airtècnics

ADVANCED PRO RJ11 Control

INSTALLATION AND OPERATION MANUAL

¡Attention, Do not switch on the device without the cover on!

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1. INTRODUCTION

1.1. Description

The **ADVANCED PRO** is a versatile Plug&Play air curtain control with communication via a standard 4-way RJ11 cable.
Compatible with all air curtain models:

- 2 and 5 ventilation speed
- Air only, heating with water coil, electric and heat pump.

Once connected, it will detect the model of the air curtain and configure itself automatically (number of speeds and type of heating).

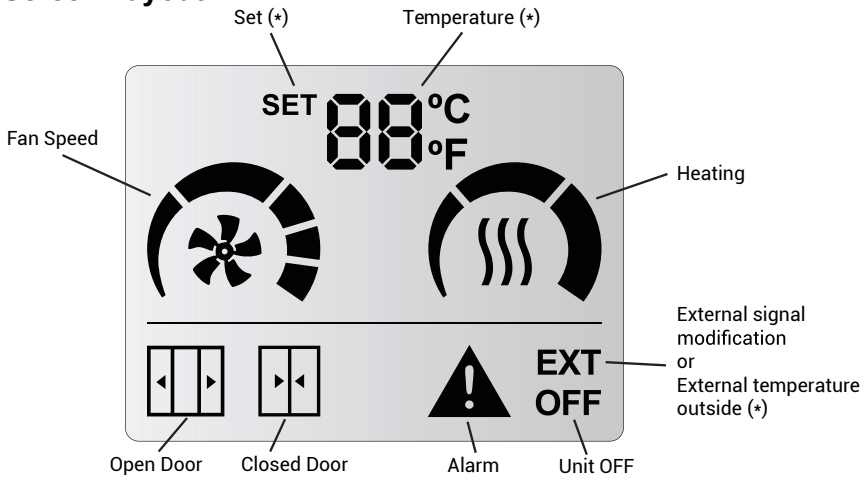
The **ADVANCED PRO RJ11** control allows the selection of different speeds and heating stages for door open and door closed.
In addition, it limits the heating based on the set temperature according to the room temperature (optionally also with the outside temperature) and the door status.
A 'Boost' function is available when the door is open, which increases the heating to ensure comfort (see explanation of Boost mode on page 11).

1.2. Main Features

- Backlight LCD display iindicates fan speed, heating stage, set, ambient and outdoor temperatures (if an additional sensor is installed outside the building), door status, alarms and errors, and external signals (EXT).
- Inbuild room thermostat to turn ON/OFF or modulate the heating according to set temperature.
- Ready for the installation of a potential-free door contact. This can be used to set one speed and heating stage for an open door and another for a closed door.
- It has 3 digital inputs with different functions depending on the air curtain model connected (OFF outside, OFF heating, fire alarm, etc.).
- Maximum speed and heating settings for door open and door closed, boost mode, memory, etc.

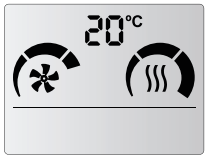
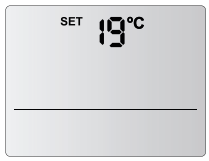
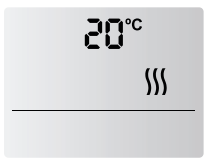
1.3. Screen and Buttons

Screen Layout:



Button Layout:

- ON/OFF (circle with line) allows to return to previous screen in Menus and starts/stops the air curtain.
- Use the arrows to set the temperature when electrical/water.
- User Menu to configure (3 lines):
  - Door open and door close ventilation speed.
  - Door open and door close heating stage.
  - Set temperature when electrical/water.

Room	
SET	
External (optional)	
Discharge	
Inlet (optional)	

2. USER FUNCTIONING

2.1. Parameter Variables

The display will know what functional limits exists and will only show the parameters that we can modify.

- **Temperature SET:** the desired temperature can be set between 10ºC and 35ºC. Below 10ºC and above 35ºC, you can select “no” and the heating will not be limited by temperature (thermostat mode).

- **Fan Speed**: user can select one fan speed for open and another for closed door. If the speed is set to 0 then the unit will be off.

- Slave DX (P2): Only one speed can be selected when the heat pump is running.

- Interface Slave (P0): The speeds are selected via the control of the heat pump brand.

Air Curtain Model	Open Door	Closed Door
2-speed	0-2	0-2
5-speed	0-5	0-5

- **Heating**: it depends on the air curtain model:

- Only Air: It has no heating.

- Electrical heated: The user can select the heating stage based on the configured ventilation speed and the door’s status.

	2-Speed		
	STANDARD	0	0
		1	0,1,2,3
		2	0,1,2,3
Exception	1000-9kW and all Aris models (Limited on the air curtain PCB)	0	0
		1	0,1,2
		2	0,1,2,3

5-Speed		
STANDARD	0	0
	1	0, 1
	2	0, 1, 2
	3	0, 1, 2
	4	0, 1, 2, 3
	5	0, 1, 2, 3

- Water heated (ON/OFF): The user can select the valve’s on or off state (optional), depending on the configured ventilation speed and the door’s status.

- Modulating heating: The user can select the heating stage based on the configured ventilation speed and the door’s status.

For water heating models, the only limitation is that a heating stage cannot be selected with a speed of 0.

Single Stage (ON/OFF):
· OFF = 0 segments painted
· ON = 3 segments painted

Proportional:
· 0% = 0 segments painted
· 33% = 1 segment painted
· 66% = 2 segments painted
· 100% = 3 segments painted

- Heat Pump:

DX CD: Only one heating stage (ON/OFF) just as the temperature SET.

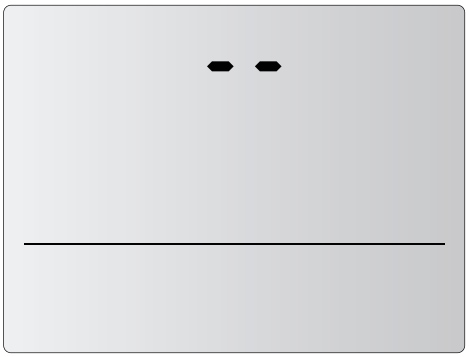
Slave DX and Interface Slave: The heating and the temperature SET are controlled by the brand control of the heat pump.

2.2. Device Initialization

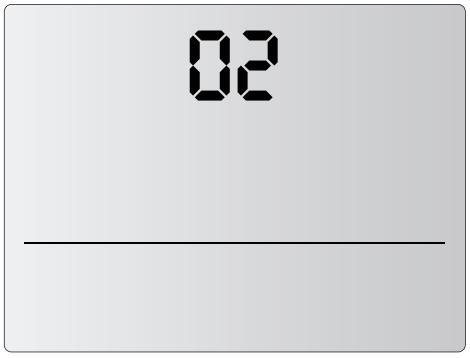
When the control is powered, the display will show the firmware version and subversion, the input/output program it is working on and how many PCBs are connected to the control.

Example: Displays show with a V01.02 version, a P1 configuration of inputs/outputs and 2 PCBs connected.

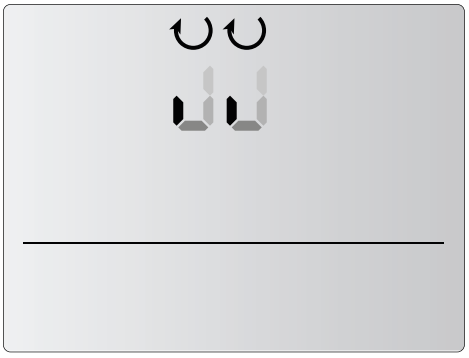
ADVANCED PRO version: 01



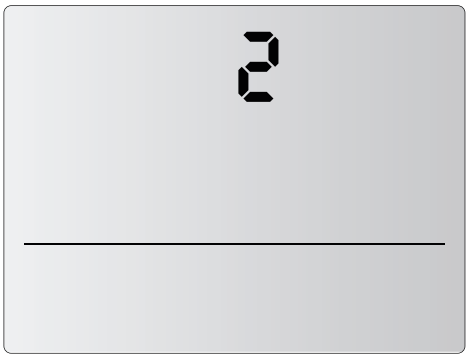
Space between version and subversion.



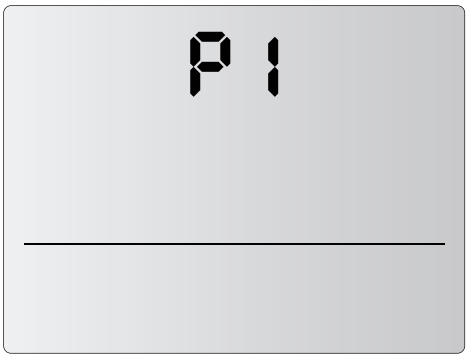
ADVANCED PRO subversion: 02



Scanning units.



2 units connected to the control (last number shown during initialization)

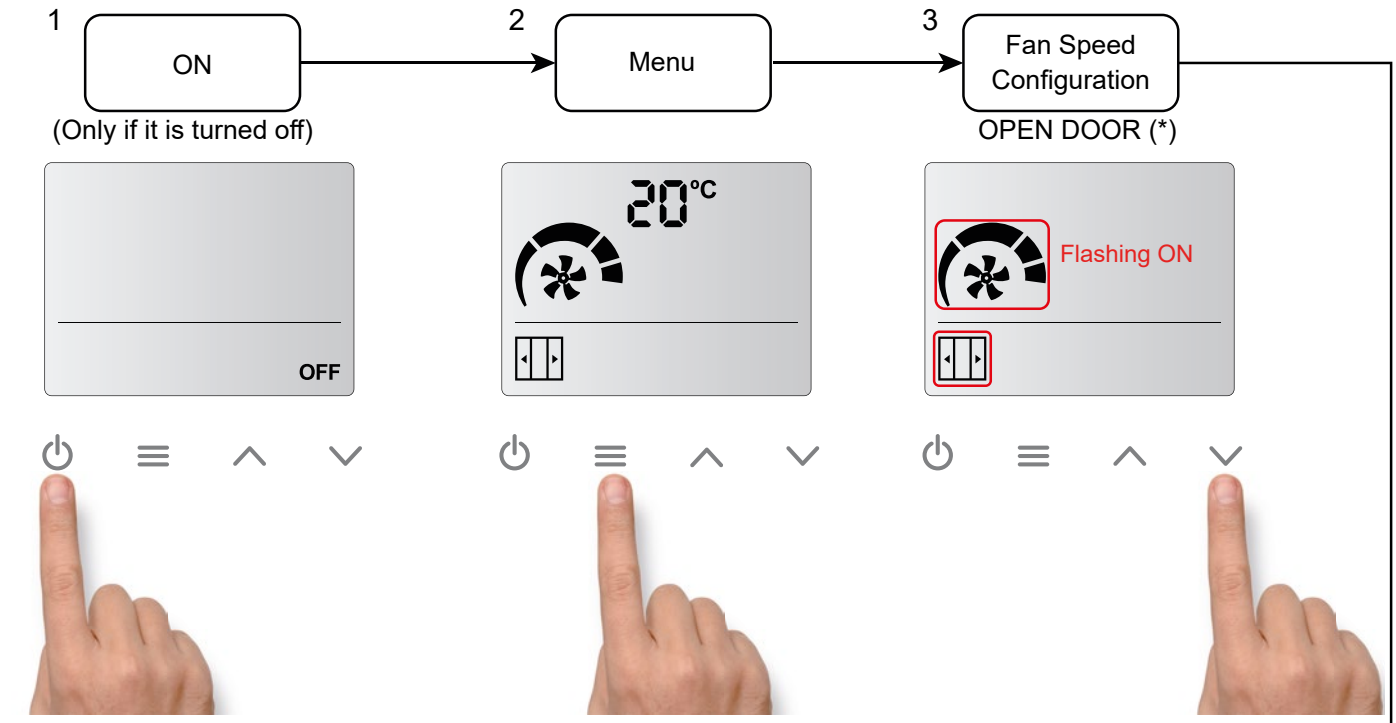


Unit Working in P1.

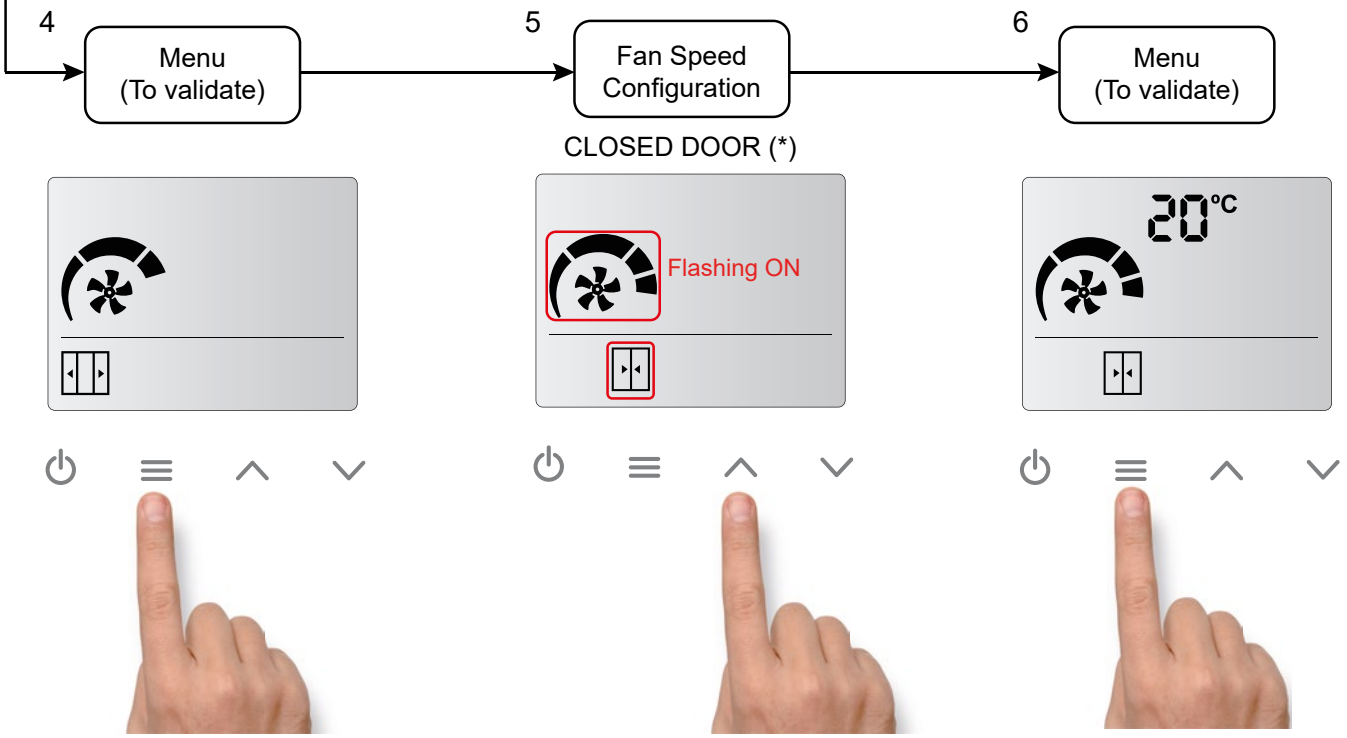
2.3. LCD User Menu Workflow

Once the control has been initialised, the user can select the ventilation speeds and heating stages at which the air curtain is wanted to operate. To do this, the user may follow the diagram below:

Menu Flow for Only Air (Non-heated) models:

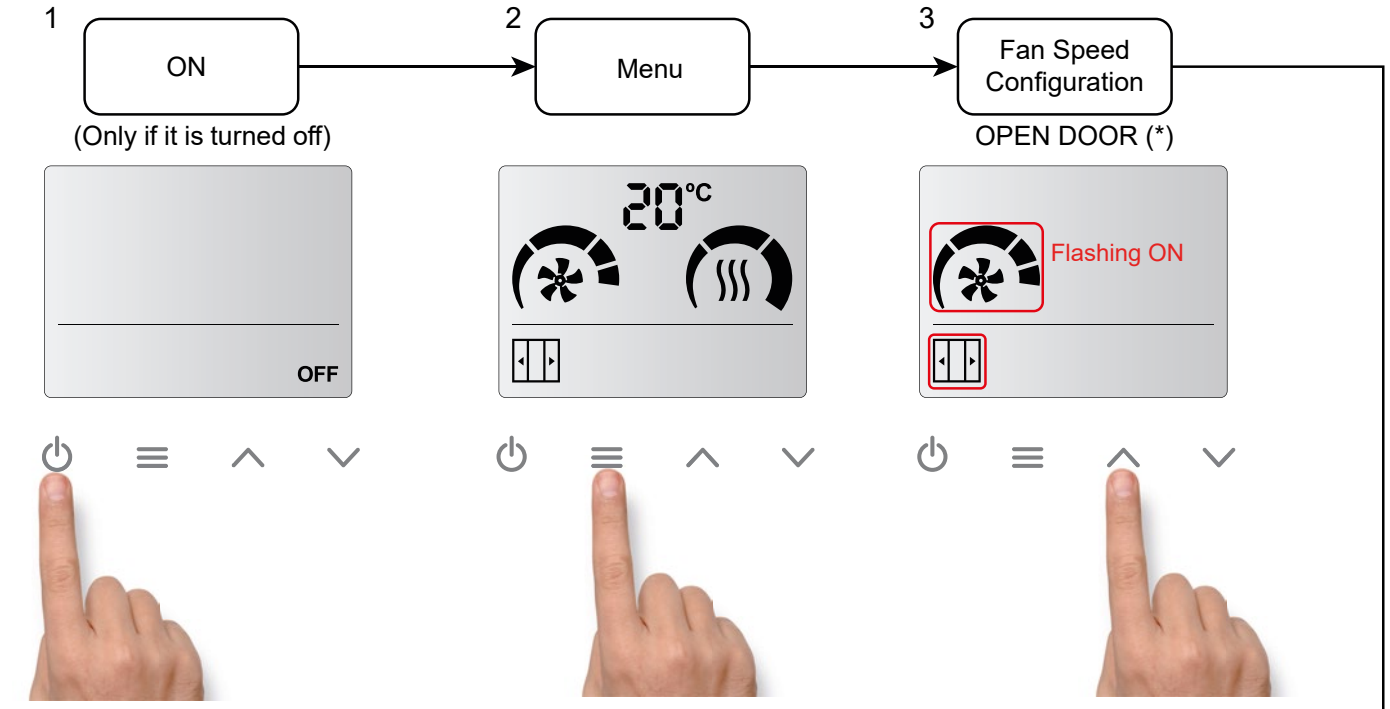


When turn on the unit or power supply is restored: if memory is ON, it will return to the configuration it had before turn off or external incident (power supply fail).

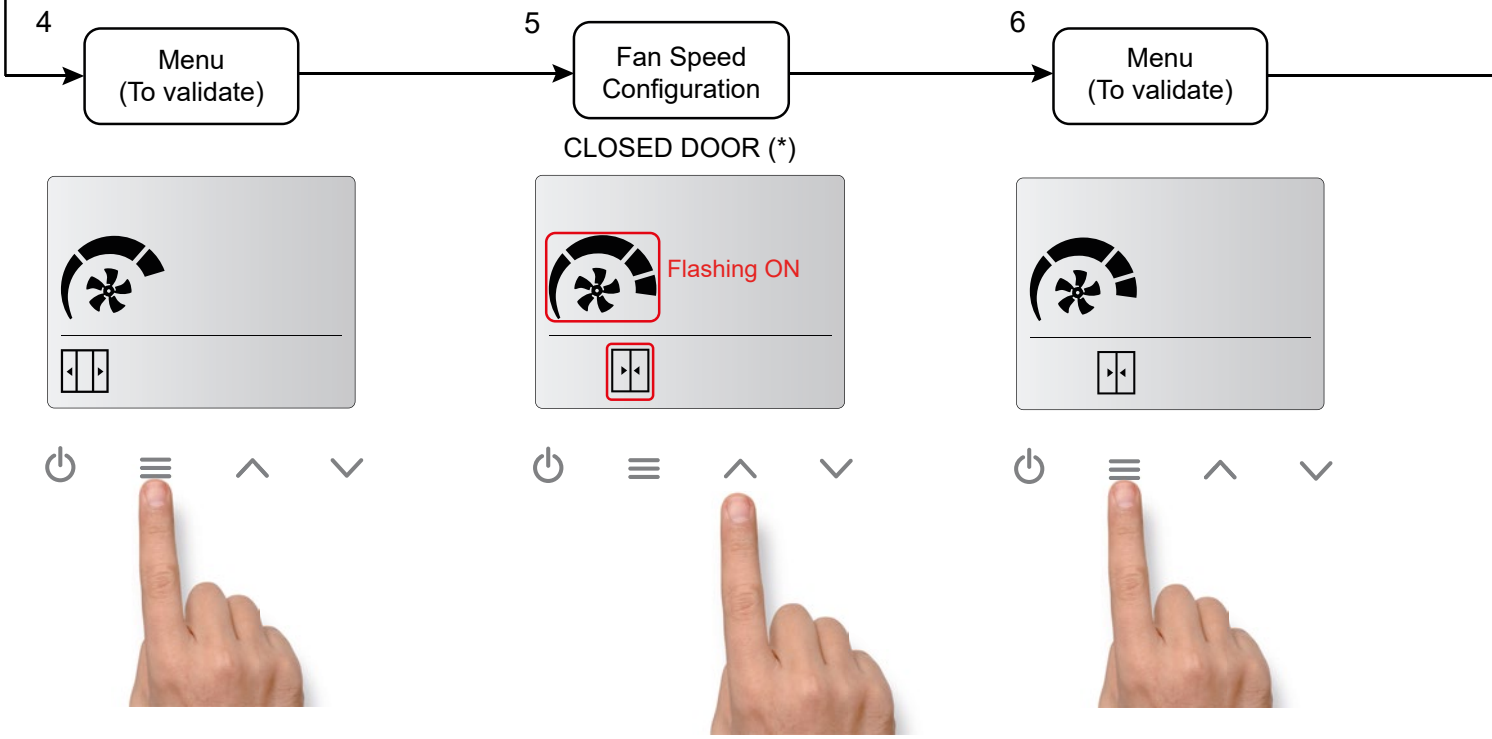


(*) If the door contact is not detected, the door open and door closed icons will not appear. Only one speed and one heating will be available.
For the door icons to appear, a door contact must be connected to the 'PCB DIN1' input and a door opening and closing cycle must be performed.

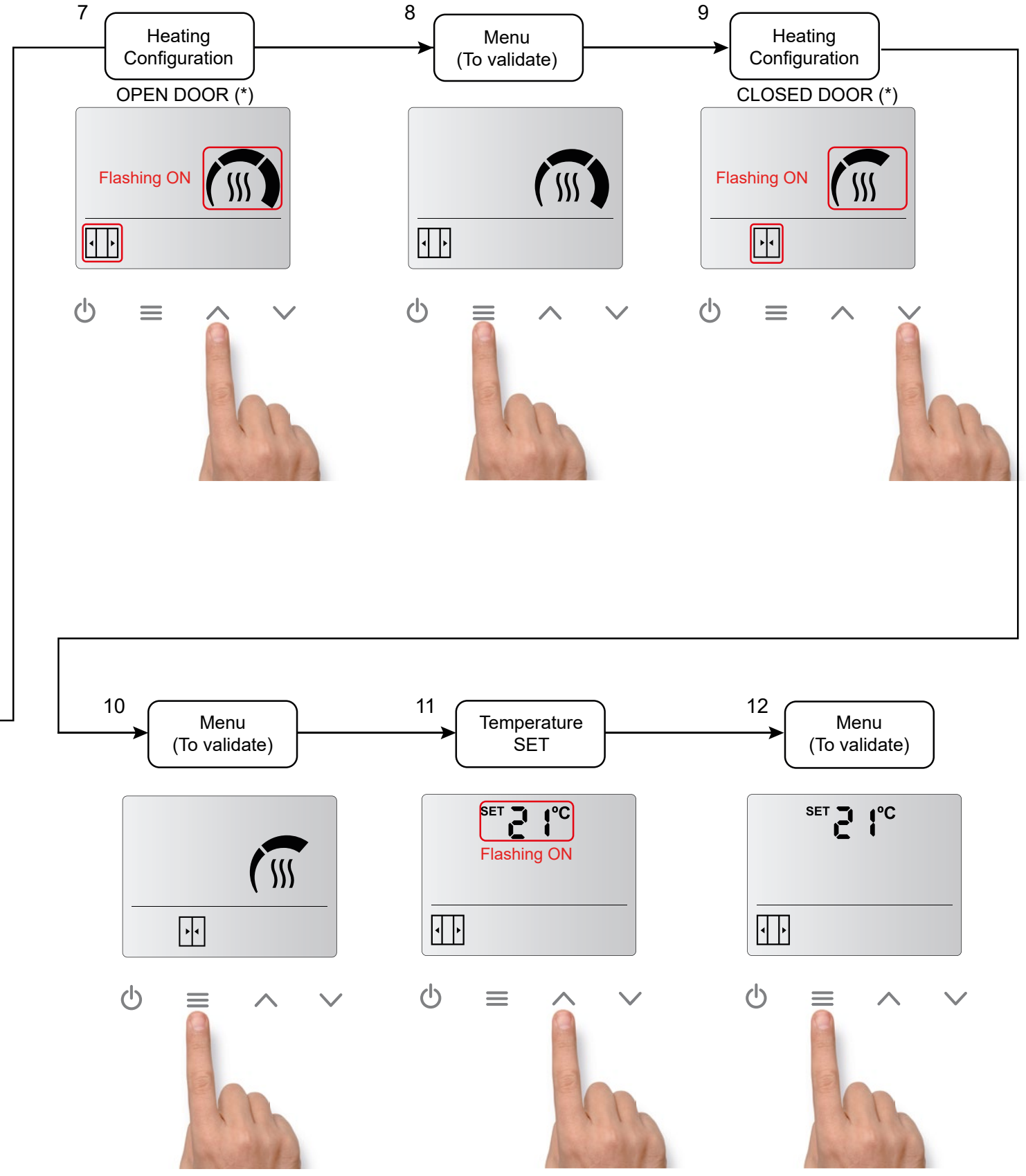
Menu Flow for heated air curtains models (it's the same process for electric heated, water heated or heat pump units) with CD control:



When turn on the unit or power supply is restored: if memory is ON, it will return to the configuration it had before turn off or external incident (power supply fail).

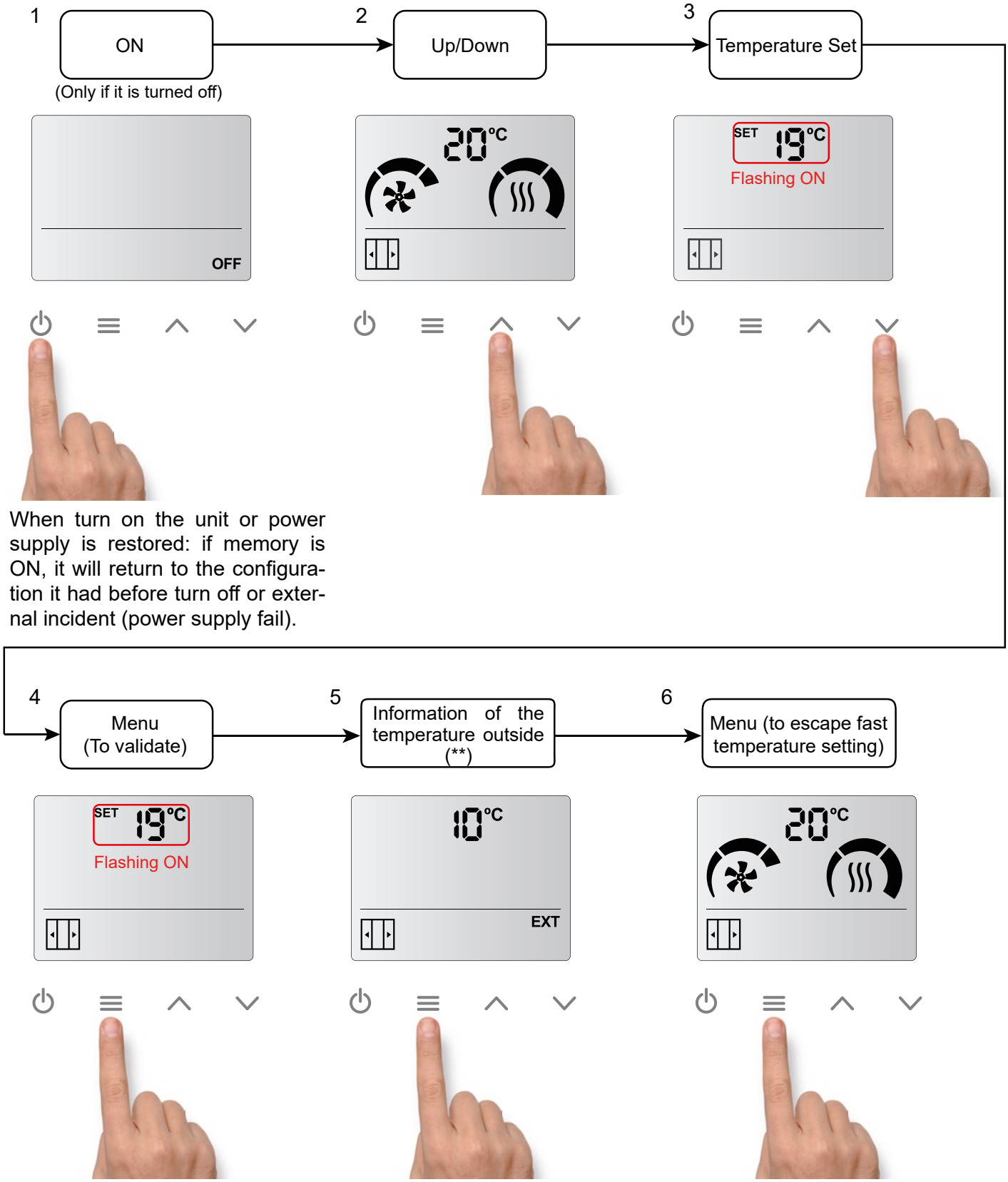


(*) If the door contact is not detected, the door open and door closed icons will not appear. Only one speed and one heating will be available.
For the door icons to appear, a door contact must be connected to the 'PCB DIN1' input and a door opening and closing cycle must be performed.



(*) If the door contact is not detected, the door open and door closed icons will not appear. Only one speed and one heating will be available.
For the door icons to appear, a door contact must be connected to the 'PCB DIN1' input and a door opening and closing cycle must be performed.

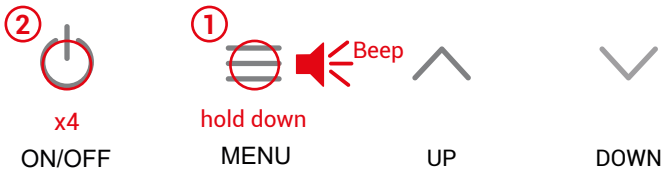
Fast access for temperature setting (only for heated models):



(**) Only if an outside temperature sensor is installed on the air curtain PCB.

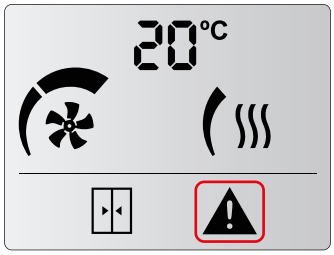
2.4. Control Locking

The control can be locked, but the air curtain will still operate normally.
To lock the device, the user needs to press the following key combination:



Hold down the menu button until the beep sounds and press the ON/OFF button 4 times and release the MENU button. Then a higher-pitched beeping sound will be played.

When the equipment is locked, the user will not be able to carry out any action. This limitation also applies with the remote control.
For example, when pressing the menu, a lower-pitched beep will be played indicating that the equipment is locked.
In addition, the alarm symbol shall appear on the display.

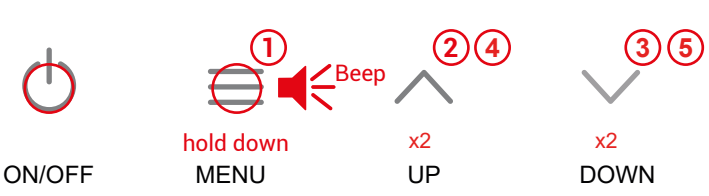


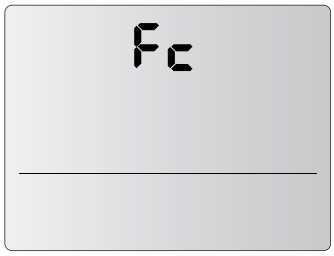
Flashing ON

To **unlock the unit**, the user must repeat the same combination of buttons as for locking.
Then a higher-pitched beeping sound will be played, indicating that the control has been unlocked.

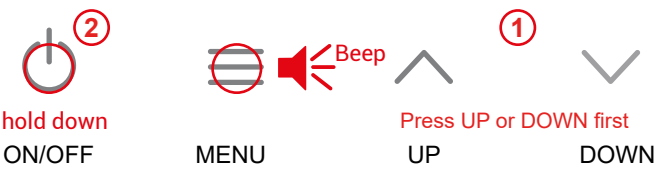
3. FACTORY CONFIGURATION RESET

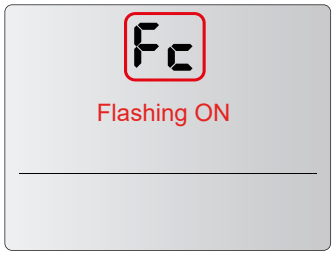
The factory configuration reset function returns to the default values of the configuration menu, to do so:
Hold down the MENU button until the beep sounds, press alternitavely 4 times the UP and DOWN buttons, 2 times for each. The icon Fc will appear on screen.





Press either the UP or the DOWN button, the Fc icon will flash on. Afterwards, hold down the ON/OFF icon for 3 seconds and you will hear 3 beep sounds to finally return to the factory configuration.

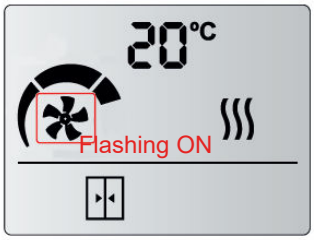




4. COOLING, AUTOCOOLING, EXTERNAL CONTROL AND BOOST FUNCTION

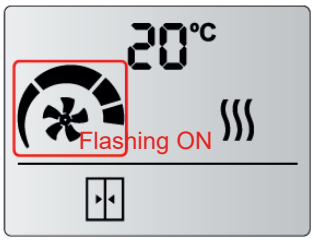
Cooling:

When the discharge temperature is lower than the ambient temperature, Cooling mode starts working (flashing temperature units icon) and limits to the third fan speed. The fan icon will flash intermittently in case the set speed is higher than 3.



Autocooling:

Autocooling is only available for Electric heating.
If the air curtain has been running with heating for more than 10 s at a time and the user switch it off, the ventilation continues ON (at the same speed before stop the control) up to a maximum of 90 s depending on the heating working time. The ventilation speeds icons will flash intermittently and the fan icon will remain static.



External control:

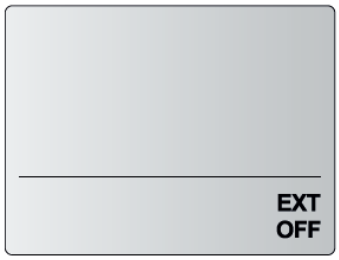
The “EXT” icon indicates that there is an external control to the unit and it is affecting the unit. There are four external signals available, depending on the program selected.

In the P1 program:

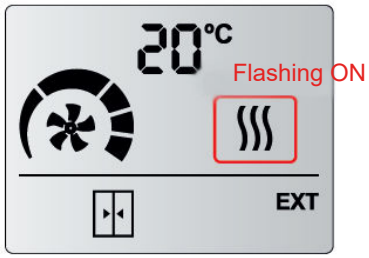
- **EXT OFF**: The unit has been stopped by External OFF contact. Not considered an alarm.
- **HEAT OFF**: Heating OFF, stopped externally. Not considered an alarm.

In the P2 program:

- **FAN EXT:** It is possible to select a fan speed when the DIN1 is closed.
- **Defrost:** The unit is set to configurated speed (V1 default) for the duration of the defrost. The fan and ventilation speeds icons will flash intermittentlly.



EXT CONTROL OFF



HEAT OFF

Boost Function:

The Boost function increases automatically the setpoint temperature (SET) when the door is open. For the function to be active, the door contact or the exterior sensor must be installed and, in addition, the Boost function varies according to the accessories installed:

Door contact	Exterior sensor	Boost
NO	NO	Not available
YES	NO	Open door → Always Boost *
NO	YES	Exterior temperature ≤ SET Temperature -7
YES	YES	Open door + Exterior temperature ≤ SET Temperature -7

*If you want to deactivate this function, set function 10 in the configuration menu to 0°.

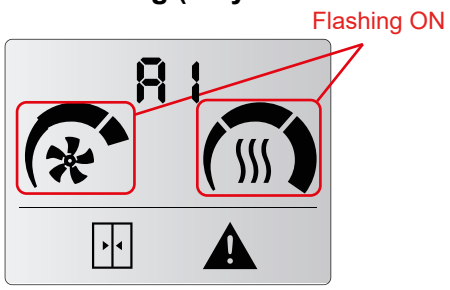
5. ALARMS AND ERRORS

To indicate an alarm (A) or an error (E), it will be displayed with a letter and a number in the same place as the temperature.

5.1. Alarms

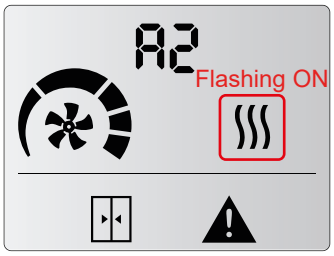
Alarms will remain fixed on the display because it affects to the device functioning.

A1 - Overheating (only electrical heated)



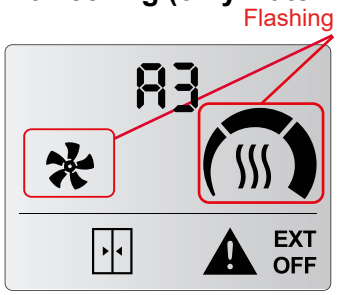
When the unit goes into overheating, it starts a process to cool it down. The ventilation starts to rise up to the maximum each 2 minutes. If overheating persists, the heating is turned down each 2 minutes until it is switched off. If it is still not solved, after 2 minutes heating is blocked and alarm A2 is activated (check A2).

A2 - Heating Blocked (only electrical heated)



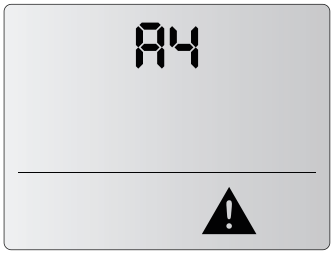
The heating is blocked and switched off. It is the overheating safety program. Service must check the unit and fix the problem to avoid internal damages. Once solved, reset the unit.

A3 - Antifreezing (only water heated)



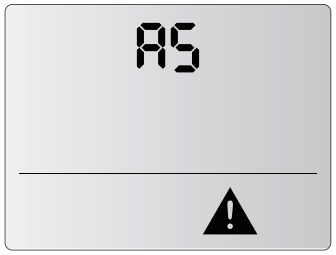
When ambient and inlet temperature is below antifreezing temperature set (5ºC), the valve opens to protect the water coil and the fan stops functioning.
It can be also activated by external antifreezing sensor connected to the PCB.

A4 - Communications Error



No unit found. When this error appears, the user can do a scan to find the PCBs pressing the ON/OFF button during 10 seconds.

A5 - Inappropriate device



Wrong combination of 2 different heatings (electric with water or heat pump) It is only possible to mix unheated units with one type of heating units.

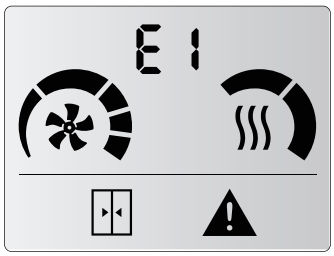
A6 - Fire Alarm

Stops and locks the unit. To unlock it, the power supply must be switched off. It is activated with DIN3 digital IN on the control unit.

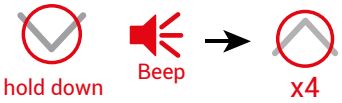
5.2. Errors

Errors will not remain on the display, they will alternate with the ambient temperature. Unit operation remains working normal or adapted.

E1 - Filter/maintenance



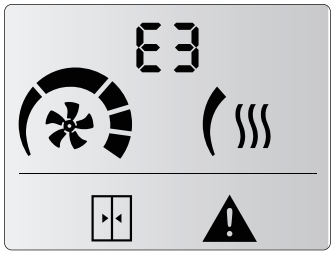
Indicates filter change or cleaning / maintenance.
This alarm is activated by time counter. It does not affect operation. To reset the counter:



E2 - Missing device

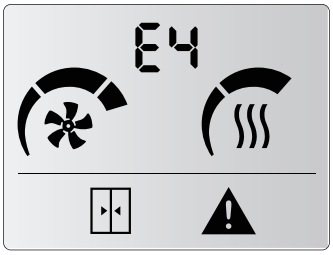
One of the working units is not found. Please consult service to check the unit.
To reset, turn OFF the power or scan the other PCBs by pressing the ON/OFF button during 10 seconds.
Other devices remain working normally.
Check the connections between units to see that none is wrongly connected.

E3 - Missing temperature sensor



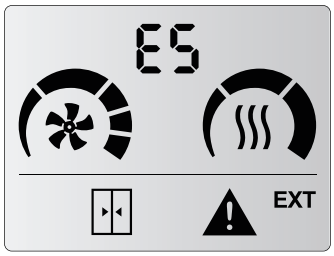
Missing temperature sensor or temperature out of range.
Unit operation adapts and remains working according to inbuilt room temperature sensor.

E4 - Fan Error



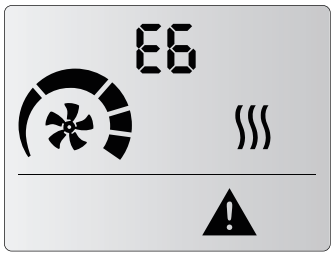
One or more fans are in alarm. Some fan has stopped. Check the unit.
Unit operation remains normal.
Not available in 2-speed range.

E5 - External Alarm



Indicates an external alarm.
Unit operation remains normal.
Only programmable with CLEVER PRO control (consult CLEVER PRO Manual).

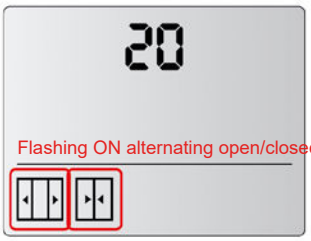
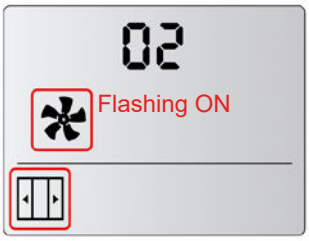
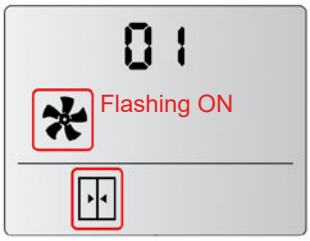
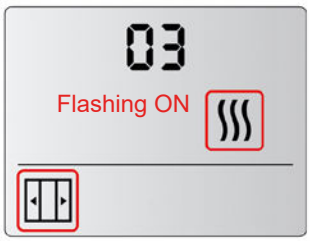
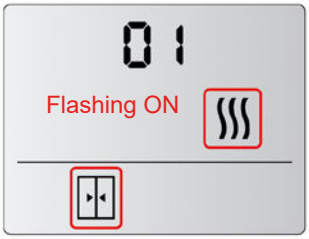
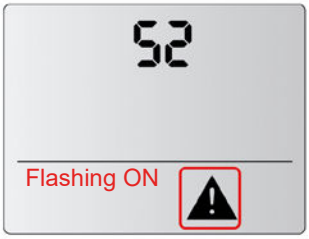
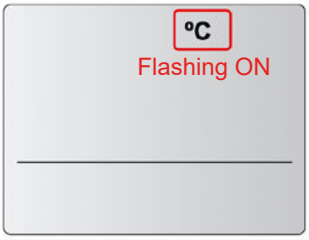
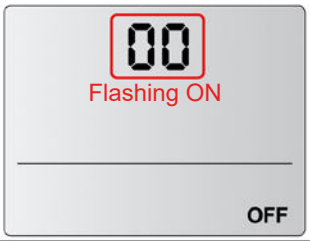
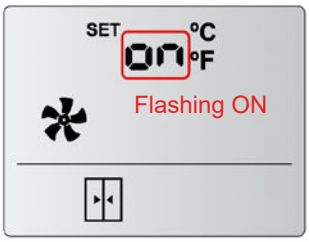
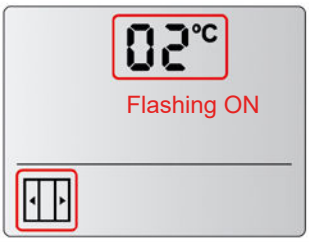
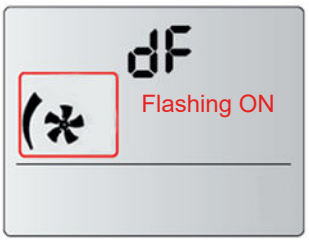
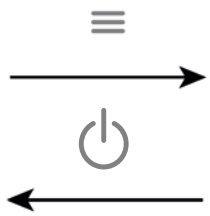
E6 - Additional PCB Error



Additional PCB inside the same air curtain has an error or is disconneted.
In case of electrical heater, heating stops.

6. CONFIGURATION

To access the advanced menu, hold down the menu button (until a beep is heard) then press the DOWN button 4 times and release the MENU button.

1- Door Delay (0,5,10...90)(seconds) 15 sec by default	2- Maximum speed (limit) Open Door (*)	3- Maximum speed (limit) Closed Door (*)	4- Maximum heating (limit) Open Door (*)
			
5- Maximum heating (limit) Closed Door (*)	**6- Filter/maintenance (effective days) (*)** (0,1,2....99) (0 days by default)	**7- Celsius/Farenheit** Celsius by default	**8- Memory** 00 - Memory OFF 01 - Memory ON (by default)
			
9- Heater Function On by default	**10- Set Boost Mode** SET + xºC when door is open (+2 ºC by default) (see page 11)	**11- Defrost Function** Only for Heat Pump air curtains	**Press Button** Between screens
			

1- Time that the speed and heating stages remain in open door mode from the time the door contact is closed until the air curtain operates at closed door speed and heating stages.

2,3,4 and 5- Limits the ventilation and heating stages that can be selected in the user menu.

6- The numbers are sequential. If the maximum is reached, it will go back to the beginning. For example, in the *Filter/maintenance* days when the user reach 99 in case to keep going up it will go back to 0.

8- In a power failiure:

- If Memory is set as ON. Once power supply is restored, the unit will go back to work with the same parameters than before the failure.
- If Memory is set as OFF. The unit will remain switched off.

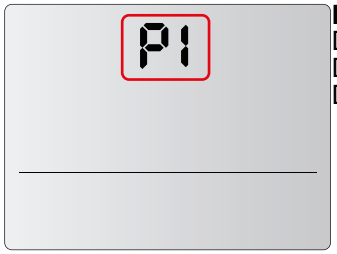
9- Thermo ON - Ventilation ON when room temperature reaches SET temperature at closed door. Thermo OFF - Ventilation OFF when room temperature reaches SET temperature at close door.

(*) By default, door open/close icons are not activated. First time the door contact is closed, then it is possible to choose door open heating/ventilation and door closed heating/ventilation.

7. INPUT/OUTPUT CONFIGURATION

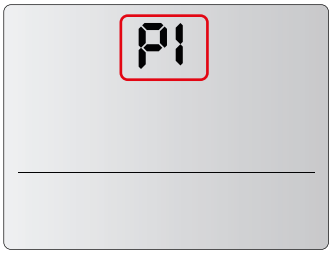
Depending on the operating program, change the configuration of the PCB and LCD inputs and outputs.

P1 - Only Air



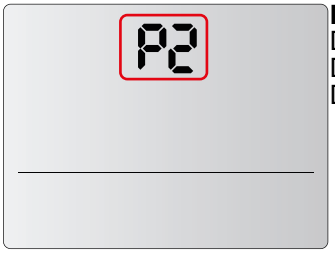
Digital Input:
DIN1 - OFF
DIN2 - n/a
DIN3 - Fire Alarm

P1 - Electrical Heating, Water and CD



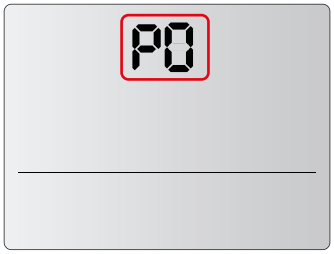
Digital Input:
DIN1 - OFF
DIN2 - Heating OFF
DIN3 - Fire Alarm

P2 - Heat Pump



Digital Input:
DIN1 - FAN
DIN2 - Defrost
DIN3 - Fire Alarm

P0 - Interface Slave

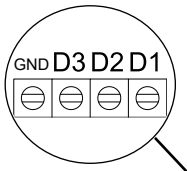


Digital Input:
DIN1 - Low speed
DIN2 - Medium speed
DIN3 - High speed

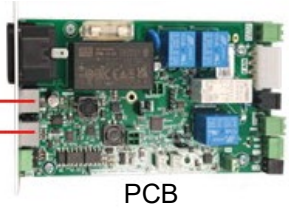
8. FIRMWARE UPDATE

UPDATE (AUX)

Programming mode to be updated by CLEVER PRO Control using an USB pen drive. Please consult.



To update the controller, the user must connect the jumper as shown in the image.



PCB

To update the control, ADVANCED PRO and CLEVER PRO must be connected to COM1 and COM2 ports from the air curtain's PCB. To complete firmware update, consult CLEVER PRO manual.

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AIRDOM05800-R5(06/25) ORIGINAL USER MANUAL
Airtècnics reserves the right to modify some of the specifications in this manual.