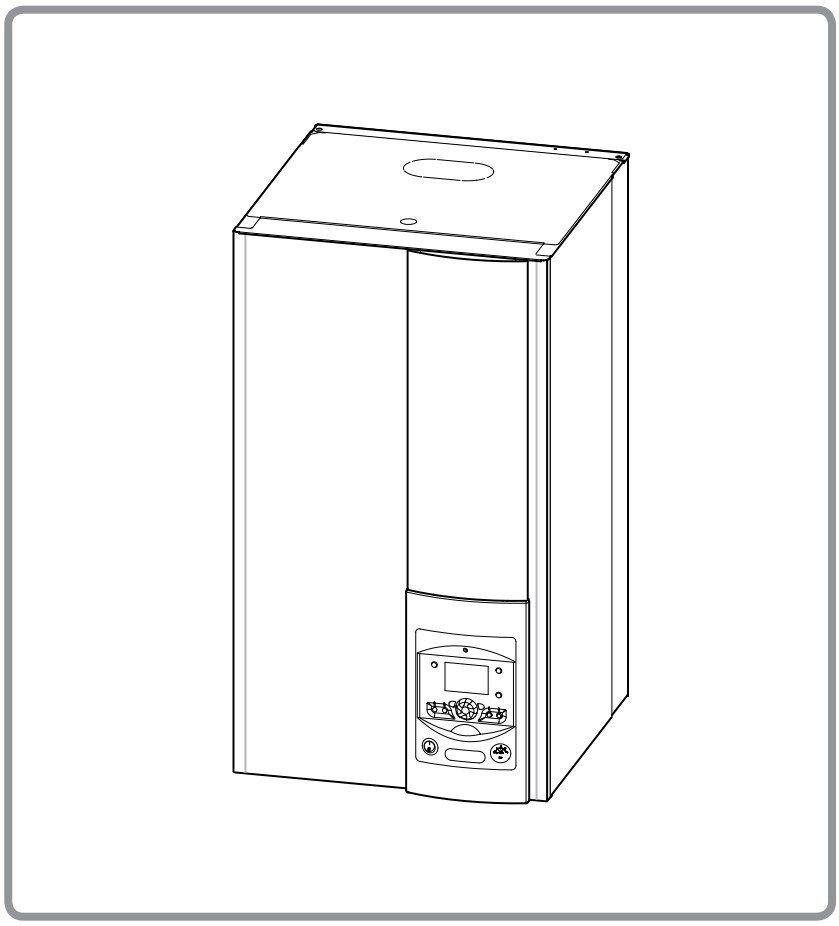
WATERSTAGE

Document n° 1732-2 ~ 12/04/2016

FR EN DE

hydraulic indoor unit

WSYP100DG6



Refrigerant R410A

INVERTER

Installation and operating manual

intended for professionals

To be saved for future consultation

Fujitsu General (Euro) GmbH
Werftstrasse 20
40549 Düsseldorf - Germany

Subject to modifications without notice.
Non contractual document.

☞ **This device requires for its installation, the intervention of qualified personnel with a certificate of capacity for handling refrigerants.**

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1 Description of the unit

1.1 Designation

References of heat pump

Monobloc heat pump		*Hydraulic unit*
Model	*Output*	*Code*
WPYA050LG	5 kW	WSYP100DG6
WPYA080LG	8 kW	
WPYA100LG	10 kW	

Optional equipment

- ***DHW kit*** (code UTW-KDW*G) for connecting a DHW tank (with built-in electrical back-ups).
- ***Room thermostat*** (code UTW-C55*A), ***Wireless room thermostat*** (code UTW-C58*D) for correcting the ambient temperature.
- ***Remote control*** (code UTW-C75*A), ***Wireless remote control*** (code UTW-C78*A) for correcting the ambient temperature and programming the heat pump.

Scope of application

This Hydraulic Indoor Unit provides:

- Heating in winter,
- Production of domestic hot water* (provided that combined with a DHW tank).
- Cooling in summer* (for floor heating-cooling system or fan-convectors),
- Heating the swimming pool*.

* : These options require the use of additional kits (see para "Optional equipment").

1.2 Package

- **1 package**: Hydraulic unit and outdoor sensor.

1.3 Specifications

Designation model		**WSYP100DF6**
Electrical characteristics		
Supply voltage (50 HZ)	V	230
Max. current of the Heating electrical back-up	A	13,05 (x2 , two separate power supply)
Power of the Heating electrical back-up	kW	ajustable 3 or 6 kW
Hydraulic circuit		
Maximum operating pressure Heating	MPa (bar)	0,3 (3)
Various		
Weight of hydraulic unit (empty / full of water)	kg	40 / 62
Water capacity of the hydraulic unit	l	22

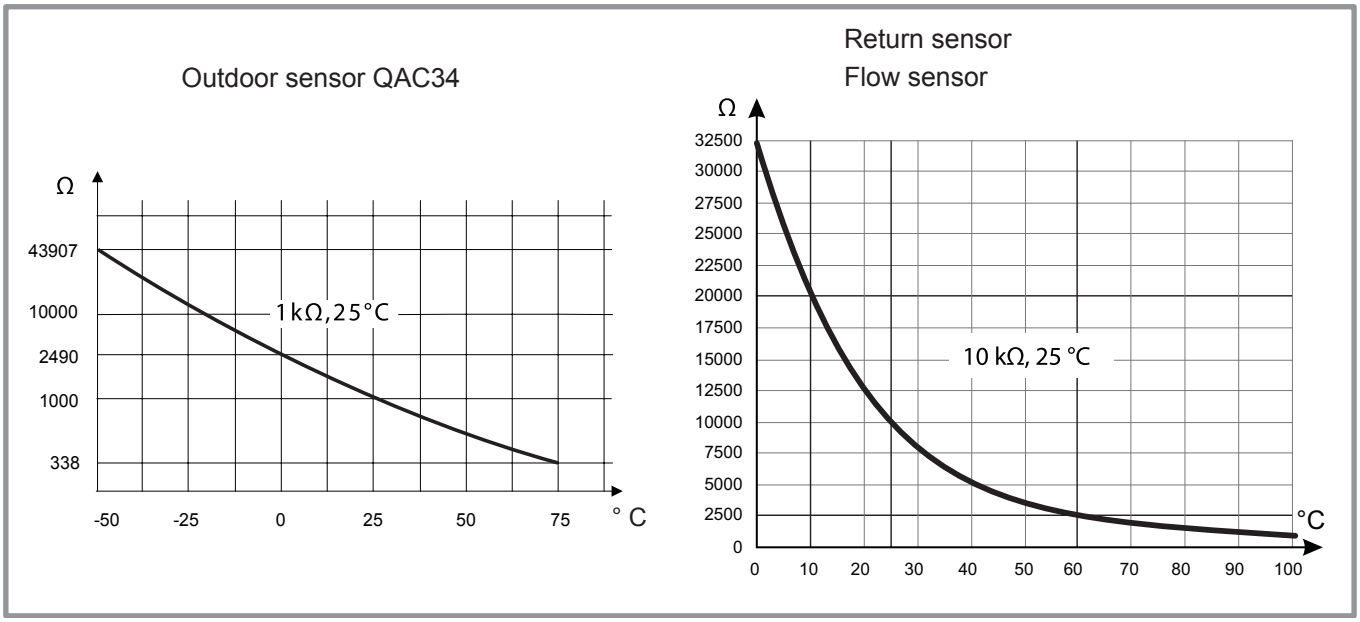


figure 2 - Ohmic values of the sensors (hydraulic unit)

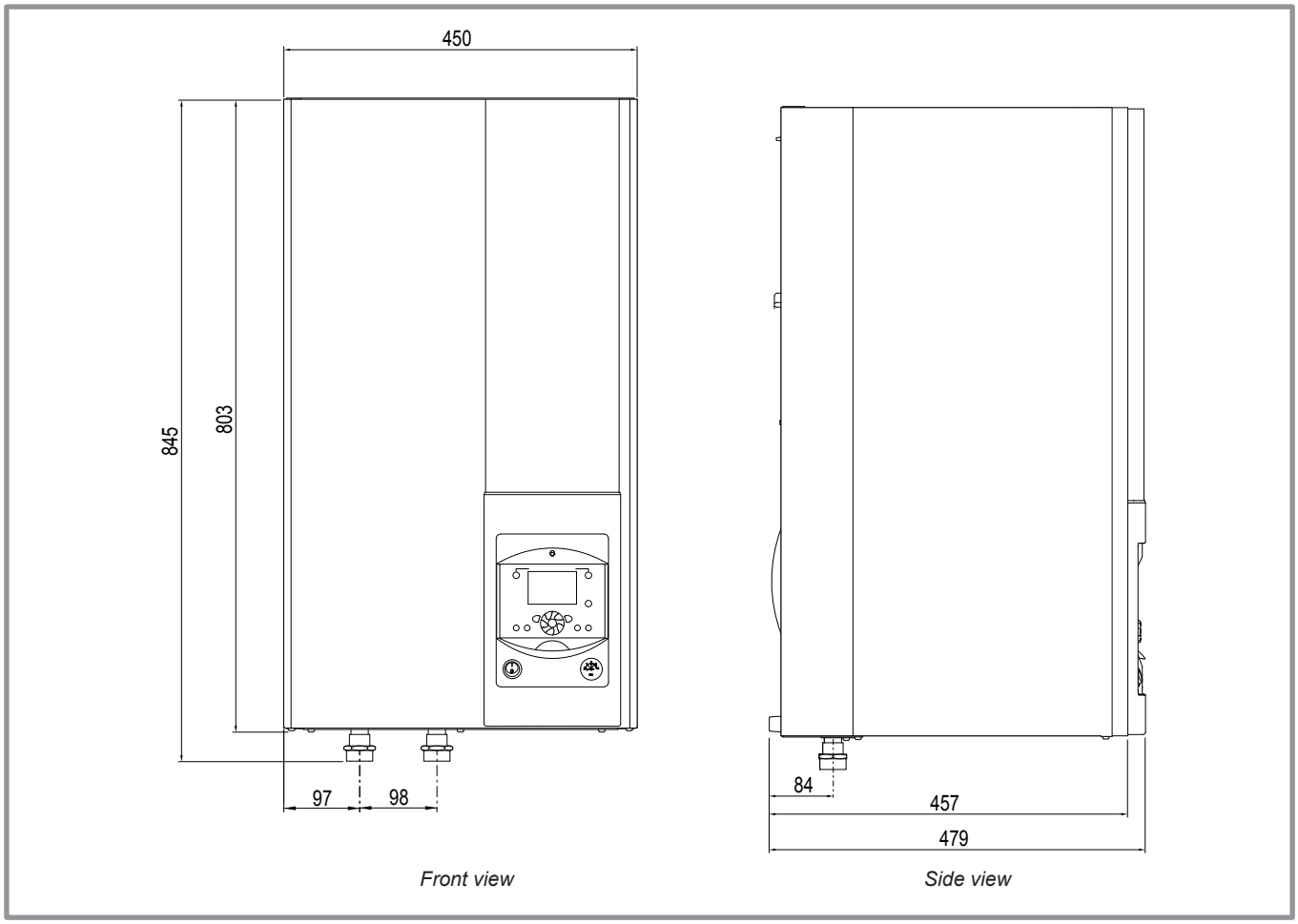


figure 3 - Dimensions in mm

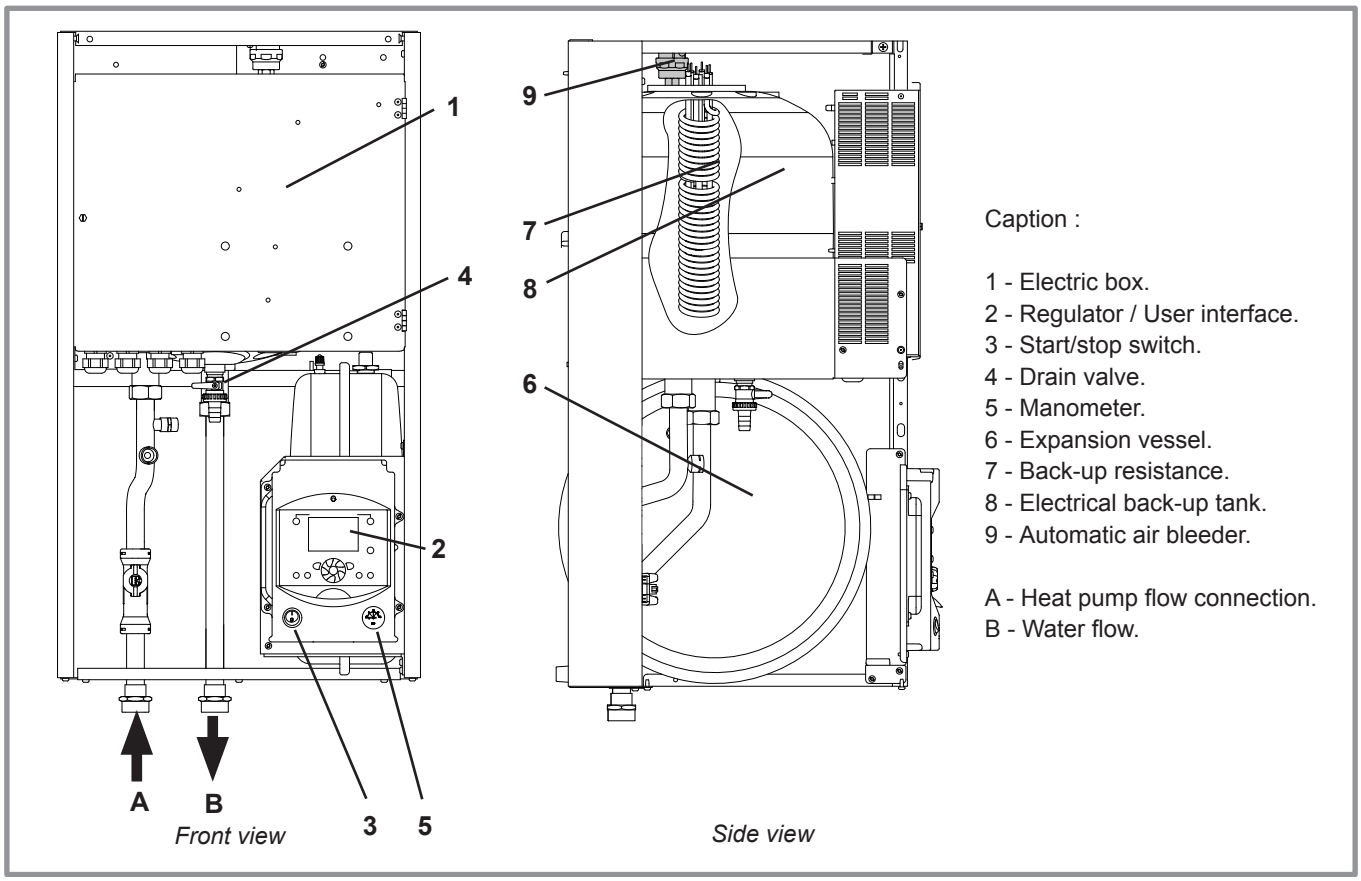


figure 4 - Components

1.4 Operating principle

The hydraulic unit is equipped with a controller, which controls the room temperature based on the outdoor temperature measurement and governed by the temperature control. The room thermostat (option) provides a corrective action for the temperature control.

The hydraulic unit is fitted with an electrical back-up which starts up in order to provide addtional heating during the coldest periods.

• Regulation functions

- The heating circuit's initial temperature is controlled by the temperature control.
- The power of the heat pump is modulated according to flow heating temperature via the "inverter" compressor.
- Control of the electrical back-up heating.
- The daily timer program enables you to define the periods for comfortable or reduced ambient temperature.
- Summer/winter mode switchover is automatic.
- The room thermostat (option)*: provides a corrective action for the temperature control.
- Domestic hot water*: Heating time program, control of the operation of the DHW circulation pump.
- Managing the cooling*.

• Energy meter

The hydraulic unit integrates a metering of produced energy. It uses a flowmeter, the flow temperature sensor and the return temperature sensor.

This function records:

- The total energy production since the start of the installation
- The yearly production of the last ten years

The unit comes ready to use.

The information inherent to this feature is the following ones :

- Read the Heat pump flow at the parameter 8460.
- Total energy production since the start at the parameter 3110 (kWh value) (installer access).
- Yearly production of the last ten years with Heating, Cooling and DHW*(option) differentiation (kWh).

Parameters (with “N” = current year)

Year	Energy in Heating	Energy in DHW	Energy in Cooling
N -1	3121	3122	3123
N -2	3128	3129	3130
N -3	3135	3136	3137
N -4	3142	3143	3144
N -5	3149	3150	3151
N -6	3156	3157	3158
N -7	3163	3164	3165
N -8	3170	3171	3172
N -9	3177	3178	3179
N -10	3184	3185	3186

• Protection functions

- Anti-legionella cycle for domestic hot water*.
- Frost protection: Frost protection cuts in if the low-temperature point of the heating circuit falls below 5 °C (provided that the hydraulic unit's electrical power supply is not interrupted).

• Domestic hot water (DHW)* operating principle

Two domestic hot water (DHW) temperatures can be parametered: nominal temperature (line 1610 to 55 °C) and reduced temperature (line 1612 to 40 °C).

The default heat pump program (line 560, 561 and 562) is set for nominal temperature from 0:00 to 5:00 and from 14:30 to 17:00 and for reduced temperature for the rest of the day. This optimizes electrical consumption while ensuring comfortable availability of hot water.

Setting for reduced temperature can be useful to prevent the DHW from switching on too often and for too long during the day.

The production of domestic hot water (DHW) is triggered when the temperature in the tank falls 7°C (setting from line 5024) below the set temperature.

The heat pump produces the domestic hot water, which is then additively heated, if required, by electrical back-up heating inside the tank. To ensure a DHW setting over 45°C, the electrical back-up heating or the boiler must be left on.

Depending on how the parameter (1620) is set, nominal temperature can be reached 24h/day or only at night or depending on the heat pump programme.

If the contract concluded with the energy provider includes a subscription to day/night tariff, the electrical backup is subordinate to the supplier’s power tariff and the comfort temperature may only be reached at night.

If no particular contract is concluded, the comfort temperature can be reached at any time, including during the day

The production of DHW takes priority over heating; nevertheless the production of DHW is controlled by cycles that control the times assigned to the heating and the production of DHW in the event of simultaneous demand.

A function to switch from "reduced" to "nominal" is provided on the front of the user interface. (see ref. **5**, figure 15, page 22).

Anti-legionella cycles can be programmed.

• Fan coils with integrated control system

Do not use a room sensor in the area.

***** If the hydraulic unit is equipped with optional equipment and the associated kits.

2 Installation

2.1 Regulation installation and maintenance conditions

The appliance must be installed and the maintained by an approved professional in accordance with the prevailing regulations and code of practice, in particular:

- Heating installation with floor heating system.
- Low voltage electrical installations - Rules.

2.2 Unpacking and reservations

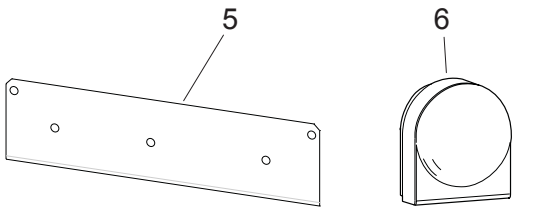
2.2.1 Receipt

Carefully check, in the carrier's presence, the general appearance of the appliance.

In the case of any dispute, state any appropriate reservations to the carrier in writing within 48 hours and send a copy of this letter to the After-Sales service.

2.2.2 Accessories provided

Accessories provided with the hydraulic unit (figure 5).



5	Bracket	To secure the hydraulic model
6	Outdoor sensor	To monitor the outdoor temperature

figure 5 - Accessories provided with the hydraulic unit

2.3 Installation position

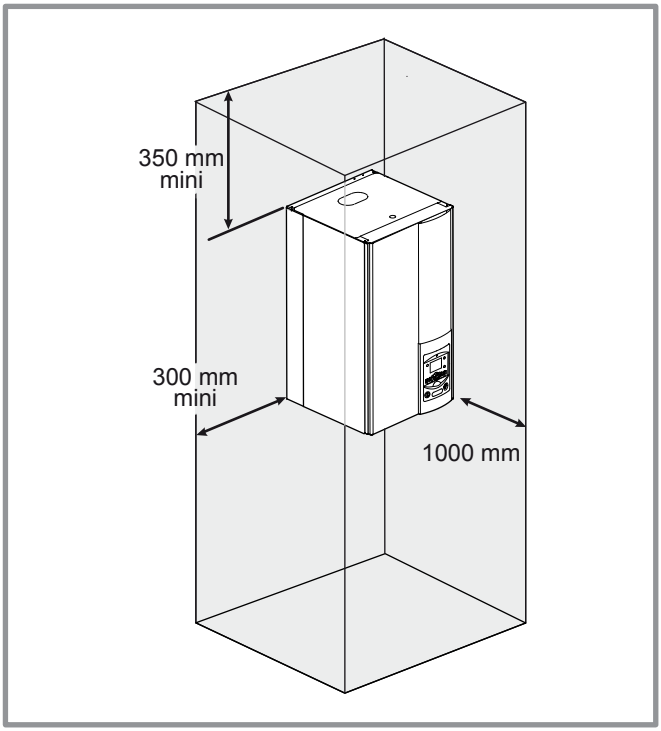
The choice of the position for installation is particularly important insofar as any later movement is a delicate operation requiring the intervention of a qualified person.

Choose the site of the heat pump and the hydraulic unit after discussion with the customer.

2.4 Installing the hydraulic unit

2.4.1 Installation precautions

- The room in which the appliance operates must comply with the prevailing regulations.
- To facilitate maintenance and to allow access to the various components, we recommend that you provide sufficient space all around the hydraulic unit.



- Be careful not to bring inflammable gas near to the hydraulic unit during its installation, in particular when it requires brazing. The appliances are not fireproof and should therefore not be installed in a potentially explosive atmosphere.

2.4.2 Positioning the hydraulic unit

- Fix the support solidly (4 screws and plugs) to a flat, hard-wearing wall (not a light partition) ensuring that it is correctly levelled.
- Hook the appliance onto its support.

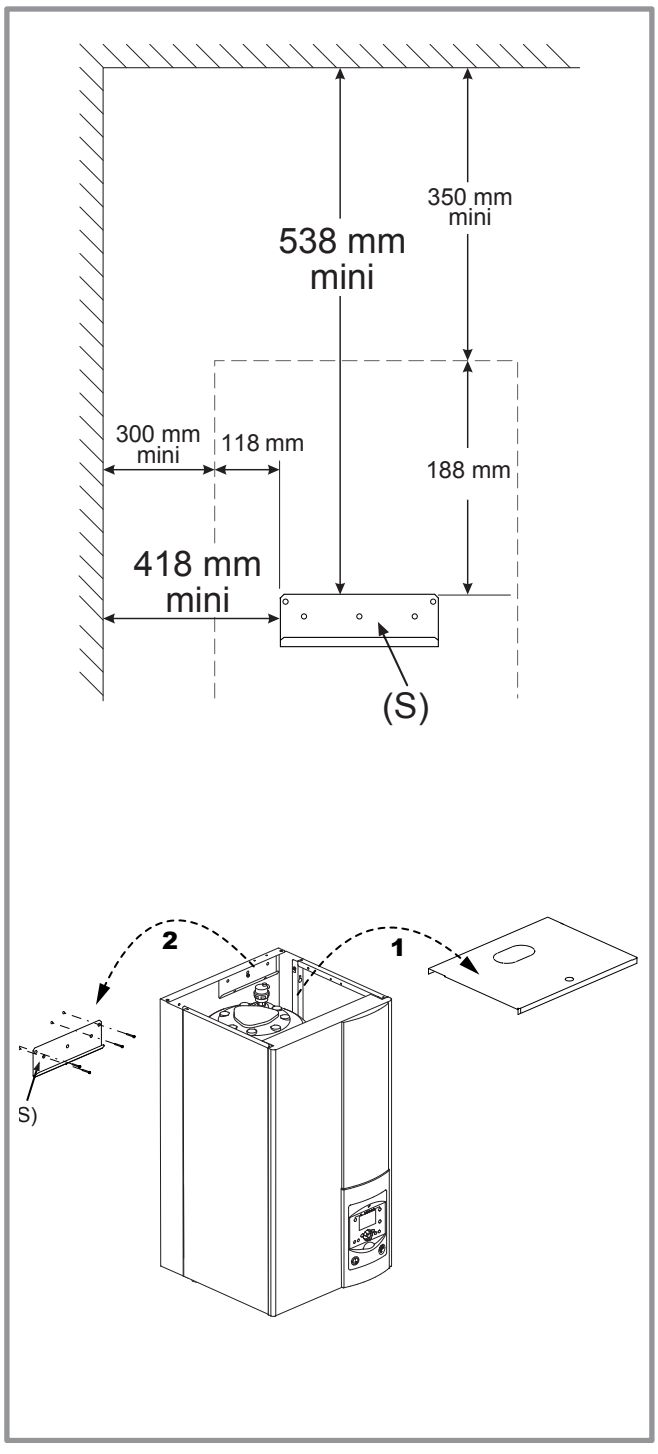


figure 6 - Mounting bracket

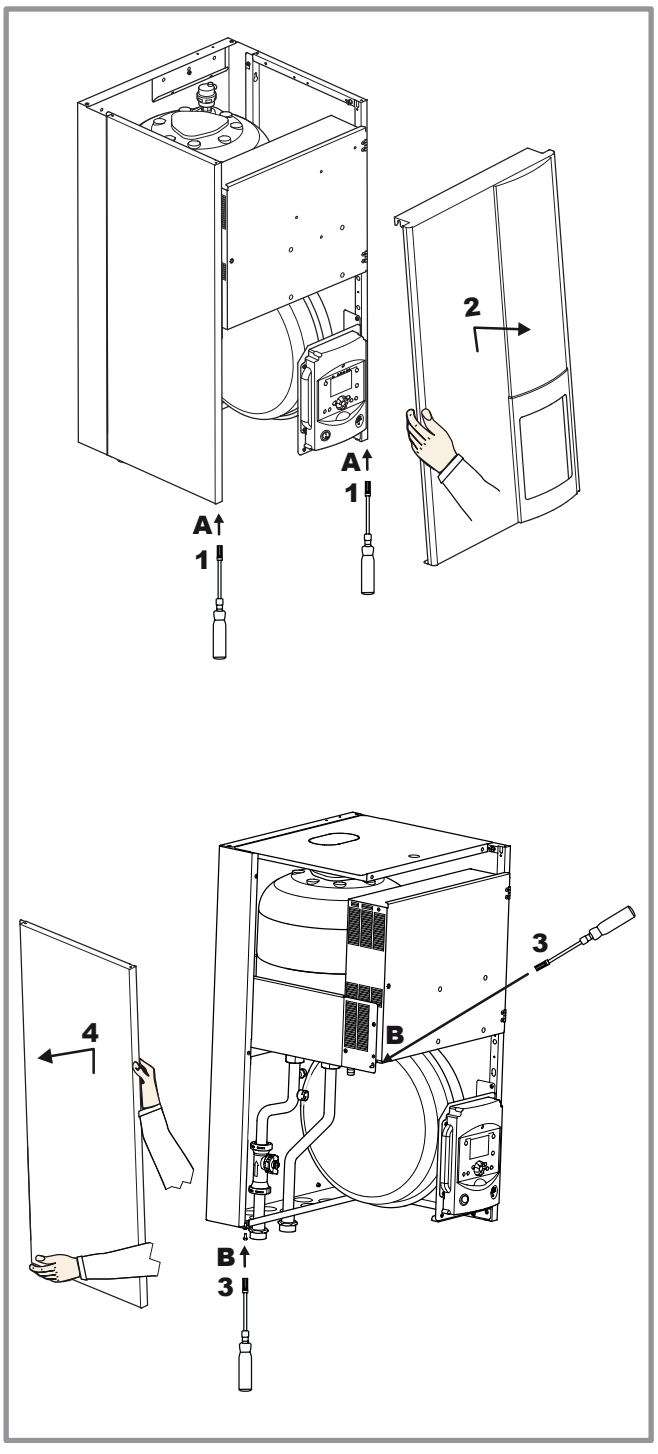


figure 7 - Removing the casing

2.5 Hydraulic connection

2.5.1 General

The connection must comply with good trade practice according to local building regulations.

Calculate the diameter of the pipes according to the flow rates and the lengths of the hydraulic systems.

Tightening torque: 15 to 35 Nm.

Use union connectors to facilitate removing the hydraulic unit.

Preferentially use connection hoses to avoid transmitting noise and vibrations to the building.

Connect the drains from the air bleeders and the safety valve to the main sewer system.

Verify the correct functioning of the expansion system. Control the vessel pressure and the safety valve setting.

Reminder: Seal everything when fitting in accordance with prevailing trade practice for plumbing work:

- Use suitable seals (fibre seals, o-rings).
- Use Teflon tape or hemp.
- Use sealing paste (synthetic depending on the case).

The use of glycol is not necessary. If you are using a glycol/water mix, provide for an annual check on the quantity of glycol. Use monopropylene glycol only. **Never use monoethylene glycol.**

☞ **In certain installations, the presence of different metals can cause corrosion problems; the formation of metal particles and sludge in the hydraulic circuit is then seen.**

☞ **In this case, it is advisable to use a corrosion inhibitor in the proportions indicated by its manufacturer.**

- Please refer to the chapter "Treatment of domestic and heating water" in our price catalogue.

☞ **It is also necessary to ensure that the treated water does not become aggressive.**

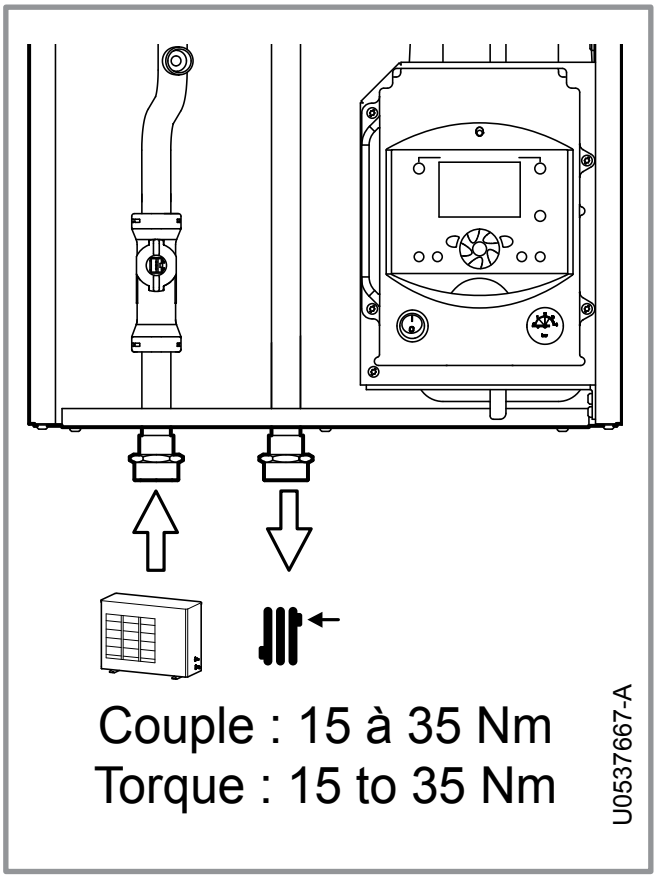


figure 8 - Hydraulic connections

2.5.2 Outdoor unit connecting

Connect the heat pump pipes to the hydraulic unit, complying with the direction of circulation.

2.5.3 Rinsing out the heating installation

Before connecting the hydraulic unit to the installation, rinse out the heating system correctly to eliminate any particles that may affect the appliance's correct operation.

Do not use solvents or aromatic hydrocarbons (petrol, paraffin, etc.).

In the case of an old installation, provide a sufficiently large decanting pot with a drain on the return from the boiler and at the lowest point in the system in order to collect and remove the impurities.

Add an alkaline product to the water and a dispersant.

Rinse the installation several times before filling it definitively.

2.5.4 Heating circuit connecting

Connect the central heating pipes to the hydraulic unit, complying with the direction of circulation.

The pipe between the hydraulic unit and the heat collector must be at least one inch in diameter (26x34 mm).

2.5.5 Filling and purging the installation

Check the pipe fixings, the tightness of the connectors and the stability of the appliance.

Check the direction in which the water is circulating and that all the valves open.

Proceed to fill the installation.

Do not operate the circulating pump while filling. Open all the drain valves in the installation and the air bleeders for the hydraulic unit (**P**) to remove the air contained in the conduits.

Close the air bleeder valves and add water until the pressure in the hydraulic circuit reaches 1 bars.

Check that the hydraulic circuit has been purged correctly.

Check there is not a leak.

After the "Commissioning", page 20, once the machine has started, purge the hydraulic unit again (2 litres of water).

☞ **Precise filling pressure is determined by the manometric height of the installation.**

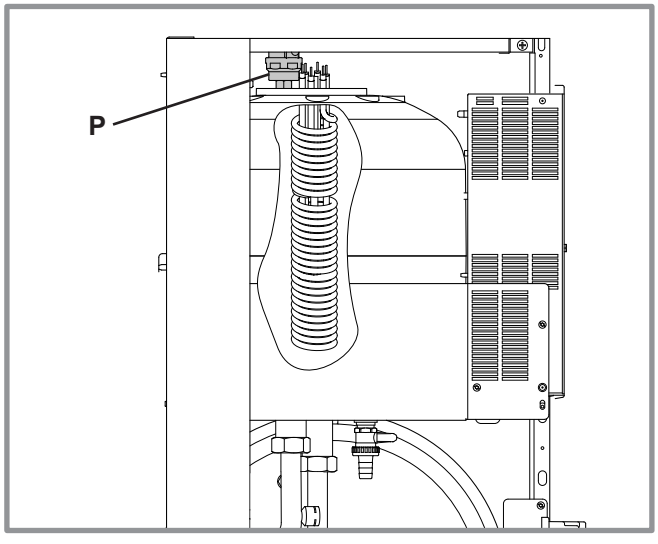


figure 9 - Hydraulic unit
Automatic air bleeder

2.6 Electrical connections

Ensure that the general electrical power supply has been cut off before starting any repair work.

2.6.1 Characteristic of the electrical supply

The electrical installation must be conducted in accordance with the prevailing regulations.

The electrical connections must only be made when all the other fitting operations have been completed (fixing, assembly, etc.).

☞ **Warning !**

The contract concluded with the energy provider must be sufficient not only to cover the hydraulic unit's power but also the combined sum of all the appliances likely to be operating at the same time. When the power is too low, check with your energy provider the value subscribed to in your contract.

Never use a socket for the power supply.

The heat pump must be supplied directly (without external switch) with power by special protected leads from the electric panel via 2-pole circuit breakers specially dedicated to the heat pump, Curve D, Curve C for two separate supply for heating electrical back-up (see tables on page 13).

The electrical installation must necessarily be equipped with a 30mA differential protection.

This appliance is designed to operate under a nominal voltage of 230 V +/- 10%, 50 Hz.

2.6.2 General remarks on electrical connections

It is essential to maintain the live-neutral polarity when making the electrical connections.

Rigid wires are preferable for fixed installations, particularly in a building.

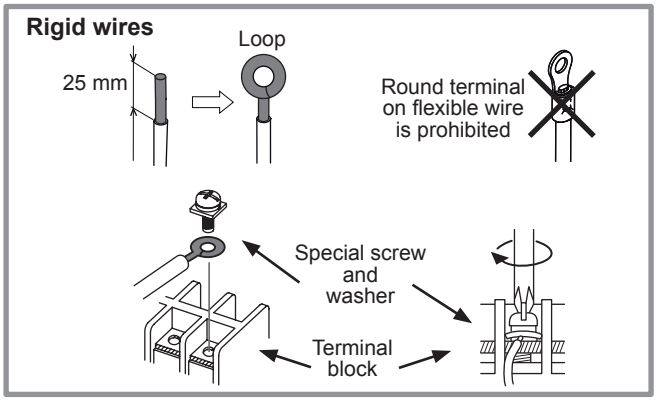
Tighten the cables using the cable glands to prevent the conductors from disconnecting accidentally.

Connection to Earth and Earth bonding continuity are essential.

• Connecting to screw terminals

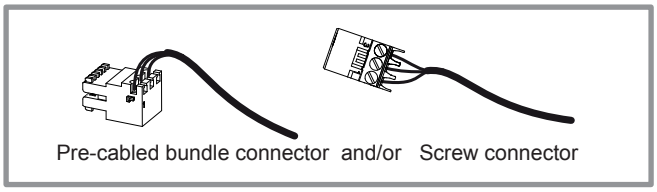
☞ **The use of round terminal or the ends is prohibited**

- Always select a rigid wire that complies with the prevailing standards.
- Strip away around 25 mm from the end of the wire.
- With round end pliers, form a loop with a diameter corresponding to the tightening screws on the terminal.
- Tighten the terminal screw firmly onto the loop created. Unsufficient tightening can cause overheating, leading to breakdown or even a fire.



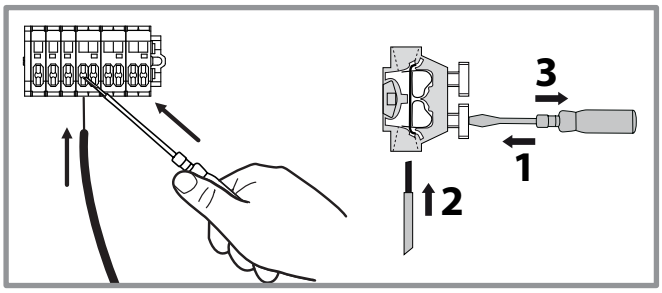
• Connecting to regulation cards

- Remove the corresponding connector and make the connection.



• Connecting to spring terminals

- Strip away around 10 mm from the end of the wire.
- Push the spring with a screwdriver so that the wire enters the cage.
- Slide the wire into the opening provided for this purpose.
- Remove the screwdriver and then check that the wire is jammed in the cage by pulling on it.



2.6.3 Overview of all the electrical connections

The wiring diagram for the hydraulic unit is shown in detail on figure 14, page 16.

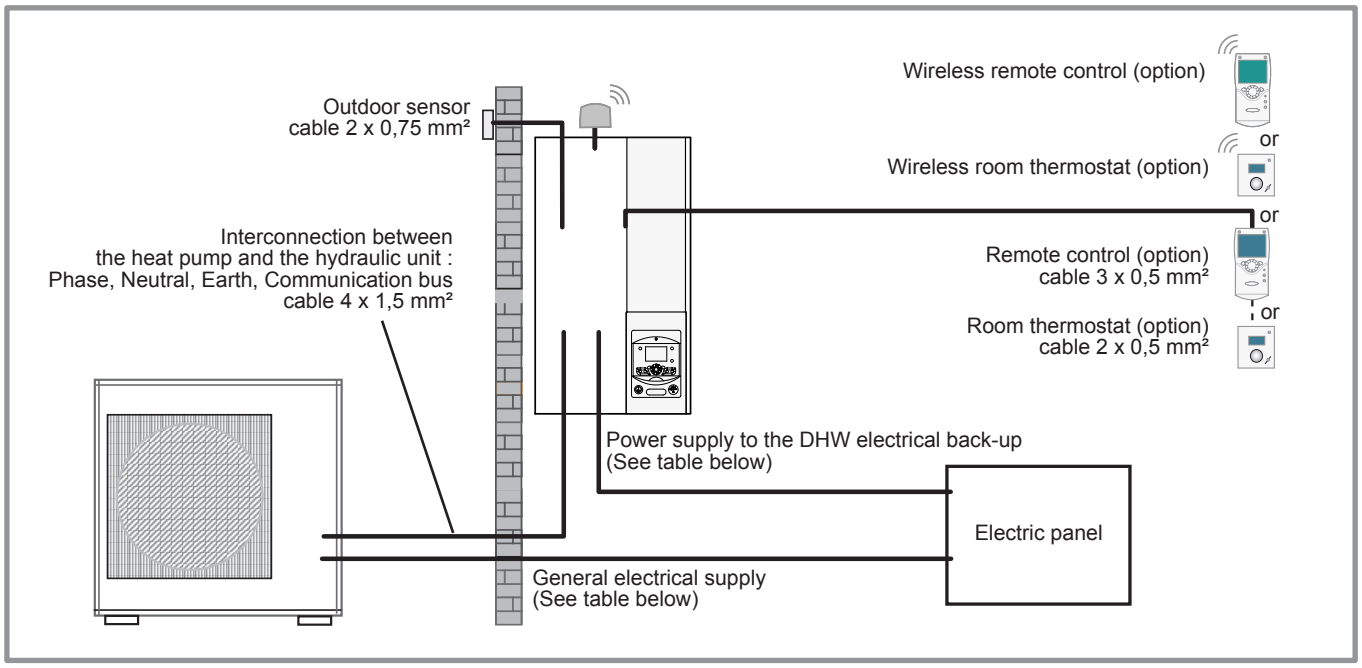


figure 10 - Overall layout of the electrical connections for a simple installation

2.6.4 Cable section and protection rating

The cable sections are given for information purposes only and do not exempt the installer from checking that these sections correspond to the requirements and comply with the prevailing standards.

• Interconnection between the heat pump and the hydraulic unit

The hydraulic unit is powered by the heat pump by means of a cable with 4 x 1,5 mm² (phase, neutral, earth, communication bus).

• Power supply to the electrical back-up

The hydraulic unit contains two stages of electrical back-up installed in a heat exchange tank.

Model	*Electrical back-ups*		*Power supply to the electrical back-ups*	
	Power	*Nominal current*	*Cable connection (phase, neutral, earth)*	*Curve C circuit breaker size*
Hydraulic indoor unit	3 kW	13.05 A	3 x 1.5 mm²	16 A
	3 kW	13.05 A	3 x 1.5 mm²	16 A

☞ **Ensure that the general electrical power supply has been cut off before starting any repair work.**

2.6.5 Electrical connections on the hydraulic unit side

Access to the connection terminals:

- Remove the front panel (2 screws) (figure 7, page 9).
- Open the power control box.
- Make the connections in accordance with the diagram figure 13.

Do not place the sensor wires and the sector supply wires in parallel in order to avoid interferences due to voltage points in the sector supply.

Ensure that all the electrical cables are housed in the spaces provided for this purpose.

• Interconnection between the heat pump and the hydraulic unit

Comply with the correspondence between the markings on the hydraulic unit's terminals and those on the heat pump when connecting the interconnection cables.

A connection error could cause the destruction of one or other of the units.

• Electrical back-up

- Connect the electrical supply for each stage of electrical back-up to the electrical panel (see figure 12, page 15).

• DHW tank with electrical back-up heating (option)

If the installation is fitted with a DHW tank with electrical back-up heating:

- Please refer to the instructions supplied with the DHW kit.
- Please refer to the instructions supplied with the DHW tank.

• Contract with the power provider

The heat pump's operation can be controlled to suit special contracts (e.g. off-peak, day/night). In particular, domestic hot water (DHW) at Nominal temperature will be produced during the off-peak hours when electricity is cheaper.

- Connect the "Power Provider" contact to input EX2.
- Set the parameter (1620) to "Off-peak hours".

• 230V on input EX2 = "Peak hours" information activated.

• Power shedding or EJP (peak day removal)

Power limitation is intended to reduce electrical consumption when this is too high compared to the contract with the power provider.

- Connect the power limiting device to input EX1, the back-ups for the heat pump and the DHW stop in the event of over-consumption by the dwelling.

• 230 V on input EX1 = power limitation in progress.

• External faults the heat pump

Any component of carryforward of information (thermostat, pressure switch, etc.) may signal an external problem and stop the heat pump.

- Connect the external component to input EX3.

• 230 V on input EX3 = stoppage of heat pump (the system displays Error 369).

- In the case of a heated floor, insert the heated floor thermal safety in the binding of circulating heated floor.

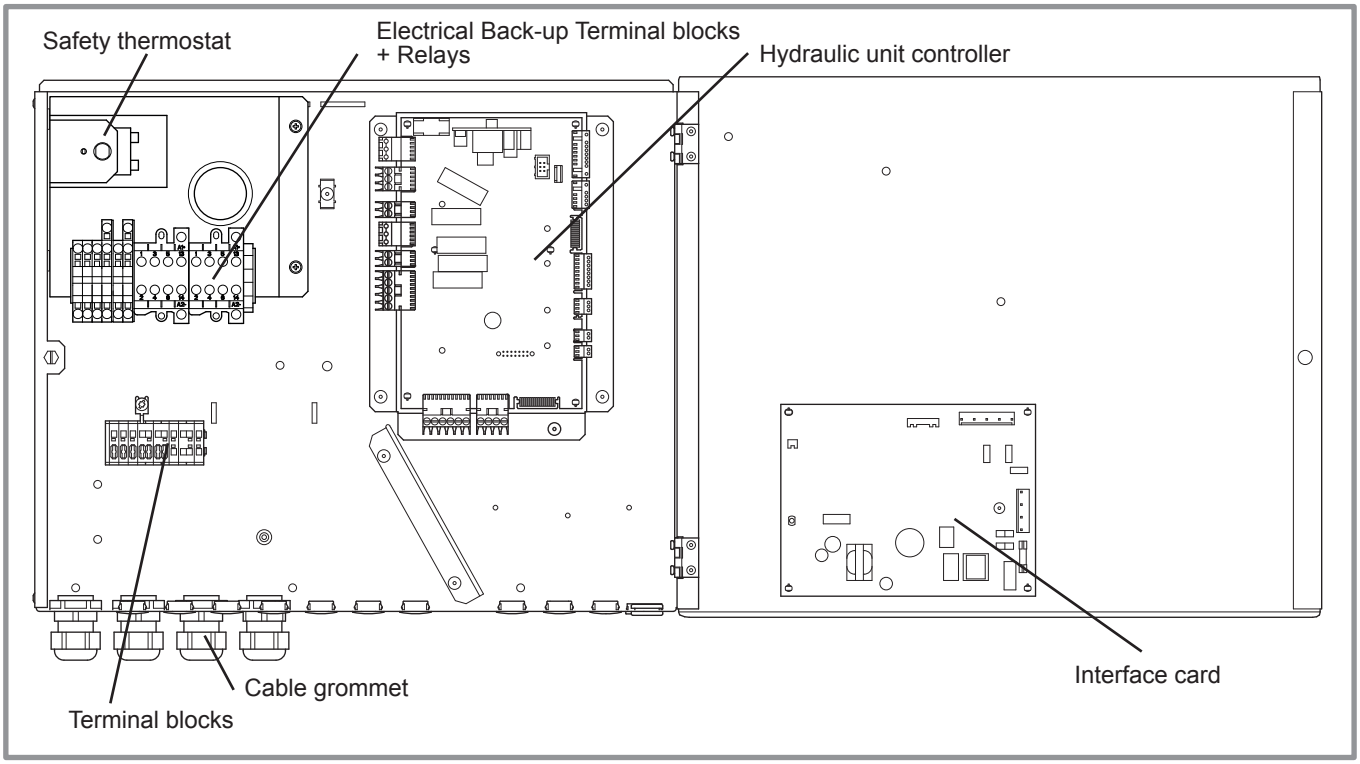


figure 11 - Hydraulic unit electric box

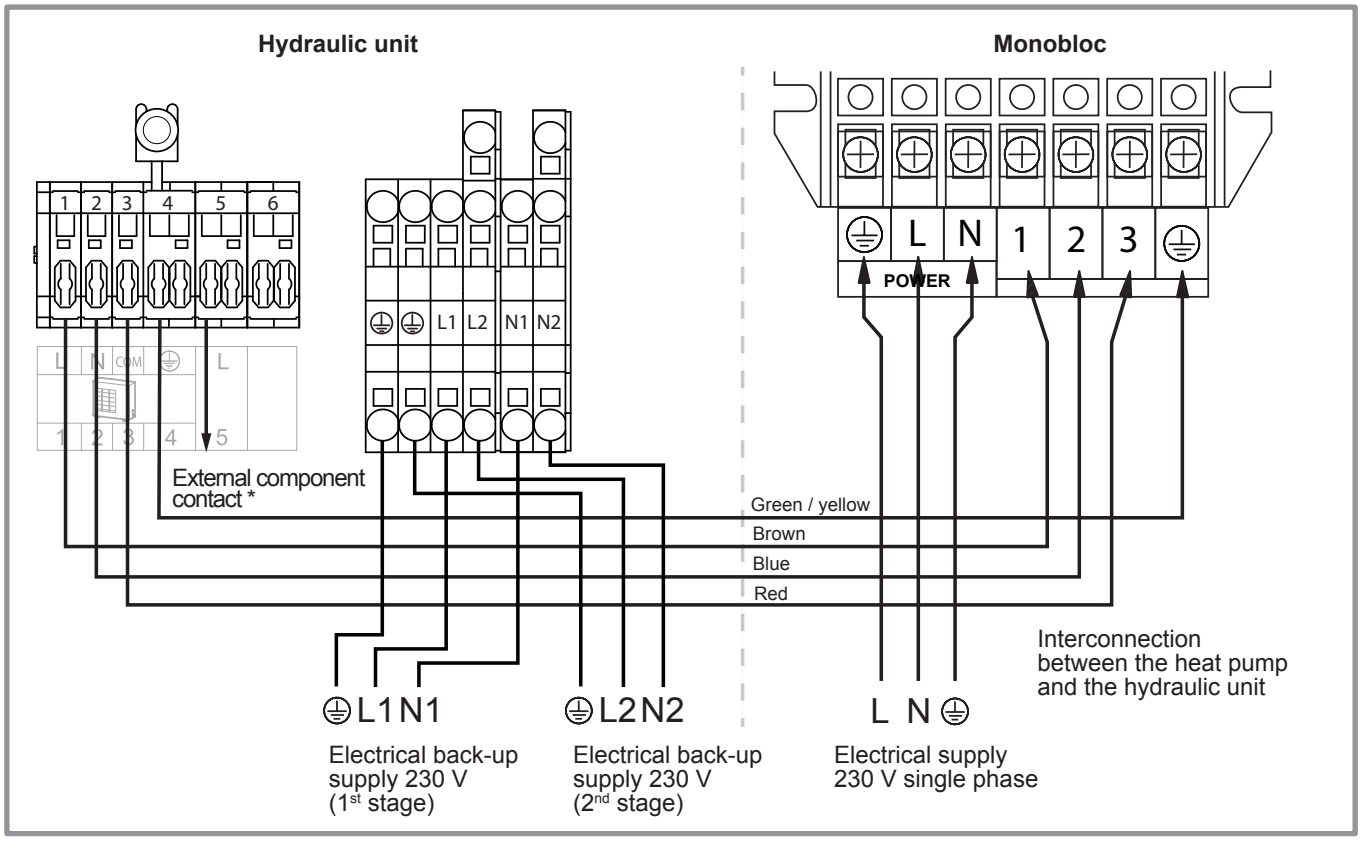


figure 12 - Connection to terminal block and power relays

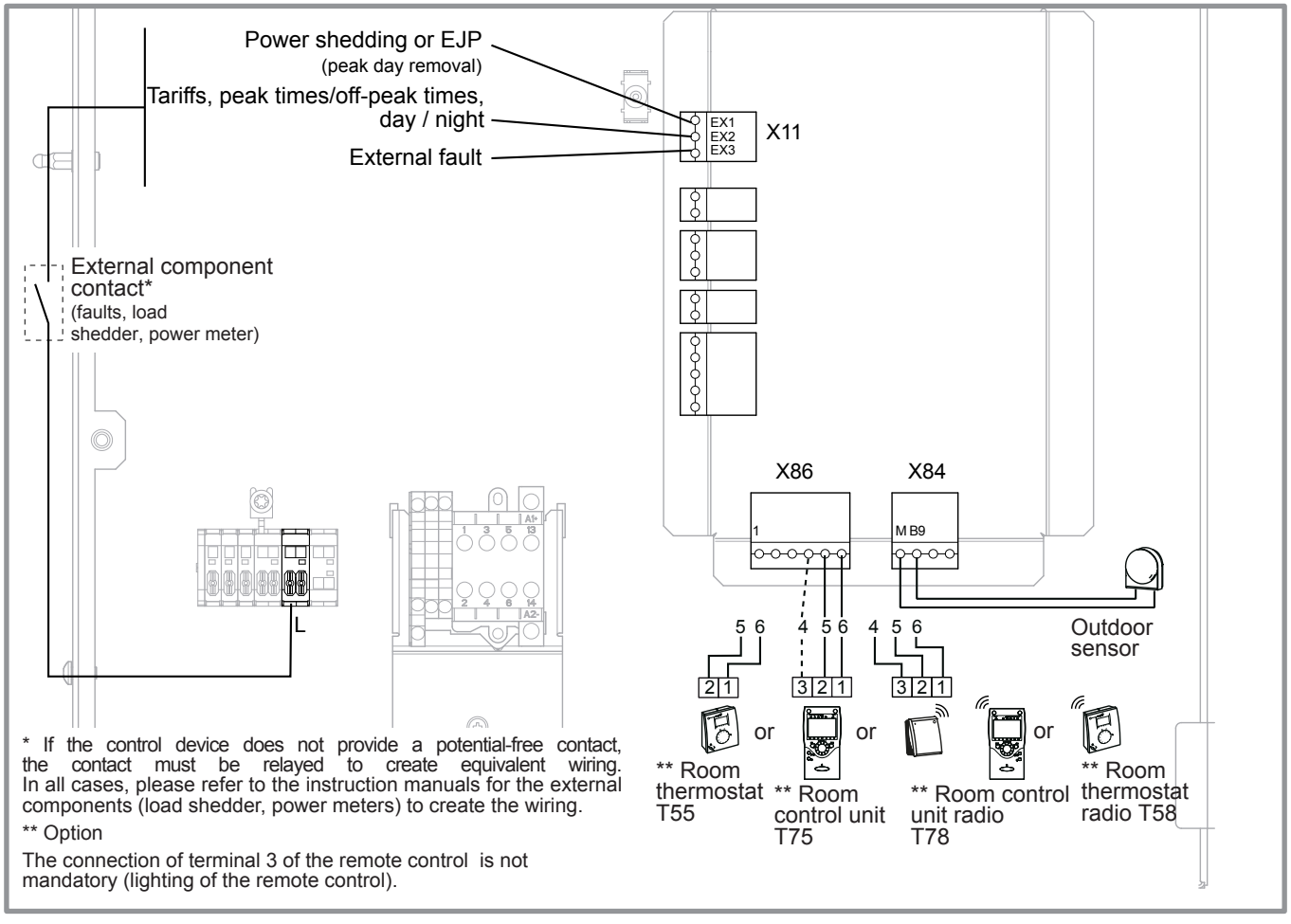


figure 13 - Connections to the hydraulic unit controller (accessories and options)

2.7 Electrical wiring diagrams

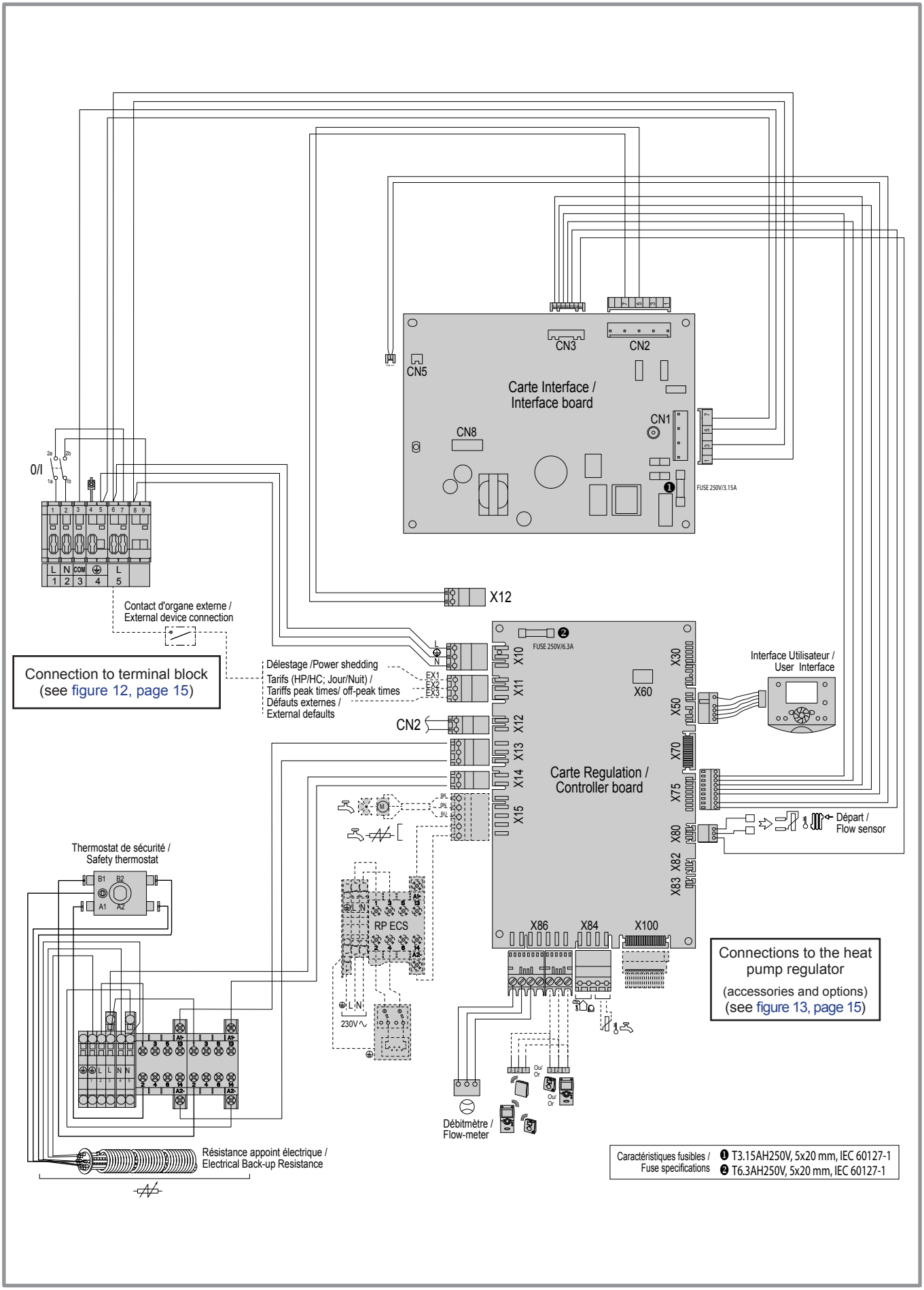


figure 14 - Electrical wiring, Hydraulic unit (Except installer's connections)







2.8 Outdoor sensor

The outdoor sensor is required for the heat pump to operate correctly.

Consult the fitting instructions on the packaging.

Place the sensor on the coldest part, generally the northern or north-eastern side.

In any case, it must not be exposed to the morning sun.

It must be installed so as to be easily accessible but at least 2,5 m from the floor.

It is essential that it avoid any sources of heat such as flues, the upper parts of doors and windows, proximity to extraction vents, the underneath of balconies and under-eave areas, which would isolate the sensor from variations in the outdoor air temperature.

- Connect the outdoor sensor to the connector **X84** (terminals **M** and **B9**) on the hydraulic unit control board.

2.9 Room thermostat and/or room control unit

The room thermostat (room control unit) is optional.

Consult the fitting instructions on the packaging.

The sensor must be installed in the living room area on a very uncluttered wall. It must be installed so as to be easily accessible.

Avoid direct sources of heat (chimney/flue, television, cooking hobs), draughty areas (ventilation, door, etc.).

Air leaks in the seals in the constructions are often translated into cold air blowing through the electrical conduits. Lag the electrical conduits if there is a cold draught on the back of the IR sensor.

2.9.1 Installing a room sensor

• Room thermostat UTW-C55XA

- Connect the sensor to the **X86** connector on the hydraulic unit control board using the connector provided (terminals **1**, **2**).

• Wireless room thermostat UTW-C58XD

- Connect the wireless room thermostat to the connector **X60**.

2.9.2 Installing a room control unit

• Room control unit UTW-C75XA

- Connect the sensor to the **X86** connector on the hydraulic unit control board using the connector provided (terminals **1**, **2** and **3**).

• Wireless room control unit UTW-C78XD

- Connect the wireless room control unit to the connector **X60**.

2.9.3 Fan coils or dynamic radiators area

If the installation is equipped with fan coils or dynamic radiators, **Do not use a room sensor in the area**.

2.10 Commissioning

- Close the installation's main circuit breaker.

  On first commissioning (or in winter), in order to allow the compressor to pre-heat, engage the installation's main circuit breaker (power supply to the HP) some hours before starting up the tests.

- Engage the start/stop switch.

  To ensure that inputs EX1, EX2 and EX3 operate correctly: Check that the live-neutral polarity of the electrical supply is correct.

When the power is switched on and every time that the ON/OFF button is switched off and then switched on again, the heat pump will take approximately 4 minutes to start up, even if the setting is requesting heating.

The display can show error 370 when the appliance (re)starts. Do not be concerned, the communication between the heat pump and hydraulic unit will re-establish itself in a few moments.

During the controller initialisation set, the display shows all the symbols and then "Data, update" and then "State heat pump"

- Make all the specific adjustments to the setting. (Installation configuration):

- Press OK.

- Hold on the key i for 3s and select the level of access used with the aid of the knob.

- Confirm with the key OK.

- Parameter the heat pump's setting (Consult the settings' list page 27).

On commissioning (or the case of error 10), the electrical back-up heaters are liable to start up even if the outdoor temperature at the time is above the heaters' trigger temperature.

The control system uses an average initial outdoor temperature of 0°C and requires some time to update this temperature.

To avoid this situation, the sensor must be connected correctly. Re-initialise parameter 8703 (commissioning level, consumer diagnostic menu).

2.11 Configuring room thermostat

To configure the room thermostat and connect it to the appropriate heating zone:

- Hold on the presence key for more than 3 seconds. The room thermostat displays RU and a number flashes.
- Hold on the presence key; the room thermostat displays P1 and a flashing number. 1: Automatic recording: a correction of the setting with the button is adopted without any particular confirmation (timeout) or by pressing the mode key. 2: Recording with confirmation: a correction of the setting with the button is not adopted until the mode key is pressed.
- Press the presence key again; the room thermostat displays P2 and a flashing number.

0: OFF: all the operating elements are engaged.

1: ON: the following operating elements are locked:

- Switch over the heating circuit's operating mode,
- Adjust the comfort setting,
- Change the operating level.

The room thermostat displays OFF for 3 seconds when a locked button is pressed.

2.12 Configuring room control unit

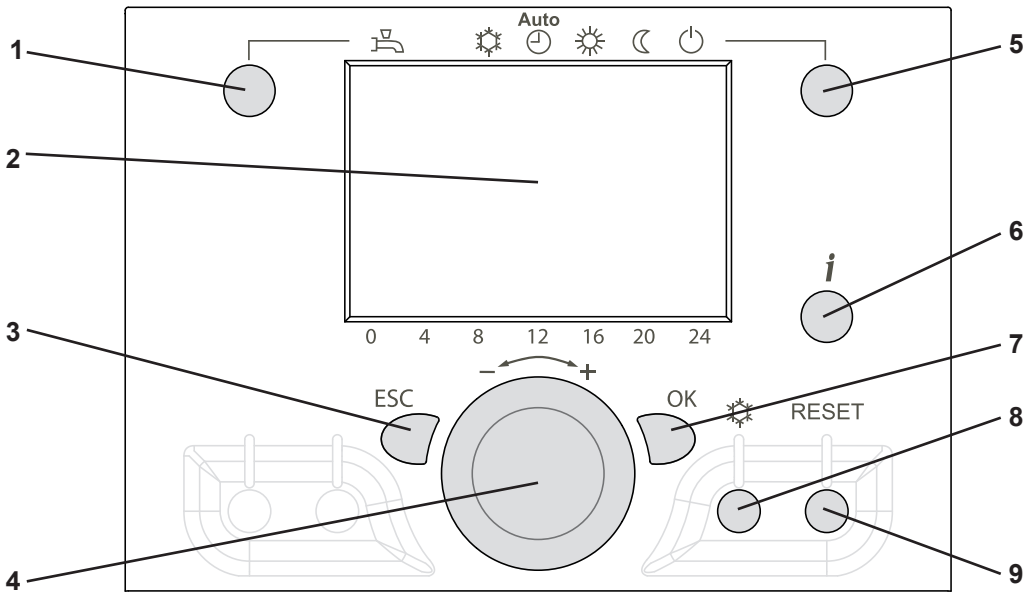
During commissioning, after an initialisation period of approx. 3 minutes, the user's language must be set:

- Press 

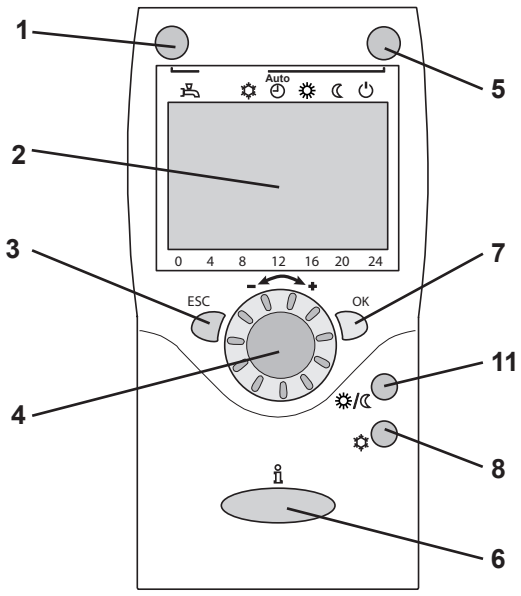
.
- Choose menu "Operator section".
- Choose language.
- Select the language (**English**, Deutsch, Français, Italiano, Nederlands, Español, Português, Dansk…).

3 Controller

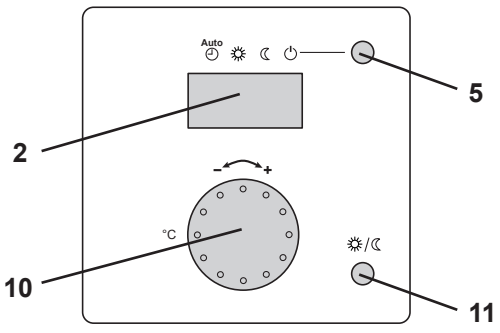
3.1 User interface, Room control unit (option) and Room thermostat (option)



User interface



Room control unit UTW-C75XA / UTW-C78XD



Room thermostat UTW-C55XA / UTW-C78XD

figure 15 -

Ref.	*Function*	*- Definitions*
1	Selecting of the DHW operating mode (Domestic hot water) On Off	If the installation is fitted with a DHW tank. - **On**: Production of DHW according to the time program. - **Off**: Preparing the domestic hot water for stopping with the anti-frost function active. - **Manual start button**: Hold on the DHW key for 3 seconds. Switch from "reduced" to "comfort" until the next time the ECS timer switches over.
2	Digital display	- Operating control. Readout of the current temperature, of the heating mode and of any faults . - View the settings.
3	Exit "ESC"	- Quit the menu.
4	Navigation and setting	- Selecting the menu. - Setting parameters. - Adjusting the ambient temperature setpoint.
5	Selecting the heating mode	- Heating operating according to the heating program (Summer/winter mode switchover is automatic). - Constant comfort temperature. - Constant reduced temperature. - Stand-by mode with anti-frost protection (Provided that the heat pump's electrical power supply is not interrupted).
6	Information display	- Various data (please see page 40). - Reading error codes (please see page 40). - Information concerning maintenance, special mode.
7	Confirm "OK"	- Input into the selected menu. - Confirmation of the parameter settings. - Confirmation of the adjustment to the comfort temp. setting.
8	Selecting cooling mode	- Cooling operating according to the heating program (Summer/winter mode switchover is automatic).
9	RESET button (Brief press)	- Reinitialising the parameters and cancelling error messages. **Do not use during normal operation.**
10	Control knob	- Adjusting the ambient temperature setpoint.
11	Presence key	- Comfort / Reduced switchover.

3.2 Description of the display

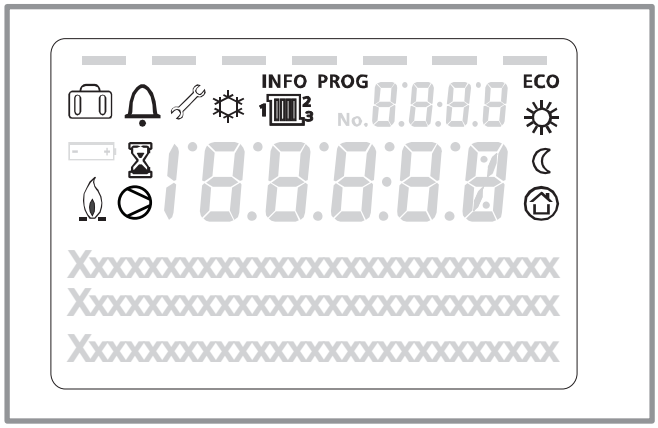


figure 16 - User interface display

Symbols	Definitions
	- Heating mode active with reference to the heating circuit.
	- Heating in comfort mode.
	- Heating in reduced mode.
	- Heating in "standby" mode (freeze protection).
	- Cooling mode active.
	- Holiday mode activated.
	- Process in progress.
	- Compressor operation.
	- Burner operation.
	- Default message.
	- Service / Special operation.
INFO	- Information level activated.
PROG	- Programme activated.
ECO	- ECO mode activated (Heating temporarily stopped).
	- Hour / Parameter number / Setpoint value.
	- Room temperature / Setpoint value.
	- Setpoint information / Parameter Information.

3.4 Temperature control

The heat pump's operation is subject to the temperature control.

The set temperature for the water in the heating circuit is adjusted according to the outdoor temperature.

If there are thermostatic valves on the installation, these must be fully open or adjusted for higher than the normal set temperature.

3.4.1 Adjustment

During installation, the temperature control must be parametered according to the heat emitters and the dwelling's insulation.

The temperature control' curves (figure 18) refer to an ambient setting of 20°C.

The slope of the temperature control (parameter 720) determines the impact of the variations in the outdoor temperature on the initial heating temperature variations.

The higher the slope, the more a slight reduction in the outdoor temperature causes a significant increase in the flow water temperature in the heating circuit.

The off-set in the temperature control (parameter 721) modifies the initial temperature of all the curves, without modification of the slope (figure 19).

The corrective actions in the case of any inconvenience are detailed in the table (figure 20).

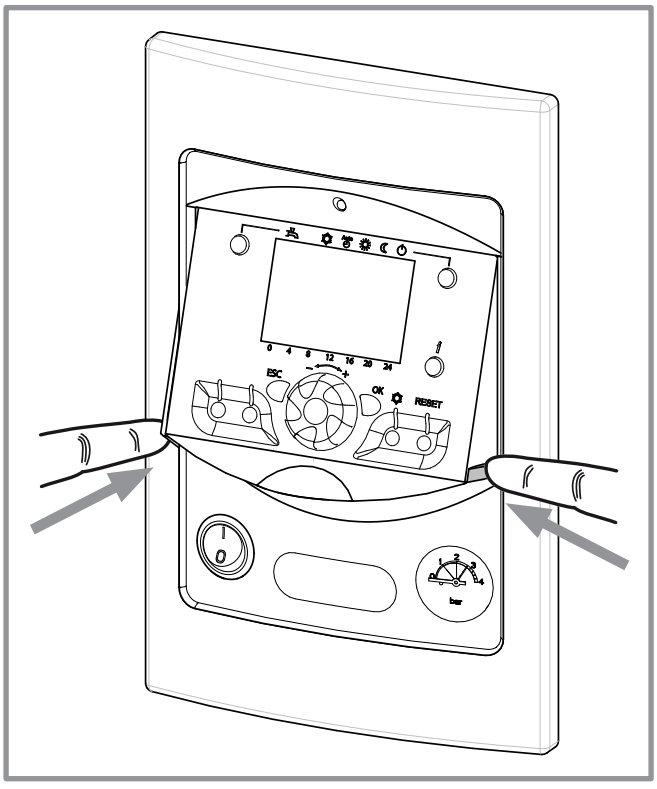


figure 17 - Closing the display

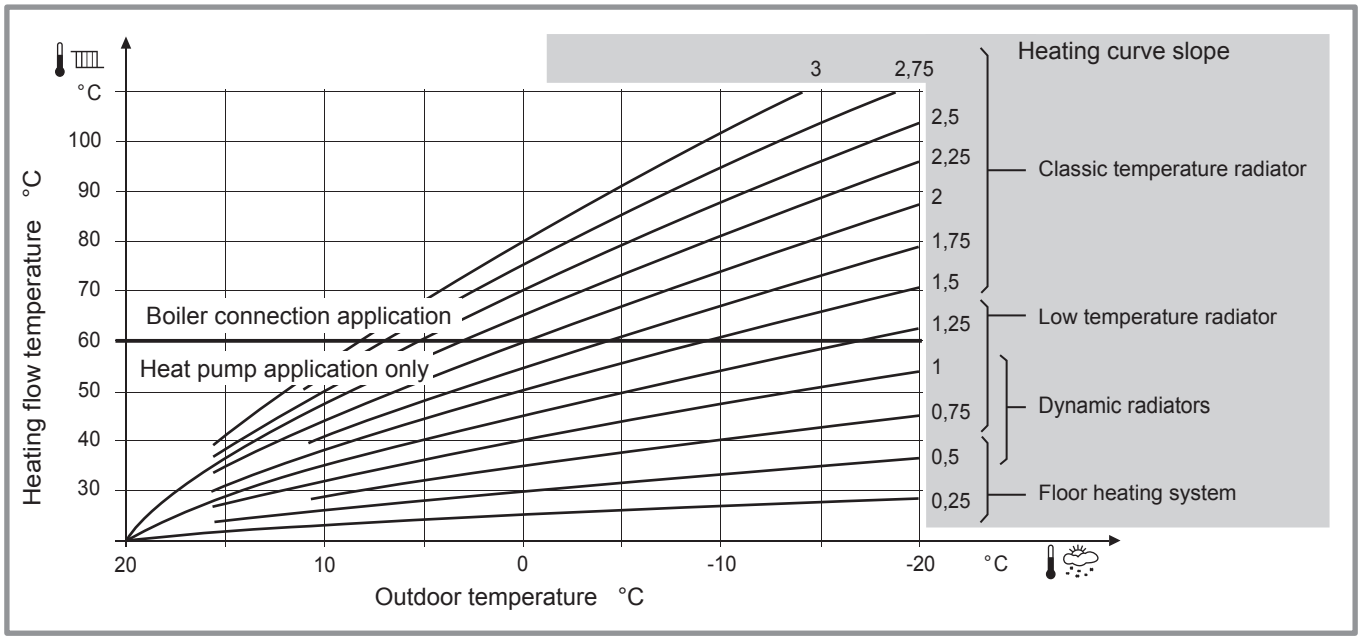


figure 18 - Heating curve slope (line 720)

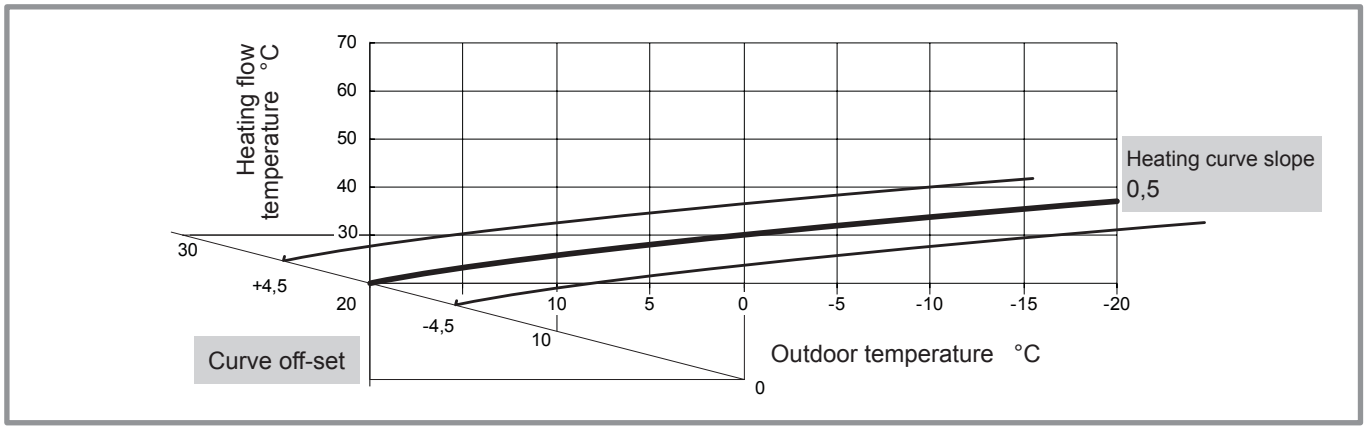


figure 19 - Off-set of the heating curve (line 721)

Felling... ...in mild weather		...in cold weather	→ Corrective actions on the temperature control: Curve slope (line **720**)	Curve off-set (line **721**)
OK	&	OK	No correction	No correction
Cold	&	Hot	−	+
Cold	&	OK	−	+
Cold	&	Cold	No correction	+
OK	&	Hot	−	No correction
OK	&	Cold	+	No correction
Hot	&	Hot	No correction	−
Hot	&	OK	+	−
Hot	&	Cold	+	−

figure 20 - Corrective actions in the case of discomfort

3.5 Parametering the setting

3.5.1 General

Only the parameters accessible to levels:

U - End user.

I - Commissioning level.

S - Engineer level.

Are described in this document.

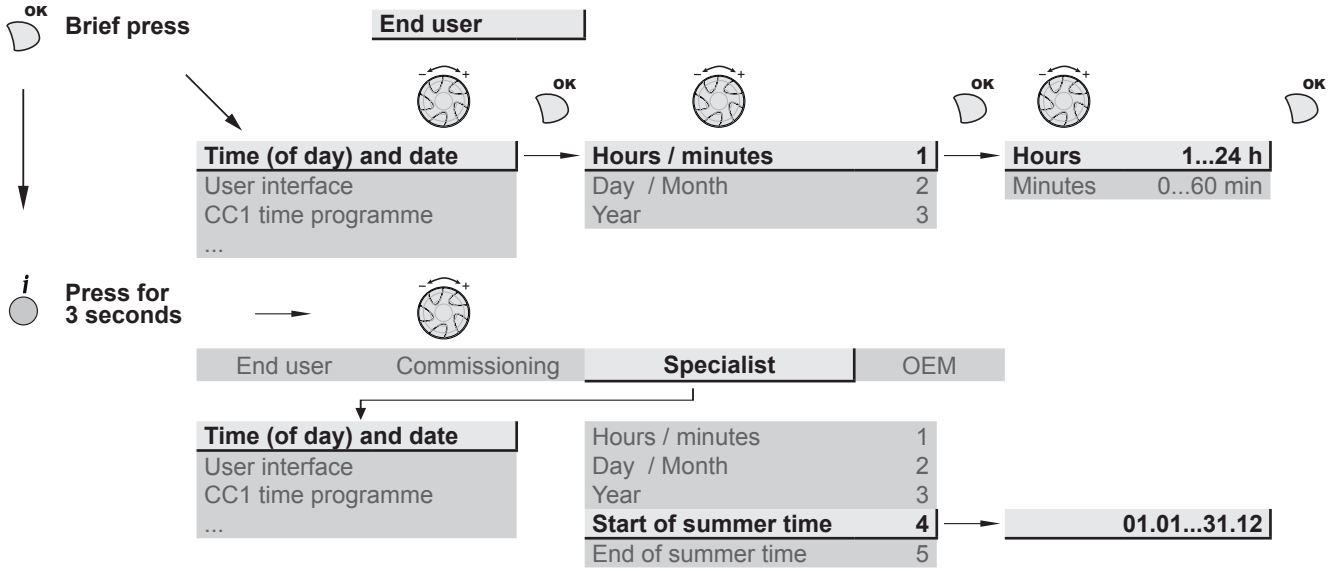
The access levels are specified in the second column of the table by means of the letters **U**, **I** and **S**.

The OEM parameters are not described and require a manufacturer's access code.

3.5.2 Setting parameters

- Choose the desired 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.



3.5.3 Recommended settings according to the heat emitters installation

		Very Low Temperture radiators / Floor heating-cooling	Low Temperature radiators	Dynamic radiators or fan coil heaters	Classic radiators
Heating curve slope	**720** (CC1)	**from 0,25 to 0,5**	**from 0,5 to 1,25**	**from 0,4 to 1,1 ***	**from 1,25 to 3**
Heating curve displacement	**721** (CC1)	**0**	**0**	**4 ***	**0**
Flow temp setpoint mini	**740** (CC1)	**factory setting (17 °C)**	**factory setting (17 °C)**	**30 or 35 °C ***	**factory setting (17 °C)**
Flow temp setpoint maxi	**741** (CC1)	**50 °C**	**factory setting (55 °C)**	**65 °C ***	**65 °C**
Charging time limitation (DHW)	**5030**	**factory setting (90mn)**	**factory setting (90mn)**	**40mn**	**factory setting (90mn)**

3.5.4 List of function (settings, diagnosis, status)

Line		*Function*	*Setting range or display*	*Setting increment*	*Basic setting*
Date and time					
1	**U**	Hours / Minutes	00:00... 23:59	1	**--:--**
2	**U**	Day / Month	01.01... 31.12	1	**--.--**
3	**U**	Year	1900... 2099	1	**----**
5	**S**	Start of Summer time (Day / Month)	01.01... 31.12	1	**25.03**
6	**S**	End of Winter time (Day / Month)	01.01... 31.12	1	**25.10**
		The change of hour will appear at 3:00 first Sunday after the regulated date.			
User interface					
20	**U**	Language	English, Français, Italiano,Nederlands...		**English**
22	**S**	Info	Temporary, Permanent		**Temporary**
26	**S**	Operation locking	On, Off		**Off**
27	**S**	Programming locking	Off, On		**Off**
44	**I**	Operation HC2 (command HC2)	Commonly with HC1, Independent		**Commonly with HC1**
		This function enables you to choose whether you wish the room thermostat (as an option) to act on both zones or just a single zone.			
46	**I**	Operation HCP (domestic hot water pump command, output QX2)	Commonly with HC1, Independent		**Commonly with HC1**
		(if independent, see timer program 3 / HCP)			
70	**S**	Display software version			
Heating / Cooling time programme, circuit 1					
500	**U**	Pre-selection (Day / Week)	Mon-Sun, Mon-Fri, Sat-Sun, Monday, Tuesday, …		**Mon-Sun**
501	**U**	1st phase On (start)	00:00... --:--	10 min	**6:00**
502	**U**	1st phase Off (end)	00:00... --:--	10 min	**22:00**
503	**U**	2nd phase On (start)	00:00... --:--	10 min	**--:--**
504	**U**	2nd phase Off (end)	00:00... --:--	10 min	**--:--**
505	**U**	3rd phase On (start)	00:00... --:--	10 min	**--:--**
506	**U**	3rd phase Off (end)	00:00... --:--	10 min	**--:--**
516	**U**	Standard values, Circuit 1	No, Yes		**No**
		Yes + OK: The standard values memorised in the controller replace and cancel the customised heating programmes. Your customised settings are therefore lost.			
Time programme 4 / DHW					
		If the installation is fitted with the DHW kit.			
560	**U**	Pre-selection (Day / Week)	Mon-Sun, Mon-Fri, Sat-Sun, Monday, Tuesday, …		**Mon-Sun**
561	**U**	1st phase On (start)	00:00... --:--	10 min	**00:00**
562	**U**	1st phase Off (end)	00:00... --:--	10 min	**05:00**
563	**U**	2nd phase On (start)	00:00... --:--	10 min	**14:30**
564	**U**	2nd phase Off (end)	00:00... --:--	10 min	**17:00**
565	**U**	3rd phase On (start)	00:00... --:--	10 min	**--:--**
566	**U**	3rd phase Off (end)	00:00... --:--	10 min	**--:--**
576	**U**	Standard values	No, Yes		**No**
		Yes + OK: The standard values memorised in the controller replace and cancel the customised heating programmes. Your customised settings are therefore lost.			

Line		*Function*	*Setting range or display*	*Setting increment*	*Basic setting*
Holidays, heating circuit 1 (For the Holiday program is active, the heating mode should be on AUTO).					
641	**U**	Preselection	Period 1 to 8		**Period 1**
642	**U**	Period Start (Day / Month)	01.01... 31.12	1	**--.--**
643	**U**	Period End (Day / Month)	01.01... 31.12	1	**--.--**
648	**U**	Operating level	Frost protection, Reduced		**Frost protection**
Heating, circuit 1					
710	**U**	Comfort setpoint	Reduced setpoint… Comfort setpoint maximum	0,5 °C	**20 °C**
712	**U**	Reduced setpoint	Frost protection setpoint… Comfort setpoint	0,5 °C	**19 °C**
714	**U**	Frost protection setpoint	4 °C… Reduced setpoint	0,5 °C	**8 °C**
716	**S**	Comfort setpoint maximum	20 °C... 35 °C	1 °C	**28 °C**
720	**I**	Heating curve slope	0,1... 4	0,02	**0,5**
		(see chapter 3.5.3, page 26 & figure 18, page 25)			
721	**I**	Heating curve displacement (figure 19, page 25)	-4,5 °C... 4,5 °C	0,5 °C	**0 °C**
730	**I**	Summer / Winter heating limits	8 °C... 30 °C	0,5 °C	**18 °C**
		When the average of the outside temperatures over the past 24 hours reaches 18°C, the regulator switches off the heating (as an economy measure). During summer mode, the display shows "Eco". This function is only active in automatic mode.			
740	**I**	Flow temp setpoint min	8 °C... Flow temp setpoint max	1 °C	**17 °C**
		(with dynamic radiator, adjust from 30 to 35°C)			
741	**I**	Flow temp setpoint max	Flow temp setpoint min... 70 °C	1 °C	**55 °C**
		Floor heating system = 50 °C / Radiators = 65 °C. **Important Note :** Maximum temperature limitation is not a safety function as required by ground heating.			
750	**S**	Room influence	1%... 100%	1%	**50%**
		If the installation is fitted with a room thermostat: This function enables you to choose the ambient temperature's influence on the setting. If no value is entered, the setting is made based on the temperature control. If the parameter is set at 100%, the setting is only based on the ambient temperature.			
760	**S**	Room temperature limitation	0,5... 4 °C	0,5 °C	**0,5 °C**
		As soon as the room temperature = [Setpoint line **710** (ex. 20°C) + Room temperature limitation setpoint line **760** (ex. 0,5 °C)] > 20,5 °C => The heat pump is stopped. It restarts when the room temperature falls below the setpoint (in the example, Room temperature < 20,0 °C).			
780	**S**	Quick setback	Off, Down to reduced setpoint, Down to frost prot setpoint		**Off**
790	**S**	Optimum start control max (Early start to switch to the comfort setting.)	0... 360 min	10 min	**180 min**
791	**S**	Optimum stop control max (Early stop to switch from the comfort setting to the reduced setting.)	0... 360 min	10 min	**30 min**
800	**S**	Reduced setpoint increase start	-30... 10 °C	1 °C	**--**
801	**S**	Reduced setpoint increase end	-30... 10 °C	1 °C	**-5 °C**
830	**S**	Mixer valve boost	0... 50 °C	1 °C	**0 °C**
834	**S**	Actuator running time	30... 873 s	1 s	**240 s**

Line		Function	Setting range or display	Setting increment	Basic setting
850	I	Floor curing function (figure 1)			**Off**

- Off: Early interruption of the current program, program inactive.
- Functional heating.
- Heating ready for occupation.
- Functional heating + Curing heating.
- Curing heating + Functional heating.
- Manually: Manual mode enables you to programme your own concrete slab drying time.The function ends automatically after 25 days.

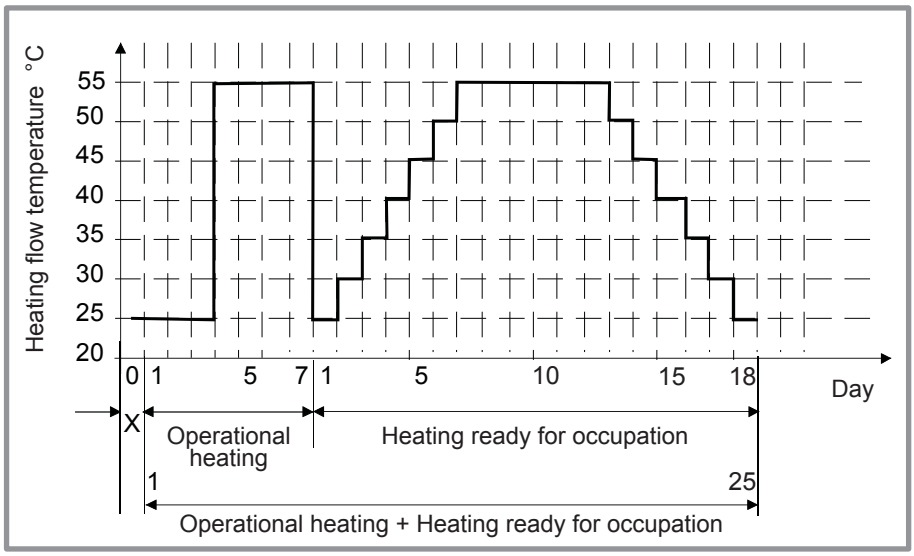


figure 1 - Diagram of the concrete slab drying programmes

☞ **Please comply with the standards and instructions of the manufacturer of the building ! A good performance of this function is only possible with an installation correctly implemented (hydraulic, electricity and adjustments) ! This function can be stopped by anticipation when setting the adjustment on "Stop".**

851	I	Floor curing setpoint manually (if line 850 = manual)	0... 95 °C	1 °C	**25 °C**
		This function enables you to set the custom concrete slab drying temperature. This temperature remains fixed. The concrete slab-drying program stops automatically after running for 25 days.			
856	I	Floor curing day current	0... 32		**0**
857	I	Floor curing day completed	0... 32		**0**
900	S	Operating mode changeover	None, Protection mode, Reduced, Comfort, Automatic		**Reduced**
		Operating mode at end of concrete slab curing period			
Cooling circuit 1 (only available if the parameter 5711 on "System with 2 tubes")					
901	U	Operating mode	Off, Automatic		**Off**
902	U	Comfort cooling setpoint	17... 40 °C	0,5 °C	**24 °C**
903	U	Reduced cooling setpoint	17... 40 °C	0,5 °C	**26 °C**
908	I	Flow temp setp at OT° 25°C	6... 35 °C	0,5 °C	**20 °C**
909	I	Flow temp setp at OT° 35°C	6... 35 °C	0,5 °C	**16 °C**
912	I	Cooling limit at OT°	8... 35 °C	0,5 °C	**24 °C**
913	S	Lock time at end of heating	8... 100	1 h	**24 h**
918	S	Summer comp start at OT°	20... 50 °C	1 °C	**26 °C**
919	S	Summer comp end at OT°	20... 50 °C	1 °C	**40 °C**
920	S	Summer comp setp increase	1... 10 °C	1 °C	**4 °C**
923	S	Flow temp setp min OT° 25°C	6... 35 °C	0,5 °C	**18 °C**
924	S	Flow temp setp min OT° 35°C	6... 35 °C	0,5 °C	**18 °C**

Line		Function	Setting range or display	Setting increment	Basic setting
928	S	Room influence	1... 100 %	1 %	**80 %**
		If the installation is fitted with a room thermostat: This function enables you to choose the ambient temperature's influence on the setting. If no value is entered, the setting is made based on the temperature control. If the parameter is set at 100%, the setting is only based on the ambient temperature.			
932	S	Room temp limitation	0,5... 4 °C	0,5 °C	**0,5 °C**
938	S	Mixing valve decrease	0... 20 °C	1 °C	**0 °C**
941	S	Actuator running time	30... 873 s	1 s	**240 s**
963	S	With prim contr / system pump	No, Yes		**No***
		*Basic setting : 1 circuit = No ; 2 circuits = Yes.			
Domestic hot water					
		If the installation is fitted with the DHW kit.			
1610	U	Nominal setpoint	Reduced setpoint (line 1612)… 65 °C	1	**55 °C**
		The backup electrical system is required to reach this level.			
1612	U	Reduced setpoint	8 °C... Nominal setpoint (line 1610)	1	**40 °C**
1620	I	Release (of DHW load)	24h / day Time program HCs Time program 4 / DHW Low-tariff (Off-peak) T°prog 4 / DHW or Low-tariff		**Time program 4 / DHW**
		24h / day: The temperature of the DHW is constantly maintained at the DHW comfort setting.			
		Time program HCs: The DHW is produced according to the programming for the ambient temperature (with 1 hour in advance when switched on).			
		Time program 4 / DHW: The DHW program is separate form the heating circuit program.			
		Low-tariff* : The electrical backup heating is only authorised to operate during the off-peak period.			
		T'prog 4/DHW or low-tariff *: The electrical backup heating is authorised to operate during the comfort period or off peak.			
		* - Connect the "Power Provider" contact to input EX2 (see figure 13, page 15). In the case of a day /night contract, the electric back-ups for the DHW tank are subject to the power supplier's tariffs. Switching on the electric back-up for the DHW tank is only authorised during off-peak hours.			
1640	I	Legionella function	Off, Periodically (depending line setting 1641), Fixed weekday (depending line setting 1642)		**Off**
1641	S	Legionella function periodically	1 to 7	1 day	**7**
1642	S	Legionella function weekday	Monday, Tuesday,...		**Sunday**
1644	S	Legionella funct time			**--**
1645	S	Legionella funct setpoint			**60**
1646	S	Legionella funct duration			**60**
1647	S	Legionella funct circ pump	Off, On		**Off**
1660	S	Circulating DHW pump release	Time program 3/HCP, DHW release, Time program 4/DHW, Time program 5		**DHW release**
Heat pump (HP)					
2803	S	Overrun time cond pump	8... 240 s	1 s	**240s**
2843	S	Compressor off time min	0... 120 min	1 min	**8 min**
2844	S	Switch-off temp max	8... 100 °C	1 °C	**75 °C**

Line		*Function*	*Setting range or display*	*Setting increment*	*Basic setting*
2862	**S**	Locking time stage 2 / mod	0... 40 min	1 min	**5 min**
2873	**S**	Compressor mod run time	10... 600 s	1 s	**240 s**
2882	**S**	Release integr electric flow	0... 500 °Cmin	1 °Cmin	**100 °Cmin**
2884	**S**	Release el flow below OT Electrical release - start-up with outside temperature	-30... 30 °C		**2 °C**
2916	**S**	Max setpoint HP DHW charg	8... 80 °C		**58 °C**
2920	**S**	With electrical utility lock (EX1)	Locked (Blocked on standby), Released		**Released**
		Released : HP = ON _ Back-up DHW = off _ 1st back-up HP = off _ 2nd back-up HP = off _ Boiler = ON. **Locked (Blocked on standby)** : HP = off _ Back-up DHW = off _ 1st back-up HP = off _ 2nd back-up HP = off _ Boiler = ON.			
Energy meter					
3095	**S**	Flow measurement heat	None, With input H1, With input H2 module 1, With input H2 module 2, With input H2 module 3, With input H21 module 1, With input H21 module 2, With input H21 module 3, With input H22 module 1, With input H22 module 2, With input H22 module 3, With input H3, With input H31, With input H32		**Input H3**
3097	**S**	Not used			
3098	**S**	Not used			
3100	**S**	Not used			
3102	**S**	Not used			
3103	**S**	Not used			
3104	**S**	Not used			
3109	**S**	Not used			
3110	**I**	Heat delivered			**--**
3113	**I**	Not used			**--**
3121	**U**	Heat delivered heating 1			**--**
3122	**U**	Heat delivered DHW 1			**--**
3123	**U**	Cooling delivered cooling 1			**--**
3124	**U**	Not used			**--**
3125	**U**	Not used			**--**
3126	**U**	Not used			**--**
3128	**U**	Heat delivered heating 2			**--**
3129	**U**	Heat delivered DHW 2			**--**
3130	**U**	Cooling delivered cooling 2			**--**
3131	**U**	Not used			**--**
3132	**U**	Not used			**--**
3133	**U**	Not used			**--**
3135	**U**	Heat delivered heating 3			**--**
3136	**U**	Heat delivered DHW 3			**--**
3137	**U**	Cooling delivered cooling 3			**--**
3138	**U**	Not used			**--**
3139	**U**	Not used			**--**
3140	**U**	Not used			**--**

Line		*Function*	*Setting range or display*	*Setting increment*	*Basic setting*
3142	**U**	Heat delivered heating 4			--
3143	**U**	Heat delivered DHW 4			--
3144	**U**	Cooling delivered cooling 4			--
3145	**U**	Not used			--
3146	**U**	Not used			--
3147	**U**	Not used			--
3149	**U**	Heat delivered heating 5			--
3150	**U**	Heat delivered DHW 5			--
3151	**U**	Cooling delivered cooling 5			--
3152	**U**	Not used			--
3153	**U**	Not used			--
3154	**U**	Not used			--
3156	**U**	Heat delivered heating 6			--
3157	**U**	Heat delivered DHW 6			--
3158	**U**	Cooling delivered cooling 6			--
3159	**U**	Not used			--
3160	**U**	Not used			--
3161	**U**	Not used			--
3163	**U**	Heat delivered heating 7			--
3164	**U**	Heat delivered DHW 7			--
3165	**U**	Cooling delivered cooling 7			--
3166	**U**	Not used			--
3167	**U**	Not used			--
3168	**U**	Not used			--
3170	**U**	Heat delivered heating 8			--
3171	**U**	Heat delivered DHW 8			--
3172	**U**	Cooling delivered cooling 8			--
3173	**U**	Not used			--
3174	**U**	Not used			--
3175	**U**	Not used			--
3177	**U**	Heat delivered heating 9			--
3178	**U**	Heat delivered DHW 9			--
3179	**U**	Cooling delivered cooling 9			--
3180	**U**	Not used			--
3181	**U**	Not used			--
3182	**U**	Not used			--
3184	**U**	Heat delivered heating 10			--
3185	**U**	Heat delivered DHW 10			--
3186	**U**	Cooling delivered cooling 10			--
3187	**U**	Not used			--
3188	**U**	Not used			--
3189	**U**	Not used			--

Line		*Function*	*Setting range or display*	*Setting increment*	*Basic setting*
3190	**S**	Reset fixed day storage	No, Yes		**No**
3264	**S**	Not used			**--**
3265	**S**	Not used			**--**
3266	**S**	Not used			**--**
3267	**S**	Not used			**--**
DHW storage tank					
		If the installation is fitted with the DHW kit.			
5024	**S**	Switching diff	0... 20 °C	1 °C	**7 °C**
5030	**S**	Charging time limitation	10... 600 min	10 min	**90 min**
		(with dynamic radiator, adjust 40 min)			
5055	**S**	Recooling temp	10... 95 °C	1 °C	**65 °C**
5057	**S**	Recooling collector	Off, Summer, Always		**Summer**
5061	**S**	Electric immersion heater release	24h / day, DHW release, Time program 4 / DHW		**DHW release**
5093	**S**	Not used			
Installation configuration					
5700	**I**	Pre-setting	1,2,3,... 9	1	**1**
		This control enables you to choose one of the 4 pre-selected installation configurations. The hydraulic layouts for the various configurations are detailed in the section: "Installation Configurations". - Pre-setting 1: 1 heating circuit with or without DHW tank. - Pre-setting 2: Not used. - Pre-setting 3: Boiler connection and 1 heating circuit and with or without DHW tank. - Pre-setting 4: Not used. - Pre-setting 5 and more: Not used.			
5710	**S**	Heating circuit 1	Off, On		**On**
5711	**S**	Cooling circuit 1	Off, System with 4 tubes, System with 2 tubes		**Off**
5715	**S**	Not used			
5716	**S**	Cooling circuit 2	Off, System with 4 tubes, System with 2 tubes		**Off**
5731	**S**	DHW controlling element Q3	No charging request, Charging pump, Diverting valve		**Diverting valve**
5740	**S**	Output el imm heater K6			**--**
5806	**I**	Type el imm heater flow	3-stage, 2-stage excluding, 2-stage complementary, Modulating UX		**2-stage complementary**
5950	**S**	Function input H1			**None**
		0: None, 1: Optg mode change HCs+DHW, 2: Optg mode changeover DHW, 3: Optg mode changeover HCs, 4: Optg mode changeover HC 1, 5: Optg mode changeover HC 2, 6: Optg mode changeover HC 3, 8: Error/alarm message, 9: Consumer request VK1, 10: Consumer request VK2, 11: Release swi pool source heat, 13: Release swi pool solar, 14: Operating level DHW, 15: Operating level HC1, 16: Operating level HC2, 17: Operating level HC3, 18: Room thermostat HC1, 19: Room thermostat HC2, 20: Room thermostat HC3, 21: DHW flow switch, 24: Pulse count, 26: Dewpoint monitor, 27: Flow temp setp incr hygro, 30: Swi-on command HP stage 1, 35: Status info suppl source, 36: Charg prio DHW sol fuel boil, 43: Ventilation switch 1, 44: Ventilation switch 2, 45: Ventilation switch 3, 50: Flow measurement Hz, 51: Consumer request VK1 10V, 52: Consumer request VK2 10V, 54: Pressure measurement 10V, 55: Rel room humidity 10V, 56: Room temp 10V, 59: Flow measurement 10V, 60: Temp measurement 10V, 61: Air quality measurement 10V			
5953	**S**	Input value 1 H1			**0**
5954	**S**	Function value 1 H1			**0**
5955	**S**	Input value 2 H1			**10**
5956	**S**	Function value 2 H1			**100**

Line		Function	Setting range or display	Setting increment	Basic setting
5960	S	Function input H3			None
5963	S	Input value 1 H3			0
5964	S	Function value 1 H3			0
5965	S	Input value 2 H3			10
5966	S	Function value 2 H3			100
5980	S	Function input EX1			Electrical utility lock E6
		0: None, 1: Electrical utility lock E6, 2: Low-tariff E5, 3: ---, 4: Overload source E14, 5: Pressure switch source E26, 6: Flow switch source E15, 7: Flow switch consumers E24, 8: Manual defrost E17, 9: Common fault HP E20, 10: Fault soft starter E25, 11: ---, 12: Low-pressure switch E9, 13: High-pressure switch E10, 14: Overload compressor 1 E11, 15: Error/alarm message, 16: Mains supervision E21, 17: ---, 18: Pressure diff defrost E28, 19: Pres sw source int circ E29, 20: Flow sw source int circ E30, 21: Smart grid E61, 22: Smart grid E62, 23: ---, 24: ---, 25: Optg mode changeover HCs, 26: DHW push			
5981	S	Contact type input EX1	Normally-closed contact (NC) Normally-opened contact (NO)		NO
5982	S	Function input EX2			Low-tariff E5
		0: None, 1: Electrical utility lock E6, 2: Low-tariff E5, 3: ---, 4: Overload source E14, 5: Pressure switch source E26, 6: Flow switch source E15, 7: Flow switch consumers E24, 8: Manual defrost E17, 9: Common fault HP E20, 10: Fault soft starter E25, 11: ---, 12: Low-pressure switch E9, 13: High-pressure switch E10, 14: Overload compressor 1 E11, 15: Error/alarm message, 16: Mains supervision E21, 17: ---, 18: Pressure diff defrost E28, 19: Pres sw source int circ E29, 20: Flow sw source int circ E30, 21: Smart grid E61, 22: Smart grid E62, 23: ---, 24: ---, 25: Optg mode changeover HCs, 26: DHW push			
5983	S	Contact type input EX2	Normally-closed contact (NC) Normally-opened contact (NO)		NC
5985	S	Contact type input EX3	Normally-closed contact (NC) Normally-opened contact (NO)		NO
6098	S	Not used			
6100	S	Readjustm outside sensor	-3... 3 °C	0,1 °C	0 °C
6117	S	Central setp compensation	1... 100 °C	1 °C	5 °C
6120	S	Frost protection plant	On, Off		On
6201	S	Delete sensors	No, Yes		No
6205	S	Reset to default parameters	No, Yes		No
6220	S	Software version (RVS)	0... 99		--
6300	S	Info 1 OEM			--
6301	S	Info 2 OEM			--
6420	S	Function input H33 (= contact in X152)	1... 56		1
		(1) Mode changeover HC+DHW - (2) Mode changeover HC - (3) Mode changeover HC1 - (4) Not used - (5) Mode changeover HCP - (6) to (56) Not used.			
6421	S	Contact type H33	Normally-closed contact (NC) Normally-opened contact (NO)		NO
Error					
6711	U	Reset HP	No, Yes		No
6800	S	History 1	Time, Date, Error code		
6802	S	History 2	Time, Date, Error code		
6804	S	History 3	Time, Date, Error code		
6806	S	History 4	Time, Date, Error code		
6808	S	History 5	Time, Date, Error code		
6810	S	History 6	Time, Date, Error code		
6812	S	History 7	Time, Date, Error code		

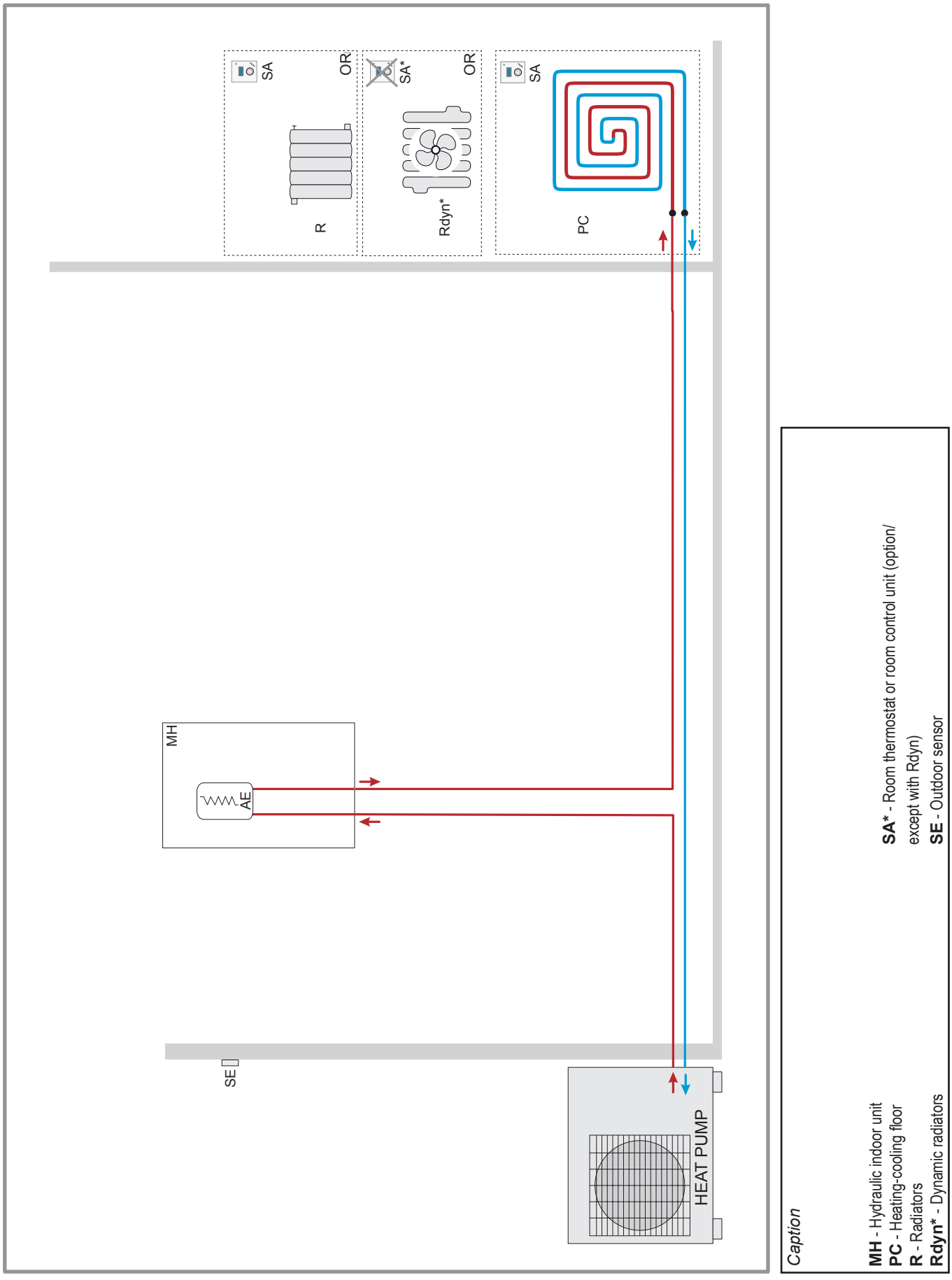
Line		Function	Setting range or display	Setting increment	Basic setting
6814	**S**	History 8	Time, Date, Error code		
6816	**S**	History 9	Time, Date, Error code		
6818	**S**	History 10	Time, Date, Error code		
Maintenance / special regime					
7070	**S**	HP interval	--, 1... 240	1 month	**--**
7071	**S**	HP time since maint Reset ? (no, yes)	0... 240	1 month	**--**
7073	**S**	Cur starts compr1/hrs run (since the 6 last weeks) Reset ? (no, yes)	0... 12		**--**
7141	**U**	Emergency operation	Off, On		**Off**
		Off: Heat pump functions normally (with boosters if necessary). On: Heat pump uses the electric boost system or the boiler connection. Use the “On” position only in Assist mode or Test mode: may result in high power bills.			
7142	**S**	Emergency operating function type	Manual, Automatic		**Manual**
		Manual: Emergency mode is not active when a fault occurs (Emergency mode = OFF). Automatic: Emergency mode is active when a fault occurs (Emergency mode = ON). In "Automatic" position, the energy cost can be onerous if the error is not detected and eliminated.			
7150	**I**	Simulation outside temp	-50... 50 °C	0,5 °C	**--**
Inputs / outputs test					
7700	**I**	Relay test			**No test**
		This consists of instructing the regulator's relays one by one and checking their outputs. This enables you to check that the relays are working and that the cabling is correct. Check that each appliance in the installation is operating correctly. (0) No test, (1) Everything is on STOP, (2) Relay output QX1 : heat pump CC1 (Main controller board), (3) Relay output QX2 : Electrical back-up (1st stage), (4) Relay output QX3 : Electrical back-up (2nd stage), (5) Relay output QX4 : DHW distribution valve, (6) Relay output QX5 : DHW Electrical back-up, (7) Relay output QX6 , (8) Relay output QX31 : Heat circ mix valve open Y1, (9) Relay output QX32, (10) Relay output QX33, (11) Relay output QX34, (12) Relay output QX35, (13) Relay output QX21 module 1, (14) Relay output QX22 module 1, (15) Relay output QX23 module 1, (16) Relay output QX21 module 2, (17) Relay output QX22 module 2, (18) Relay output QX23 module 2, (19) Not used, (20) Not used, (21) Not used.			
		The display shows the “Key” symbol. Pressing the Info button displays "Error 368". **Warning: The component being tested is receiving electrical power throughout the test.**			
7710	**I**	Output UX1 test	0... 100%	1 %	**--**
7716	**I**	Output UX2 test	0... 100%	1 %	**--**
7722	**I**	Cooling mode D2	Off, On		**Off**
7723	**I**	Heat pump D3	Off, On		**Off**
7724	**I**	Outputs test UX3 ("Inverter" command)	0... 100 %		**--**
7725	**I**	Voltage value (UX3)	0... 10 v		**--**
7804	**I**	Sensor temperature BX1 (HP flow temperature)	-28... 350 °C		**--**
7805	**I**	Sensor temperature BX2 (HP return temperature)	-28... 350 °C		**--**
7806	**I**	Sensor temperature BX3 (DHW temperature)	-28... 350 °C		**--**
7807	**I**	Sensor temperature BX4 (Outdoor temperature)	-28... 350 °C		**--**
7858	**S**	Input signal H3	None, Closed (ooo), Open (---) Pulse, Frequency Hz, Voltage V		**None**
7911	**I**	Input EX1 (Power shedding, EJP)	0, 230 V		**--**
7912	**I**	Input EX2 (Tariffs day/night)	0, 230 V		**--**
7913	**I**	Input EX3 (External fault)	0, 230 V		**--**
7999	**I**	Input signal H33	None, Closed (ooo), Open (---) Pulse, Frequency Hz, Voltage V		**None**

Line		Function	Setting range or display	Setting increment	Basic setting
State					
8000	I	State heating circuit 1			--
8001	I	Not used			
8003	I	State DHW			--
8004	I	State cooling circuit 1			
8006	I	State heat pump			--
8007	I	Not used			
8010	I	Not used			
8011	I	State swimming pool			
8022	I	State supplementary source			--
8025	I	Status cooling circuit 2			--
Generator diagnosis					
8400	I	State compressor 1	Off, On		**Off**
8402	I	El imm heater flow 1	Off, On		**Off**
8403	I	El imm heater flow 2	Off, On		**Off**
8406	I	Condenser pump	Off, On		**Off**
8414	I	Modulation electric flow	0... 100%	1 %	--
8425	S	Temp diff condensor	-50... 140 °C	1 °C	--
8450	S	Hours run compressor 1		1 h	--
8454	S	Locking time Heat Pump Reset ? (no, yes)	0... 2730 h	1 h	--
8455	S	Counter number of locks HP Reset ? (no, yes)	0... 65535		--
8456	S	Hours run electrical flow Reset ? (no, yes)	0... 2730 h	1 h	--
8457	S	Start counter electrical flow Reset ? (no, yes)	0... 65535		--
8458	I	Smart grid state	Draw disabled, Draw free, Draw wish, Draw forced		**Draw free**
8460	I	Heat pump throughput		1 l/min	--
Diagnostics consumers					
8700	U	Outside temperature	-50... 50 °C	1 °C	--
8701	U	Outside temp min Reset ? (no, yes)	-50... 50 °C	1 °C	--
8702	U	Outside temp max Reset ? (no, yes)	-50... 50 °C	1 °C	--
8703	I	Outside temp attenuated Reset ? (no, yes)	-50... 50 °C	1 °C	--
		This is the average of the outside temperature over a 24-hour period. This value is used for automatic Summer / Winter switchover (line 730).			
8704	I	Outside temp composite	-50... 50 °C	1 °C	--
		The mixed outdoor temperature is a combination of the current outdoor temperature and the average outdoor temperature calculated by the controller. This value is used for calculating the initial temperature.			
8730	I	Heating circuit pump, circuit 1	Off, On		**Off**
8731	I	Mixer valve HC1 open	Off, On		**Off**
8732	I	Mixer valve HC1 closed	Off, On		**Off**

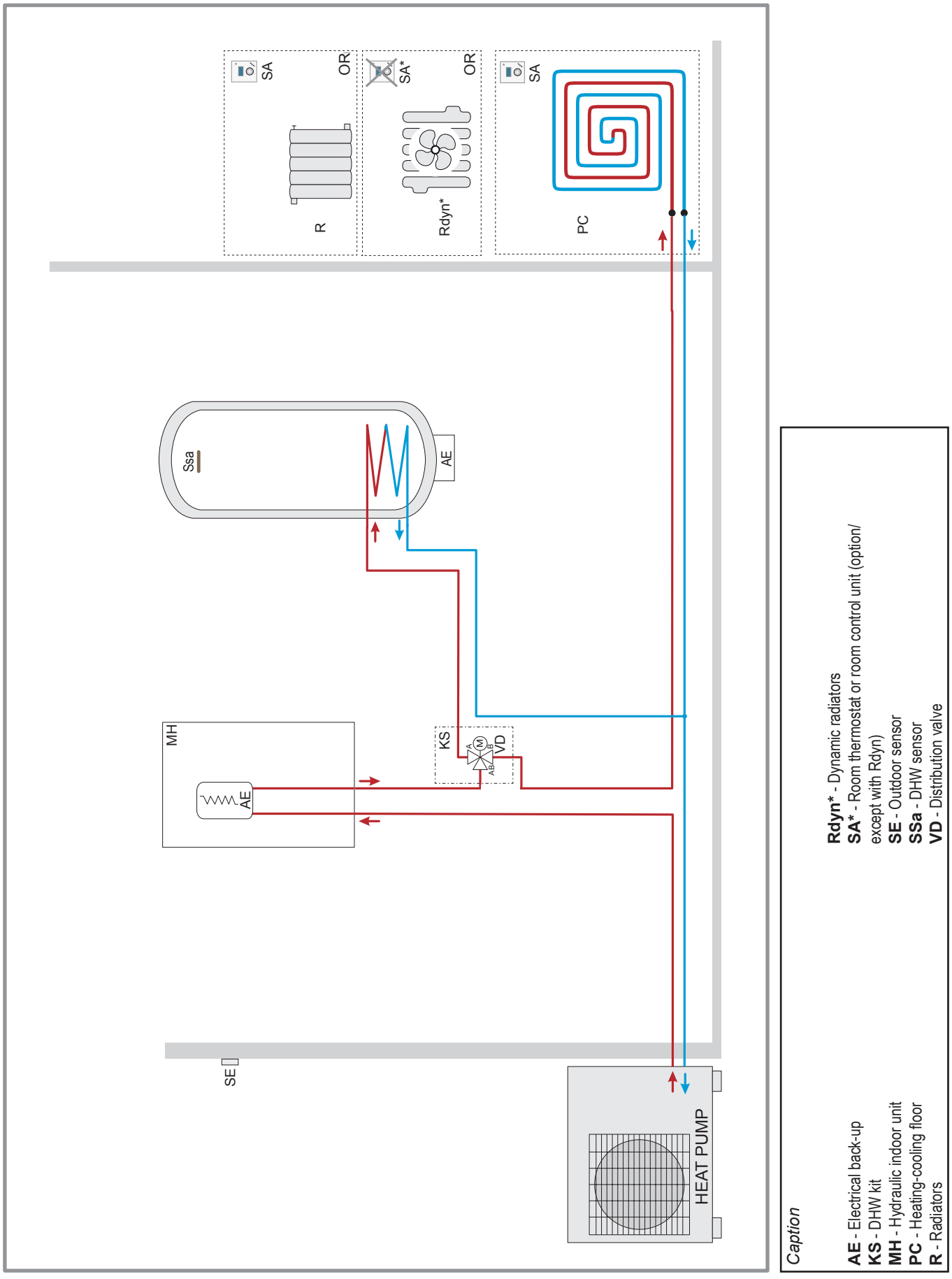
Line		*Function*	*Setting range or display*	*Setting increment*	*Basic setting*
8740	**U**	Room temperature 1	0... 50 °C	1 °C	**--**
		Room setting 1			**20 °C**
8743	**U**	Flow temperature 1	0... 140 °C	1 °C	**--**
		Flow temperature setpoint 1			**--**
8749	**I**	Room thermostat heating circuit 1	No demand, Demand		**No demand**
8779	**I**	Room thermostat heating circuit 2	No demand, Demand		**No demand**
8832	**I**	DHW temperature actual value bottom (B31)	0... 140 °C	1 °C	**--**
8950	**S**	Common flow temperature	0... 140 °C	1 °C	**--**
		Common flow temperature setpoint			**--**
8957	**S**	Common flow setpoint, refrigeration	0... 140 °C	1 °C	**--**
9005	**S**	Water pressure 1	-100... 500 bar	1 bar	**--**
9006	**S**	Water pressure 2	-100... 500 bar	1 bar	**--**
9009	**S**	Water pressure 3	-100... 500 bar	1 bar	**--**
9010	**S**	Room temp measurement 1	0... 50 °C	1 °C	**--**
9011	**S**	Room temp measurement 2	0... 50 °C	1 °C	**--**
9031	**I**	Relay output QX1	Off, On		**On**
9032	**I**	Relay output QX2	Off, On		**On**
9033	**I**	Relay output QX3	Off, On		**On**
9034	**I**	Relay output QX4	Off, On		**Off**
9035	**I**	Relay output QX5	Off, On		**Off**

4 Overall hydraulic layout

• Configuration 1: 1 heating circuit



• Configuration 1: 1 heating circuit and DHW tank (with electrical back-up)



5 Troubleshooting

Depending on whether the error comes from the heat pump or the hydraulic unit, the error may be indicated by the digital display or the diode on the interface cards.

5.1 Errors displayed on the hydraulic unit

Errors or breakdowns on the hydraulic unit are indicated by the display on the user interface.

The display shows the symbol.

Press the key for more details on the origin of the error.

When the error has been resolved, the faults are re-initialised at zero automatically.

Hydraulic unit: error visible on the digital display.

Error number	*Error description*	*Error location*	*Heat pump operation despite the error*
-	No connection.	Failure to comply with room thermostat's polarity.	No
10	Outdoor sensor.	B9	Yes with OT = 0 °C
33	Heat pump initial temperature sensor error.	B21	Yes
44	Heat pump return temperature sensor error.	B71	Yes
50	DHW temperature sensor.	B3	Yes
60	Ambient temperature sensor 1.		Yes
105	Maintenance message.		Yes
121	Flow temperature for (HC1) not reached.		Yes
127	Anti-legionella temperature not reached.		Yes
369	External error (safety component).		No
370	Heat pump connection error. (In the start phase, see the para. "Start-up").	See below.	No

Outoor unit : Error codes visible on the unit display board.

*Error codes Unit WPYA***LG*		*Appearance, portion, parts seemed wrong*		
050	*080 / 100*		*050*	*080 / 100*
-	-	Do not work at all / -	Power supply	
			Fuse CF1	Fuse CF3 (250V T 5A)
			Fuse CF3	Fuse CF1 (250V T 25A)
			PCB (Controller)	
A0	A0	DC voltage error	Fan motor	
			Pump	Fuse CF4 (250V T3. 15A)
			Reactor	Power module
			Power supply	
A1	A1	Discharge temperature error	Sensor temperature discharge	
			-	Sensor temperature suction
			Gas leakage	
A2	A2	Protective action against axcess current DC current detection	Unreasonable operation under overload	
			Drop of power voltage	
			Momentary stop of power (in case of lighning)	Power module
			PCB (Controller)	Fuse CF2 (250V T 15A)
			Compressor	
-	A3	CT disconnection	-	PCB (Controller)
A4	A4	Protective action against excess current DC current detection	Unreasonable operation under overload	
			Drop of power voltage	
			Momentary stop of power (in case of lighning)	

*Error codes Unit WPYA***LG*		*Appearance, portion, parts seemed wrong*		
050	*080 / 100*		*050*	*080 / 100*
A5	**A5**	Abnomal revolution of compressor	Unreasonable operation under overload	
			Clogged the circulation pump and/or heating circuit	Fuse CF2 (250V T 15A)
			Drop of power voltage	
			Momentary stop of power (in case of lighning)	Power module
			Compressor or PCB (Controller)	Compressor
A6	**A6**	Suction temperature sensor error	Sensor temperature suction	
A7	**A7**	Defrost temperature sensor error	Sensor temperature defrost	
A8	**A8**	Discharge temperature sensor error	Sensor temperature discharge	
C0	**-**	PCB (Controller) error	PCB (Controller)	-
-	**C0**	Power module error	-	Power module
C2	**C2**	Outdoor temperature sensor error	Sensor temperature outdoor	
C3	**C3**	Fan motor error	-	Fuse CF4 (250V T3. 15A)
			Fan motor	Fan motor (*1)
			PCB (Controller)	
C4	**-**	Rise of temperature of PCB (Controller)	Mis-installation	-
			Sensor temperature PCB (Controller)	-
-	**C4**		-	Mis-installation
			-	Sensor temperature power module
C5	**-**	PCB (Controller) sensor error	Sensor temperature PCB (Controller)	
-	**C5**	Power module sensor error	-	Sensor temperature power module
C6	**C6**	PCB (Controller) error	PCB (Controller)	
C7	**C7**	I/F PCB serial error	Mis-wiring [PCB (Controller) - I/F PCB connecting cable] or rare contact	Mis-wiring (I/F PCB heat pump regulator) or rare contact
			I/F PCB	
			PCB (Controller)	
C8	**-**	PCB (Controller) error	PCB (Controller)	-
-	**C8**	Inverter PCB serial error	-	Connector (13) is rare contact or Power module and PCB (Controller)
CC	**CC**	Heat pump regulator PCB serial error	Mis-wiring (I/F PCB heat pump regulator) or rare contact	
			I/F PCB	
			heat pump regulator	
E4	**E4**	Outgoing circulating temperature sensor error	Sensor temperature outgoing circulating water	
E5	**E5**	Return circulating temperature sensor error	Sensor temperature return circulating water	
P1	**P1**	Pump error	Pump or PCB (Controller)	Pump or PCB (Controller) (*1)
			Clogged the circulation pump and/or heating circuit	
-	**U5**	Low-ouside air temperature limit	-	The outdoor temperature falls below -20 °C
				Sensor temperature outdoor

☞ **Ensure that the general electrical power supply has been cut off before starting any repair work.**

☞ **When the HP is not under tension, protection frost-free is not assured.**

*Error codes Unit WPYA***LG*		*Appearance, portion, parts seemed wrong*		
050	*080 / 100*		*050*	*080 / 100*
PCB (Display) cannot be operated PCB (Display) doesn't display anything			Lead wire of PCB (Display)	-
			PCB (Display)	-
			PCB (Controller)	-
Not cool down **Not warm up**			4-way valve	
			Short cycle (insufficient air circulation)	
			Sensor temperature outgoing & return circulating water	
			Gas leakage	
			Clogged heating circuit	

*(*1) When checking fan motor and/or pump, turn off the power supply complety and touch their terminal or connector.*

5.2 Information display

Various data can be displayed by pressing the info button.

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

- Possible error messages from the error code list (see table, page 40).
- Possible service messages from the maintenance code list.
- Possible special mode messages.
- Various data (see below).

Designation	*Line*
Floor drying current setpoint .	-
Current drying day.	-
Terminated drying days.	-
State heat pump.	8006
State DHW.	8003
State heating circuit 1.	8000
State cooling circuit 1.	8004
Outdoor temperature.	8700
Room temperature 1.	8740
Room setpoint 1.	
Flow temperature 1.	8743
Flow temperature setpoint1.	
DHW (domestic hot water) temperature.	8830
Heat pump return temperature.	8410
Setpoint (return) HP.	
Heat pump flow temperature.	8412
Setpoint (flow) HP.	

6 Maintenance of the installation

Ensure that the general electrical power supply has been cut off before starting any repair work.

6.1 Hydraulic checks

☞ **Warning : If frequent refills are required it is essential that you look for any leaks.**
If filling and re-pressurization are required, check what type of fluid has been used initially.

Recommended filling pressure: 1 to 2 bar (Precise filling pressure is determined by the manometric height of the installation).

Each year,

- Check the expansion vessel pressure (precharge 1 bar) and the correct functioning of the safety valve.

If the installation is fitted with a DHW tank:

- Verify the safety unit on the cold water supply inlet. Make it work as prescribed by the manufacturer.
- Check the shut-off.

6.2 Electrical checks

- Check connections and possible tightening.
- Check the cables condition and electronic boards.

7 Maintenance

7.1 Emptying the hydraulic unit

- Remove the facade from the hydraulic unit.
- Open the all valves and emptying valve,
- Open the hydraulic unit's air bleeders,
- Open the installation air bleeder.

7.2 Distribution valve

If the installation is fitted with a DHW tank.

Carefully comply with the direction for fitting the distribution valve.

Channel **AB** : Inlet to the hydraulic unit .

Open channel **A** : Return from DHW tank.

Open channel **B** : Return from the heating circuit.

8 Instructions for the end user

Explain to the end user how his installation operates, in particular the functions of the room thermostat and the programs accessible to him from the end user interface.

Emphasise that a heating floor has significant inertia and that therefore any adjustments must be made progressively.

Also explain to the end user how to check the filling of the heating circuit.

9 Quick-start procedure

Before switching on the hydraulic unit:

- Check the electric wiring.
- Check the refrigeration circuit and make sure the gas supply has been performed.
- Check the pressure of the hydraulic circuit (1-2 bar), check that the heat pump is purged, and the rest of the installation.
- Make sure that ALL DIPSW on the interface card are OFF before starting up.

9.1 Start-up check-list

9.1.1 Before starting-up

• Sight checks

Outdoor unit (see chapiter "Installation", page 8).	OK	Non compliant	
Location and fittings, condensate evacuation.			
Compliance with distances from obstacles.			

• Hydraulic checks

Hydraulic unit (see chapiter "Installing the hydraulic unit", page 8).	OK	Non compliant	Value
Connection of pipes, valves and pumps (1 or 2 circuits, DHW).			
Installation water volume (expansion vessel of adequate capacity ?).			
No leaks.			
Main system pressure and degassing.			

• Electrical checks

Outdoor unit (see chapiter "Electrical connections", page 12).	OK	Non compliant	Value
Main power supply 230v.			
Protection by rated circuit breaker.			
Cable cross-section.			
Earth connection.			

Hydraulic unit (see chapiter "Electrical connections on the hydraulic unit side", page 14).	OK	Non compliant	
Connection with outdoor unit (phase, neutral, earth).			
Sensors connection (positioning and connections).			
3 way valve and circulators connections.			
Power supply and protection of electric auxiliary (option).			

9.1.2 Starting-up

• Switching On

(see chapiter "Commissioning", page 20 & chapiter "List of function (settings, diagnosis, status)", page 27).	OK	Non compliant	
Engage the installation's main circuit breaker (power supply to the outdoor unit) 2 hours before starting up the tests => Preheating of the compressor.			
Turn ON the start/stop switch => Initialisation for a few seconds.			
Operation of the circulation pumps.			
Outdoor unit starts after 4 mins.			
Time, Date and time programs for HC1, if different than default values (settings 500 – 576).			
Configure the hydraulic circuit (setting 5700).			
Adjust the heating curve slope (720).			
Adjust the maximum start setting (741).			

• Outdoor unit checks

	OK	Non compliant	Value
Operation of fan(s), compressor.			
Current measurement.			
After a few minutes, measurement of air temp. delta.			
Check condensation and evaporation pressure/temperature.			

• Hydraulic unit checks

	OK	Non compliant	Value
After 15 mins of operation.			
Primary water temp. delta.			
Operation of heating, mixing valve, …			

• Room control

(see chapiter "Configuring room thermostat", page 21 & chapiter "List of function (settings, diagnosis, status)", page 27).	OK	Non compliant	
Settings, manipulations, checks.			
Set the scheduled periods for heating (500 to 516).			
Adjust the heating circuit setpoints if different than default values (710-714).			
Setpoint display.			
Explanations on use.			

The heat pump is ready for operation !

9.2 Settings sheet

Setting	*Description*	*Set to.*	*Menus*
Preliminary settings			
20	language		*Operator section*
1	hour / minutes		*Time & date*
2	day / month		*Time & date*
3	year		*Time & date*
5700	installation config.		*Configuration*
Heating circuit No. 1			
710	comfort setpoint		*HC1 adjust.*
712	reduced setpoint		*HC1 adjust.*
720	heating curve slope		*HC1 adjust.*
741	flow temp setpoint max		*HC1 adjust.*
750	room influence		*HC1 adjust.*
790 / 791	optimis. at switch-on / off		*HC1 adjust.*
834	servomotor travel time		*HC1 adjust.*
850 / 851	floor drying		*HC1 adjust.*
Domestic Hot Water (if DHW kit)			
1610	nominal DHW temp. setpoint		*DHW*
1612	reduced DWH temp. setpoint		*DHW*
1620	DHW release		*DHW*
1640 to 1642	legionella cycle		*DHW*
5024	DHW switch-on differ.		*DHW tank*
5030	charging time limitation		*DHW tank*
5061	heater release		*DHW tank*
Miscellaneous			
6420	input H33 function	1	*Configuration*
6100	OT sensor correction		*Configuration*
6120	frost protection on/off		*Configuration*
6205	reset settings		*Configuration*
6220	software version		*Configuration*
6711	reset heat pump		*Error*

Setting	*Description*	*Set to.*	*Menus*
Cooling			
5711	cooling unit	2 pipes	*Configuration*
Faults (if a fault occurs, press"Info" key)			
No. 10	outdoor sensor		
No. 33	flow temp. sensor		
No. 44	return temp. sensor		
No. 50	DHW temp. sensor		
No. 60	room sensor 1		
No. 105	maintenance message		
No. 121	HC1 flow T not reached		
No. 127	leg. prot. T not reached		
No. 369	external fault (EX3)		
No. 370	outdoor unit connect error		
6711	reset heat pump		*error*
Heat pump			
2844	switch-off temp max		*Heat pump*
2884	OT auth. to start elec. aux.		*Heat pump*
2920	Pk day clear (EX1) rel / lock		*Heat pump*

9.3 Start-up data sheet

Site		**Installer**	

Outdoor unit	serial No.		**Hydraulic unit**	serial No.	
	model			model	

Refrigerant type		Refrigerant charge	kg

Checks			**Operating voltage & current on outdoor unit**				
Compliance with positioning distances			L/N	V			
Condensate evacuation correct							
Electric connections / connections tightnees			L/T	V			
No GAS leaks (unit ID No. :)							
Installation of refrigeration connection correct (lenght : m)			N/T	V			
Reading in HEATING operating mode							
Compressor discharge temperature	°C		Icomp	A			
Liquid line temperature	°C						
Condensation temperature HP = bar	°C	}	sub-cooling	°C			
Tank water output temperature	°C	}	ΔT condensation	°C			
Tank water input temperature	°C	}	ΔT secondary	°C			
Evaporation temperature LP = bar	°C						
Suction temperature	°C	}	Overheating	°C			
Battery air input temperature	°C	}	ΔT evaporation	°C			
Battery air output temperature	°C	}	ΔT battery	°C			

Hydraulic system of hydraulic unit					
Secondary system	Low temp. heating floor		Circulator brand	Type	
	LT Radiators				
	Fan coils				
Domestic hot water ; tank type					
Estimated water volume of secondary system		L			

Options & accessories :				
Location of room sensor correct			Room thermostat UTW-C55XA	
DHW kit			Wireless room thermostat UTW-C58XA	
			Room control unit UTW-C75XA	
			Wireless room control unit UTW-C78XD	
			Details	

Control settings		
Configuration type		
Essential settings		

Complies with :

- Low voltage directive 2006/95/EC, under standard EN 60335-1 and EN 60335-2-40.
- Electromagnetic compatibility Diretive 2004/108/EC,
- Directive 2006/42/EC Machinery,
- Directive for pressurised equipment 97/23/EC.

This appliance also conforms to:

- Regulation 842/2006 of the european parliament on certain fluorinated greenhouse gases.
- The standards relating to the product and the testing methods used: Air-conditioners, refrigeration units and heat pumps with compressor driven by electric motor for heating and refrigeration EN 14511-1, 14511-2, 14511-3, and 14511-4.
- To standard XP ENV 12102: Air-conditioners, heat pumps and dehumidifiers with compressor driven by electric motor. Measurement of airborne noise. Determination of acoustic power level.



This appliance is marked with this symbol. This means that electrical and electronic products shall not be mixed with general household waste.
European Community countries(*), Norway, Iceland and Liechtenstein should have a dedicated collection system for these products.
Do not try to dismantle the system yourself as this could have harmful effects on your health and on the environment.
The dismantling and treatment of refrigerant, oil and other parts must be done by a qualified installer in accordance with relevant local and national regulations.
This appliance must be treated at a specialized treatment facility for re-use, recycling and other forms of recovery and shall not be disposed of in the municipal waste stream.
Please contact the installer or local authority for more information.
* subject to the national law of each member state

Date of installation :

Contact of your heating technician or your after-sales service.

Matériel sujet à modifications sans préavis - Document non contractuel