User and installer manual
(Translation of original instructions)

EN

innova

N420834A - Rev. 01 - 11/2022

eHPoca - 3in1

Control Panel

First of all, we would like to thank you for having chosen a device of our production.

We are sure you will be happy with it because it represents the state of the art in the technology of home air conditioning.

By following the suggestions contained in this manual, the product you have purchased will operate without problems giving you optimum room temperatures with minimum energy costs.

INNOVA S.r.l.

Conformity

Refer to the Installer Manual of the paired unit.

Markings

CE

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GENERAL INFORMATION

1.1 About the manual

This manual was written to provide all the explanations for the correct management of the appliance.

⚠ This instruction manual forms an integral part of the device and therefore must be carefully preserved and must ALWAYS travel with it, even if you transfer the device to another owner or relocate it to other premises. If the manual gets damaged or lost, download a copy from the website.

⚠ Read this manual carefully before proceeding with any operation and follow the instructions in the individual chapters.

⚠ The manufacturer is not responsible for damages to persons or property caused by failure to follow the instructions in this manual.

⚠ This document is restricted in use to the terms of the law and may not be copied or transferred to third parties without the express authorization of the manufacturer.

1.1.1 Editorial pictograms

The pictograms in the next chapter provide the necessary information for correct, safe use of the machine in a rapid, unmistakable way.

Related to security

⚠ **High risk warning (bold text)**
- The operation described above presents a risk of serious physical injury, fatality, major damage to the appliance and/or to the environment if not carried out in compliance with safety regulations.

⚠ Low risk warning (plain text)
- The operation described above presents a risk of minor physical injury or minor damage to the appliance and/or to the environment if not carried out in compliance with safety regulations.

⛔ Prohibition (plain text)
- Refers to prohibited actions.

ⓘ **Important information (bold text)**
- This indicates important information that must be taken into account during the operations.

In the texts

– procedures
- lists

In the control panels

- actions required
  Expected responses following an action.

In the figures

1 The numbers indicate the individual components.
A The capital letters indicate component assemblies.
❶ The white numbers in black marks indicate a series of actions to be carried out in sequence.
Ⓐ The black letter in white identifies an image when there are several images in the same figure.

1.1.2 Pictograms on the product

Symbols are used in some parts of the appliance:

Related to security

⚠ **Caution: electrical danger**
- The concerned personnel is informed to the presence of electricity and the risk of suffering an electric shock.

1.1.3 Recipients

User
Non-expert person capable of operating the product in safe conditions for people, for the product itself and the environment, interpreting an elementary diagnostic of faults and abnormal operating conditions, carrying out simple adjustment, checking and maintenance operations.

Installer
Expert person qualified to position and connect (hydraulically, electrically, etc.) the unit to the plant; this person is responsible for handling and correct installation according to the instructions provided in this manual and the national standards currently in force.
To work on the refrigeration circuit, the installer must comply with the provisions of Regulation 303/2008/EC which defines, in accordance with Directive 842/2006/EC, the requirements for companies and personnel with regard to fixed refrigeration, air conditioning and heat pump equipment containing certain fluorinated greenhouse gases (F-gas licence).

Technical Service Centre
Expert and qualified person authorised directly by the manufacturer to carry out all routine and supplementary maintenance operations, as well as every adjustment, check, repair and replacement of parts necessary during the life of the unit itself.
Service personnel must comply with the provisions of Regulation 303/2008/EC which defines, in accordance with Directive 842/2006/EC, the requirements for companies and personnel with regard to fixed refrigeration, air conditioning and heat pump equipment containing certain fluorinated greenhouse gases (F-gas licence).

1.1.4 Manual organisation

The manual is divided into sections each dedicated to one or more target groups.

General information
It addresses all recipients.
It contains general information and important warnings that should be known before installing and using the appliance.

Product presentation
It addresses all recipients.
It contains the information to identify the product, its components, compatible accessories and destination of use.

Use
It is addressed exclusively to the User.
It contains all the information necessary for the user to operate the appliance.

Menu structure
It is addressed only and exclusively to the Installer and the Technical Assistance Centre.
It contains the menu structure of the control, the operating parameters, the input and output statuses, the alarms and the installer parameters.

Functions
It is addressed only and exclusively to the Installer and the Technical Assistance Centre.
These are sections dedicated to the different types of units that use the same Control Panel and contain specific information for that combination.

Troubleshooting
It is addressed exclusively to the Technical Assistance Centre.
Contains troubleshooting concerning the product.

1.2 Disposal

The symbol on the product or its packaging indicates that the product must not be treated as normal household waste, but must be taken to the appropriate collection point for the recycling of electrical and electronic equipment.
Proper disposal of this product avoids harm to humans and the environment and promotes the reuse of valuable raw materials.
For more detailed information about the recycling of this product, contact your local city office, your household waste disposal service or the shop where you purchased the product.
Illegal disposal of the product by the user involves the application of the administrative sanctions provided for by the regulations in force.
This provision is only valid in the EU Member States.

USE

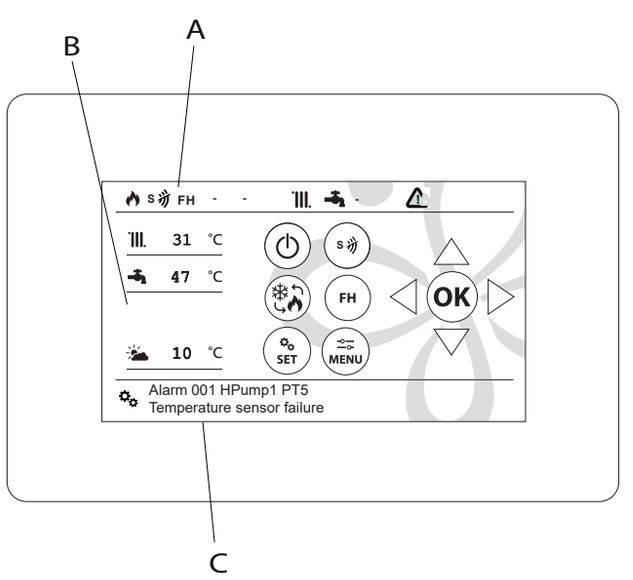
2.1 Interface

2.1.1 Description

The Control Panel regulates and coordinates all the main functions of the appliance. The device can be used to view the machine status, the main temperatures, the alarms and the main operating mode selection.

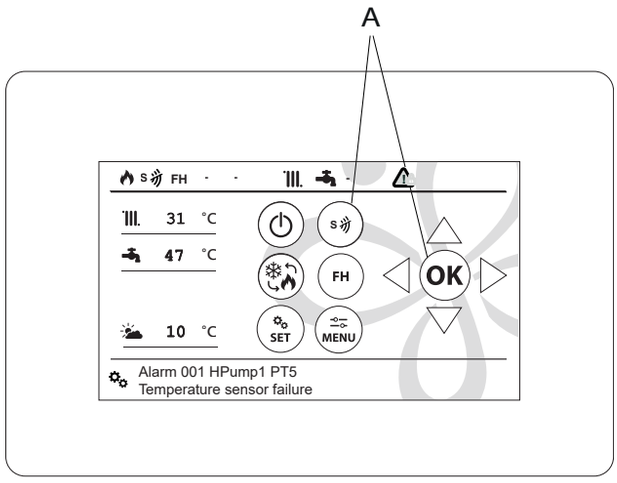
2.1.2 Display

Statuses and active alarms on display.



Function area	
OFF	Unit in stand-by mode
	Cooling function on
	Heating function on
	Stand-by antifreeze alarm detected
	Auxiliary heater outputs PR1/PP5 and BC1 active
	Auxiliary heater outputs PR1/PP5 and BC1 active for 'CAL' operation (specifically designed for boiler activation)
	Anti-legionella function active
S	Silent low-noise function active
FH	Fast heat function active (in heating and cooling mode)
	Plant water function active (flashing icon in call mode)
	Domestic hot water function active (flashing icon in call mode)
	Active alarm
	Alarm to be reset manually
Temperature area	
	Plant water temperature
	Domestic hot water temperature (if the function has been activated)
	Ext. ambient temperature
Settings area	
	Settings active. When this symbol is active, the machine parameters can be changed
A	Function area
B	Temperature area
C	Settings area

2.1.3 Keys functions



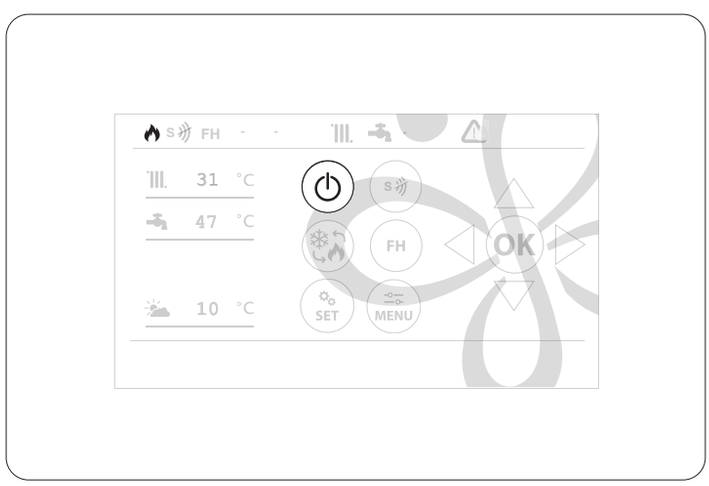
	This can be used to switch the unit on or off
	This can be used to select the operating mode (Cooling or Heating)
	This can be used to activate the Silent low-noise function
FH	This can be used to activate the rapid heating of the plant water
SET	This can be used to modify the selected parameter. Press and hold the button for 3 seconds to reset the manual alarms
MENU	This can be used to enter and exit the main menus, exit without saving
OK	This can be used to enter the sub-levels of the menus and confirm selections
	This can be used to move between the digits of the values
	This can be used to move through the menus and change parameter values
A	Key area

2.2 Control activation

Before the activation:

– set the plant master switch in the ON position.

The display lights up in the set last mode. If OFF (icon) appears, the appliance is off.



To activate the device

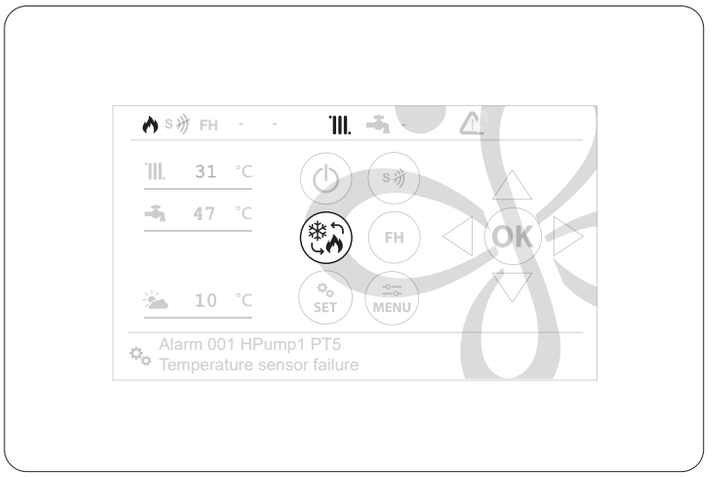
- press the key ⏻
  The symbol 🔥 or ❄ lights up

⚠ The display of the control unit will switch off after a certain time. Touch the screen to reactivate it. The last screen used appears on the display.

2.3 Basic function

2.3.1 Selecting the operating mode

This can be used to select the operating mode (Cooling or Heating)

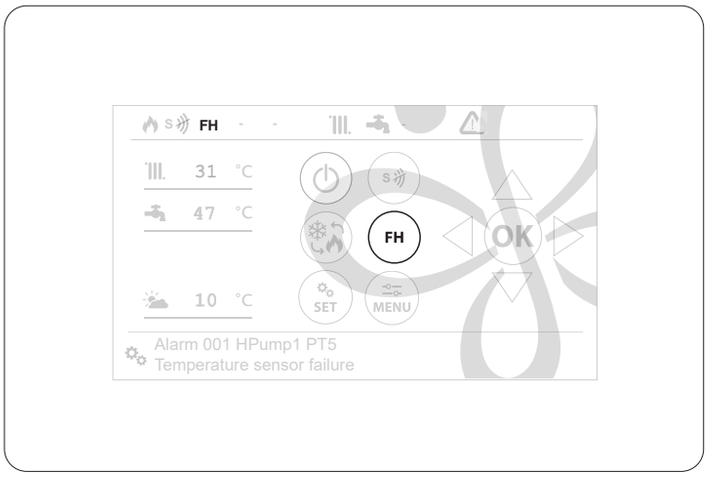


To select:
- in sequence press the button
  The symbol ❄ on indicates that Cooling mode is active
  The symbol 🔥 on indicates that Heating mode is active

The unit activates in the selected mode.
The symbol fixed indicates that the heat pump is being called.
The symbol flashing indicates that the heat pump has started up.

2.3.2 Fast Heat function

The heat pump is set by default to produce domestic hot water as a priority. If fast heating of the rooms is required, priority can be temporarily shifted to the production of plant water with the Fast Heat function.



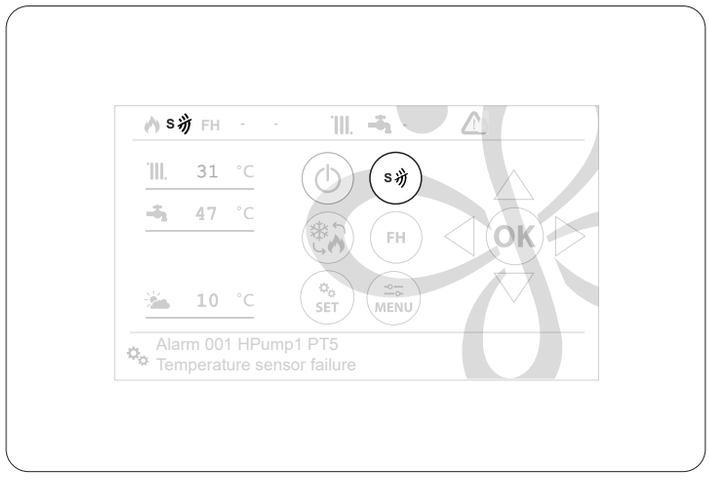
To activate:
- press the key FH
  The symbol **FH** *appears and the function is on for 90 minutes*

To deactivate before the timeout:
- press the key FH
  The symbol **FH** *disappears and the function is off*

2.3.3 Silent function

In particular situations, the noise level of the appliance can be reduced by lowering the operating speed of the compressor and the fan.

⚠ Activating the Silent function reduces the unit performance. Therefore, use is recommended only when necessary and not for normal operation.



To activate:
- press the key
  The symbol appears and the function is on

To deactivate:
- press the key
  The symbol disappears and the function is off

2.4 Advanced features

The Control Panel provides access to advanced user functions. These features are present in the User menu:
- Set temp. Domestic hot water (only present if domestic hot water function is activated)
- Date and time
- Language

To access the advanced features:
- press the key
  The User menu appears in the settings area
- press
  The first menu item appears in the settings area

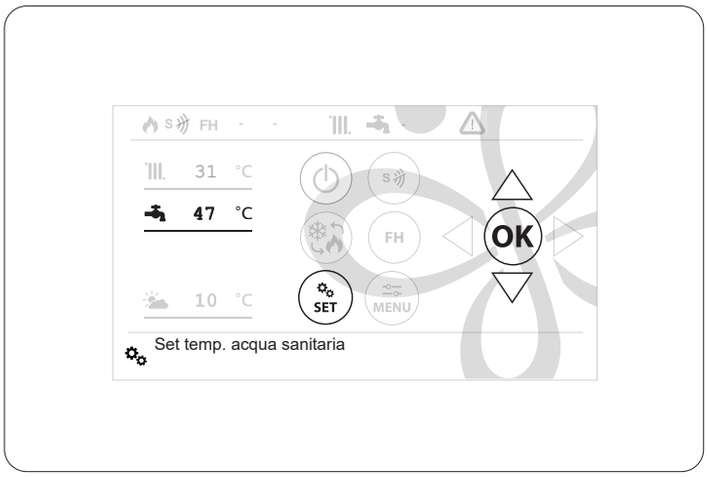
To select the desired function:
- act on
- select the desired function

⚠ In addition to the User menu, other menus for use by the Technical Assistance Centre or Installer are provided.

2.4.1 Domestic hot water temperature setting

This function makes it possible to set the desired hot water temperature.

⚠ The menu is only present if the Domestic Hot Water function is activated.



To set:

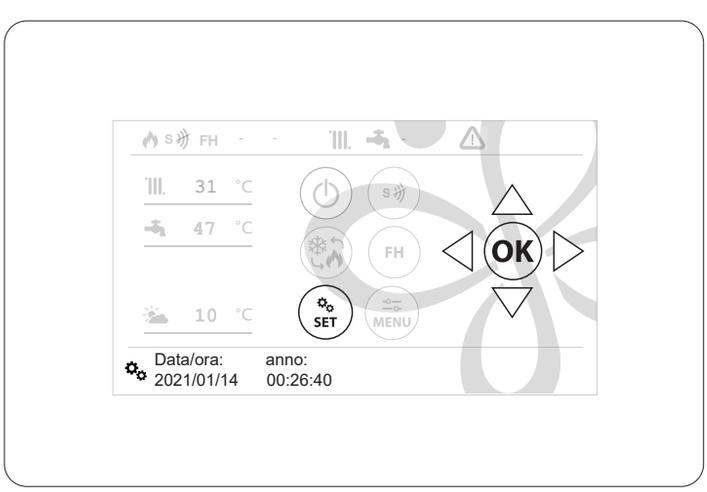
- press SET
  The symbol appears in the settings area
  The set value flashes in the temperature area

- act on ▽△ to modify the value
- press OK to confirm
  The symbol disappears in the settings area
  The set value keeps flashing in the temperature area

⚠ The measured domestic hot water temperature value reappears when the menu is closed.

2.4.2 Date and time setting

This function can be used to set the current date and time.



To set:

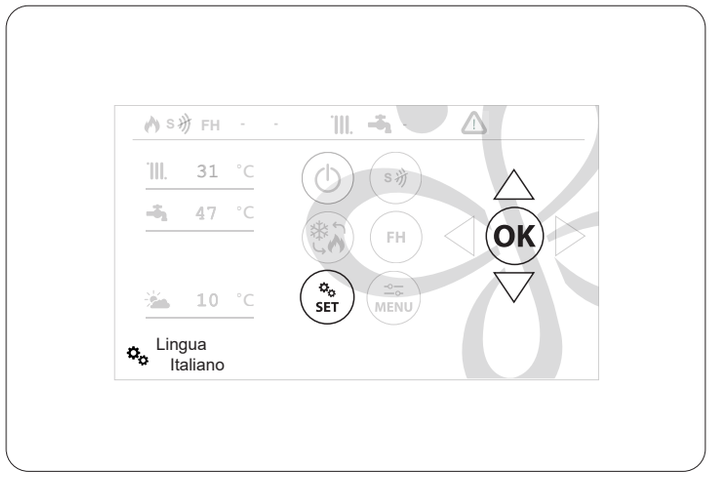
- press SET
  The symbol appears in the settings area
  The settings area displays the currently set date and time
- click on ◁▷ to select the parameter to be modified from among year, month, day, hours, minutes and seconds

- act on ▽△ to modify the value
- press OK to confirm
  The symbol disappears in the settings area

2.4.3 Language setting

The function can be used to set the desired language.
Available languages:

- Italian
- English
- German



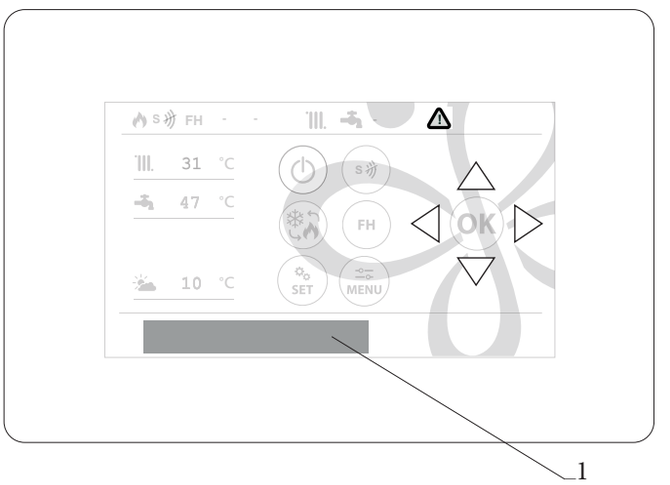
To set:

- press (SET)
  The symbol appears in the settings area
  The current language appears in the settings area

- click on △▽ to select the parameter
- press (OK) to confirm
  The symbol disappears in the settings area

2.5 Alarm signals

1. Alarm message zone



The faults are indicated on the display of the Control Panel by the symbol ⚠ without padlock and with a digit indicating the number of alarms that have occurred. The alarm code and description appear in the settings area.

If more than one alarm has occurred, to display them:

- act on ◁▷
  The settings area displays the alarms that have occurred
- use △▽ to display the entire alarm message

The occurrence of the anomaly may be due to a random situation, in which case the alarm is automatically reset after some time.

⚠ If the anomaly is repeated several times, the appliance is put in safety and the symbol ⚠🔒 appears. In this case, the appliance components must be checked in detail by the Technical Assistance Centre.

2.6 Manual reset of alarms

⚠ **Manual reset of the alarms is an operation to be carried out by the Technical Assistance Centre.**
The alarm can be reset after checking the appliance components.

To restore:

– press and hold SET for a few seconds
– the padlock disappears from the symbol ⚠🔒
– then the symbol ⚠ disappears

MENU STRUCTURE

3.1 Remote Control Panel

Menu navigation

Button (MENU)
- to enter the main menus
- to exit the menu sub-levels
- to exit without saving

Button (OK)
- to enter the menu sub-levels
- to confirm

Button (SET)
- to modify a parameter

Buttons ▲▼
- to move through the menus
- to change the parameter values

Buttons ◀▶
- to move between the digits of the values

3.1.2 Change installer password

To change the password for accessing the Installer Parameters Menu
- press (OK) to access the "Change installer PW?" parameter
  The display shows a sequence of numbers 000000
- use the arrows ▲▼ to choose a number from 0 to 9
  use the arrows ◀▶ to move between digits

To confirm the change
- press the key (OK)
  A warning appears on the display
  press again the (OK) key
  The setting is saved

To go back without saving
- press the key (MENU)
  The setting is not saved

⚠ Default installer PW: 100000

3.1.3 Structure overview

|..... **User menu**

Contains: all the parameters that the user can modify according to the needs of the plant

|..... **Setpoints set**

Contains: information (in display only) on the current operation of the unit

|..... **Input status**

Contains: information (in display only) on the input of the unit.

|..... **Output status**

Contains: information (in display only) on the output status of the unit.

|..... **Installer menu**

Contains: the parameters that only the installer or qualified personnel can modify

► Installer parameters

► Change Password

|..... **Service menu**

Contains: the most advanced parameters that only the Technical Service Centre can modify

3.1.4 Structure details

|..... **User menu**

► Set temp. Domestic hot water

Visible only if the domestic hot water function is activated.

► Date and time

► Language

Value: Italian, English, German

Setpoint set

► Summer/winter set

Indicates: required water plant temperature
Value: °C

► Sanitary set

Indicates: requested domestic hot water temperature
Value: °C

► Set Anti-legionella

Indicates: AntiLegionella function when activated
Value: °C

► Set FTV

Indicates: Photovoltaic management when activated
Value: °C

Input status

► PI1

View: flow switch
0: open
1: closed

► PI3

View: TA consent
0: open
1: closed

► PI4

View: Anti-Legionella
0: open
1: closed

- ▶ PI5
  - # **View:** remote on/off
  - # **0:** open
  - # **1:** closed
- ▶ PI6
  - # **View:** FTV / Z2A
  - # **0:** open
  - # **1:** closed
- ▶ EXTI1
  - # **View:** outdoor unit alarm
  - # **0:** open
  - # **1:** closed
- ▶ EXTI2
  - # **View:** defrosting outdoor unit
  - # **0:** open
  - # **1:** closed
- ▶ PT1
  - # **Views:** plant water temperature
  - # **Value:** °C
- ▶ PT4
  - # **Views:** domestic hot water storage temperature
  - # **Value:** °C
- ▶ PT5
  - # **Display:** water exchanger outlet temperature
  - # **Value:** °C
- ▶ PT6
  - # **Display:** water exchanger inlet temperature
  - # **Value:** °C
- ▶ PT8
  - # **Views:** external air temperature
  - # **Value:** °C

Output status

- ▶ PP1
  - # **Indicate:** Primary circulation pump
  - # **0:** off
  - # **1:** on
- ▶ PV1/PP2
  - # **Indica:** sanitary three-way valve
  - # **0:** off
  - # **1:** on
- ▶ PP3
  - # **Indicate:** Secondary circulation pump
  - # **0:** off
  - # **1:** on
- ▶ PP4
  - # **Indicate:** High-temperature circulation pump
  - # **0:** off
  - # **1:** on
- ▶ PR1/PP5
  - # **Indicates:** auxiliary resistance
  - # **0:** off
  - # **1:** on
- ▶ EXTA "ON-OFF"
  - # **Indicates:** Outdoor unit call
  - # **0:** off
  - # **1:** on

- ► EXTB "SIL"
  - # **Indicates:** silent function activation
  - # **0:** off
  - # **1:** on
- ► AUX1
  - # **Indicates:** alarm output
  - # **0:** off
  - # **1:** on

Installer menu

- ► Installer parameters (PF)
  - ► ECE
    - # **Enable:** SUMMER function (Cooling)
    - # **NO:** disabled
    - # **YES:** enabled (default)
  - ► ESL
    - # **Set:** minimum SUMMER setpoint (Cooling)
    - # **Units** of measure: °C
    - # **Minimum:** 7
    - # **Maximum:** 40
    - # **Setting:** 10
  - ► ESH
    - # **Set:** maximum SUMMER setpoint (Cooling)
    - # **Units** of measure: °C
    - # **Minimum:** 7
    - # **Maximum:** 40
    - # **Setting:** 20
  - ► ESP
    - # **Set:** SUMMER setpoint (Cooling)
    - # **Units** of measure: °C
    - # **Minimum:** 7
    - # **Maximum:** 40
    - # **Setting:** 12
  - ► EHY
    - # **Set:** SUMMER hysteresis (Cooling)
    - # **Units** of measure: °C
    - # **Minimum:** 1
    - # **Maximum:** 6
    - # **Setting:** 2.5
  - ► ICE
    - # **Enable:** WINTER function (Heating)
    - # **NO:** disabled
    - # **YES:** enabled (default)
  - ► ISL
    - # **Set:** minimum setpoint WINTER (Heating)
    - # **Units** of measure: °C
    - # **Minimum:** 20
    - # **Maximum:** 75
    - # **Setting:** 20
  - ► ISH
    - # **Set:** maximum setpoint WINTER (Heating)
    - # **Units** of measure: °C
    - # **Minimum:** 10
    - # **Maximum:** 75
    - # **Setting:** 45

► ISP

Set: setpoint WINTER (Heating)
Units of measure: °C
Minimum: 10
Maximum: 75
Setting: 40

► IHY

Set: WINTER hysteresis (Heating)
Units of measure: °C
Minimum: 1
Maximum: 6
Setting: 2.5

► SCE

Enable: SANITARY function enabled
NO: disabled
YES: enabled (default)

► SSL

Set: minimum SANITARY setpoint
Units of measure: °C
Minimum: 10
Maximum: 90
Setting: 30

► SSH

Set: maximum SANITARY setpoint
Units of measure: °C
Minimum: 10
Maximum: 90
Setting: 53

► SSP

Set: SANITARY setpoint
Units of measure: °C
Minimum: 10
Maximum: 90
Setting: 45

► SHY

Set: SANITARY hysteresis
Units of measure: °C
Minimum: 1
Maximum: 10
Setting: 2

► LSP

Set: ANTI-LEGIONELLA setpoint
Units of measure: °C
Minimum: 30
Maximum: 90
Setting: 60

► LTI

Enable: interval between ANTILEGIONELLA cycles
0: off (default)
Unit of measurement: days
Minimum: 0
Maximum: 30
Setting: 0

► LTM

Sets: anti-legionella cycle time
Unit of measurement: hours
Minimum: 1
Maximum: 12
Setting: 2

► LTO

Set: ANTILEGIONELLA cycle timeout
Unit of measurement: hours
Minimum: 1
Maximum: 24
Setting: 5

► HIE

Enable: auxiliary heater management
NOT: not present
INT: in integration (default)
COM: switching
CAL: boiler

► HIS

Set: Maximum water temperature for pdc function
Units of measure: °C
Minimum: 20
Maximum: 55
Setting: 53

► HOR

Set: outside temperature heating element activation in WINTER
Units of measure: °C
Minimum: -30
Maximum: 30
Setting: -15

► HOS

Enable: external temperature activation heater SANITARY
Units of measure: °C
Minimum: -30
Maximum: 30
Setting: -15

► HTO

Set: resistance timeout
Unit of measurement: minutes
Minimum: 0
Maximum: 240
Setting: 20

► AHI

Set: high temperature alarm PT1 probes
Units of measure: °C
Minimum: 20
Maximum: 95
Setting: 80

► ALO

Set: alarm low temperature probes PT1
Units of measure: °C
Minimum: 3
Maximum: 30
Setting: 5

► PMS

Enable: operation mode
CON: continuous
NOR: on request
TIM: Energy Saving (Default)

► PRT

Set: Pump OFF time energy saving cycle
Unit of measurement: min
Minimum: 1
Maximum: 30
Setting: 2

► PST

Set: Pump OFF time energy saving cycle
Unit of measurement: min
Minimum: 10
Maximum: 240
Setting: 15

► PRD

Set: Pump switch-off delay
Unit of measurement: min
Minimum: 1
Maximum: 30
Setting: 2

► CLI

Enable: climatic and PT8
NO: disabled
YES: enabled (default)

► OTH

Set: maximum outside temperature for climate control
Units of measure: °C
Minimum: -30
Maximum: 40
Setting: 15

► OTL

Set: minimum outside temperature for climate control
Units of measure: °C
Minimum: -30
Maximum: 40
Setting: -5

► OTS

Setting: Differential for climate control
Units of measure: °C
Minimum: 0
Maximum: 40
Setting: 5

► SIL

Select: Silent
NO: disabled (default)
YES: enabled

► FH

Setting: Fast heat function
NO: disabled (default)
YES: enabled

► ALC

Setting: Autlock display
NO: disabled
YES: enabled (default)

► Z2A

Select: secondary zone
NON: disabled
MIS: mixed
HT: high temperature (default)

► Z2Y

Select: sanitary offset for pump switching off PP4
Units of measure: °C
Minimum: 0
Maximum: 10
Setting: 5

► Z2T

Select: timeout for pump switch-off PP4
Unit of measurement: min
Minimum: 0
Maximum: 45
Setting: 45

► SRI

Select: system regulation probe
PT1: plant (circuit breaker or inertial tank)
PT5: system delivery
PT6: system return (default)

► PI4

Setting: PI4 input options
SEA: cooling/heating selection
LEG: ANTI-LEGIONELLA (Default)

► PI5

Selects: ON/Standby from digital input
STO: Standby when open (dafault)
STC: Standby when closed
SCE: Sanitary Disabling

► PI6

Setting: PI6 input options
NO: No function (default)
FTV: minimum photovoltaic delay
Z2A: secondary high temperature zone thermostat

► TDS

Setting: Probe displayed
PT4: domestic hot water (dafault)
PT5: system delivery
PTI: plant (circuit breaker or inertial tank)
PT8: outside air

► OS1

Setting: Probe Offset PT1
Units of measure: °C
Minimum: -12,5
Maximum: 12,5
Setting: 0

► OS4

Setting: Probe Offset PT4
Units of measure: °C
Minimum: -12,5
Maximum: 12,5
Setting: 0

► OS5

Setting: Probe Offset PT5
Units of measure: °C
Minimum: -12,5
Maximum: 12,5
Setting: 0

► OS6

Setting: Probe offset PT6
Units of measure: °C
Minimum: -12,5
Maximum: 12,5
Setting: 0

► OS8

Setting: Probe Offset PT8
Units of measure: °C
Minimum: -12,5
Maximum: 12,5
Setting: 0

► RTU

Setting: Modbus protocol
NO: disabled (default)
YES: enabled

► ATM

Enable: Remote CT integration
NO: disabled (default)
YES: enabled

► ADR

Setting: ModBus address
Minimum: 1
Maximum: 255
Setting: 1

FUNCTION SETTING EHPOCA

4.1 Introduction

The unit is designed to provide:
- water to plant for heating or cooling the rooms
- domestic hot water

If necessary, it is possible to support the heat output generated by the appliance with auxiliary heating systems (backup), which may be:
- heating elements available as accessories and mounted inside the unit from the factory
- combustion heaters (boilers)

The appliance has functions that allow the operation to be set to suit the type of plant on which it has been installed.
The settings and function management is done through:
- the control panel display

4.2 Plant water management

The following plant types are provided:
- plant with direct delivery and buffer tank
- plant with hydraulic separator and secondary pump
- plant with direct delivery

According to the plant type and the required control type, the plant water temperature can be controlled through:

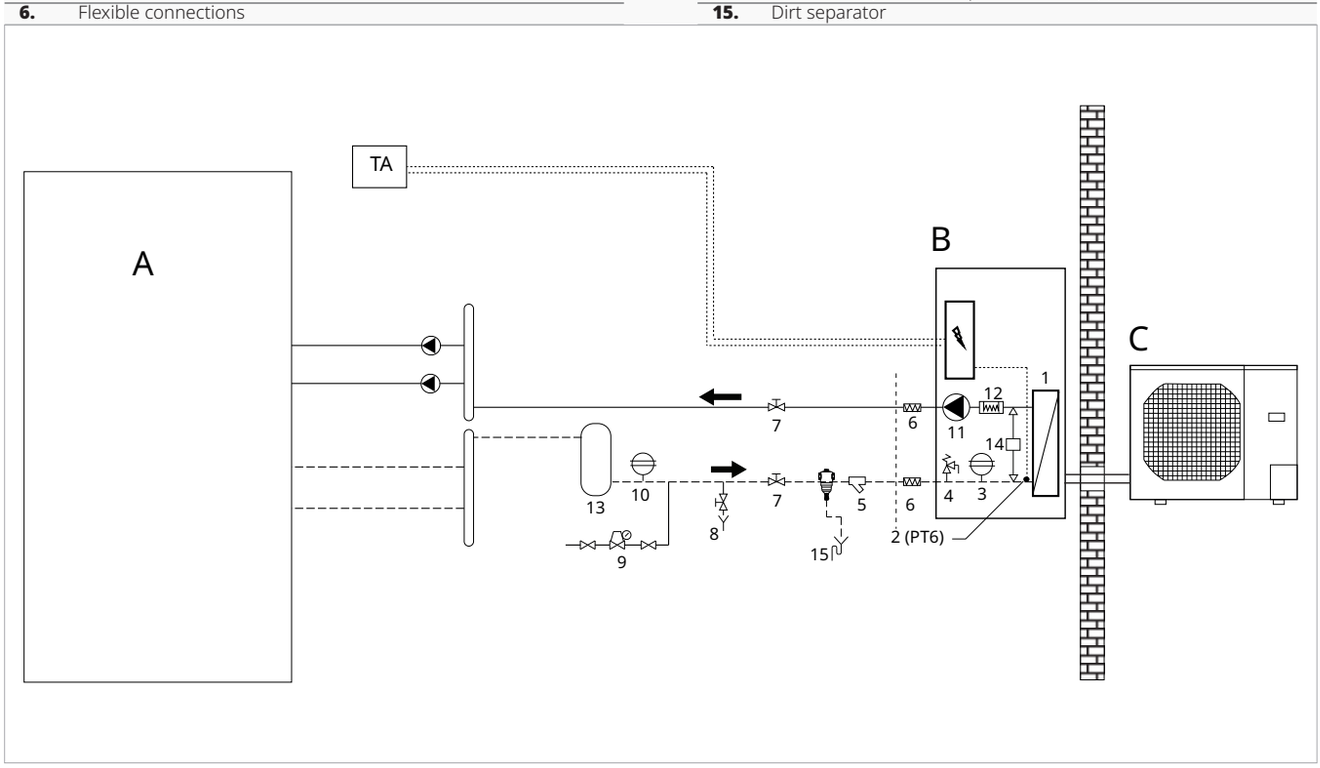
PT6: heat pump input probe (default setting). To be used in case of a plant with direct flow and presence of buffer storage on the return line, when the stability of the heat pump operation is preferred.

PT1: plant probe. To be used in the case of a plant with a hydraulic separator and secondary pump, it guarantees the stability of both heat pump operation and water temperature for the consumers.

PT5: heat pump delivery line probe. To be used in case of a plant with direct delivery when guaranteeing the stability of the water temperature for the consumers is necessary.

4.2.1 Schematic diagram with direct delivery and buffer tank

A	Plant
B	Indoor unit eHPoca
C	Outdoor unit
1.	Plate exchanger
2.	PT6 probe
3.	Expansion vessel
4.	3-bar safety valve
5.	Network water filter
6.	Flexible connections
7.	Shut-off valves
8.	Plant drain cock
9.	Automatic plant filling assembly
10.	Expansion vessel
11.	PP1 primary circulation pump
12.	Electric heating element (accessory)
13.	Buffer storage
14.	Flow switch (differential pressure switch)
15.	Dirt separator



Water temperature control

Control setting on PT6-S (plant return)

⚠ Factory setting.

"SRI" *p. 22*: **PT6 (default)**

⚠ The installer will be in charge of selecting the correct set-points for the heating and cooling functions, both with fixed point and with dynamic set adjustment, who will take into consideration the type of terminal and the temperature adjustment point.

PP1 primary circulation pump

The primary pump is set for Energy Saving operation.

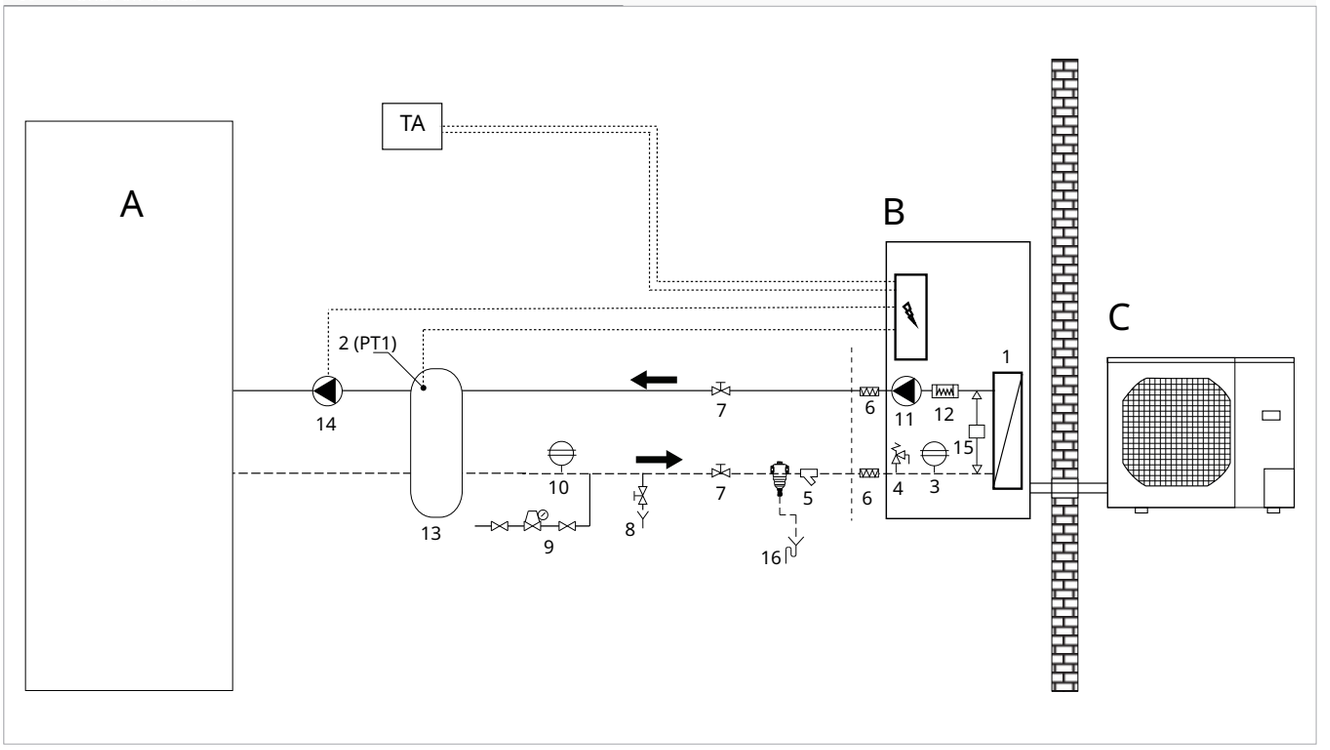
"PMS" *p. 20*: **TIM (default)**

⚠ Continuous on-call setting can be selected for this type of system.

⚠ Check the primary pump head with the pressure drop of the plant. If this is not sufficient, manifolds must be provided on the delivery and return lines of secondary pumps.

4.2.2 Schematic diagram with hydraulic separator and secondary pump

A	Plant
B	Indoor unit eHPoca
C	Outdoor unit
1.	Plate exchanger
2.	Plant temperature probe (PT1)
3.	Expansion vessel
4.	3-bar safety valve
5.	Network water filter
6.	Flexible connections
7.	Shut-off valves
8.	Plant drain cock
9.	Automatic plant filling assembly
10.	Expansion vessel
11.	Primary circulation pump (PP1)
12.	Electric heating element (accessory)
13.	Hydraulic separator
14.	Secondary circulation pump PP3
15.	Flow switch (differential pressure switch)
16.	Dirt separator



Water temperature control

Setting of the control on PT1 probe to be placed in the separator

"SRI" *p. 22*: **PT1**

PP1 primary circulation pump

The primary pump is set for Energy Saving operation.
For this type of system, operation on demand can be enabled so that the pump stops when the set-point is reached.

"PMS" *p. 20*: **NOR**

⚠ Check the primary pump head with the pressure drop of the plant. If this is not sufficient, manifolds must be provided on the delivery and return lines of secondary pumps.

Secondary circulation pump PP3

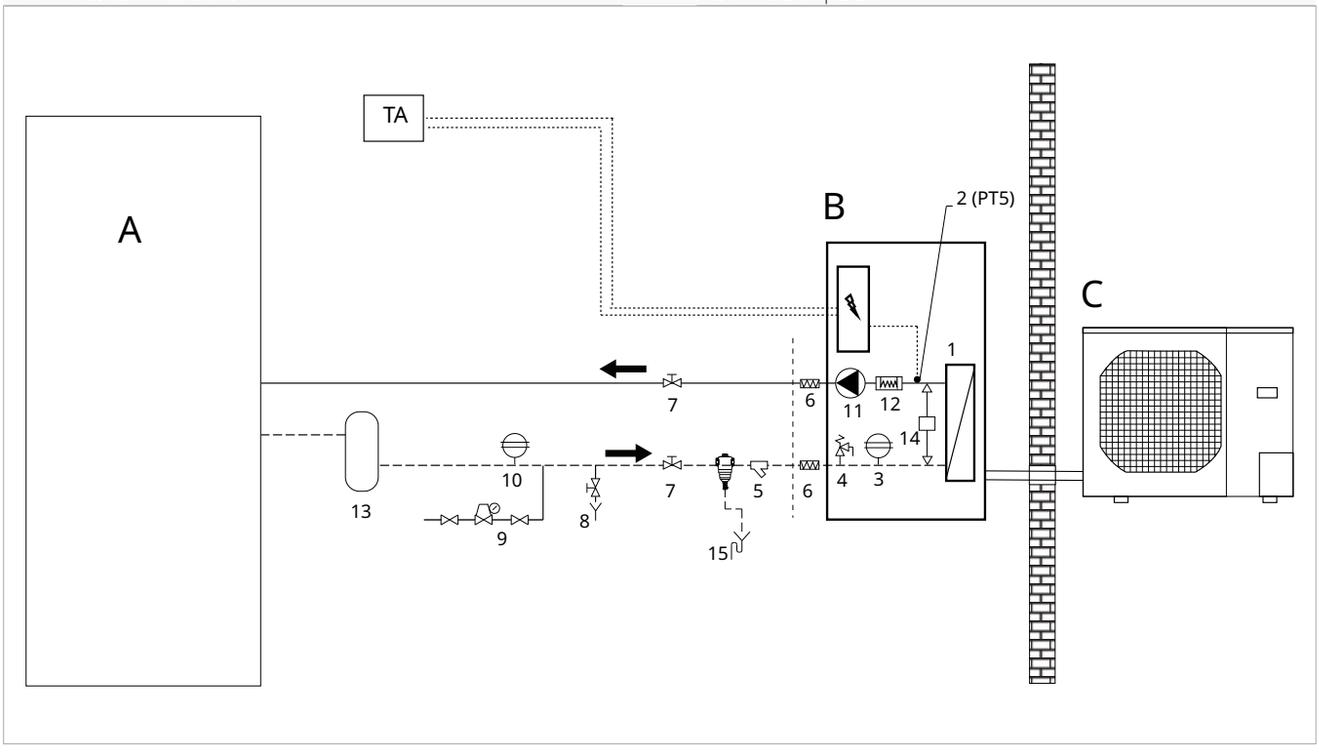
The secondary pump is driven exclusively:

- from input "PI3" *p. 16* TA or ModBus supervisor

Independently of the status of the domestic hot water function, it is always switched off in standby.

4.2.3 Principle diagram with direct delivery

A	Plant
B	Indoor unit eHPoca
C	Outdoor unit
1.	Plate exchanger
2.	PT6 probe
3.	Expansion vessel
4.	3-bar safety valve
5.	Network water filter
6.	Flexible connections
7.	Shut-off valves
8.	Plant drain cock
9.	Automatic plant filling assembly
10.	Expansion vessel
11.	PP1 primary circulation pump
12.	Electric heating element (accessory)
13.	Buffer tank
14.	Flow switch (differential pressure switch)
15.	Dirt separator



Water temperature control

Control setting on PT5 (system flow)

SRI: PT5

⚠ The minimum water content of the plant indicated in the installer manual of the unit being installed must be respected. If necessary, provide for the use of a buffer tank on the plant return line.

PP1 primary circulation pump

The primary pump is set for Energy Saving operation.

"PMS" *p. 20*: **TIM (default)**

⚠ Continuous on-call setting can be selected for this type of system.

⚠ Check the primary pump head with the pressure drop of the plant. If this is not sufficient, manifolds must be provided on the delivery and return lines of secondary pumps.

4.2.4 Plant cooling/heating function enabling from TA

The connection and activation of an external consents (TA) is essential for the operation of the unit:

- TA from room thermostat
- TA from Modbus Supervisor

The two types of TA consents can co-exist and the unit will activate when it receives a call from at least one of the two .

TA from room thermostat or a generic potential-free contact contact

Function Logic:

The TA must be connected to digital input PI3:

- on the terminal board of the indoor unit

Contact logic:
- Closed contact: the unit is switched on for heating or cooling the plant water.
- Open contact: the unit is switched off for heating or cooling the plant water

⚠ If the domestic hot water function is active, this function has priority.

TA from Modbus Supervisor

Function Logic:
The room thermostat is enabled by Modbus Supervisor and controlled by the Modbus register with address 117.

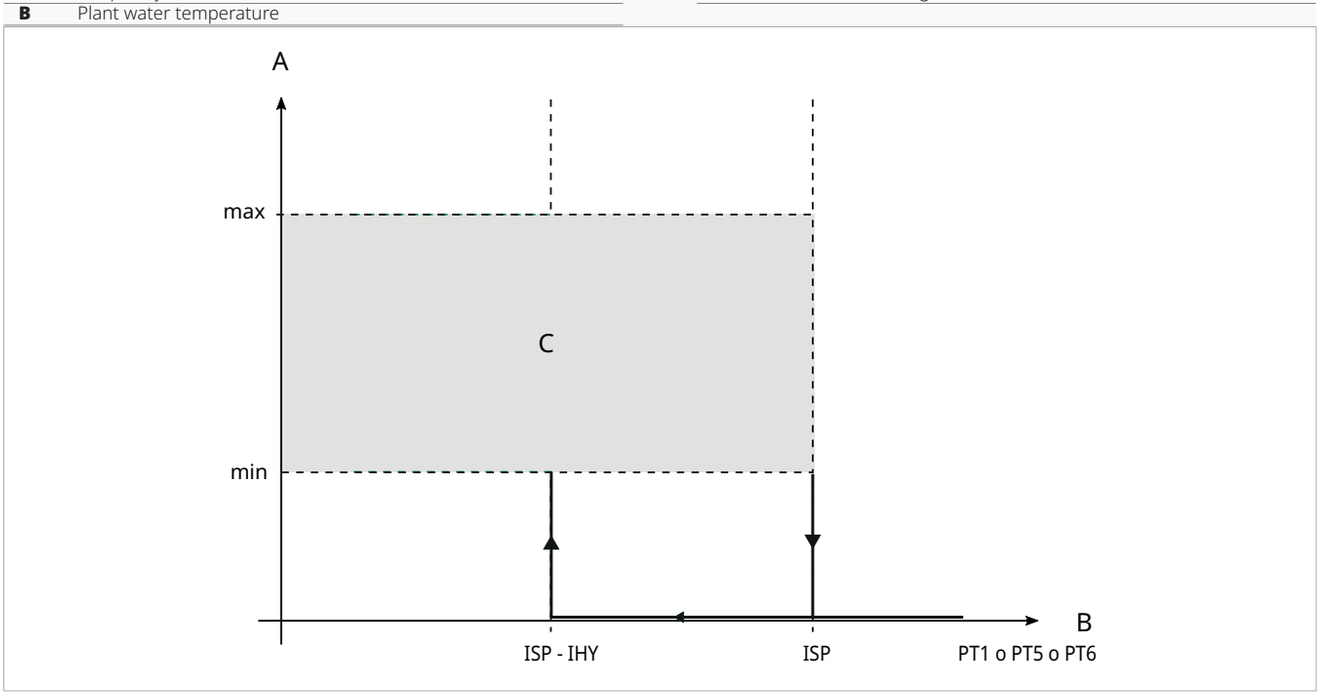
Logic of the register:
The call is managed by the Modbus Supervisor.
- Value 1: the unit is switched on for heating or cooling the plant water.
- Value 0: the unit is switched off for heating or cooling the plant water.

⚠ If the domestic hot water function is active, this function has priority.

Enabling:
Use must be enabled by parameter **"ATM"** *p. 23*.

4.2.5 Heating logic

A	Frequency	**C**	Additive control logic
B	Plant water temperature		



⚠ Min and max depend on the logic corresponding to the active mode (heating) and the configuration of the unit.

PT1, 5, 6: Plant temperature probe. This depends on the setting of **"SRI"** *p. 22*

"ISP" *p. 19***:** Setpoint WINTER (Heating)

⚠ If the external climate control is active, the reference setpoint is not "ISP" *p. 19*, but the dynamically calculated setpoint. View chapter "Dynamic set adjustment" *p. 34*.

IHY: WINTER hysteresis (2.5 °C)

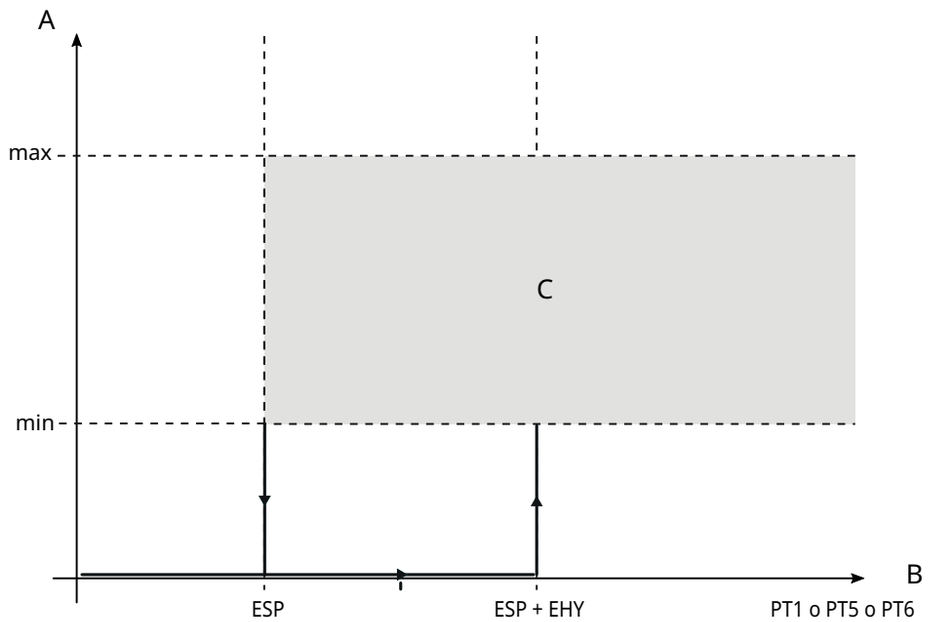
⚠ The function is inhibited by the simultaneous request for domestic hot water (which higher priority) but the priority can be reversed for 60 minutes (**"FH"** *p. 21*) by pressing the Fast Heating button

⚠ The temperature in the separator may not exceed 60 °C.

⚠ During the start-up phase, the compressor reaches the maximum frequency in 3 minutes.

4.2.6 Cooling logic

A Frequency
B Plant water temperature
C Adaptive control logic



⚠ Min and max depend on the logic corresponding to the active mode (cooling) and the configuration of the unit.

PT1, 5, 6: Plant temperature probe. This depends on the setting of **"SRI"** *p. 22*

"ESP" *p. 18***:** SUMMER setpoint (Cooling)

⚠ If the external climate control is active, the reference setpoint is not "ESP" *p. 18*, but the dynamically calculated setpoint. View chapter "Dynamic set adjustment" *p. 34*.

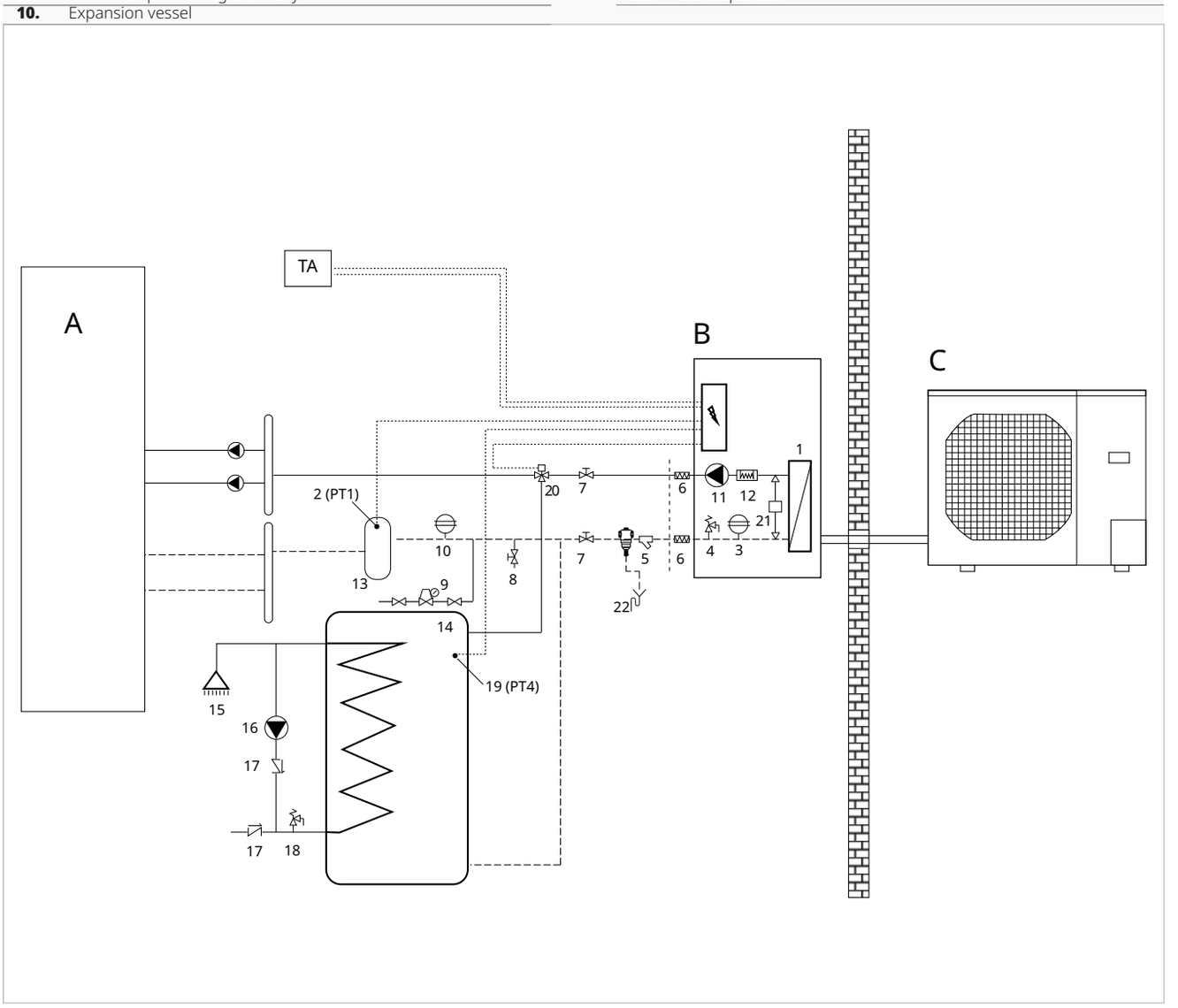
EHY: SUMMER hysteresis (2.5 °C)

⚠ The function is inhibited by the simultaneous request for domestic hot water (which higher priority) but the priority can be reversed for 60 minutes (**"FH"** *p. 21*) by pressing the Fast Heating button

4.3 Domestic hot water management

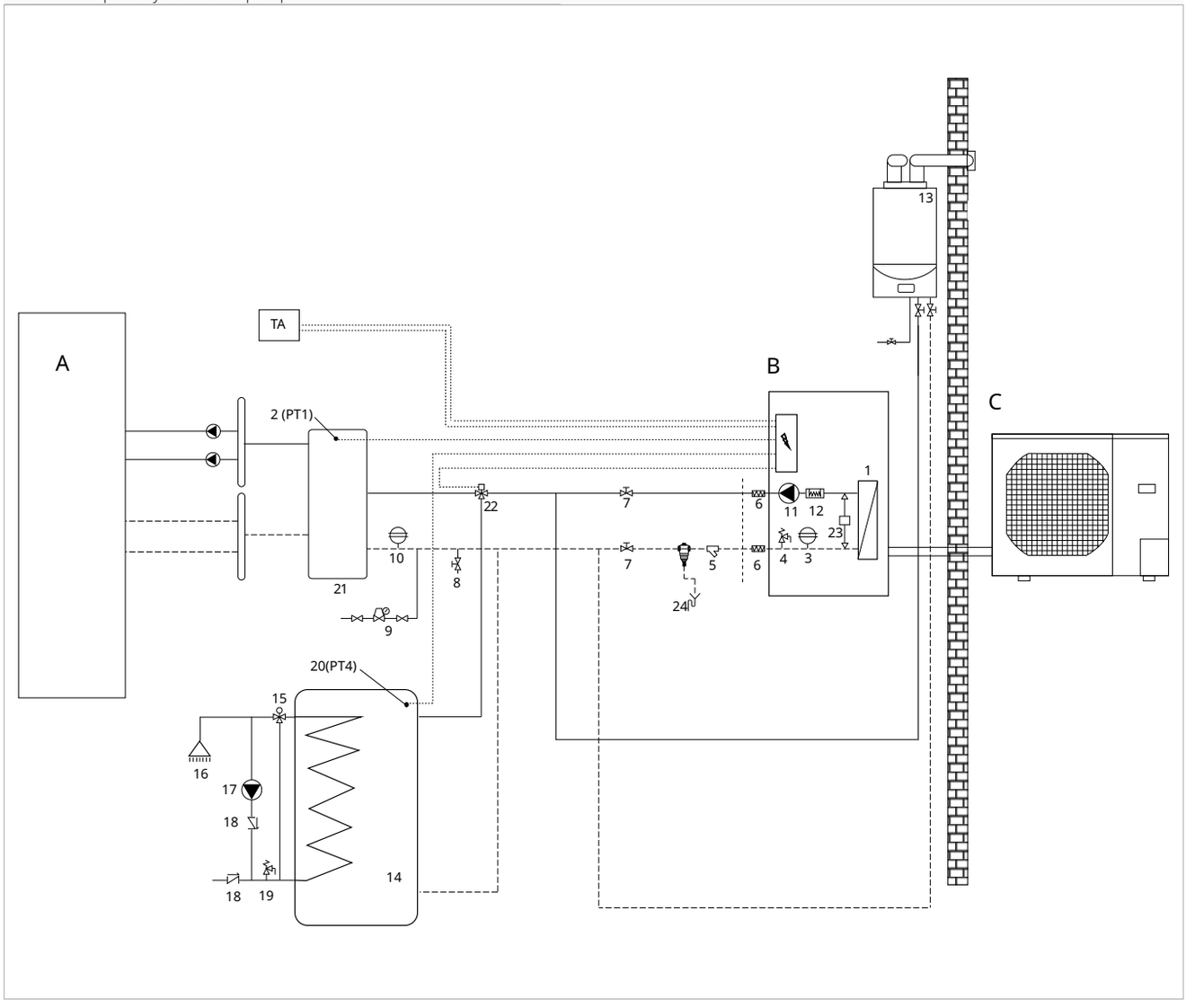
4.3.1 Schematic diagram with instantaneous domestic hot water storage tank and heating elements

A	Plant
B	Indoor unit eHPoca
C	Outdoor unit
1.	Plate exchanger
2.	Plant temperature probe (PT1)
3.	Expansion vessel
4.	3-bar safety valve
5.	Network water filter
6.	Flexible connections
7.	Shut-off valves
8.	Plant drain cock
9.	Automatic plant filling assembly
10.	Expansion vessel
11.	PP1 primary circulation pump
12.	Electric heating element (accessory)
13.	Buffer storage
14.	Instant domestic hot water preparation storage
15.	Domestic hot water consumers
16.	Domestic hot water recirculation pump
17.	Check valve
18.	Safety valve
19.	Domestic hot water tank temperature probe (PT4)
20.	3-way on/off valve PV1
21.	Flow switch (differential pressure switch)
22.	Dirt separator



4.3.2 Schematic diagram with sanitary hot water storage and heating generator

A	Plant
B	Indoor unit eHPoca
C	Outdoor unit
1.	Plate exchanger
2.	Plant temperature probe (PT1)
3.	Expansion vessel
4.	3-bar safety valve
5.	Network water filter
6.	Flexible connections
7.	Shut-off valves
8.	Plant drain cock
9.	Automatic plant filling assembly
10.	Expansion vessel
11.	PP1 primary circulation pump
12.	Electric heating element (accessory)
13.	Heat generator (boiler)
14.	Instant domestic hot water preparation storage
15.	Thermostatic mixer
16.	Domestic hot water consumers
17.	Domestic hot water recirculation pump
18.	Check valve
19.	Safety valve
20.	Domestic hot water tank temperature probe (PT4)
21.	Separator
22.	3-way on/off valve PV1
23.	Flow switch (differential pressure switch)
24.	Dirt separator



Domestic hot water temperature check

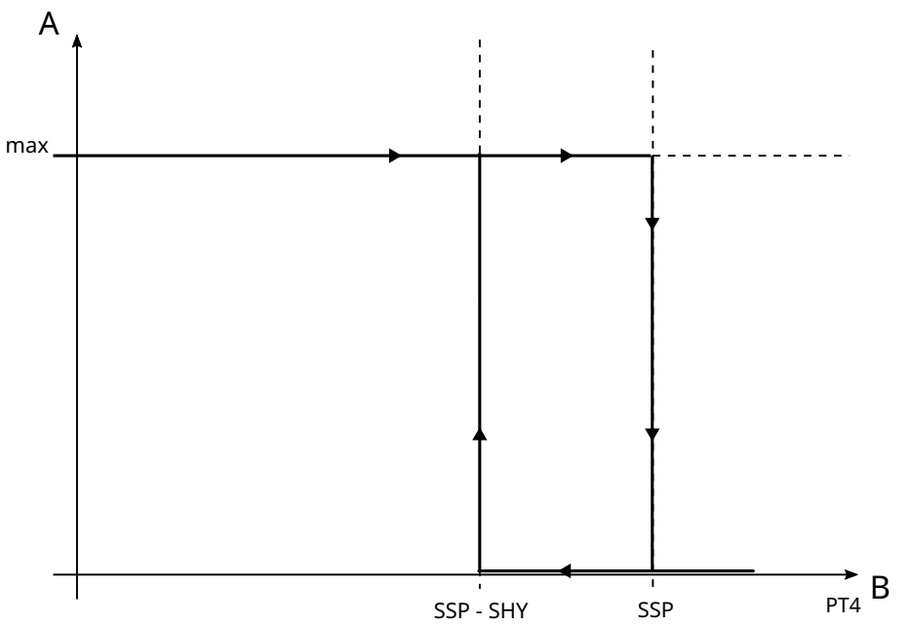
The domestic hot water temperature is controlled by the PT4 probe that must be positioned in the domestic hot water storage tank.

4.3.3 Enable domestic hot water production

The domestic hot water function must be enabled by parameter **"SCE"** *p. 19*

4.3.4 Domestic hot water logic

A Compressor frequency **B** Domestic hot water storage temperature



"SSP" *p. 19*: set domestic hot water temperature

"SHY" *p. 19*: domestic hot water temperature hysteresis (2 °C)

4.4 Auxiliary heater management (heating element or support heat generator)

The system allows the implementation of an auxiliary heating element or a heat generator (Boiler) to support the heat pump.
The auxiliary generators can intervene for producing plant water or domestic hot water with a difference:

- the electrical heating element can operate either in cooperation with the heat pump (HIE: CAL) or switching (HIE: CON) with heat pump circulation pump
- the boiler can operate only in switching mode (HIE: CAL) using its own circulator

⚠ The boiler must be connected to digital output BC1.

⚠ **The backup boiler cannot work at the same time as the heat pump.**

⚠ The parameters are already modified if the kit is factory-fitted.

⚠ Adjustments and parameter changes must be carried out by the Technical Service Department or a competent person.

4.4.1 Activation logics

The activation logic is the same for the plant water and the domestic hot water.

⚠ The production of domestic hot water has priority over plant water heating.
The auxiliary heating element or boiler is activated to support the heat pump in case of the outdoor unit in winter and in the sanitary area and according to:

- Outdoor temperature too low
- setpoint timeout
- water temperature demand higher than the limit that the heat pump can manage

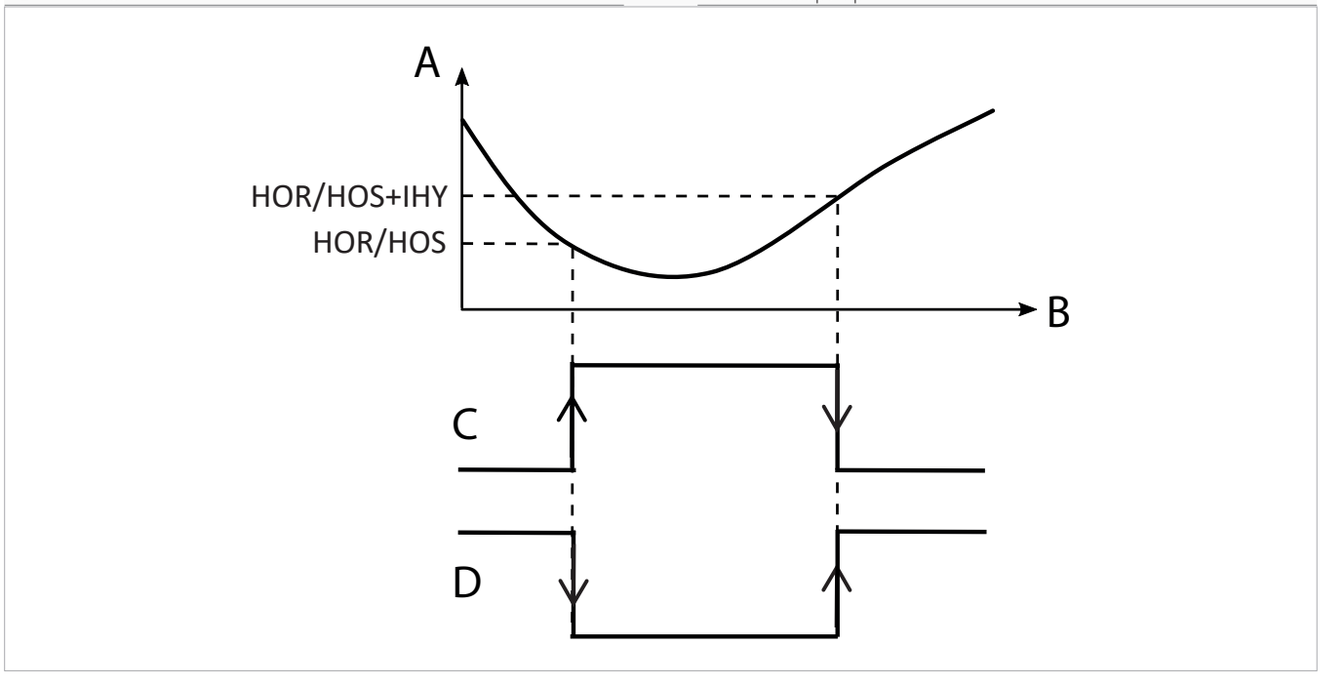
The boiler will shut down in the event of:

- domestic hot water storage temperature too high alarm
- plant water temperature too high

Outdoor temperature too low

The system activates the auxiliary generator when the outside temperature falls below the threshold value.

A	Outdoor air temperature	**C**	Auxiliary heater
B	Time	**D**	Heat pump



"HOR" *p. 20*: sets the heating threshold value

"HOS" *p. 20*: sets the hysteresis value in sanitary

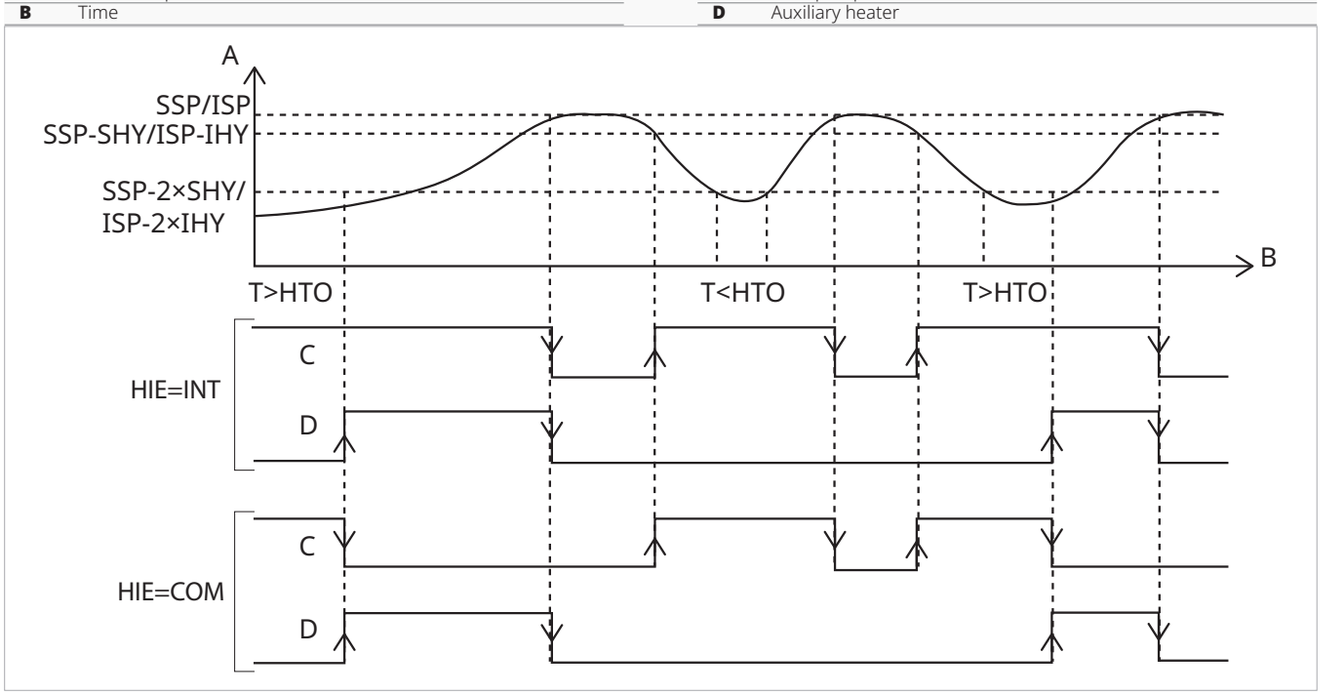
"IHY" *p. 19*: hysteresis

Setpoint timeout

if the water detected by the adjustment input sensor drops and re-mains under a value equal to double the set hysteresis for longer than 20 minutes, the controller activates auxiliary heater in integration, switching or exclusion entirely the head pump.

Switching / integration

A	Water temperature	**C**	Heat pump
B	Time	**D**	Auxiliary heater



"SSP" *p. 19*: Sanitary setpoint

"SHY" *p. 19*: Health hysteresis

"ISP" *p. 19*: Setpoint WINTER (Heating)

"IHY" *p. 19*: WINTER Hysteresis (Heating)

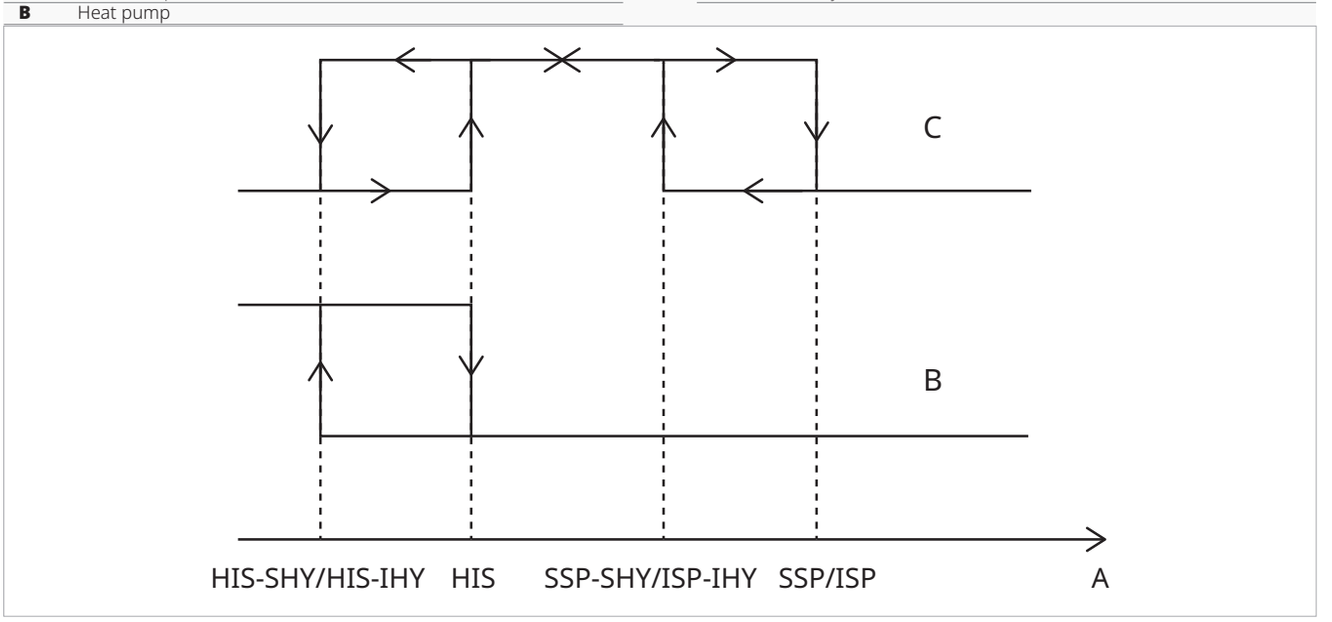
"HTO" *p. 20*: Resistance timeout

"HIE" *p. 20*: Auxiliary heater management

Water high-temperature request

If a setpoint above 50 °C is set, the controller switches the heat pump off and the auxiliary heater on. When this function is active, there will be no simultaneous operation of the heat pump and auxiliary heater.

A Water temperature
B Heat pump
C Auxiliary heater



"HIS" *p. 20*: Maximum water temperature for pdc function

"SHY" *p. 19*: Health hysteresis

"IHY" *p. 19*: WINTER Hysteresis (Heating)

"SSP" *p. 19*: Sanitary setpoint

"ISP" *p. 19*: Setpoint WINTER (Heating)

4.5 Dynamic set adjustment

The dynamic set function allows the creation of compensation algorithms based on the settable parameters according to the operating mode.

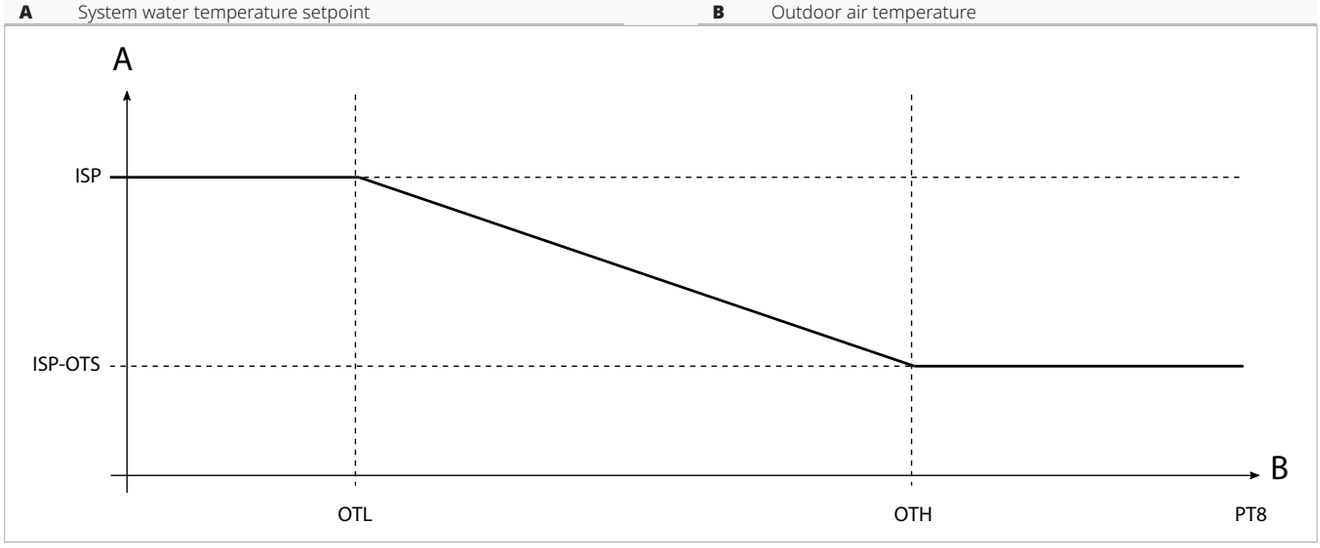
4.5.1 Function enabling

The dynamic set adjustment must be enabled by parameter **"CLI"** *p. 21*

4.5.2 Heating mode settings

Settable parameters:

A System water temperature setpoint **B** Outdoor air temperature



"ISP" *p. 19*: setpoint WINTER (Heating)

"OTS" *p. 21*: differential for climate control

"OTL" *p. 21*: minimum outside temperature for climate control

"OTH" *p. 21*: maximum outside temperature for climate control

"PT8" *p. 17*: outside air

⚠ Check carefully how the parameter setting affects the plant water flow temperature. An excessively low temperature will not allow sufficient heating of the air treated by the hydronic terminals.

4.6 Anti-Legionella

The anti-legionella function must be activated if domestic hot water is stored in a boiler.
The function is not necessary if domestic hot water is produced by the plant water using a rapid exchanger.

⚠ The anti-legionella function is only possible with the electric heater kit.

By activating the Antilegionella function, the regulator can conduct the thermal disinfection procedures autonomously on hot water systems equipped with recirculation, consider-ably reducing the risk of the presence and proliferation of the bacteria causing Legionella.
The variables in the systems in which our products may be installed do not allow the total exclusion of the risk.
Activation of the disinfection function can be performed by connecting a timer to the inlet that has a default value set for 2 a.m. the night between Sunday and Monday; as statistically this is a time with a low probability of employment on behalf of the users.
The length of the action depends by the features of the installation.
Legionella bacteria react differently de-pending upon the maximum temperature reached within the circuit and, with the increase of temperature, the dura-tion time decreases.

4.6.1 Function enabling

The anti-legionella function must be enabled by parameter "LTI" *p. 19*

4.6.2 Settings

"LSP" *p. 19*: anti-legionella temperature setting

"LTM" *p. 19*: anti-legionella cycle duration

"LTI" *p. 19*: anti-legionella cycle frequency

"LTO" *p. 20*: Anti-legionella cycle timeout
The default parameters set in the device are:
- temperature setting LSP > 60°C for a duration LTM of 2 hours.

Other settings are possible taking into account the following rules:
- above 70°C disinfection lasts 30 minutes

- between 65° and 70°C disinfection lasts 60 minutes;
- between 60° and 65°C disinfection lasts 120 minutes;
- between 57.5° and 60°C disinfection lasts 180 minutes;
- between 55°C and 57.5°C disinfection lasts 240 minutes;

The controller doesn't signal the execution of the Anti-Legionella function.
The regulator performs a check according to the preset parameters and exits the Anti-Legionella function after a timeout of 5 hours.
During the Anti-Legionella function, the cooling and heating requirements of the system are not fulfilled.

FUNCTION SETTING 3IN1

5.1 Introduction

The unit is designed to provide:
- water to plant for heating or cooling the rooms
- domestic hot water

If necessary, it is possible to support the heat output generated by the appliance with auxiliary heating systems (backup), which may be:
- heating elements available as accessories and mounted inside the unit from the factory
- combustion heaters (boilers)
- solar system kit available as an accessory and managed with a dedicated control unit

The appliance has functions that allow the operation to be set to suit the type of plant on which it has been installed.
The settings and function management is done through:
- the Control Panel display

5.2 Plant water management

The following plant type is provided:
- system with hydraulic separator and secondary pump, inside the machine to be ordered as a factory-fitted kit

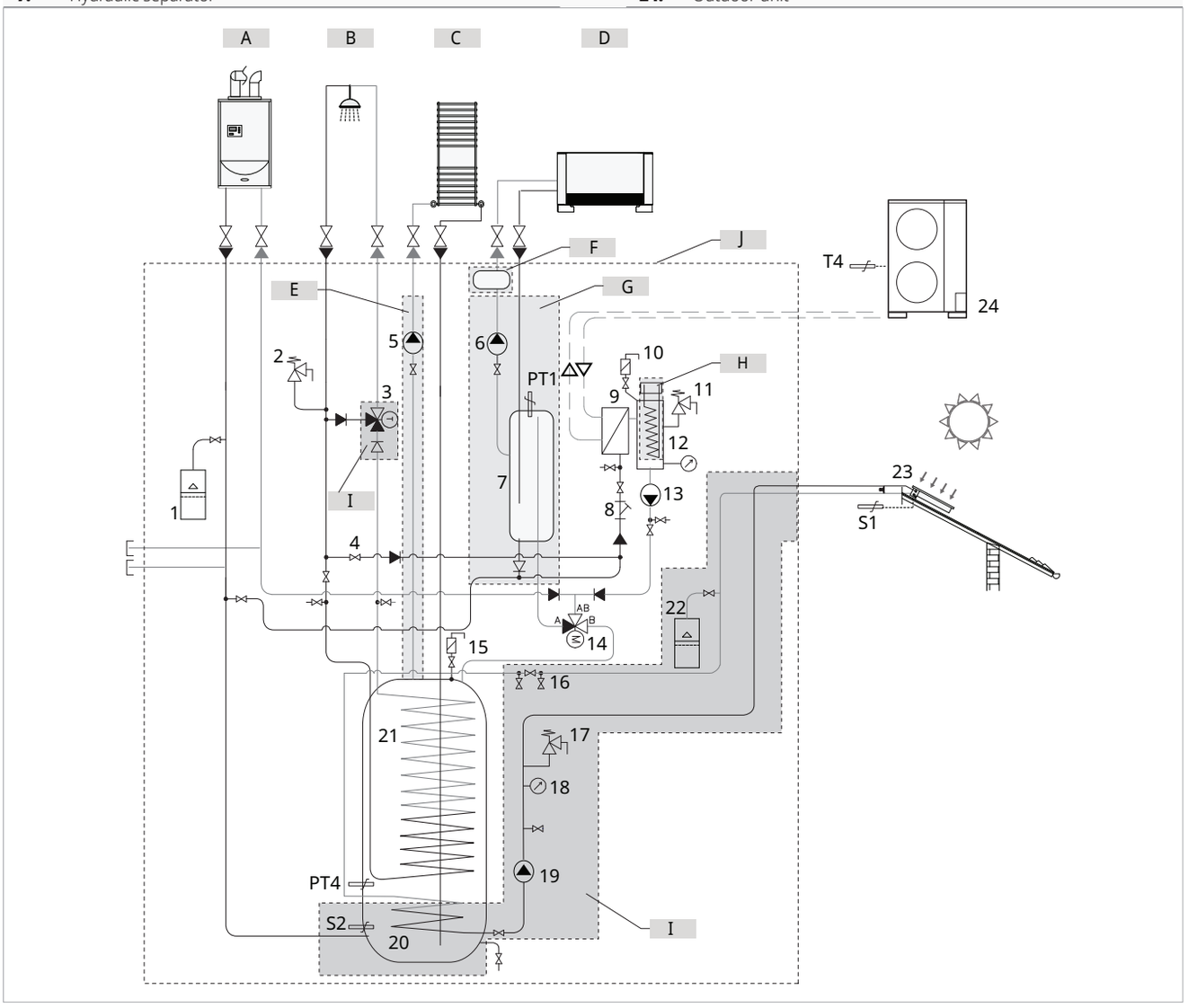
⚠ **The separator is mandatory. It must be provided on the system if it is not ordered as an accessory.**
The system water temperature can be controlled via:

PT1: plant probe. To be placed in the hydraulic separator.

⚠ If the secondary separator kit is used, the probe is positioned at the factory.

5.2.1 Schematic diagram with hydraulic separator and secondary pump

A	Boiler
B	Domestic hot water consumers
C	High temperature (radiator) utilities
D	System utilities
E	Heated towel rail kit (optional)
F	Tank (optional)
G	Secondary separator kit (optional)
H	Heater kit (optional)
I	Solar heating kit (optional)
J	Indoor unit
1.	24 litre system expansion vessel
2.	7-bar safety valve
3.	Thermostatic mixing valve (supplied with the solar kit)
4.	Filling cock
5.	High-temperature circulation pump PP4
6.	Secondary circulation pump PP3
7.	Hydraulic separator
8.	Net filter
9.	Plate exchanger
10.	Automatic vent valve
11.	3-bar safety valve
12.	Collector with heating element
13.	PP1 primary circulation pump
14.	3-way on/off valve PV1
15.	Boiler vent valve
16.	Solar filling cock
17.	4 bar solar safety valve (optional)
18.	Pressure gauge
19.	Solar circuit pump PP7
20.	Solar serpentine
21.	200 litre tank for domestic hot water
22.	24 L solar expansion vessel
23.	Solar panel
24.	Outdoor unit



Water temperature control

Setting of the control on PT1 probe to be placed in the separator

"SRI" *p. 22*: **PT1**

PP1 primary circulation pump

The primary pump is set for Energy Saving operation.
For this type of system, operation on demand can be enabled so that the pump stops when the set-point is reached.

"PMS" *p. 20*: **NOR**

⚠ Check the primary pump head with the pressure drop of the plant. If this is not sufficient, manifolds must be provided on the delivery and return lines of secondary pumps.

Secondary circulation pump

The secondary pump is driven exclusively:
- from input "PI3" *p. 16* TA or ModBus supervisor

Independently of the status of the domestic hot water function, it is always switched off in standby.

High-temperature circulation pump PP4

The high temperature pump is driven by the "PI6" *p. 17* input if the Domestic Hot Water function is enabled.

Activation logic:

"PI6" *p. 17***:** closed

"PI6" *p. 17***:** set to "Z2A" *p. 21*

"Z2A" *p. 21***:** set to HT

Temperature measured by probe PT4 above domestic hot water setpoint SSP less hysteresis "Z2Y" *p. 21*.

Deactivation logic:

"PI6" *p. 17***:** open
Alternatively, when the device is switched off
Alternatively after timeout set by the parameter "Z2T" *p. 22*. In this case, the pump is only reactivated after the Domestic Hot Water SSP setpoint has been reached or if the device is switched off and on again from stand-by.

5.2.2 Plant cooling/heating function enabling from TA

The connection and activation of an external consents (TA) is essential for the operation of the unit:
- TA from room thermostat
- TA from Modbus Supervisor

The two types of TA consents can co-exist and the unit will activate when it receives a call from at least one of the two .

TA from room thermostat or a generic potential-free contact contact

Function Logic:
The TA must be connected to digital input PI3:
- on the terminal board of the indoor unit

Contact logic:
- Closed contact: the unit is switched on for heating or cooling the plant water.
- Open contact: the unit is switched off for heating or cooling the plant water

⚠ If the domestic hot water function is active, this function has priority even when the contact is open.

TA from Modbus Supervisor

Function Logic:
The room thermostat is enabled by Modbus Supervisor and controlled by the Modbus register with address 10.

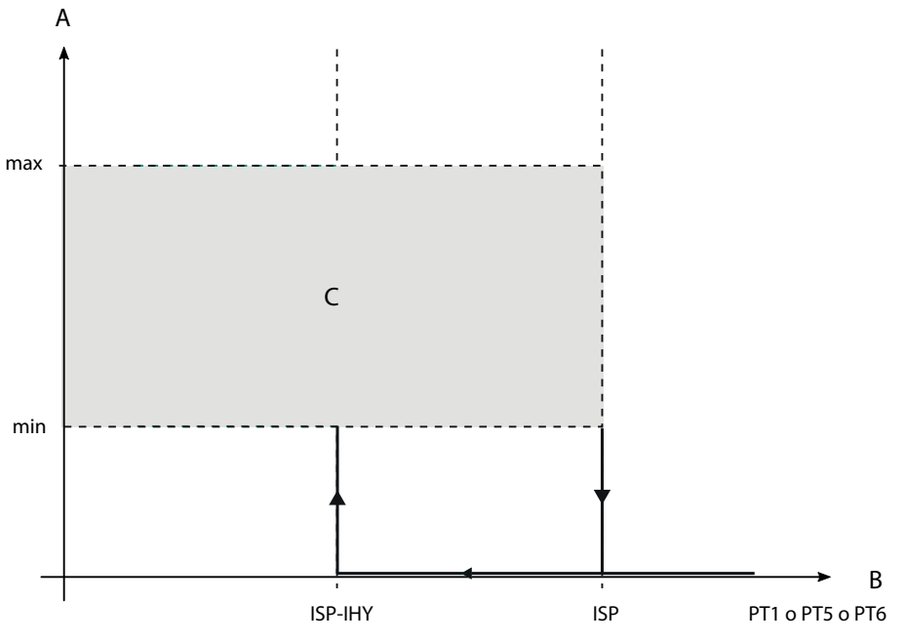
Logic of the register:
The call is managed by the Modbus Supervisor.
- Value 1: the unit is switched on for heating or cooling the plant water.
- Value 0: the unit is switched off for heating or cooling the plant water.

⚠ If the domestic hot water function is active, this function has priority.

Enabling:
Use must be enabled by parameter **"ATM"** *p. 23*.

5.2.3 Heating logic

A Frequency
B Plant water temperature
C Adaptive control logic



⚠ Min and max depend on the logic corresponding to the active mode (heating) and the configuration of the unit.

PT1, 5, 6: Plant temperature probe. This depends on the setting of **"SRI"** *p. 22*

"ISP" *p. 19*: **Setpoint WINTER (Heating)**

⚠ If the external climate control is active, the reference setpoint is not "ISP" ***p. 19***, but the dynamically calculated setpoint. View chapter "Dynamic set adjustment" ***p. 44***.

"IHY" *p. 19*: WINTER hysteresis (2.5 °C)

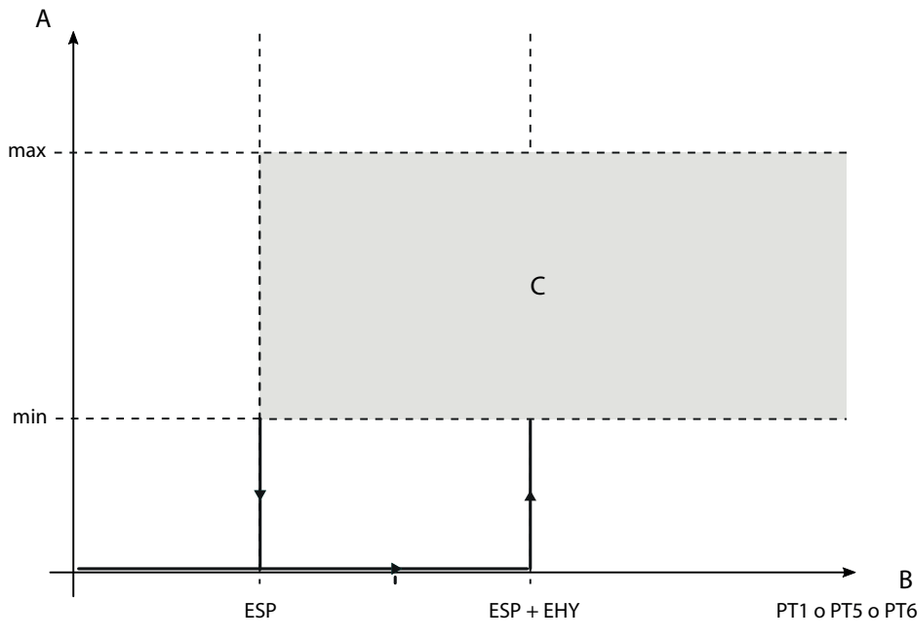
⚠ The function is inhibited by the simultaneous request for domestic hot water (which higher priority) but the priority can be reversed for 90 minutes (**"FH"** *p. 21*) by pressing the Fast Heating button

⚠ The temperature in the separator may not exceed 60 °C.

⚠ During the start-up phase, the compressor reaches the maximum frequency in 3 minutes.

5.2.4 Cooling logic

A Frequency
B Plant water temperature
C Adaptive control logic



⚠ Min and max depend on the logic corresponding to the active mode (cooling) and the configuration of the unit.

PT1, 5, 6: Plant temperature probe. This depends on the setting of **"SRI"** *p. 22*

"ESP" *p. 18***: SUMMER setpoint (Cooling)**

⚠ If the external climate control is active, the reference setpoint is not PF22, but the dynamically calculated setpoint. View chapter "Dynamic set adjustment" *p. 44*.

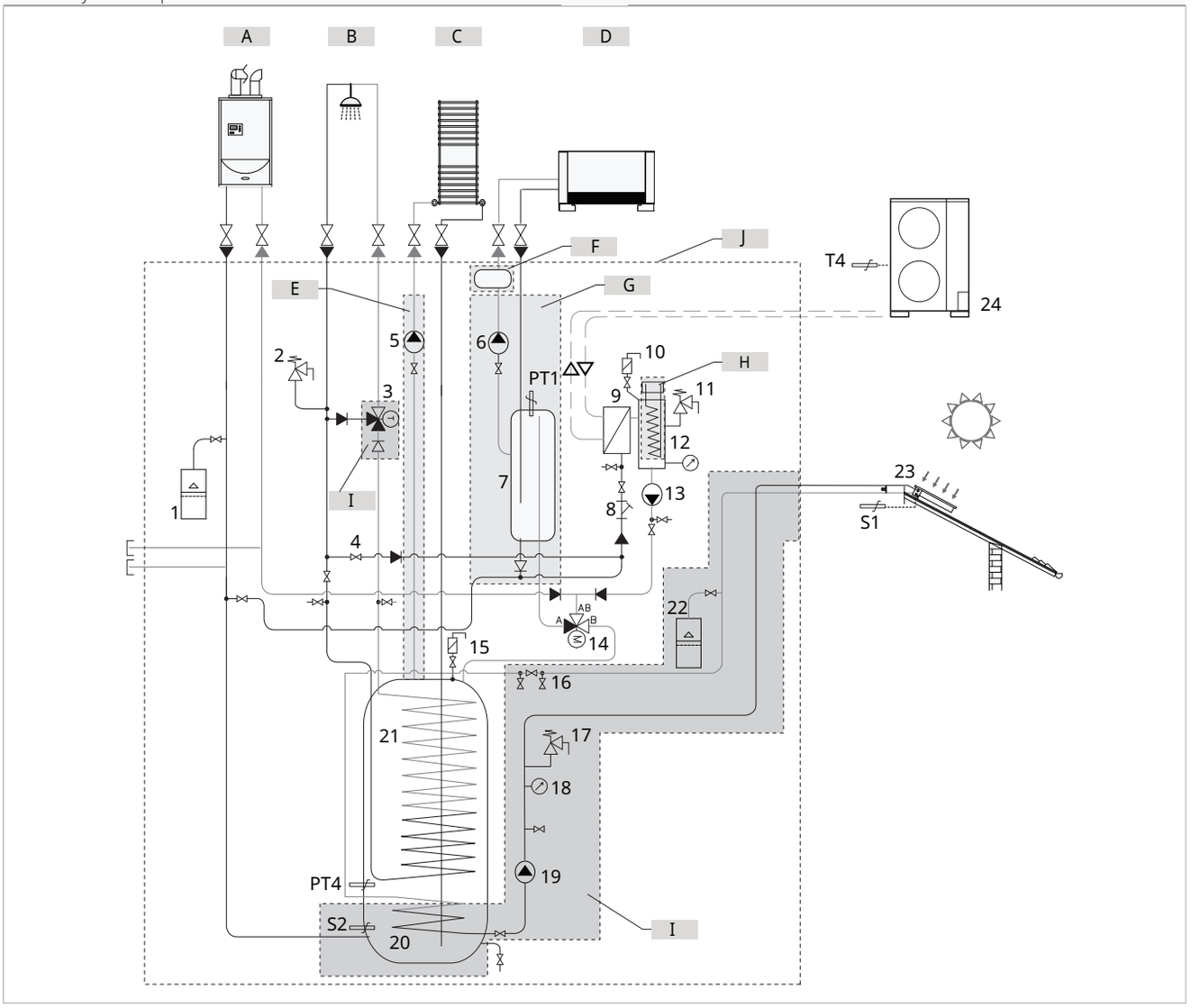
"EHY" *p. 18***:** SUMMER hysteresis (2.5 °C)

⚠ The function is inhibited by the simultaneous request for domestic hot water (which higher priority) but the priority can be reversed for 90 minutes (**"FH"** *p. 21*) by pressing the Fast Heating button

5.3 Domestic hot water management

5.3.1 Schematic diagram with sanitary hot water storage and heating generator

A	Boiler
B	Domestic hot water consumers
C	High temperature (radiator) utilities
D	System utilities
E	Heated towel rail kit (optional)
F	Tank (optional)
G	Secondary separator kit (optional)
H	Heater kit (optional)
I	Solar heating kit (optional)
J	Indoor unit
1.	24 litre system expansion vessel
2.	7-bar safety valve
3.	Thermostatic mixing valve (supplied with the solar kit)
4.	Filling cock
5.	High-temperature circulation pump PP4
6.	Secondary circulation pump PP3
7.	Hydraulic separator
8.	Net filter
9.	Plate exchanger
10.	Automatic vent valve
11.	3-bar safety valve
12.	Collector with heating element
13.	PP1 primary circulation pump
14.	3-way on/off valve PV1
15.	Boiler vent valve
16.	Solar filling cock
17.	4 bar solar safety valve (optional)
18.	Pressure gauge
19.	Solar circuit pump PP7
20.	Solar serpentine
21.	200 litre tank for domestic hot water
22.	24 L solar expansion vessel
23.	Solar panel
24.	Outdoor unit



Domestic hot water temperature check

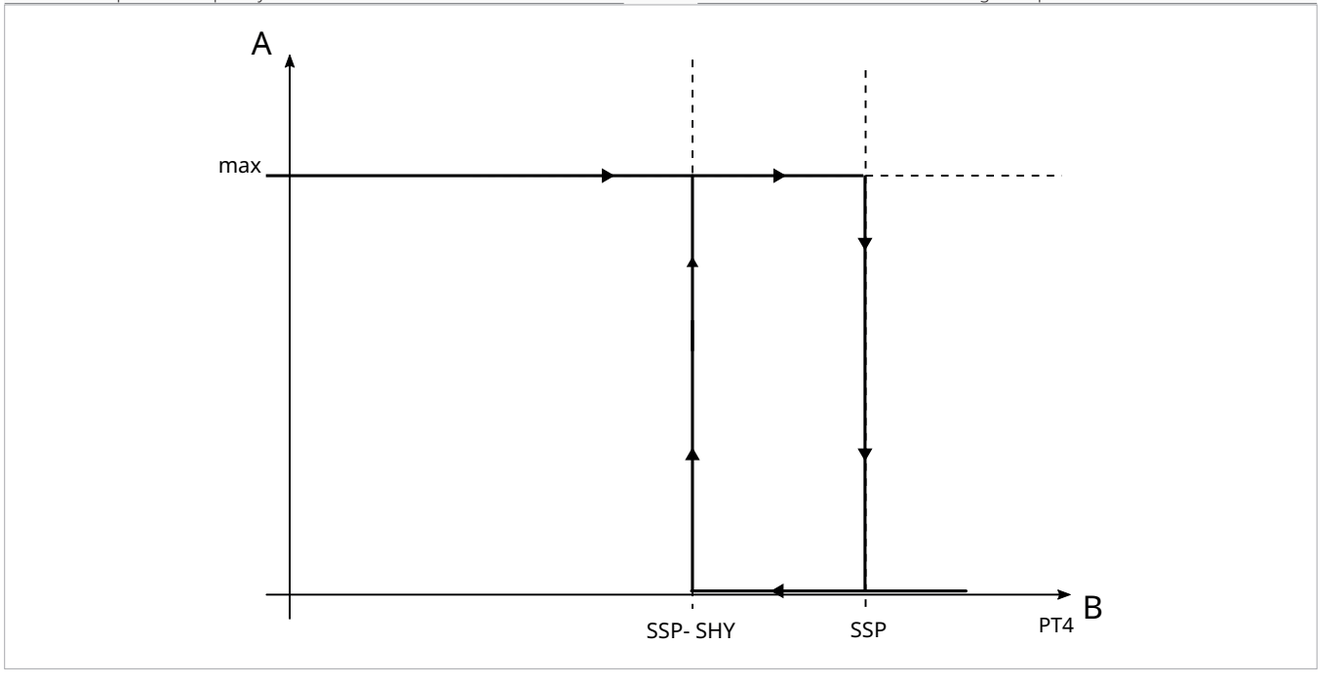
The domestic hot water temperature is controlled by the PT4 probe positioned in the domestic hot water storage tank.

5.3.2 Enable domestic hot water production

The domestic hot water function must be enabled by default.

5.3.3 Domestic hot water logic

A Compressor frequency **B** Domestic hot water storage temperature



⚠ Min and max depend on the logic corresponding to the active mode (domestic hot water production) and the configuration of the unit.

"SSP" *p. 19*: set domestic hot water temperature

"SHY" *p. 19*: domestic hot water temperature hysteresis (2 °C)

5.4 Auxiliary heater management (heating element or support heat generator)

The system allows the implementation of an auxiliary heating element or a heat generator (Boiler) to support the heat pump. The auxiliary generators can intervene for producing plant water or domestic hot water with a difference:

- the electrical heating element can operate either in cooperation with the heat pump (HIE: CAL) or switching (HIE: CON) with heat pump circulation pump
- the boiler can operate only in switching mode (HIE: CAL) using its own circulator

⚠ The boiler must be connected to digital output BC1.

⚠ Adjustments and parameter changes must be carried out by the Technical Service Department or a competent person.

⚠ The parameters are already modified if the kit is factory-fitted.

⚠ **The backup boiler cannot work at the same time as the heat pump.**

5.4.1 Activation logics

The activation logic is the same for the plant water and the domestic hot water.

⚠ The production of domestic hot water has priority over plant water heating.
The auxiliary heating element or boiler is activated to support the heat pump in case of:

- Outdoor temperature too low
- setpoint timeout
- water temperature demand higher than the limit that the heat pump can manage

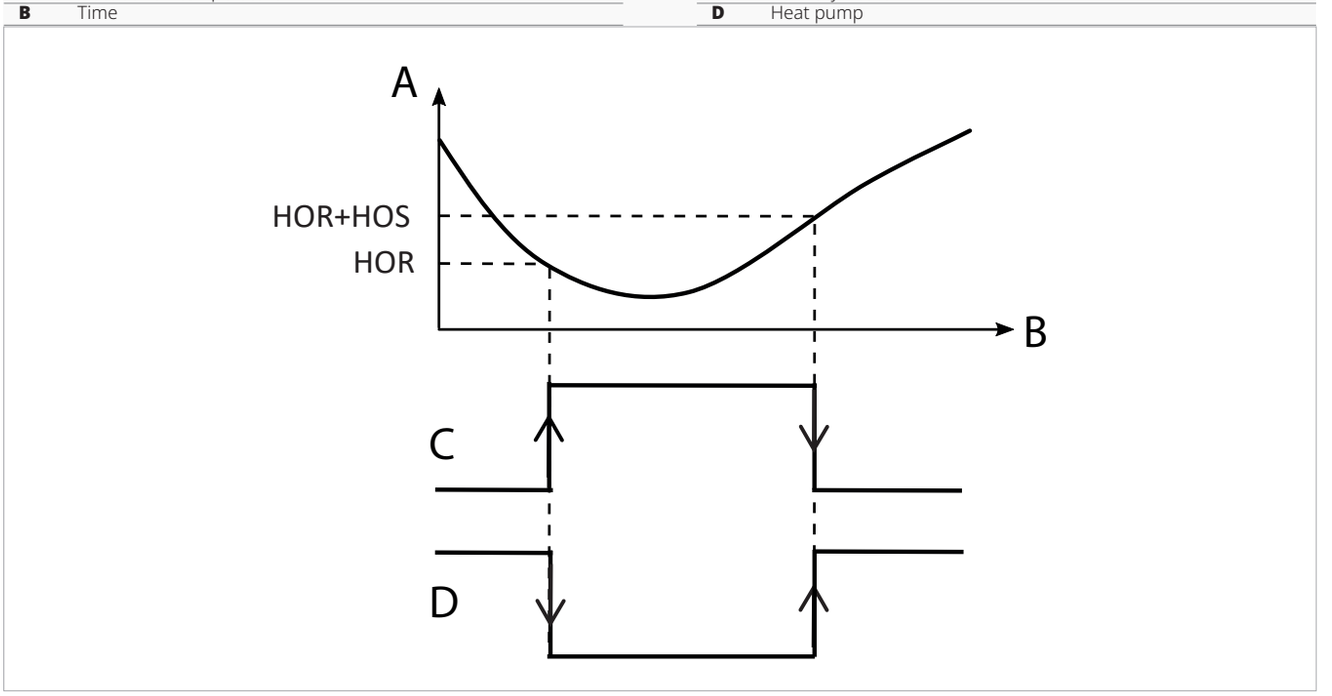
The boiler will shut down in the event of:

- domestic hot water storage temperature too high alarm
- plant water temperature too high

Outdoor temperature too low

The system activates the auxiliary generator when the outside temperature falls below the threshold value. In this case, three situations may occur according to the parameter setting:

A	Outdoor air temperature	**C**	Auxiliary heater
B	Time	**D**	Heat pump



"HOR" *p. 20*: sets the heating threshold value

"HOS" *p. 20*: sets the hysteresis value in sanitary

"IHY" *p. 19*: hysteresis

Setpoint timeout

When the heat pump fails to reach the setpoint within a given time, three situations can occur depending on the setting of the connected parameters:

"HTO" *p. 20*: sets the plant water timeout value

Water high-temperature request

The intervention of the auxiliary generator can be enabled when the required water temperature exceeds the maximum value that can be reached by the heat pump:
The setting can be differentiated for plant water and domestic hot water.

"HIS" *p. 20*: sets the plant water threshold value

⚠ The auxiliary backup generators will shut down when the storage temperature is less than the maximum allowed temperature.

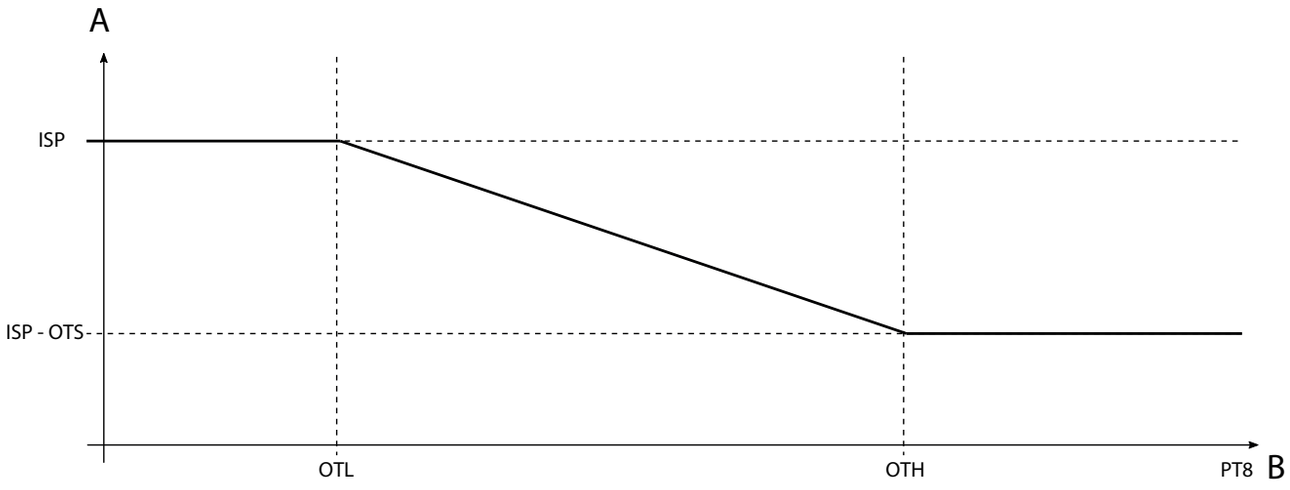
5.5 Dynamic set adjustment

The dynamic set function allows the creation of compensation algorithms based on the settable parameters according to the operating mode.

5.5.1 Function enabling

The dynamic set adjustment must be enabled by parameter **"CLI"** *p. 21*

5.5.2 Heating mode settings



Settable parameters:

"ISP" *p. 19*: setpoint WINTER (Heating)

"OTS" *p. 21*: differential for climate control

"OTL" *p. 21*: minimum outside temperature for climate control

"OTH" *p. 21*: maximum outside temperature for climate control

"PT8" *p. 17*: outside air

⚠ Check carefully how the parameter setting affects the plant water flow temperature. An excessively low temperature will not allow sufficient heating of the air treated by the hydronic terminals.

TROUBLESHOOTING

6.1 Troubleshooting Table

Alarm	Description	Correlated variables	Cause	Solution
ALLARME 001	Inlet water temperature probe malfunction	PT6	Probe disconnected, faulty or abnormal value	Check the connection and if necessary replace the probe
ALLARME 002	Water outlet temperature probe malfunction	PT5	Probe disconnected, faulty or abnormal value	Check the connection and if necessary replace the probe
ALLARME 003	Domestic water temperature probe malfunction	PT4	Probe disconnected, faulty or abnormal value	Check the connection and if necessary replace the probe
ALLARME 004	Outdoor temperature probe malfunction	PT8	Probe disconnected, faulty or abnormal value	Check the connection and if necessary replace the probe
ALLARME 005	Low water temperature	PT5	The minimum frost protection temperature alarm has triggered. The temperature of the exiting water dropped below 5°C.	• Check that nothing is preventing the good water circulation in the plant (air, partially closed valves, clogged sieve filter) • Check that the thermal gradient between the plant delivery and return is between 4÷7 °C by querying parameter PT5 • Set a lower circulator speed if the thermal gradient is lower than 4 °C • If the thermal gradient is greater than 7 °C, check that all the valves on the plant are open and if necessary add an external pump to increase the water flow rate or insert a hydraulic separator
ALLARME 006	Low water temperature PT5 (and PT6 and if enabled PT1) on standby	PT1, PT5, PT6	The frost temperature alarm has triggered during the stand-by state. The outlet water temperature has dropped below 5 °C.	• During the stand-by state, a dangerous situation developed that could lead to serious damage to the device. • If the outside temperature may fall below zero degrees centigrade, with the likelihood of frost, the hydraulic plant must be drained or antifreeze liquid (e.g. ethylene glycol) must be added in the doses recommended by the manufacturer.
ALLARME 007	Low water temperature in standby	PT4	The frost temperature alarm has triggered during the stand-by state. The outlet water temperature has dropped below 5 °C.	• During the stand-by state, a dangerous situation developed that could lead to serious damage to the device. • If the outside temperature may fall below zero degrees centigrade, with the likelihood of frost, the hydraulic plant must be drained or antifreeze liquid (e.g. ethylene glycol) must be added in the doses recommended by the manufacturer.
ALLARME 008	High water temperature	PT5	Inlet water temperature detected by PT5 exceeded 80 °C	• If a boiler is installed in the system check the system's diverter valves
ALLARME 009	High water temperature	PT4	The domestic water tank temperature detected by PT4 has exceeded 80 °C	• If a boiler is installed in the system check the system's diverter valves • If a solar collector is present in the system, PT4 in the hot water tank detects a high temperature but this does not prevent the production of hot or cold water for the system
ALLARME 010	Plant flowmeter tripped	PI1	The water circulation in the plant is not good	Check that: • The check valves are open • the three -way valve for hot-cold diversion (if present) is in the correct position, • There are no air bubbles inside the circuit • At least one of the consumers has an open circuit or is equipped with a 3-way valve • The external mesh filter is not clogged • The plant water pressure is correct • The circulation pump is working properly (unlock it if necessary)

Alarm	Description	Correlated variables	Cause	Solution
ALLARME 011	Malfunctioning of condensing unit	-	• The alarm P05 appears on the control panel of the outdoor unit on size 15 or 18. (Size 18 refers to the eHPoca indoor unit only). • The outdoor unit is not working properly.	• Invert two of the three-phase power phases. • Check on the control panel of the outdoor unit the meaning of the alarm • Contact the Technical Service Centre
ALLARME 012	Anti-legionella cycle terminated after LTO timeout exceeded	-	The anti-Legionella cycle ended in-correctly after 5 hours instead of holding 60°C for 2 hours.	• The auxiliary heater (resistor or backup boiler) is not available or the power is not sufficient for perform the function • Contact the installer
ALLARME 013	Plant temperature probe malfunction	PT1	Probe disconnected, faulty or abnormal value	Check the connection and if necessary replace the probe
ALLARME 014	Low water temperature	PT1	The minimum frost protection temperature alarm has triggered. The temperature of the exiting water dropped below 5°C.	Check that: • There is nothing to prevent good water circulation in the system (air, partially closed valves, clogged mains water filter, etc.) • Check that the thermal gradient between the plant flow and return is between 4÷7 °C by querying parameter PT1 • Set a lower circulator speed if the thermal gradient is lower than 4 °C • If the thermal gradient is greater than 7 °C, check that all the valves on the plant are open and if necessary add an external pump to increase the water flow rate or insert a hydraulic separator
ALLARME 015	Low water temperature	PT6	The minimum frost protection temperature alarm has triggered. The temperature of the exiting water dropped below 5°C.	Check that: • There is nothing to prevent good water circulation in the system (air, partially closed valves, clogged mains water filter, etc.) • Check that the thermal gradient between the plant flow and return is between 4÷7 °C by querying parameter PT6 • Set a lower circulator speed if the thermal gradient is lower than 4 °C • If the thermal gradient is greater than 7 °C, check that all the valves on the plant are open and if necessary add an external pump to increase the water flow rate or insert a hydraulic separator
-	Noise and turbulence is coming from the hydraulic circuit	-	There is air inside the circuit	• Vent the air via the external devices and the vent on the buffer tank of the machine and bring the circuit to the correct pressure • Check that the suction pressure (hydraulic circuit return) with the pump on is higher than 0.6 bar.
-	Unsatisfactory cooling or heating	-	• The setpoint set on the controller is too low (heating mode) or too high (cooling mode) • The control panel is regulated to too high a temperature for cooling (or too low for heating) • Open doors and/or windows	• Reset according to needs • Adjust the temperature to a suitable value • Close them to prevent air from entering

1. **Note:**
2. In general, alarm resetting is automatic when the activation condition is established again.
3. The activation or reset conditions must remain for a preset time (e.g. 30 s) before the alarm is activated or deactivated on the display. The duration of the preset time depends on the alarm type.
4. If the alarm trips multiple times in a given time (e.g. 3 times in 1 hour), it must be reset manually by the Technical Service Centre.

realized by Innova technical dept.

innova

INNOVA S.r.l.
Via I Maggio 8 - 38089 Storo (TN) - ITALY
tel. +39.0465.670104 – fax +39.0465.674965
info@innovaenergie.com