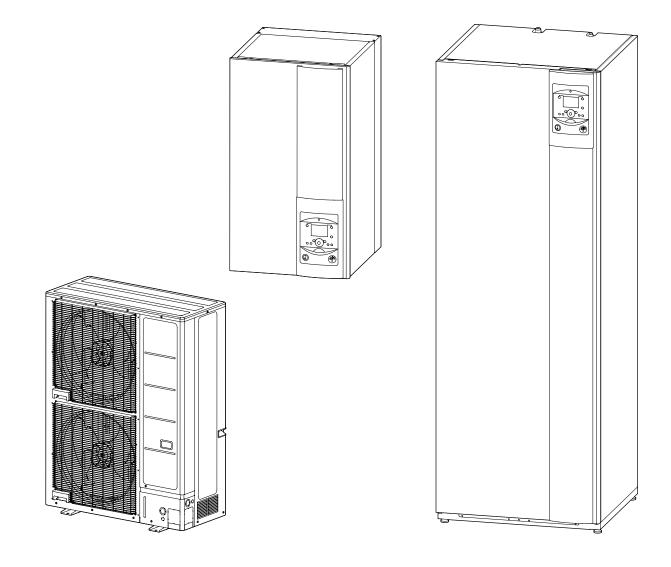
FUJITSU







OPERATING INSTRUCTIONS



Air to Water Heat Pump Split single service & Split integrated DHW type

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Please comply with the following instructions in order to avoid any risk of injury or inappropriate use of the appliance.

Commissioning

Do not switch the appliance ON until every filling operation has been performed

Do not attempt to install this appliance yourself. This heat pump must be installed by qualified personnel holding a certificate of competence.

The installation must always be properly earthed and fitted with a safety circuit breaker.

Do not change the power supply.

The appliances are not fireproof and should not therefore be installed in an explosive environment.

How to Use

This appliance can be used by children 8 years and above. Also persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, provided they have been given supervision or instruction concerning use of the appliance in a safe way and with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

Do not let children insert foreign bodies inside the propeller protection grate or climb onto the roof of the outdoor unit. The fins of the air heat exchanger are extremely thin and can cause cuts.

Nothing should obstruct the air circulation through the evaporator and out from the fan.

The outdoor unit must only be installed outside. If a shelter is required, it must have broad openings on all 4 sides and installation clearances must be observed (see your installation engineer).

Do not climb on top of the outdoor unit.

The room in which the unit is operating must be correctly ventilated in order to avoid any shortage of oxygen in the event of a refrigerant gas leak.

If your installation location already meets safety standards, do not carry out any modifications (ventilation, exhaust evacuation, openings, etc.) without the advice of your installation engineer.

Do not place any heat source under the remote control.

Maintenance

Do not try to repair the appliance yourself.

This appliance does not contain any components which can be repaired by the user. Removing either of the covers can expose you to dangerous electrical voltages.

In any case, switching off the current is not sufficient to protect you from any external electrical shocks (condensers).

Do not open the outdoor unit or the hydraulic unit while they are in operation.

If you hear unusual noises, smell smoke or other odours coming from the appliance, turn off the power and contact your installation engineer.

Before starting any cleaning, turn off the power to the appliance.

Do not use aggressive cleaning liquids or solvents to clean the body work.

Do not use a pressure hose to clean the outdoor unit. You may damage the air exchanger and get water inside the electrical circuits.

Overview of installation

Precautions and warnings about your installation

▼ Outdoor unit

The outdoor unit contains the equipment that enables the capture of energy from the surrounding air.

This unit was installed by your installer in a location where it is able to operate with best performance.

Nothing should obstruct the air circulation through the evaporator and out from the fan.

The water contained in the air may condense and flow out of the outdoor unit. The outdoor unit can generate a large volume of water called condensate.

In cold weather, this water freezes on contact with the exchanger and must be regularly removed using the defrosting cycles. The defrosting cycle is managed automatically by the control system and can produce steam emissions which are completely normal.

▼ Hydraulic unit

The hydraulic unit contains the appliance's control system which manages the room temperature and the production of domestic hot water.

The hydraulic unit is fitted with an electrical backup* or boiler connection* which intervenes to provide additional heat during the coldest periods.

▼ Settings

Your installer has carefully adjusted your installation. Do not change the settings without their consent. If in doubt, do not hesitate to contact them.

Your heating system is controlled by adjustment in relation to the outside temperature (temperature control).

The installation of a room thermostat (option) makes it possible to improve the operation of the control system (influence of the ambient temperature is taken into account).

Radiators

In order to ensure operation of the control system, the room containing the thermostat must not also contain a thermostatic valve. If this is the case, it must be opened as far as possible.

Underfloor heating system

A new underfloor heating system must initially be heated slowly to avoid any problems involving cracking. Check with your installer that this initial heating procedure has indeed been performed before freely using your heating system.

An underfloor heating system's significant inertia prevents sudden room temperature differences. However, this inertia implies a reaction time of around several hours (approx 6 hours).

Any changes to the setting must be made slowly and leave the installation sufficient time to react. Any exaggerated or abrupt adjustments to the settings always result in significant temperature fluctuations during the day.

Similarly if your dwelling has an underfloor heating system, do not reduce it or switch it off if you will be absent for only short periods. The reheating period is always quite long (approx 6 hours).

▼ Fan coils / dynamic radiators with an integrated control system

Do not use a room sensor in the area in question.

▼ Domestic Hot Water (DHW)*

When hot water is required, the heat pump adapts its priority to meet the request.

No heating is produced during the preparation of domestic hot water.

The heat pump produces the domestic hot water (DHW), which is then additionally heated, if required, by the electrical backup.

To ensure a DHW setpoint over 45° C, the electrical backup heating or boiler (boiler connection kit)* must be left on.

The electrical backup allows the correct operation of the anti-legionella cycles.

► Appliance end-of-life

The appliances must be dismantled and recycled by a specialised service. The appliances must not, under any circumstances, be thrown out with household waste, bulky waste or at a tip.

At the end of its service life, please contact your installer or local representative to proceed with its dismantling and recycling.

Overview of the installation

Your heat pump has been configured by your installation engineer. It is made up of the following main parts:

- The outdoor unit, as its name suggests, is placed outside your dwelling, and extracts energy from the outside air.
- The hydraulic unit is located in your boiler room, cellar, garage or even in your kitchen, and transfers energy to the heating and domestic hot water circuits*.
- The outside sensor monitors the outside temperature.

Optional:

- Room sensor(s).

Heat pumps are systems which can be connected to any type of **low temperature distribution system** and the heat captured by the heat pump can be used in different ways:

- Underfloor heating system.
- Radiators.
- Domestic Hot Water (DHW)*.

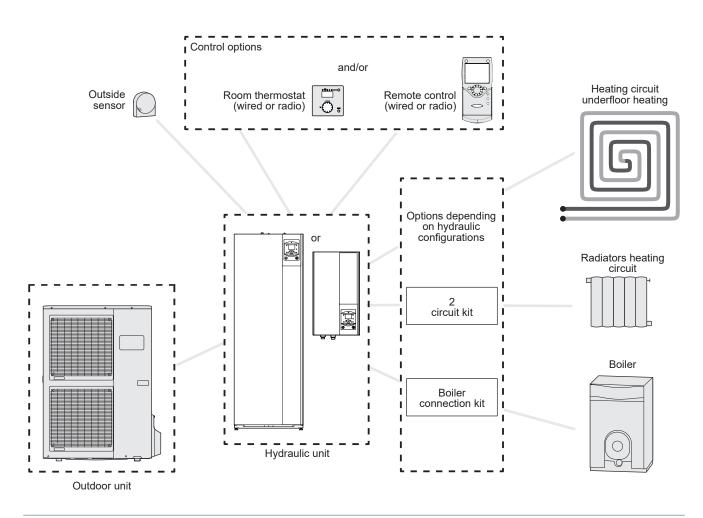
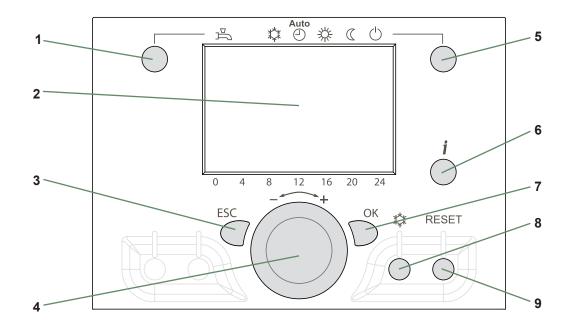


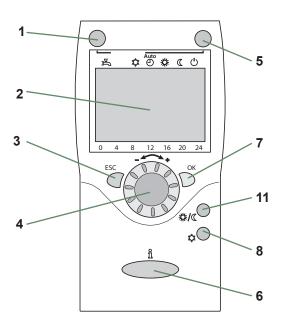
fig. 1 - Overview of complete installation configuration

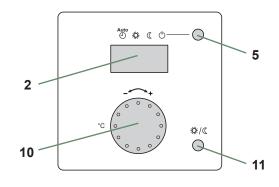
* depending on configuration / option

Carrying out the installation

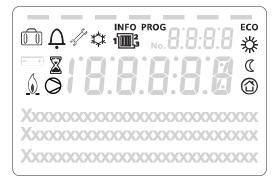
▶ User interface, Room control unit (option) and Room thermostat (option)







(Domestic hot water) On: Production	
On active.	on is fitted with a DHW tank. In of DHW according to the time program. the domestic hot water for stopping with the anti-frost function
	outton: Hold down the DHW key for 3 seconds. Switch from comfort" until the next time the ECS timer switches over.
and of any fau	
- View the settin	gs
3 Exit "ESC" Quit the menu	
4 Navigation and setting Selecting the r	nenu.
- Setting parame	
- Adjusting the a	mbient temperature setpoint.
	perating according to the heating program
	er mode switchover is automatic).
	comfort temperature. educed temperature.
	node with anti-frost protection
	the heat pump's electrical power supply is not interrupted).
6 Information display Various data (s	see page 17).
- 🗘 Reading e	rror codes.
- 🦑 Informatio	n concerning maintenance, special mode.
7 Confirm "OK" Input into the s	elected menu.
- Confirmation c	f the parameter settings.
- Confirmation o	f the adjustment to the comfort temp. setting.
8 Selecting cooling mode If the installation	on is fitted with the cooling kit:
	perating according to the heating program er mode switchover is automatic).
	ne parameters and cancelling error messages. Iring normal operation.
10 Control knob Adjusting the a	mbient temperature setpoint.
11 Presence key Comfort / Redu	uced switchover.



Symbols	Definitions
1 3	 Heating mode active with reference to the heating circuit*.
*	- Heating in comfort mode.
D	- Heating in reduced mode.
	- Heating in "standby" mode (freeze protection).
*	- Cooling mode active*.
	- Holiday mode activated.
X	- Process in progress.
0	- Compressor operation.
	- Burner operation*.
$\hat{\mathbf{A}}$	- Default message.
de la companya	- Service / Special operation.
INFO	- Information level activated.
PROG	- Program activated.
ECO	- ECO mode activated (Heating temporarily stopped).
18-28 ¢ 2 0.5 (temperature ambiente	- Hour / Parameter number / Setpoint value.
Income and a second sec	- Room temperature / Setpoint value.
1828 ¢ 2055 temperature ambiante	- Setpoint information / Parameter Information.

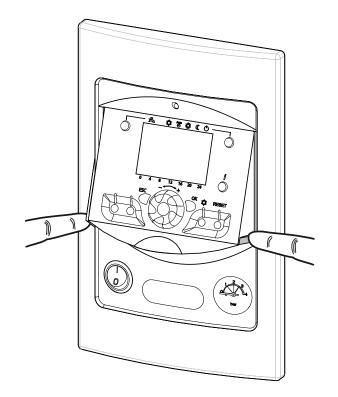


fig. 2 - Closing the display

Appliance start up

- The installation and 1st start up of the appliance must be done by a qualified installer. That person will also give you instructions on starting and running the appliance.
- Ensure that the installation is fully filled with water and has been correctly bled and that there is a sufficient pressure of 1.5 to 2 bars on the manometer (ref. 2, fig. 3).
- · Close the installation's main circuit breaker.
 - In winter, so that the compressor can be preheated, close the installation's main circuit breaker (outdoor unit's power supply) some hours before pressing the on/off button.

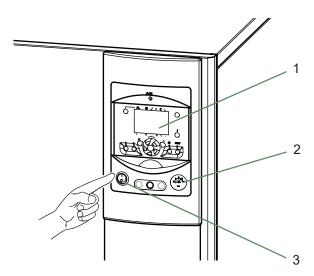
Quick start-up

Once your installer has started your installation for the first time:

• Engage the start/stop switch.

During the regulator initialisation phase, the display shows all the symbols and then "Data, update" and then "State heat pump".

- Select the "AUTO" heating mode (fig. 4).
- Select the DHW mode (fig. 4).
- Adjust the date and time if necessary (fig. 5)).



- 1. User interface
- 2. Manometer (installation hydraulic pressure)
- 3. Start/stop switch

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fig. 3 - Start-up
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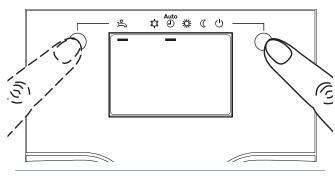


fig. 4 - Selecting the heating mode AUTO and Select the DHW mode

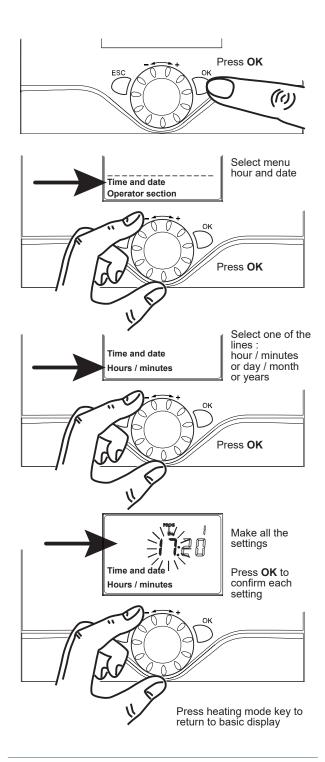
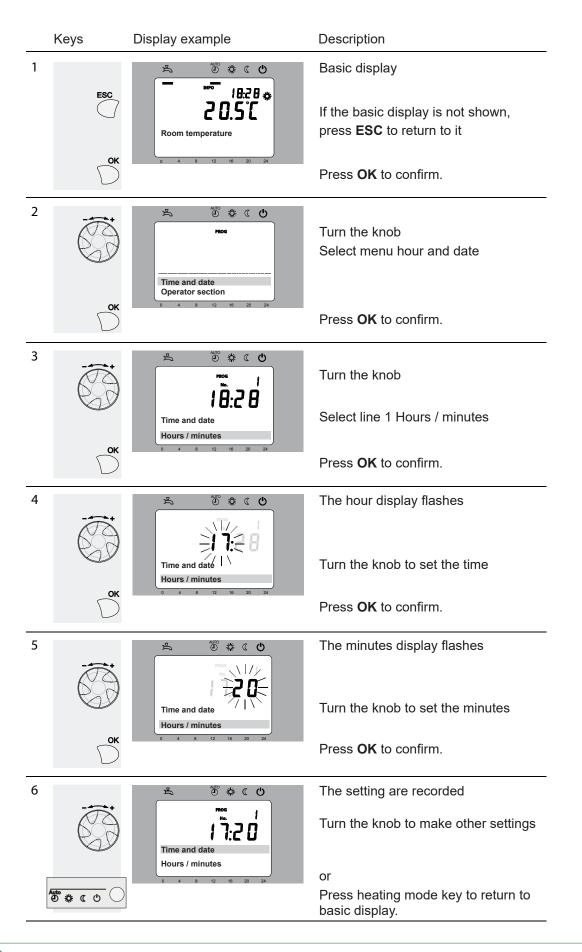
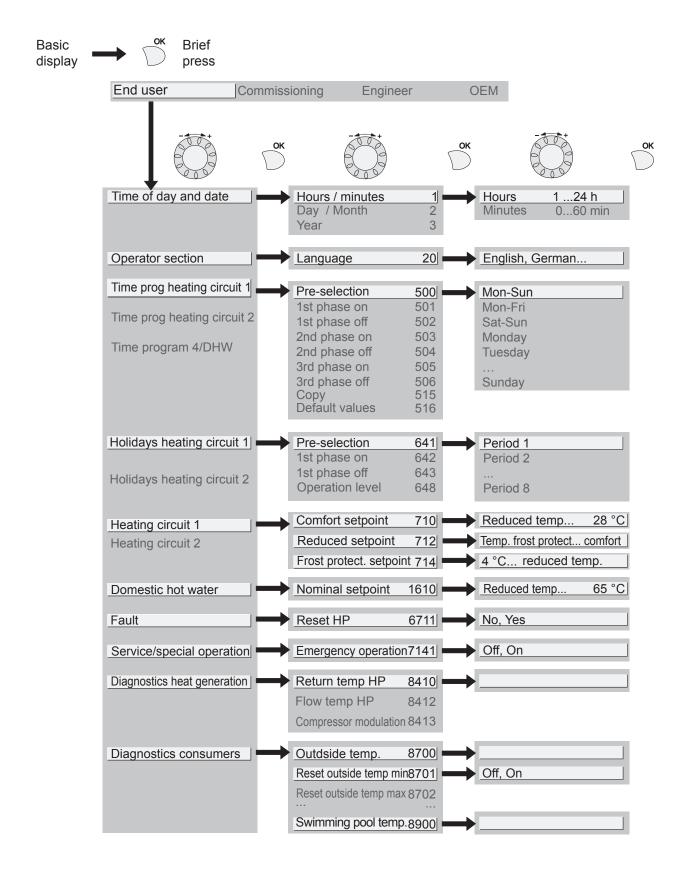


fig. 5 - Setting the time and the date

Setting the time



Structure of the "End user" control menu



Parametering the setting

▼ General

Only the parameters accessible to levels: End user

... are described in this document.

The parameters accessible at level:

Commissioning

Engineer

... are described in the document reserved for these professional specialists. Do not make any modifications to these parameters without advice from these professional specialists. **Incorrect use of any kind may result in serious malfunctioning.**

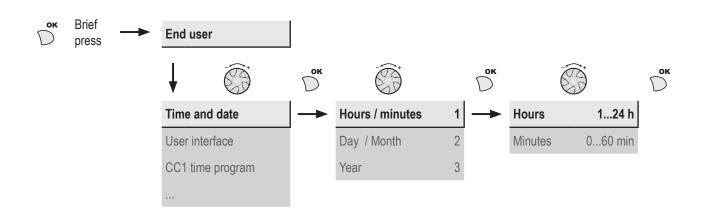
▼ Setting parameters

With the screen on basic display. - Press **OK**.

Once in "End user" level.

- Scroll the menu list.
- Choose the desired menu.
- Scroll the function lines.
- Choose the desired line.
- Adjust the parameter.
- Check the setting by pressing OK.
- To return the menu, press **ESC**.

If no setting is made for 8 minutes, the screen returns automatically to the basic display.



List of "End user" settings

Line	Function	Setting range or display	Setting increment	Basic setting
Time of c	lay and date			
1	Hours / Minutes	00:00 23:59	1	
2	Day / Month	01.01 31.12	1	
3	Year	1900 2099	1	
Operator	Section			
20	Language	English, Français, Italiano, Nederlands		English

Line	Function	Setting range or display	Setting increment	Basic setting
Time pro	ogram heating / cooling, circuit 1			
500	Pre-selection (Day / Week)	Mon-Sun, Mon-Fri, Sat-Sun, Monday, Tuesday, …		Mon-Sun
501	1st phase On (start)	00:00:	10 min	6:00
502	1st phase Off (end)	00:00:	10 min	22:00
503	2nd phase On (start)	00:00:	10 min	:
504	2nd phase Off (end)	00:00:	10 min	:
505	3rd phase On (start)	00:00:	10 min	;
506	3rd phase Off (end)	00:00:	10 min	:
516	Default values, Circuit 1	No, Yes		No
		d in the regulator replace and especified upt		

Yes + OK: The default values memorised in the regulator replace and cancel the customised heating programs. Your customised settings are therefore lost.

Time program heating / cooling, circuit 2

	Only with the 2nd circuit kit option.			
520	Pre-selection (Day / Week)	Mon-Sun, Mon-Fri, Sat-Sun, Monday, Tuesday,		Mon-Sun
521	1st phase On (start)	00:00:	10 min	6:00
522	1st phase Off (end)	00:00:	10 min	22:00
523	2nd phase On (start)	00:00:	10 min	:
524	2nd phase Off (end)	00:00:	10 min	:
525	3rd phase On (start)	00:00:	10 min	;
526	3rd phase Off (end)	00:00:	10 min	;
536	Default values, Circuit 2	No, Yes		No
	Ves + OK: The default values memoris	ed in the regulator replace and cancel the custo	mised heating r	orograms

Yes + OK: The default values memorised in the regulator replace and cancel the customised heating programs. Your customised settings are therefore lost.

Time program 4 / DHW

	If the installation is fitted with the DHW I	kit.		
560	Pre-selection (Day / Week)	Mon-Sun, Mon-Fri, Sat-Sun, Monday, Tuesday,		Mon-Sun
561	1st phase On (start)	00:00:	10 min	00:00
562	1st phase Off (end)	00:00:	10 min	05:00
563	2nd phase On (start)	00:00:	10 min	14:30
564	2nd phase Off (end)	00:00:	10 min	17:00
565	3rd phase On (start)	00:00:	10 min	:
566	3rd phase Off (end)	00:00:	10 min	;
576	Default values	No, Yes		No

Yes + OK: The default values memorised in the regulator replace and cancel the customised heating programs. Your customised settings are therefore lost.

Holidays, heating circuit 1 (For the Holiday program is active, the heating mode should be on AUTO).

641	Preselection	Period 1 to 8		Period 1
642	Period Start (Day / Month)	01.01 31.12	1	
643	Period End (Day / Month)	01.01 31.12	1	
648	Operating level	Frost protection, Reduced		Frost protection

Line	Function	Setting range or display	Setting increment	Basic setting
Holidays,	heating circuit 2 (For the Holiday program	is active, the heating mode should be on AUT	О).	
	If the installation consists of 2 heating c	ircuits (Only with the 2nd circuit kit option).		
651	Preselection	Period 1 to 8		Period 1
652	Period Start (Day / Month)	01.01 31.12	1	
653	Period End (Day / Month)	01.01 31.12	1	
658	Operating level	Frost protection, Reduced		Frost protection
Heating a	djustment, circuit 1			
710	Comfort setpoint	Reduced setpoint Comfort setpoint maximum	0,5 °C	20 °C
712	Reduced setpoint	Frost protection setpoint Comfort setpoint	0,5 °C	19 °C
714	Frost protection setpoint	4 °C Reduced setpoint	0,5 °C	8 °C
Cooling c	ircuit 1			
	If the installation is fitted with the cooling	g kit (Only with the cooling kit option).		
901	Operating mode	Protection, Automatic, Reduced, Comfort		Protection
902	Comfort cooling setpoint	17 40 °C	0,5 °C	24 °C
903	Reduced setpoint	5 40°C		26 °C
Heating a	djustment, Circuit 2			
	Only with the 2nd circuit kit option (If the	e installation consists of 2 heating circuits).		
1010	Comfort setpoint	Reduced setpoint Comfort setpoint maximum	0,5 °C	20 °C
1012	Reduced setpoint	Frost protection setpoint Comfort setpoint	0,5 °C	19 °C
1014	Frost protection setpoint	4 °C Reduced setpoint	0,5 °C	8 °C
Cooling c	ircuit 2			
	If the installation is fitted with the cooling	g kit (Only with the cooling kit option).		
1201	Operating mode	Protection, Automatic, Reduced, Comfort		Protection
1202	Comfort cooling setpoint	17 40 °C	0,5 °C	24 °C
1203	Reduced setpoint	5 40°C		26 °C
Domestic	hot water			
	If the installation is fitted with the DHW	kit.		
1600	Operating mode	Off, On, Eco		On
1610	Nominal setpoint	Reduced setpoint (line 1612) 65 °C	1	55 °C
	The backup electrical system is required	d to reach this level.		
1612	Reduced setting	8 °C Nominal setting (line 1610)	1	40 °C
Swimmin	g pool (Only with swimming pool kit option)			
2055	Setpoint solar heating	8 80 °C		26 °C
2056	Setpoint source heating	8 35 °C		22 °C

Line	Function	Setting range or display	Setting increment	Basic setting
Energy me	ter			
3095> 31	10 : Not used			
3113	Energy brought in		Kwh	
	Cumulation of total consumed electric Electrical energy consumed = Electrica electrical backup and / or DHW electrica	al energy absorbed by outdoor unit + el	ectric energy absorbed	by the heating
3121> 31	23 : Not used			
3124	Energy brought in heating 1 (N - 1)		Kwh	
3125	Energy brought in DHW 1		Kwh	
3126	Energy brought in cooling 1		Kwh	
3128> 31	30 : Not used			
3131	Energy brought in heating 2 (N - 2)		Kwh	
3132	Energy brought in DHW 2		Kwh	
3133	Energy brought in cooling 2		Kwh	
3135> 31	137 : Not used			
3138	Energy brought in heating 3 (N - 3)		Kwh	
3139	Energy brought in DHW 3		Kwh	
3140	Energy brought in cooling 3		Kwh	
3142> 31	44 : Not used			
3145	Energy brought in heating 4 (N - 4)		Kwh	
3146	Energy brought in DHW 4		Kwh	
3147	Energy brought in cooling 4		Kwh	
3149> 31	151 : Not used			
3152	Energy brought in heating 5 (N - 5)		Kwh	
3153	Energy brought in DHW 5		Kwh	
3154	Energy brought in cooling 5		Kwh	
3156> 31	158 : Not used			
3159	Energy brought in heating 6 (N - 6)		Kwh	
3160	Energy brought in DHW 6		Kwh	
3161	Energy brought in cooling 6		Kwh	
3163> 31	165 : Not used			
3166	Energy brought in heating 7 (N - 7)		Kwh	
3167	Energy brought in DHW 7		Kwh	
3168	Energy brought in cooling 7		Kwh	
3170> 31	172 : Not used			
3173	Energy brought in heating 8 (N - 8)		Kwh	
3174	Energy brought in DHW 8		Kwh	
3175	Energy brought in cooling 8		Kwh	

Line	Function	Setting range or display	Setting increment	Basic setting
3180	Energy brought in heating 9 (N - 9)		Kwh	
3181	Energy brought in DHW 9		Kwh	
3182	Energy brought in cooling 9		Kwh	
3184> 3	8186 : Not used			
3187	Energy brought in heating 10 (N - 10)		Kwh	
3188	Energy brought in DHW 10		Kwh	
3189	Energy brought in cooling 10		Kwh	
390> 32	267 : Not used			
Error				
6710	Reset Defaut relais	No, Yes		No
6711	Reset HP	No, Yes		No
Maintena	nce / special regime			
7141	Emergency operation	Off, On		Off
	Off: Heat pump functions normally (with boost On: Heat pump uses the electric boost system Use the "On" position only in Assist mode or T	or the boiler connection.	bills.	
Generato	r diagnosis			
8410	Return temp HP	0 140 °C		
	Setpoint (flow) HP			
8412	Flow temp HP	0 140 °C		
	Setpoint (flow) HP			
8413	Compressor modulation	0 100%		
Diagnost	ics consumers			
8700	Outdoor temperature	-50 50 °C		
8701	Outdoor temp min Reset ? (no, yes)	-50 50 °C		50 °C
3702	Outdoor temp max Reset ? (no, yes)	-50 50 °C		-50 °C
3740	Room temperature 1	0 50 °C		
	Room setting 1			20 °C
3743	Flow temperature 1	0 140 °C		
	Flow temperature setpoint 1			
3756	Cooling flow temperature 1	0 140 °C		
	Cooling flow temperature setpoint 1			
8830	DHW (domestic hot water) temperature	0 140 °C		
	DHW temperature setpoint			50 °C

Information display

Various data can be displayed by pressing the info button $\overset{i}{\bigcirc}$.

Depending on the type of unit, configuration and operating state, some of the info lines listed below may not appear.

- Possible error messages: The display shows the "Bell" symbol $~~ \updownarrow$.

Consult your heating technician.

- Service messages ; Special mode messages: The display shows the "Key" symbol \mathscr{A} .

Consult your heating technician.

- Various data (see below).

Designation	Line
Floor drying current setpoint .	-
Current drying day.	-
Terminated drying days.	-
State heat pump.	8006
State supplementary source.	8022
State DHW.	8003
State swimming pool.	8011
State heating circuit 1.	8000
State heating circuit 2.	8001
State cooling circuit 1.	8004
Outdoor temperature.	8700
Room temperature 1.	0740
Room setpoint 1.	8740
Flow temperature 1.	0740
Flow temperature setpoint1.	8743
Room temperature 2.	0770
Room setpoint 2.	8770
Flow temperature 2.	0770
Flow temperature setpoint 2.	8773
DHW (domestic hot water) temperature.	8830
Heat pump return temperature.	0440
Setpoint (return) HP.	8410
Heat pump flow temperature.	0440
Setpoint (flow) HP.	8412
Swimming pool temperature.	2000
Swimming pool temperature setpoint.	8900
Minimum remaining stop time for compressor 1.	-
Minimum remaining running time for compressor 1.	-

Details

If the electrical power supply has been cut off while the heat pump is operating (electrical power failure or unprogrammed pressing of the on/off switch on the hydraulic unit) the display will show error 370 when the appliance restarts. Do not be concerned, the communication between the outdoor and hydraulic unit will re-establish itself in a few moments.

Operation of the DHW system*

The key enables you to switch the DHW (domestic hot water) mode on and off. The selection is shown by a bar, which appears under the corresponding symbol.

Manual activation: Hold down the DHW key for 3 seconds (Switch from "reduced" to "nominal" until the next time the DHW timer switches over).

To ensure a DHW setting over 45°C, the electrical backup heating or the boiler must be left on.

In order to optimise operation of the DHW, it is possible to:

- Program the timer settings (parameters 560 to 576),
- Adjust the comfort temperature set point (parameter 1610),
- Adjust the reduced temperature set point (parameter 1612).

Press the info key to obtain the details on the DHW (temperature setting operation).

Selecting cooling mode*

If the installation is fitted with the cooling kit. The key activates and deactivates cooling mode.

 Pilot wire* (if kit regulation extension AVS 55)

It's possible to order up to 15 electric heaters via output "pilot wire".

The "pilot wire" handles only the hourly operation of electric heaters (comfort mode / reduced mode commutation and Frost protection mode).

The comfort temperature setting should be done directly on the electric heater(s). The "pilot wire" does not handle the temperature of the electric heaters. Refer to the manual supplied with the electric heater(s).

Put the electric heaters on "**PROG**" mode or "**AUTO**" mode for piloting by the regulation board.

The difference between the comfort temperature and the reduced temperature is from 3.5° C.

Frost protection temperature is set directly on the electric heaters. Refer to the manual supplied with the electric heater(s).

In the absence of signal, electric heaters operating in comfort mode.

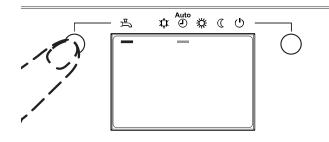


fig. 8 - Select the DHW mode

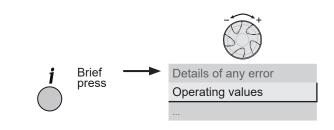


fig. 9 - Information key

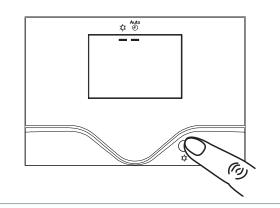


fig. 10 - Selecting cooling mode

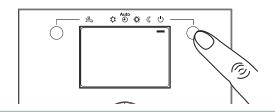


fig. 11 - Selecting the frost protection

► Telephone modem* (if Regulation extension kit AVS 55)

It is possible to command the switching of the heating mode to the "freeze" protection mode / reduced (and vise versa) on the heat pump using a modem contact.

The telephone command switches the current heat pump settings to "freeze" protection mode / reduced (and vise versa). In accordance with the setting, any temperature requests from the heating circuits and the DHW are ignored or activated.

The "freeze" protection mode / reduced must not be selected on the heat pump and/or the remote control.

See with your installer.

Configuring room control unit* (option)

In the event that the room control unit (see page 6), is used, on start-up, after initialising for around 3 minutes, the language needs setting:

- Press OK.
- Choose menu "Operator section".
- Choose language "Language" English.

Distance

In order to ensure that your appliance operates correctly for many years, the maintenance operations described below are required at the start of each heating season. They are generally carried out as part of a maintenance contract.

Regular checks

- Check the water pressure in the heating circuit regularly (refer to the installer's recommended pressure between 1 and 2 bar)
- If a filling operation and a pressure increase are required, check what type of fluid was used initially (when in doubt, contact your installer).
- If frequent refills are required it is absolutely essential that you check for any leaks.

The frequent addition of water risks scaling the exchanger and affects its performance and lifespan.

Checking the outdoor unit

Remove any dust from the exchanger, if necessary, while making sure not to damage the blades.

Check that there is nothing blocking the air flow.

Checking the refrigeration circuit

If the amount of refrigerant in the system exceeds 2kg (models > 10 kW), the refrigeration circuit must be checked annually by an approved engineer (they must have a certificate of competence for the handling of refrigerants).

Consult your heating technician.

Hot water tank*

Maintenance on the tank must be carried out annually (frequency may vary according to water hardness).

Consult your heating technician.

\bigcirc	OFF	LED Off: The circulation pump is not working, no power supply.
Ο	\checkmark	Green LED On: The circulation pump is operating normally.
į Ņ:	°air ≁₀° 10 min.	Green LED flashing: Venting mode in operation (10 minutes).
, Ċ	Auto Test	Red/green LED flashing: Operating error with automatic restart.
į Ņ	2 AC	Red LED flashing: Operating error, consult your heating engineer.

fig. 12 - Operating signals of the HP circulation pump