

# NEXPOLAR – USER INTERFACE

**RIELLO**

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Certain parts of the booklet make use of the following symbols:



= for activities that require particular caution and suitable preparation



= for activities that must not be performed under any circumstances

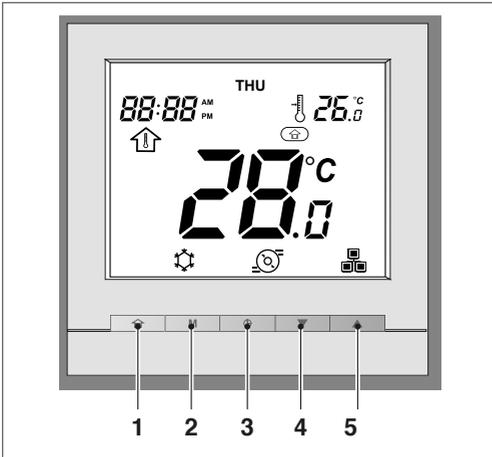


**At the end of its life, the product should be not be disposed of as solid urban waste, but rather it should be handed over to a differentiated waste collection centre.**

# 1 QUICK START-UP

## 1.1 Important

-  The system is controlled by an interface on board the machine, which can also be installed inside the home.
-  This manual provides the guidelines for the proper use of this interface.



No.	ICON	DESCRIPTION
1		Home
2		Mode
3		Program
4		Down
5		Up

## 1.2 Main characteristics

### Heating / Cooling

Based on the unit, the system can function in either cooling or heating mode.

### Home button

The **Home** button allows the system to be easily set to function in the following modes:

ICON	DESCRIPTION
	Home
	Sleep
	Away

Based on the system's configuration, the room temperature or water temperature will always be shown on the display.

ICON	DESCRIPTION
	This icon indicates that the system is controlled based on the room temperature.
	This icon indicates that the system is controlled based on the water temperature.

### Program button

The **Program** button allows the user to set a series of operating parameters predefined by the unit (heating/cooling setpoint...), for a certain period of time. The program can always be modified if necessary.

### Viewing additional data

In addition to the standard display mode, other parameters that provide information on the unit's general status can also be easily displayed.

**Freeze protection start**

This parameter is used to maintain a minimum room temperature. When the temperature drops below a threshold defined by the user, the unit activates the heating function in order to protect the building against freezing temperatures.

**Water freeze protection**

This parameter is used to protect the water pipes against freezing temperatures when the temperature of the outside air is extremely low.

**Alarms**

The alarms are used to notify the user of potentially hazardous situations that could result in malfunctions to the unit.

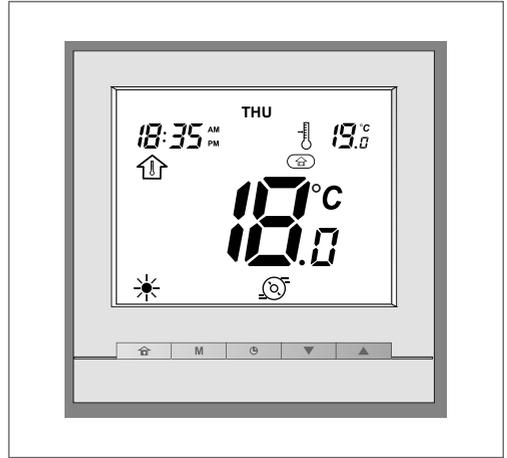
**Domestic Hot Water Option (DHW)**

DHW mode allows the system to control the production of hot water, provided that the heat pump system is equipped with a domestic hot water accumulation tank and a DHW diverter valve.

**The master/slave control option** allows the system to control up to four units.



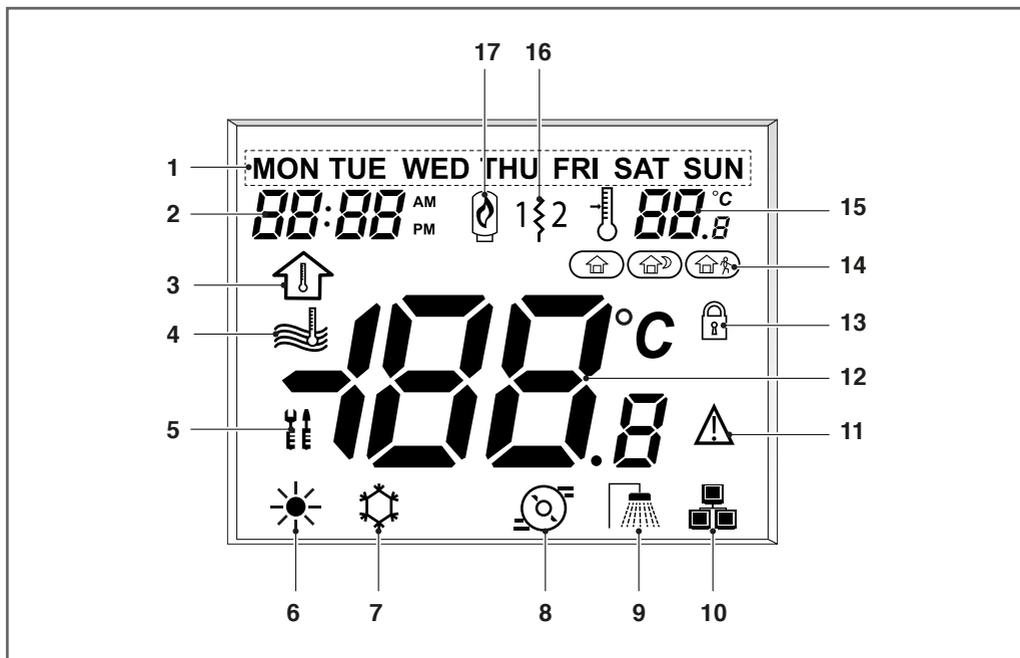
For the configuration of the parameters, please contact the Technical Support Service.

**HOME SCREEN**

The home screen's display may vary based on the unit's configuration:

- Heating / cooling / DHW mode
- Supplementary heating: boiler or electric heating
- Home mode: Home / Sleep / Away
- Monitoring of the air temperature (room temperature)
- Water temperature control

## 2 DISPLAY



NOTE: When the user interface's backlighting is off, it can be turned on by pressing any key.

No.	ICON	DESCRIPTION
1	FRI	<b>Days of the week</b> Monday - Sunday
2	00:00 AM/PM	<b>Clock</b> Clock format 12 or 24 hours
3		<b>Room temperature</b> The system's control is based on the room temperature
4		<b>Water temperature</b> The system's control is based on the water temperature
5		<b>Advanced settings</b> The icon flashes when the password is required
6		<b>Heating mode</b> HEATING mode is enabled
7		<b>Cooling mode</b> COOLING mode is enabled

No.	ICON	DESCRIPTION
8		<b>Pump status</b> The pump is in function
9		<b>Domestic hot water mode (DHW)</b> DHW mode is enabled
10		<b>Master/slave - Fixed icon</b> This interface is connected to the master unit and is used to control all the units in the same master/slave group
		<b>Master/slave - Icon flashing rapidly</b> This interface is connected to the slave unit and is controlled by the commands sent by the master
		<b>Master/slave - Icon flashing slowly</b> Master/slave communication error
11		<b>Alarm - Fixed icon</b> Alarm condition detected; the unit has stopped
		<b>Alarm - Flashing icon</b> Alarm condition detected; the unit remains in function
12		<b>Viewing the temperature</b> Room temperature 
		Water temperature 
13		<b>Home mode block</b> The home mode is blocked
14		<b>Home mode</b> HOME mode is enabled
		<b>Home mode</b> SLEEP mode is enabled
		<b>Home mode</b> AWAY mode is enabled
15		<b>Setpoint</b> Temperature to be reached (room or water temperature)
16		<b>Active electric heater stage</b> Used in the event of a heat pump malfunction or low external air temperatures
17		<b>Boiler enabled</b> Used in the event of a heat pump malfunction or low external air temperatures

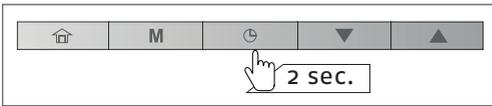
## 3 CONTROL UNIT PROGRAMMING

### 3.1 Setting the time and day

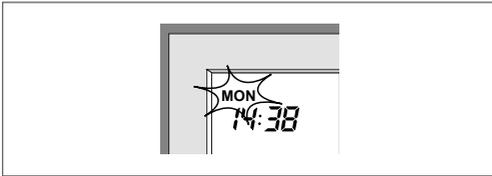
Prior to using any of the programming functions, it is necessary to set the date and time on the control unit.

**In order to configure the display of the time and day, do the following:**

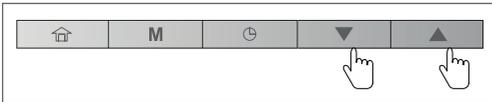
- Access the configuration menu by pressing the **Program** button for 2 seconds.



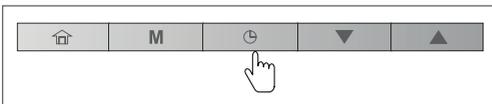
- The current day flashes.



- If necessary, press the **Up** or **Down** buttons to modify the day of the week.

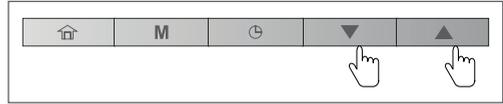


- Press the **Program** button to confirm the selection and move on to the next parameter.



- After having confirmed the day of the week, set the time format.

- To modify the time format, press the **Up** for **Down** buttons.



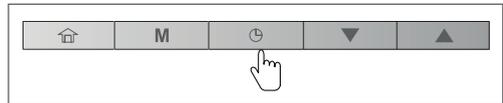
#### 12 hour format



#### 24 hour format



- To confirm the displayed format, press the **Program** button.



#### Example: 12 hour display format

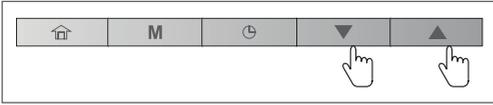


#### Example: 24 hour display format

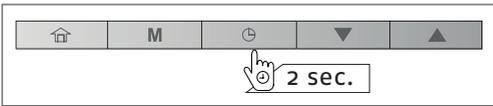


- After having confirmed the time format, set the time

- To set the time, press the **Up** or **Down** buttons.



- Once the hour has been selected, press the **Program** button to confirm. Afterwards, set the minutes and press the **Program** button to confirm.
- Confirm all the modifications by holding down the **Program** button for 2 seconds.



### 3.2 Setting heating / cooling / DHW only / off mode

The display of the operating mode depends on the unit's configuration and the user settings.

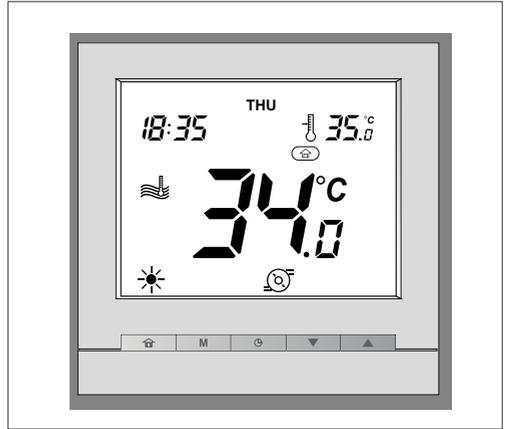
ICON	DESCRIPTION
	<b>Heating</b> The heat pump heats the water circuit to the selected setpoint temperature.
	<b>Cooling</b> The heat pump cools the water circuit to the selected setpoint temperature.
	<b>Domestic hot water only</b> The heat pump is used to provide domestic hot water. The cooling and heating modes are disabled.

- In order to select the desired operating mode (heating, cooling, or DHW), press the **Mode** button repeatedly.



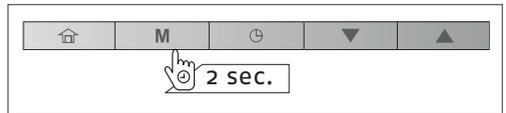
- The icon corresponding to the selected mode will be displayed.

### Example:



<b>Mode</b>	Heating
<b>Home mode</b>	Home
<b>Temperature control</b>	Water temperature control
<b>Water temperature</b>	34°C
<b>Setpoint</b>	35°C

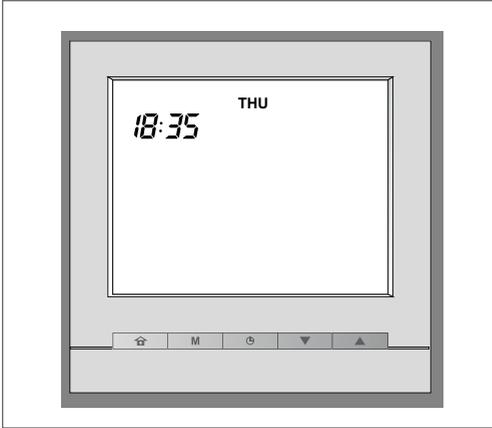
- In order to shut down the system, press and hold down the **Mode** button for 2 seconds.



- The unit will shut down, but the day and time will still be shown on the screen.

**!** When the unit is shut off, all the operating modes described above (cooling / heating / hot water only) are disabled.

**!** Do not deactivate the system's power supply, if this will ensure that the home freeze protection function and the water freeze protection function will remain available.

**Example:**

<b>Mode</b>	Off
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### 3.3 Setting Home / Sleep / Away mode

In order to optimize the building's energy efficiency, the control unit can be set with 3 various modes (Home, Sleep, Away), each with a predefined temperature interval. There are also 3 ways to define each mode's intervention.

#### A. PROGRAMMING

The user can set up to 8 time settings, each of which is defined by the following parameters:

- Activation time
- Mode type (Home, Sleep)
- Day or days of the week for which it is active

For more information, please refer to the section titled "Programming: Assigning the time frames for the heating and cooling modes".

#### B. MANUAL SETTINGS

The user can modify the mode directly from the screen. This setting will remain in effect until changed by the user.

- In order to select the mode, press the **Home** button repeatedly.



- The icon corresponding to the selected mode will be displayed.

ICON	DESCRIPTION
	The heat pump operates in Home mode and the Home setpoint is utilized.
	The heat pump operates in Sleep mode and the Sleep setpoint is utilized.
	The heat pump operates in Away mode and the Away setpoint is utilized.

#### C. MODE BLOCK

The selected mode can be blocked for a period of time specified by the user. All the programming will be ignored for the duration of this time frame.

##### In order to set the mode block time frame

- Press and hold down the **Home** button for 2 seconds.



- The duration of the Home / Sleep / Away period can be set in either hours or days. In order to set the number of hours / days, press the **Up** or **Down** buttons.

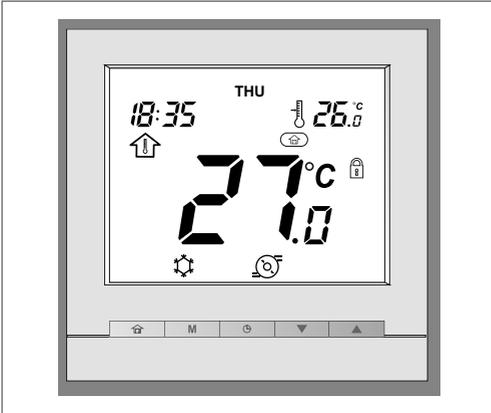


- To confirm, press and hold down the **Home** button for 2 seconds.



- The block icon will be displayed .

**Example: Home mode blocked**

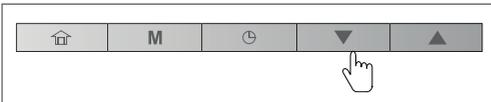


**To cancel the blocked status**

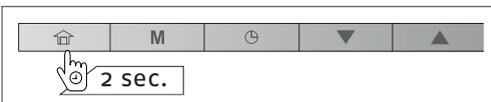
- Press and hold down the **Home** button for 2 seconds.



- The display will show the remaining time. Set the counter to "0" by pressing the **Down** button



- To confirm the operation, press and hold down the **Home** button for 2 seconds



- The block icon  will disappear, and the program will be reactivated.

**3.4 Current setpoint control: Temperature modification**

Two different configurations can be available:

- If the user interface is installed on the unit, the setpoint control is based on the water's output temperature.
- If the user interface is installed inside a room (remote user interface), the setpoint control is based on the room temperature.

Control type	Current setpoint
Local	Water setpoint
Remote	Air setpoint

In order to obtain improved comfort, the current setpoint can be adjusted based on the user's needs.

**To adjust the setpoint**

- To decrease the temperature, press the **Down** button.
- To increase the temperature, press the **Up** button.

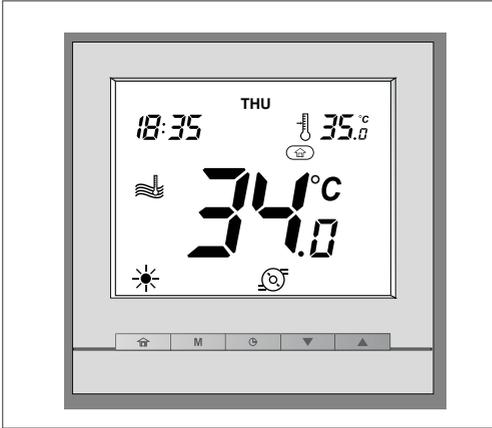


**NOTE:** After a predefined period of inactivity (with no button being pressed), the setpoint information (air or water temperatures to be reached) is obscured. By default, the time-out is 10 minutes.

Below are two examples

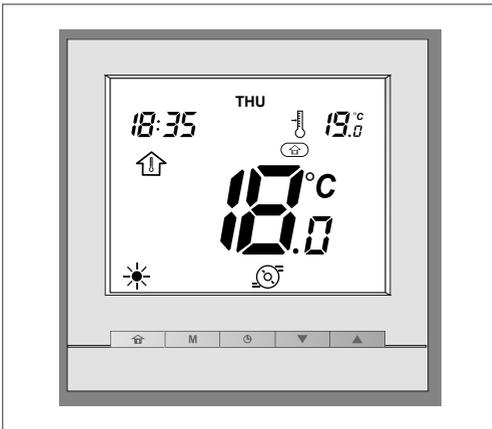
#### Example 1: water temperature control

In this case the output water temperature is equal to 34°C, while the setpoint is at 35°C.



#### Example 2: room temperature control

In this case the detected air temperature is 18°C, and the setpoint is 19°C.



### 3.5 Viewing the additional data: Unit general status

When the user interface is installed inside a room, the indoor air temperature and the air setpoint are normally shown on the display. For the interfaces installed on the machine, the display normally shows the water temperature and the water setpoint.

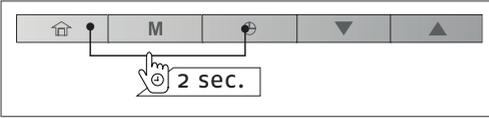
In addition to these temperatures, the control unit also offers the possibility of controlling other parameters, thus allowing the device's status to be monitored.

A list of these parameters (shown exclusively in read-only mode) is provided below

No.	Description	Parameter number
1	External air temperature	P001
2	Input water temperature	P003
3	Output water temperature	P004
4	Water setpoint temperature	P052
5	Saturated suction temperature	P008
6	Suction temperature	P009
7	Overheating temperature	P015
8	Overheating target temperature	P016
9	Discharge temperature	P010
10	Refrigerant Temperature	P005
11	Required compressor frequency	P022
12	Actual compressor frequency	P023
13	Water control point	P051
14	Flow switch status	P105
15	Flow switch status	P104

**To view the desired parameter**

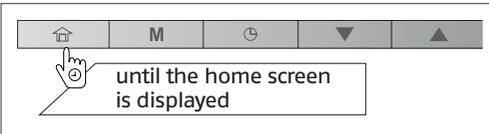
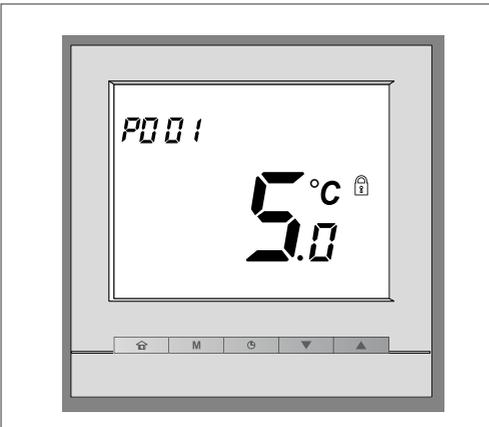
- Press and hold down the **Home** button and the **Program** button simultaneously for 2 seconds.



- The menu's first parameter will be displayed.
- Press the **Up** for **Down** buttons to move from one to the next.



- In order to exit the current screen, press and hold down the **Home** button until the initial screen appears on the display, or else wait 30s for the time-out to take effect.

**Example: external air temperature (parameter: P001)**

### 3.6 Programming: Assigning the time frames for the heating and cooling modes

The program function (program mode) allows the unit to be configured in such a way that it operates in a specific mode for a preset period of time. The system allows for the management of 8 different modes with defined time frames in which each changeover is determined by the day or days of the week, by the start time, and by the selected mode.

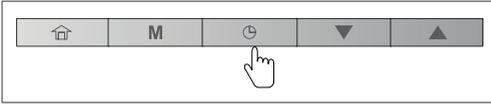
ID	Day of the week							Activation time	Mode		
	Mon	Tue	We	Thu	Fri	Sat	Dom		Home	Sleep	Away
1	x	x	x	x	x	x	x	06:00	x		
2	x	x	x	x	x			08:00			x
3				x				12:00	x		
4	x	x		x	x			17:00	x		
5	x	x	x	x	x			22:00		x	
6						x	x	23:00		x	
7								00:00			
8								00:00			

Day	Time (start time)											
	06:00		08:00		12:00		17:00		22:00		23:00	
Mon	■	■	■	■	■	■	■	■	●	●	●	●
Tue	■	■	■	■	■	■	■	■	●	●	●	●
We	■	■	■	■	■	■	■	■	●	●	●	●
Thu	■	■	■	■	■	■	■	■	●	●	●	●
Fri	■	■	■	■	■	■	■	■	●	●	●	●
Sat	■	■	■	■	■	■	■	■	■	■	■	■
Sun	■	■	■	■	■	■	■	■	■	■	■	■

■	Home
■	Away
●	Sleep

### Modifying the programming

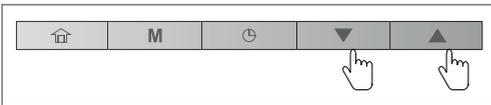
- To modify the programming, press the **Program** button



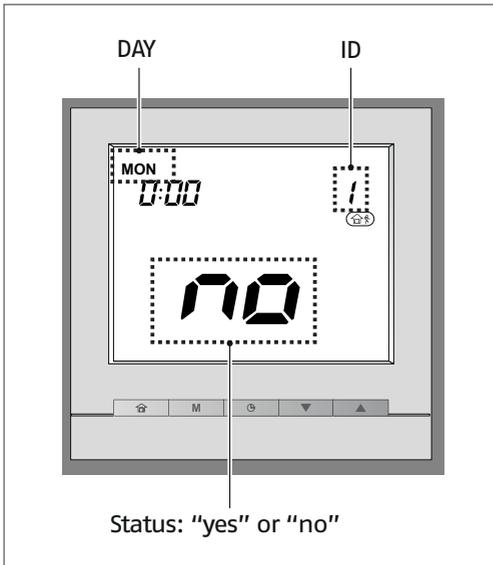
- Upon accessing the menu, the user will have the opportunity to modify the first programming interval (ID).

### Days of the week

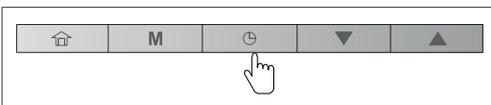
- The first day of the week ("MON") will begin to flash. Press the **Up** or **Down** buttons to select "yes" or "no".



### Example: Monday



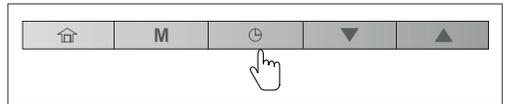
Press the **Program** button to confirm your selection.



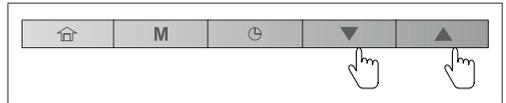
- The next day ("TUE") will begin to flash. At this point, select "yes" or "no" again as previously described.
- After having set the last day of the week, ("SUN"), the clock will begin to flash.
- Press the **Up** or **Down** buttons to set the start time



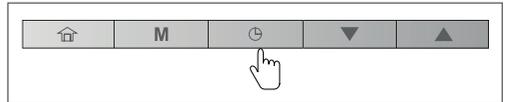
- Press the **Program** button to confirm the start time.



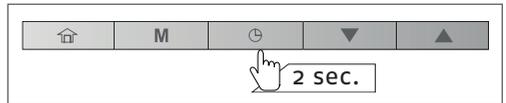
- Once the start time has been set, the home mode icon will begin to flash.
- Press the **Up** or **Down** buttons to set the home mode.



- Press the **Program** button to confirm.



- The first day "MON" will begin to flash.
- Press and hold down the **Program** button for 2 seconds to validate the program.



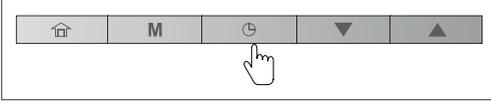
- The second program will be displayed (ID=2). To program it, repeat the operations described above.

## Modifying a program

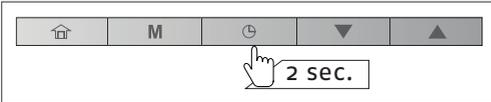
Any of the 8 programs can be easily modified, if necessary.

For example, in order to modify program "2"

- Access the program menu by pressing the **Program** button.

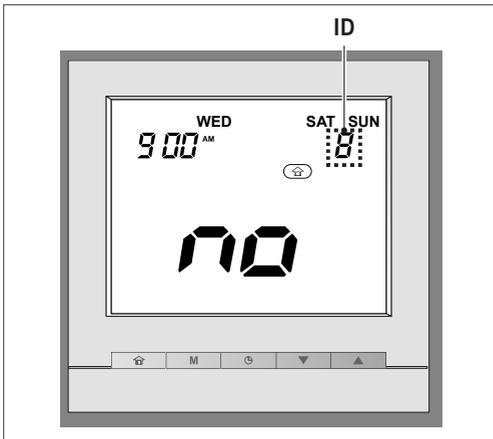


- To validate program "1" without making any changes, press and hold down the **Program** button for 2 seconds.



- Program "2" will be displayed.
- Perform the steps described in the previous section titled "Modifying the programming".

## Example:



<b>Activation time</b>	9:00
<b>Days of the week</b>	WED, SAT, SUN
<b>Mode</b>	HOME
<b>Program ID</b>	8

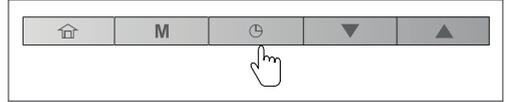
## To exit the program menu

- To exit the program menu at any time, press and hold down the **Home** button for 2 seconds.

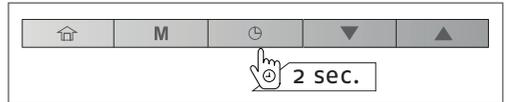


## Deleting a program

- Access the program menu by pressing the **Program** button.



- After having located the program to be deleted, all the days of the week with which the program has been associated must be deselected
- Hold down the **Program** button for 2 seconds to confirm the deletion of the program.



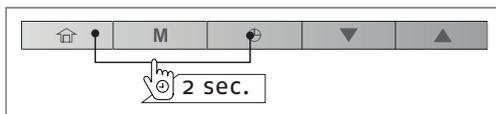
## 4 ADVANCED PROGRAMMING OPTIONS

### 4.1 Advanced settings: Control unit programming

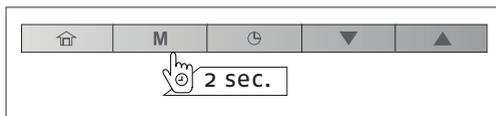
The settings menu is used by the technicians to configure a number of the unit's advanced settings.

#### To access the settings menu

- Press and hold down the **Home** button and the **Program** button simultaneously for 2 seconds.



- The password screen is displayed.
  - Inserire la password.
- For user access, enter the following password: 0000.**
- To validate the password and access the configuration settings, hold down the **Mode** button for 2 seconds.

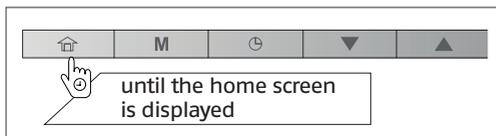


- Press the **Up** and **Down** buttons to navigate the screens.



#### To exit the settings menu

- Press and hold down the **Home** button until the initial screen is displayed.



advanced settings, please refer to the Installer's Manual.

### 4.2 Domestic hot water mode

It should be noted that domestic hot water mode (DHW), which allows for the production of hot water, only applies to heat pumps equipped with hot water tanks.

Domestic hot water mode is normally activated in the case of necessity, and the user is not required to take any additional action.

**⚠** The domestic hot water program and the DHW setpoint are set by the installer. For more information on configuring the DHW program, please refer to the Installer's Manual.

DHW mode can be activated whenever there are no heating or cooling requirements during a certain period.

#### In order to configure DHW mode

- Press the **Mode** button repeatedly.

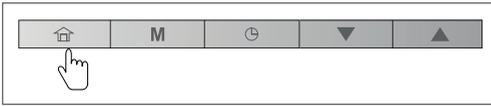


- The icon corresponding to the ACS mode  is displayed.

**⚠** For more information on configuring the

### To adjust a different DHW setpoint

- A different DHW setpoint can be configured for the 3 individual modes (Home, Sleep, Away)



Mode	Setpoint acqua
	DHW setpoint
	DHW Anti-legionella setpoint
	DHW Eco setpoint

- Press the **Home** button to select the mode.
- Define the setpoint by pressing the **Up** or **Down** buttons.



## 4.3 Master/slave control

Large size systems may require certain units to be interfaced with one another in order to provide heating/cooling with high output power levels.

The so-called "master" unit also controls all the other units, which are referred to as "slaves".

When the user interface is connected to the "master" unit, the master/slave icon doesn't flash.



If the user changes the operating mode or defines a new setpoint on the "master" user "interface, this command will be sent to all the "slave" units. The "slave" units execute the command sent by the master unit.

When the user interface is connected to the "slave" unit, the master/slave icon flashes rapidly.



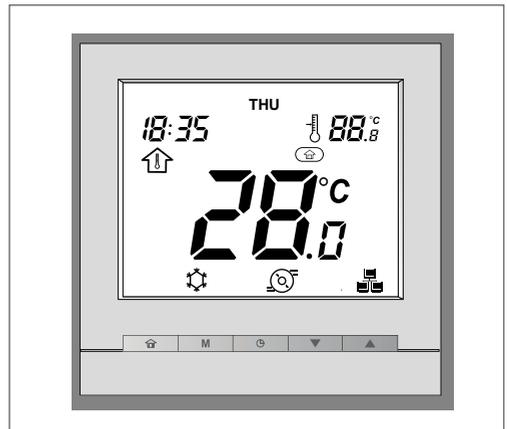
If the user changes the operating mode or defines a new setpoint on the "slave" interface, this command will be ignored. The operating mode and setpoint defined by the "master" will be activated.

When a master/slave communication error takes place on a certain user interface, the master/slave icon flashes slowly.



In the event of a master/slave communication error, the master unit will either begin to operate in stand-alone mode, or else will continue to operate with the other "slave" units that have remained connected. The "slave" unit involved in the communication error will cease all operations.

### Example: master/slave mode



**⚠** In order to have the units configured as described above, please contact the Technical Support Service.

## 5 ALARMS AND ERRORS

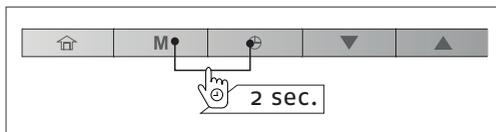
### 5.1 Alarms

The alarms are used to notify the user of any malfunctions encountered in the heat pump's components. In the event of an alarm, the alarm icon will be displayed:

	<b>Alarm - Fixed icon</b> Alarm condition detected; the unit has stopped.
	<b>Alarm - Flashing icon</b> Condition detected alarm; the unit is in function.

#### To view the alarms

- Press and hold down the **Mode** button and the **Program** button simultaneously for 2 seconds.



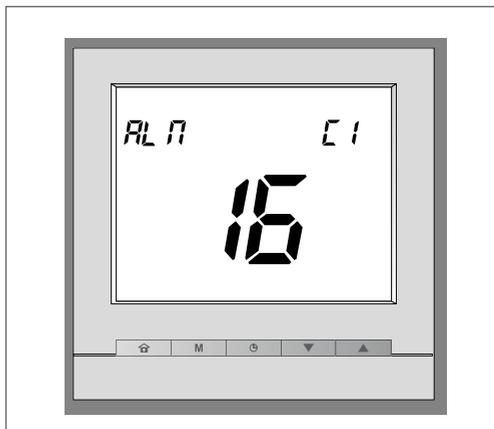
- The alarms menu will be displayed.
- To view the alarms, press the **Up** or **Down** buttons.



Two types of alarms are displayed:

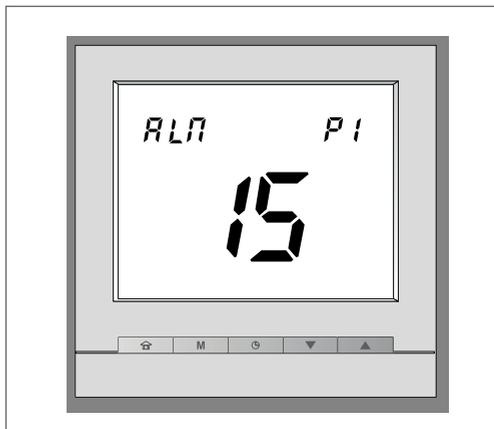
- Current alarms (C-X)
- Previous alarms (P-X).

#### Example:



<b>Current alarm</b>	C1
<b>Alarm code</b>	16

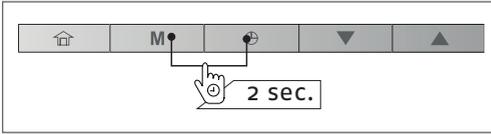
#### Example:



<b>Previous alarm</b>	P1
<b>Alarm code</b>	15

#### To reset the alarms

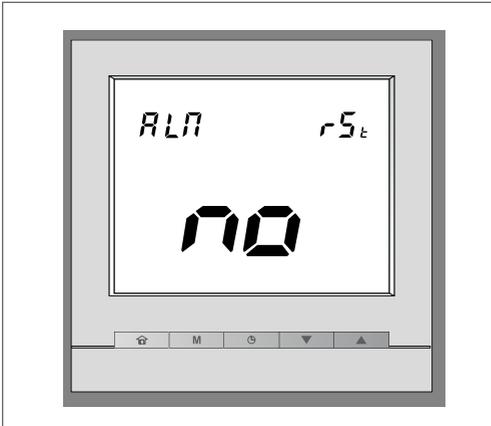
- From the alarms menu, press and hold down the **Mode** and **Program** buttons simultaneously for 2 seconds.



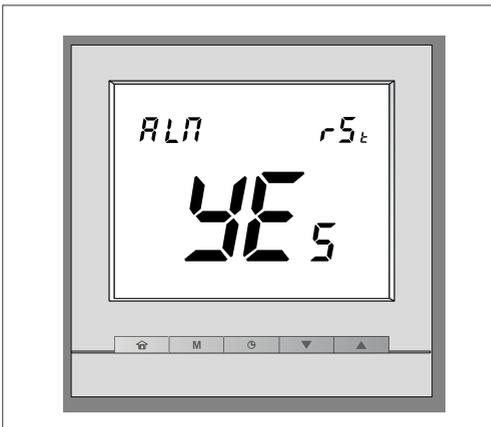
- The reset alarms menu will be displayed.
- Set the alarms to be reset by selecting "yes" with the **Up** and **Down** buttons.



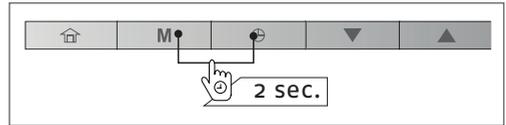
### Alarm r5t ("no" mode)



### Alarm r5t ("yes" mode)

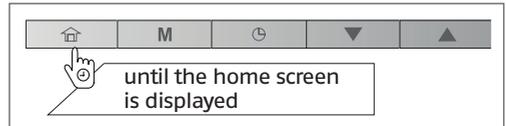


- To confirm the alarm reset operation, press and hold down the **Mode** and **Program** buttons simultaneously for 2 seconds.



### To exit the alarms screen

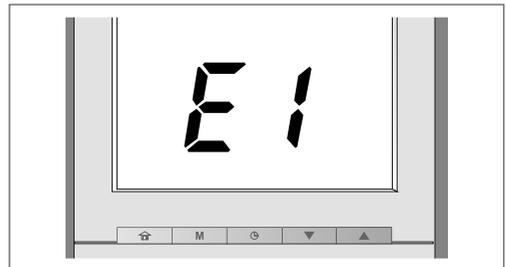
- Press and hold down the **Home** button until the initial screen is displayed.



## 5.2 Errors

Certain component malfunctions can cause the user interface to function incorrectly. In these cases, the error is shown on the screen. For more information on the errors, please refer to the Installer's Manual.

### Example: E1, error 1



N°	Meaning
1	Communication error
2	Incorrect configuration (the unit is not configured for use with the user interface)
3	Profiles Table error
4	Mandatory parameter not found
5	Room temperature sensor error

# RIELLO

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