

(Etiquette signalétique)

M2Z M



MODULE 2 ZONES MIXTE

2-ZONE MIXED MODULE


MODULO A 2 ZONE PER IMPIANTO MISTO

MÓDULO 2 ZONAS MIXTO

**HYDRAULIK - MODUL 2 ZONEN, GEMISCHT
"FUSSBODENKOLLEKTOR PLUS GEBLÄSEKONVEKTOR"**

MÓDULO 2 ZONAS MIXTAS

MARKING

This product marked  conforms to the essential requirements of the Directives:

- Low voltage no. 2006/95/EC.
- Electromagnetic Compatibility no. 89/336 EEC, modified 92/31 and 93/68 EEC.



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1 - GENERAL

1.1 - GENERAL SUPPLY CONDITIONS

- Generally speaking, the material is transported at the consignee's risk.
- The consignee must immediately provide the carrier with written reserves if any damage caused during transport is found.

1.2 - RECOMMENDATIONS

- Prior to any intervention on the unit, installation, commissioning, operation or maintenance, the personnel performing these operations must be familiar with all instructions and recommendations provided in this installation manual, as well as the elements presented in the project's technical data package.
- The personnel in charge of receiving the unit should conduct a visual inspection to detect any damage to the unit caused during transport.
- The unit must be installed, commissioned, maintained, and serviced by qualified personnel in compliance with the requirements of all current directives, laws and regulations and according to recognized trade practices.

1.3 - VOLTAGE

- Before all operation, check that the voltage indicated on the appliance rating plate corresponds with that of the mains supply.

1.4 - USE

- This unit is designed for use on water distribution type heating / air-conditioning installations, exclusively within the scope of systems used in conjunction with the following residential applications:
 - 2 zones, mixed floor + terminal units.
 - 2 zones, mixed floor + radiators.



IMPORTANT

This appliance is not designed to be used by people (including children) whose physical, sensory or mental capacities are impaired, or who lack experience or knowledge, unless they are supervised or have received instructions on how to use the appliance by a person who is responsible for their safety. Children must be supervised to ensure that they do not play with the appliance or its accessories.

1.5 - OPERATING CONDITIONS

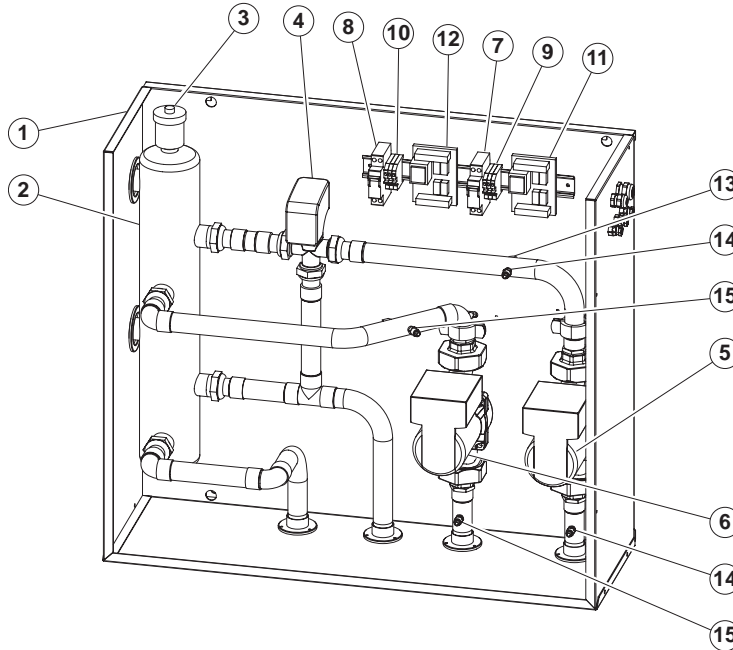
- This product is designed for use exclusively with a PHRT type generator.

2 - PRESENTATION

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2.1 - DESCRIPTION

- | | |
|------------------------------------|---|
| 1 - Housing | 9 - Circulator terminal strip, zone 1 |
| 2 - Mixing cylinder | 10 - Circulator terminal strip, zone 2 |
| 3 - Automatic air vent valve | 11 - Control board, zone 1 |
| 4 - Motorised, 3-way valve, zone 1 | 12 - Control board, zone 2 |
| 5 - Circulator, zone 1 | 13 - Outlet water sensor, zone 1 |
| 6 - Circulator, zone 2 | 14 - Pressure taps for water output measurement, zone 1 |
| 7 - Circuit breaker, zone 1 | 15 - Pressure taps for water output measurement, zone 2 |
| 8 - Circuit breaker, zone 2 | |



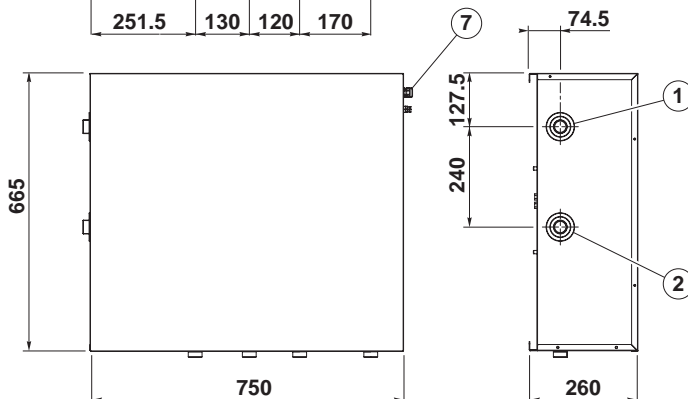
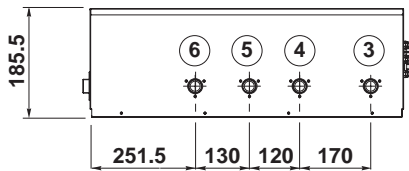
2.2 - DIMENSIONS AND WEIGHT

1	Module water inlet connection (generator side)
2	Module water outlet connection (generator side)
3	Outgoing connection, zone 1
4	Outgoing connection, zone 2
5	Return connection, zone 1
6	Return connection, zone 2
7	Holes for electric cables

Weight (kg)
39

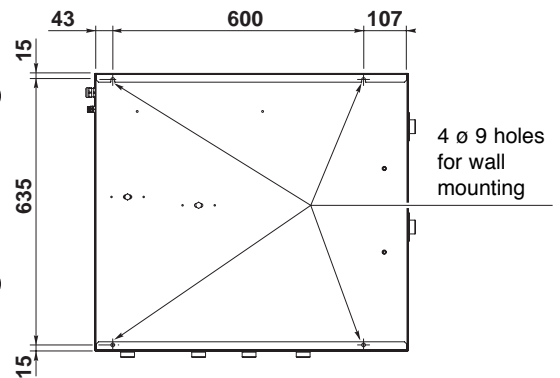
All connections are 1" male.

View from below



Front view

Left side view



Rear view

3 - INSTALLATION

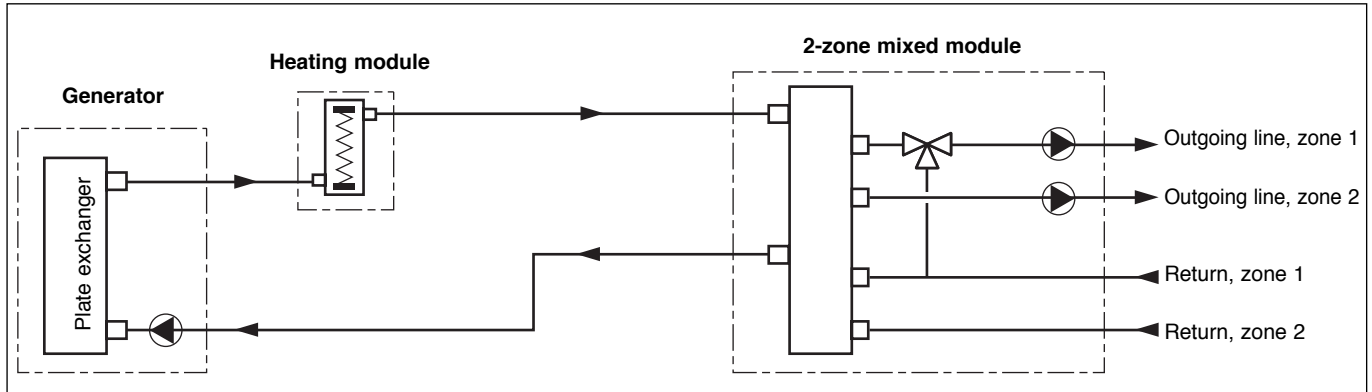
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- Protection rating of the module: IP 31.
- The module must be installed in a sheltered location.
- Remove the module's front panel (6 screws on the sides).
- Secure the module to the wall. See the position of the 4 mounting holes in paragraph 2.2.

4 - CONNECTIONS

4.1 - HYDRAULIC CONNECTION

- The module is to be connected on the installation's outgoing line, at the heating module outlet. The module is entered from above. Connect the outgoing and return line of each zone.



4.2 - ELECTRICAL CONNECTIONS

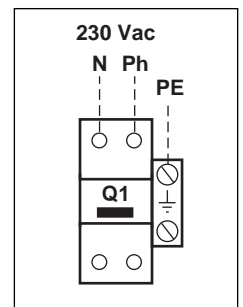
4.2.1 - GENERAL

- Class 1 apparatus, intended for an installation equipped with a neutral point connection (TT as per NFC 15-100) in domestic applications.
- Breaking capacity of the circuit breakers for the module: 3 kA as per NFC 61-410.
- Voltage variation tolerance: +/- 10% in operation.
- The electrical connection conduits must be secured.
- Use the cable glands mounted on the unit - see § 4.2.4.
- Ensure that all installation grounds are interconnected.
- Cables are not supplied.
- Consult the module electrical diagram.
- Also consult the installation manuals of the generator and the heater module, and the control's technical manual.

4.2.2 - DESCRIPTION OF CONNECTIONS

4.2.2.1 - MAINS SUPPLY

- 230 V, single-phase, 50 Hz, input amperage = 1.6 A.
- The electrical power supply must come from protection and disconnecting means (not supplied) in compliance with the standards and regulations in force. The circuit must be protected by a two-pole circuit breaker.
- Cable 3G 1.5 mm².
- Power supply to be connected directly on the zone 1 circuit breaker ("Q1") located in the module.



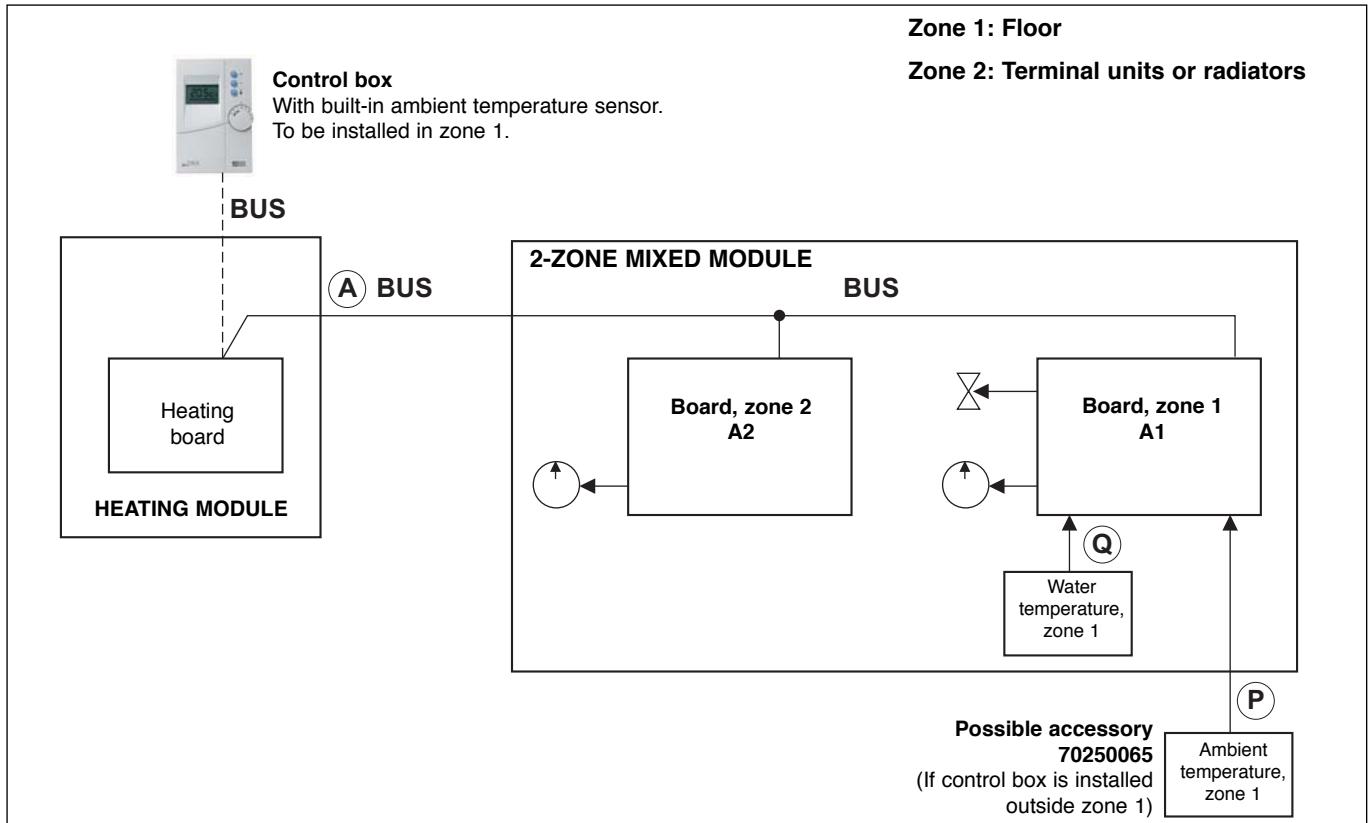
4.2.2.2 - CONTROL CONNECTIONS

- Refer to the diagrams in § 4.2.3.



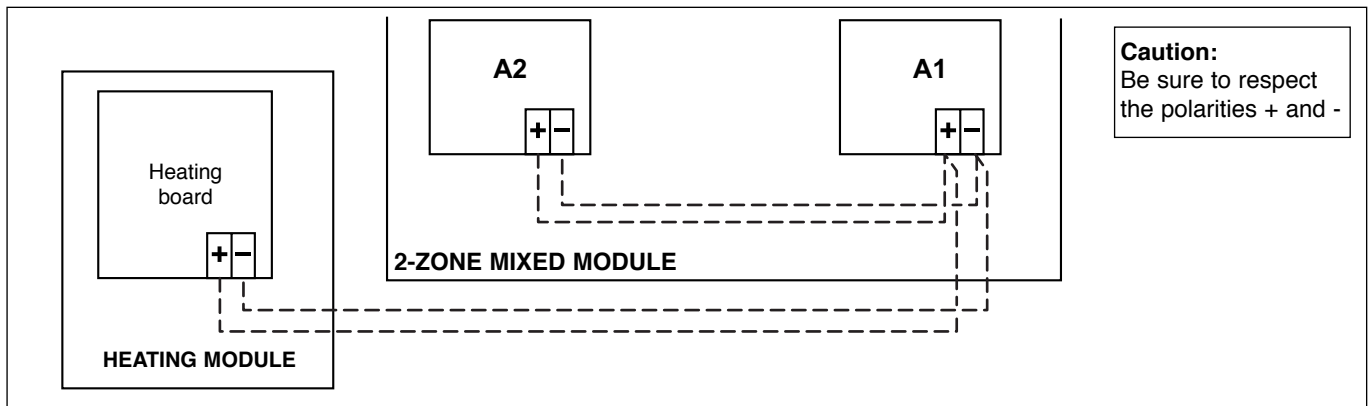
Caution :

To avoid problems related to electromagnetic disturbances, do not route these cables near power cables.



(A) BUS

- 2-conductor cable, min. size 1 mm².
- **Total** length of the BUS connection: 40 meters (heating board / control box connection + heating board / zone board if any connection).
- To be connected on the terminal strip of the boards, zones **A1** and **A2**, located in the module.



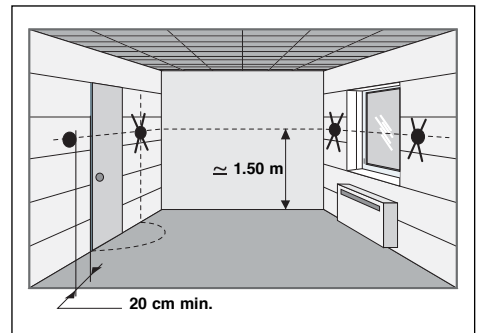
(P) Zone ambient temperature sensor

- For zone 1, Floor: required only if the control unit is not placed in a location that is representative of the temperature in zone 1.

Caution:

In this case, the remote zone 1 sensor must be activated through parameterisation on the control unit (refer to control's technical manual). This sensor is proposed as accessory **70250065**.

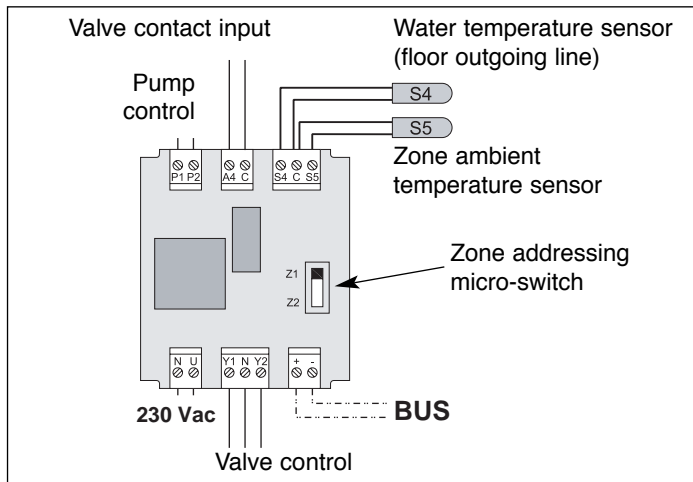
- **Wall mounting:** The sensor is designed to be mounted in a "Mosaïc" type (45 x 45), flush-mounted electrical box (not supplied). It is to be installed in a location that is representative of the temperature in the zone.
- The sensor must not be installed in corners, on shelves or behind curtains, near sources or heat or directly exposed to sunlight. The unit should be installed approximately 1.5 m above the floor.
- Use a 2-conductor cable for installation, minimum size: 0.5 mm² and max. length: 25 meters.
- To be connected directly on the corresponding zone board (terminals **C** and **S5**).



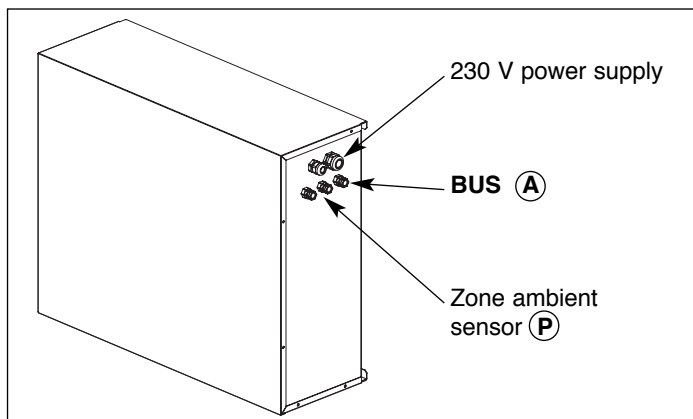
(Q) Water temperature probe (Floor zone outgoing line)

- Indicated for informational purposes as it is already connected in the module.

4.2.3 - ZONE BOARD CONNECTION DETAIL



4.2.4 - CABLE ROUTING



5 - START-UP

IMPORTANT NOTE

Before carrying out any work on the machine, make sure that it is switched off and that access to it is prevented.
Any work must be carried out by personnel qualified and authorised to work on this type of machine.

5.1 - VERIFICATIONS

- Ensure that the hydraulic connections are properly tight and that the hydraulic system operates correctly:
 - purge of circuits,
 - valve position,
 - hydraulic pressure (1.5 to 3 bar).
- No leaks.
- Proper machine stability.
- Electrical cables and wires are well secured to their connection terminals. Loose terminals can cause heat build-up on the terminal board and malfunctions.
- Ensure that the electric cables are properly protected from all sheet metal edges or metal parts that could damage them.
- Ensure that control cables and power cables are properly separated.
- Check that the unit is properly grounded.
- Make sure that no tools or any other objects have been left in the machine.

5.2 - CONFIGURATION / SETTING

- Set the button on the installation's control box to OFF.
- Turn installation and module power on.
- On the control unit, configure the system for the "2 Mixed Zones" application (**parameter 70 = 4**); then check and adapt the parameterization to the installation conditions (consult the control's technical manual).
- Check that the setpoint settings of the generator regulator are compatible with the "2 Mixed Zones" application.
- Check the position of the zone addressing micro-switches (Z1/Z2), see the diagram in § 7.

5.3 - OPERATION

- Check circulator operation in the generator and the operation of the 2 circulators of the module. Adapt the speed of the circulators in order to respect the flow rates. For the generator, refer to the corresponding installation manual.

Note:

When the system is off, operation can be forced by changing the parameterization:

- of **zone 1** (accelerator on and control valve open) with **parameter 65**,
- of **zone 2** (accelerator) with **parameter 66**,
- of the **generator** with **parameter 67**.



Caution:

At the end of testing and before starting the installation, the forced configuration must be deactivated and parameters 65, 66 and 67 returned to zero.

- Check that water is properly circulating in the installation (valve position).

Note:

The outgoing mixing valve of the Floor zone of the module is delivered in full-open position (position "1").

It is equipped with a "3-point" motor for 230 VAC controlled by the zone board:

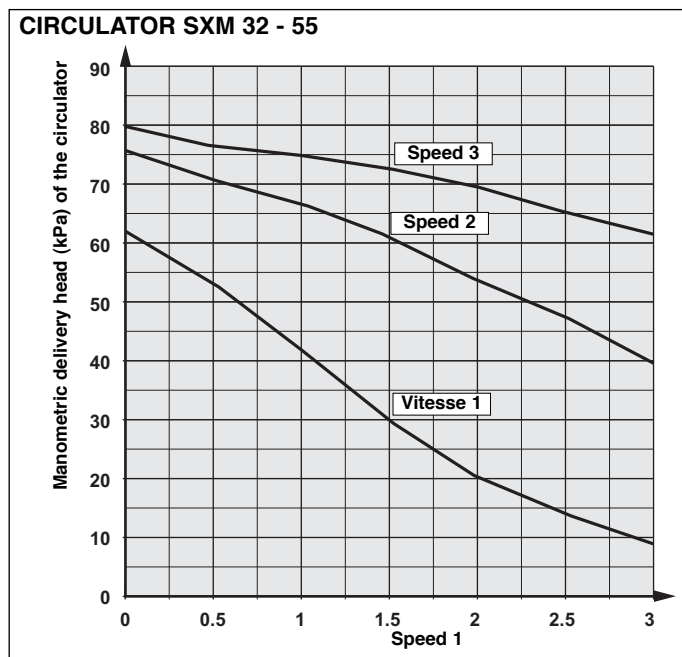
- **Y1** = open control signal,
- **N** = neutral (common),
- **Y2** = close control signal.

When off, it is possible to open this valve by actuating the motor using a 3 mm Allen wrench.

- Purge the installation. Check the bleeders located in the 2-zone module and heating module.

CAUTION:

An incorrect purge could result in malfunctions and damage to the heater of the heating module.



- Water flowrate: The module's outgoing water lines are equipped with 1/4 SAE pressure taps at the inlet and outlet of each circulator, to enable the pressure loss to be measured using a hydraulic pressure gauge. Use the following circulator curves below (circulator SXM 32 - 55) to find the water flowrate.

- Start the system in the desired operating mode using the control box button (consult the the control's technical manual and the control box user's guide).

6 - MAINTENANCE INSTRUCTIONS

IMPORTANT NOTE

- Before doing any work on the installation, make sure it is switched off and all power supplies locked out.
- Any work must be carried out by personnel qualified and authorised to work on this type of machine.

GENERAL MAINTENANCE

All equipment must be properly maintained in order to provide optimum performance over time. Faulty maintenance can result in the cancellation of the product guaranty. Depending on the products, maintenance operations consist in the cleaning of filters (air, water), internal and external exchangers, casings, and the cleaning and protection of condensate tanks. Treating odours and the disinfection of room surfaces and volumes also contributes to the cleanliness of the air breathed by users.

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- **Perform the following operations at least once per year** (the frequency of operations depends on the installation and operating conditions):
 - Check the composition and condition of the coolant.
 - Check operating points and setpoints.
 - Check the safety devices.
 - Dusting of electrical boxes.
 - Ensure that all electrical connections are properly tight.
 - Check the ground connections.
 - Check the hydraulic system (cleaning of the filter, water quality, purge, flowrate, pressure etc.).

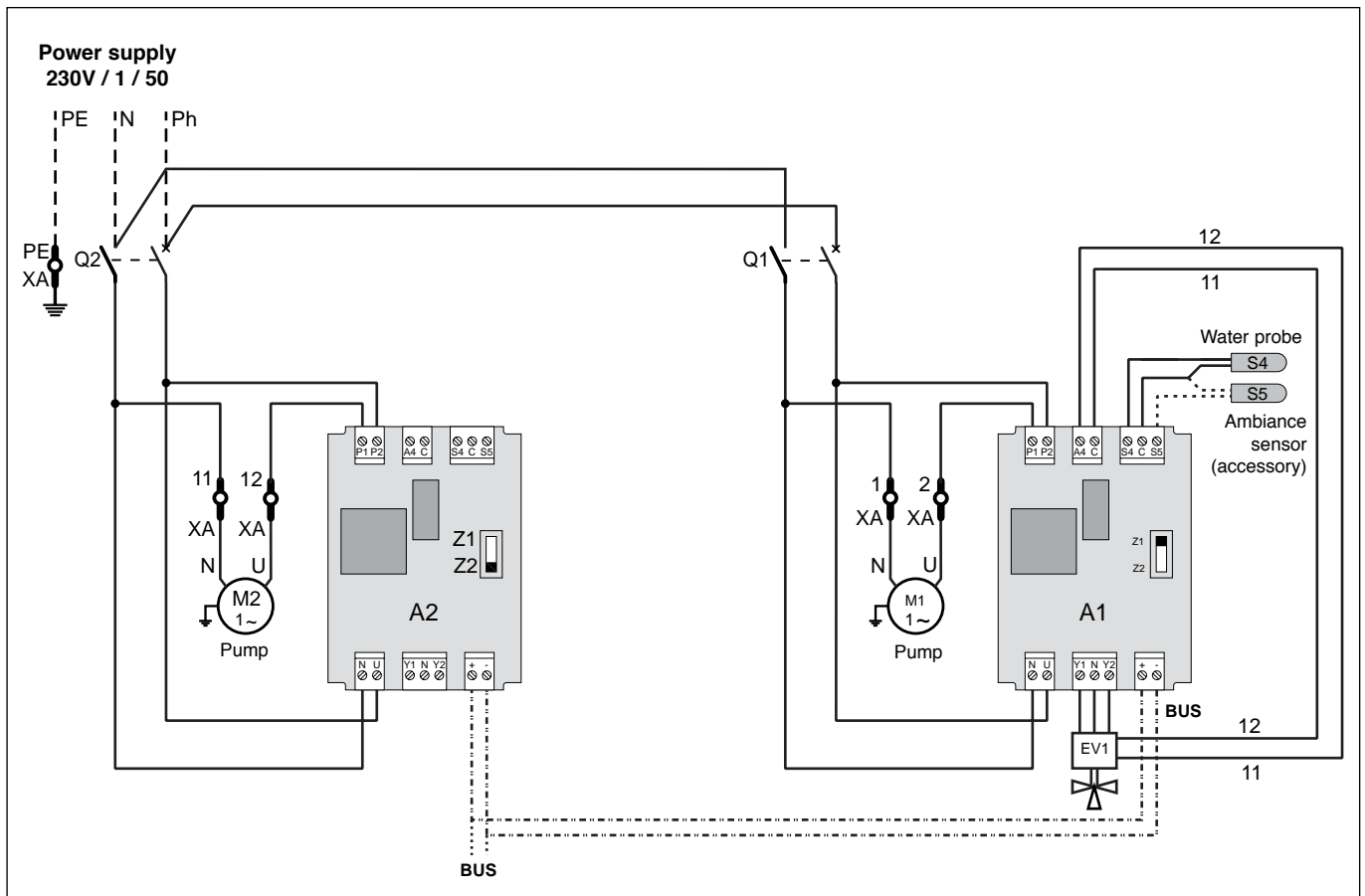
7 - ELECTRICAL DIAGRAM

Component symbols

A1	Control board, zone 1	Q1	Circuit breaker, zone 1
A2	Control board, zone 2	Q2	Circuit breaker, zone 2
EV1	Control valve, zone 1	S4	Water temperature sensor (outgoing line, zone 1)
M1	Circulator, zone 1	S5	Temperature ambience sensor (zone 1)
M2	Circulator, zone 2		Accessory

ELECTRICAL DIAGRAM - M2Z M

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