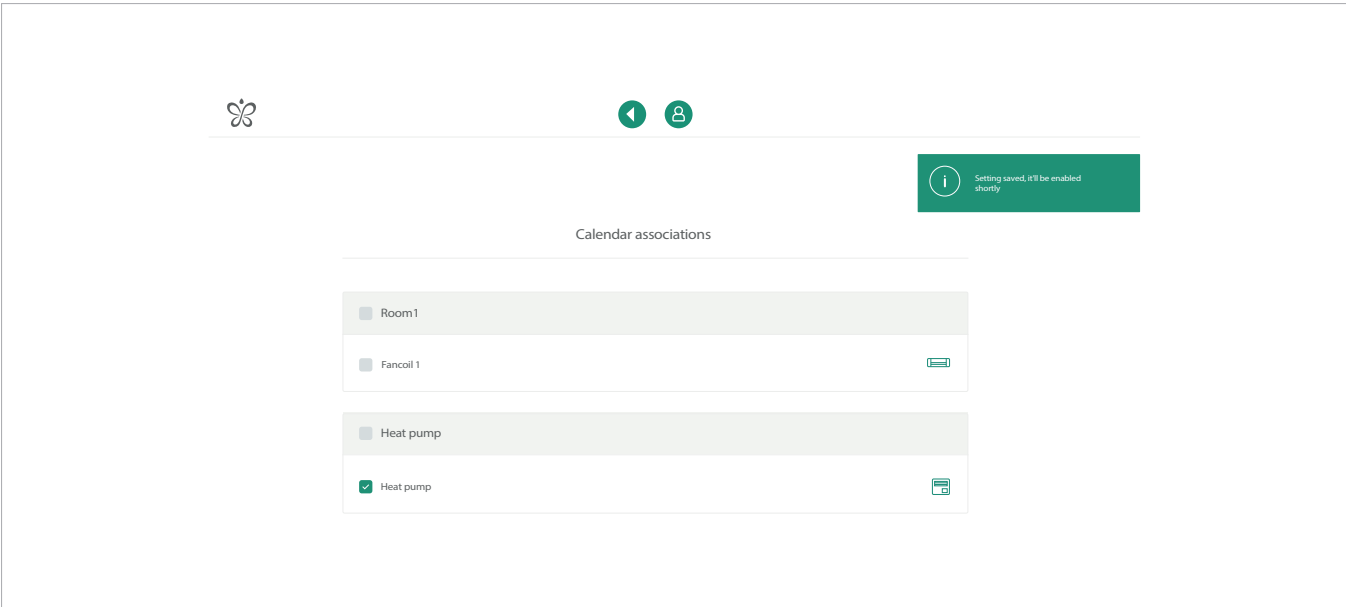## Creating a new calendar

⚠ A specific work schedule must be created in the presence of a heat pump.

⚠ All added devices are matched to the default Calendar with Comfort setting by default.
  – press the logo to go back to the home screen
    On the home screen

  – select Programming 🗓
  – select New calendar
  – enter the name of the new calendar
  – save
    Direct access to the calendar programming screen

Planning
Calendar heat pump

⚙ Planning   🗓 Calendars

Legend: Antifreeze   Comfort   Eco   Absent   **Night**

Monday   Edit ▶
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Tuesday   Edit ▶
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Wednesday   Edit ▶
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

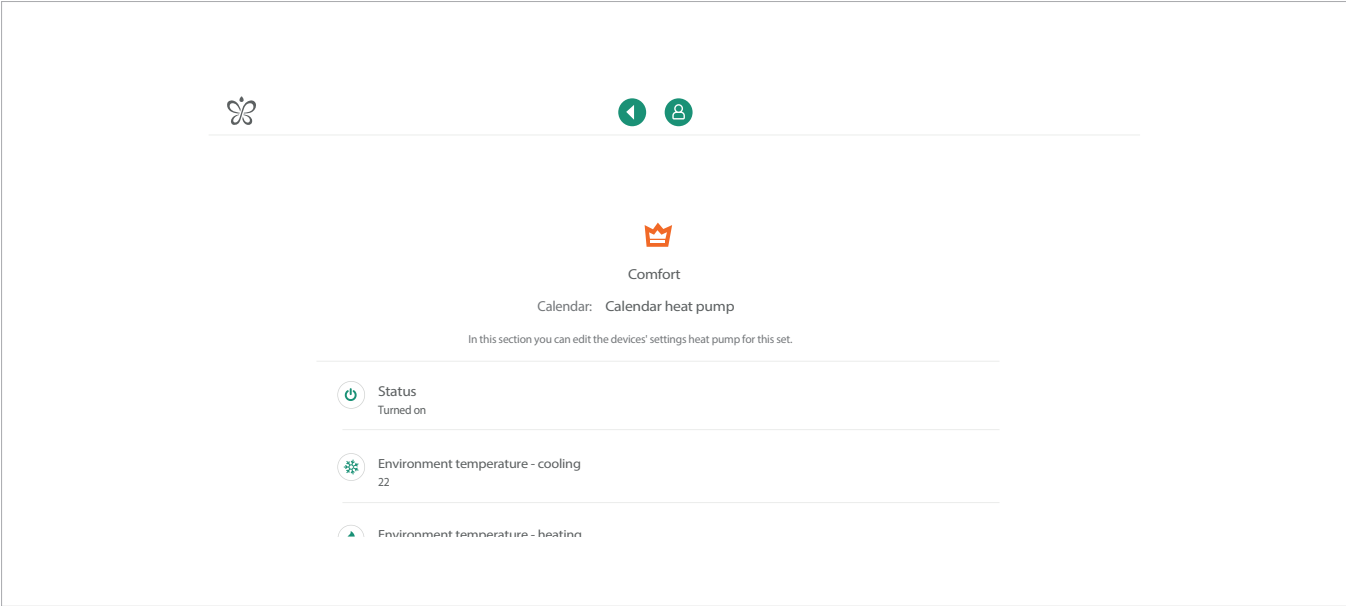**Thursday**   Edit ▶

Matching the calendar to the device

- select settings ⚙
- select Installations, rooms and associated devices
- select the device to be associated

⚘   ◀ 👤

                                                              ⓘ Setting saved, it'll be enabled
                                                                 shortly

Calendar associations

☐ Room1

☐ Fancoil 1   ▭

☐ Heat pump

☑ Heat pump   ▭


Temperature configuration

- go back to the calendar programming screen
  On the calendar programming screen

- select the Comfort setting
- configure working temperatures
- press the icon of the temperature you want to configure
- select the correct temperature from the list

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⚘   ◀ 👤

                                    👑

                                 Comfort

                    Calendar: Calendar heat pump

            In this section you can edit the devices' settings heat pump for this set.

        ⏻ Status
           Turned on

        ❄ Environment temperature - cooling
           22

        ▲ Environment temperature - heating

Energy Monitor Configuration

On the home screen
- select Settings ⚙
- select Settings com.innova.energymonitor
  This takes you to the Advanced Energy Monitor Settings screen.

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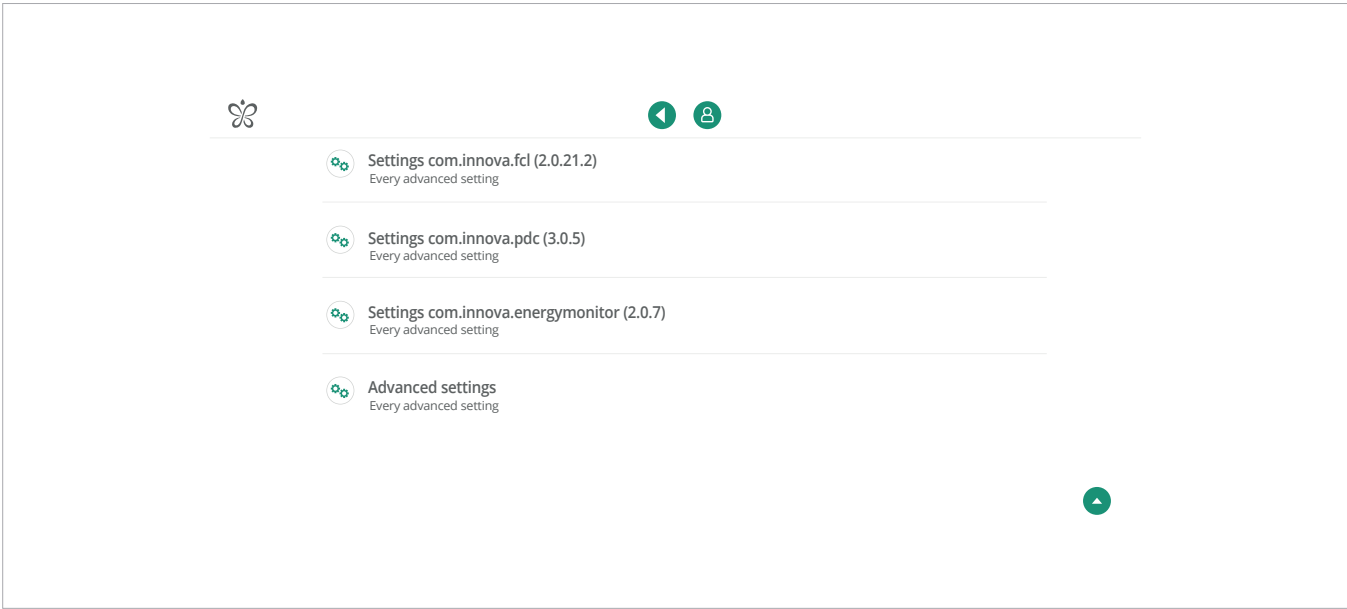
Categories
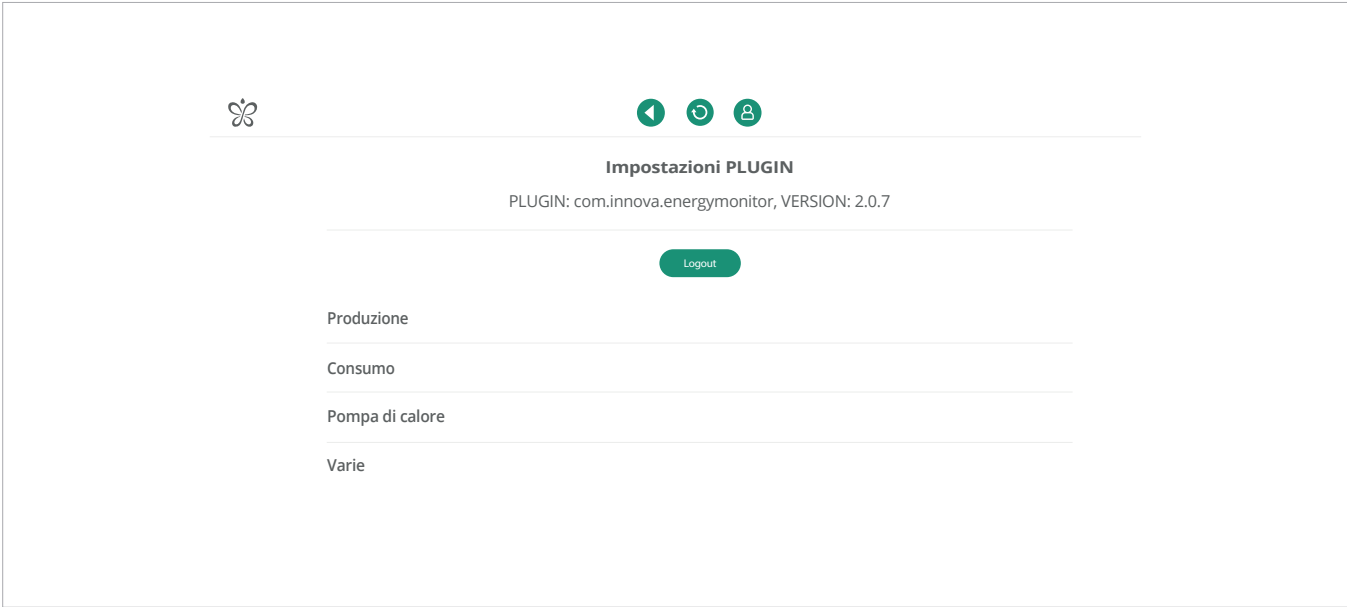
Production: Associate an Energy Monitor to the production of energy of the house (eg solar panels)

Consumption: Associates an Energy Monitor to the general consumption of the house (utilities, etc...)

Heat Pump: Associates an Energy Monitor to the consumption of the heat pump

⚠ Configure each section by setting the type of Energy Monitor used and its usage.

Configuration
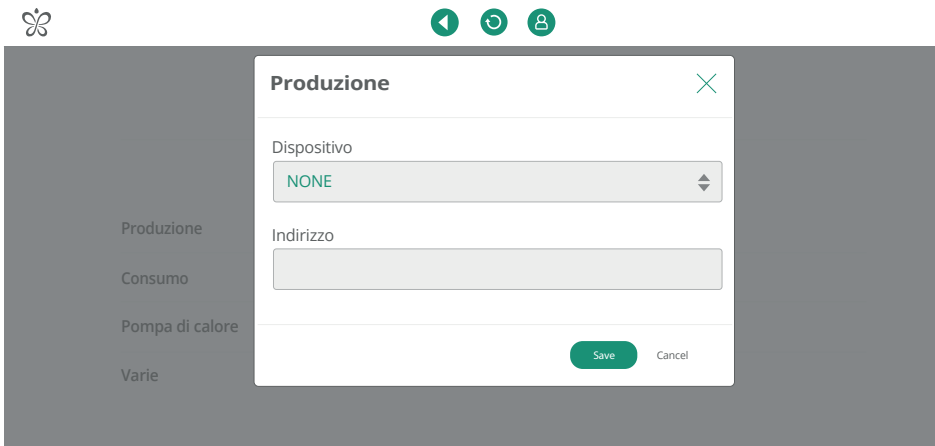
- – select category
- – set the type of Energy Monitor
  Select a type from the proposed list.
- – set the modbus address
- – save to confirm the configuration
  This returns you to the Advanced Energy Monitor Settings screen.

⚠ Energy Monitor modules are supplied from the factory with address 001. A maximum of three modules can be connected to the same Butler. In this case it is necessary to configure different Modbus addresses (e.g. 002, 003, ...) for the various modules.

⚠ Refer to the accessory manual for Modbus address configuration.

Types of Energy Monitors:

None: No Energy Monitor installed for this category.

SDM230: EMM - Single Phase Energy Monitor

SDM630: EMT - Three Phase Energy Monitor

SDM630_L1: Three Phase Energy Monitor, only the first phase L1 is used for this category

SDM630_L2: Three Phase Energy Monitor, only the first phase L2 is used for this category

SDM630_L3: Three Phase Energy Monitor, only the first phase L3 is used for this category

Conclusion

Finish the configuration procedures:
· log out from Advanced settings
· disconnect the mains cable of the device

⚠ For all other settings, refer to the manual **InnovApp**.

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