

For the heating engineer

Installation instructions
Mixer module VR 60



Bus module control system

VR 60

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1 Notes on the documentation

The following information is intended to help you throughout the entire documentation. Further documents apply in combination with this installation manual.

We accept no liability for any damage caused by failure to observe these instructions.

Other applicable documents

Observe the individual operating and installation manuals of the various components of the plant when installing, commissioning and starting up.

Storage of the documents

Pass on this installation manual to the owner of the system in order for him/her to store it so that it is available whenever it is required.

Symbols used

Please observe the safety instructions in this installation manual for the installation of the appliance.

The symbols used in the manual are explained below:



Danger!
Immediate risk of serious injury or death



Danger!
Danger of death by electric shock!



Caution!
Potentially dangerous situation for the product and environment.



Note!
Useful information and instructions

- Symbol for a necessary task

Applicability of the instructions

These installation instructions apply exclusively to units with the following part numbers:

- 306782
- 0020076591

The part number of the unit can be found on the identification plate.

2 Description of the device

The VR 60 mixer module is used for system expansion of the auroMATIC 620 or VRC 630 controllers and Vaillant geoTHERM VW.. .../2 heat pumps. Up to a maximum of six mixer modules can be connected. Two additional mixer circuits can be controlled per VR 60 mixer module.

These mixer circuits can be programmed via the auroMATIC 620 or VRC 630 controllers, or the operating section of the Vaillant geoTHERM VW.. .../2 heat pumps or, if required, via a separate VR 80 or VR 90 remote control unit.

Each mixer circuit can, as required, be switched between:

- Heating circuit (radiator circuit, floor circuit, etc.)
- Fixed value control
- Return flow boost
- Hot water circuit (storage tank charging circuit, in addition to integrated hot water circuit).

The "Return flow boost" and "Hot water circuit" options are not available with the Vaillant geoTHERM VW.. .../2 heat pumps.

With the telephone remote contact connection (floating contact) on the auroMATIC 620 or VRC 630, the controller's operating mode can be changed by telephone by means of the teleSWITCH telephone remote switch.

2.1 Identification plate

The identification plate for the VR 60 mixer module is located on the outside on the left hand side of the casing.

2.2 CE-mark/conformity

The CE label documents that the mixer module VR 60, in connection with Vaillant boilers, fulfils the basic requirements of the following directives:

- Directive relating to electrical equipment designed for use within certain voltage limits (2006/95/EWG)
- Directive relating to electromagnetic compatibility (2004/108/EWG)

2.3 Intended use

The mixer module VR 60 is a state-of-the-art appliance which has been constructed in accordance with recognised safety regulations. Nevertheless, there is still a risk of death or serious injury to the user or others or of damage to the device and other property in the event of improper use or use for which it is not intended.

The VR 60 mixer module is a system component in the auroMATIC 620 or VRC 630 modular bus control systems for controlling hot water central heating installations with integrated hot water generation. The VR 60 mixer module can also be used as a system component with the Vaillant geoTHERM VW.. .../2 heat pumps for controlling hot water central heating installations. Any other use or extended use is considered to be improper. The manufacturer or supplier is not liable for any resulting damage. The owner alone bears the risk. Intended use includes the observance of the installation manual.

3 Safety instructions and regulations

The mixer module VR 60 must be installed by a qualified engineer, who is responsible for adhering to the existing standards and regulations.

We accept no liability for any damage caused by failure to observe these instructions.

3.1 Safety instructions



Danger of death by electric shock!

Before carrying out work on the controller, switch off the power supply and secure it against being switched on again. Operating the mains switch on the VR 60, auroMATIC 620 or VRC 630 or the Vaillant geoTHERM VW.. .../2 heat pumps is not in itself sufficient to ensure that all the terminals on the system are voltage free.

3.2 Regulations

All wiring must be in accordance with Building Regulations Part P and BS 7671 (IEE Wiring Regulations), and must be carried out by a suitably qualified person.

Standard cable must be used for wiring.

Minimum cross-section of the cable:

- 230 V connecting cable (pump or mixer connection cable) 1.5 mm² solid conductor
- Low-voltage leads (sensor or Bus leads) 0.75 mm²

Do not exceed following maximum wire lengths:

- Sensor connection 50 m
- Bus lead 300 m

If sensor and eBus leads run parallel to 230 V leads over a distance greater than 10 m, they must be laid separately at a spacing of at least 25 mm.

230 V connection leads must be implemented with 1.5 mm² solid cable and fastened in the casing using the cable clamps supplied.

Do not use free terminals of the appliances as support terminals for other wiring.

The unit must be installed in a dry room.

4 Fitting

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The VR 60 mixer module should be mounted on the wall in a suitable position close to the mixer circuits to be controlled. Using the VR 60 mixer module, extension of the heating installation by two mixer circuits is possible. Up to a maximum of six mixer modules can be connected.

A unique bus address is set on the VR 60 mixer module using the rotary switch. Setting the heating programmes and all the required parameters is done via the auroMATIC 620 or VRC 630 controller using the eBus or the operating section of the Vaillant geoTHERM VW...2 heat pump. All heating circuit specific connections (sensors, pumps) are made directly on the mixer module via ProE connectors.

4.1 Scope of delivery

Before starting the installation, check the scope of delivery for completeness and lack of damage.

Pos.	Amount	Component
1	1	Mixer module VR 60
2	2	VR 10 standard sensor
3	1	eBus lead, 3 m long

Table 4.1 Scope of delivery of the mixer module VR 60

4.2 Accessories

VR 90 remote control device

For the first eight heating circuits (HK 1 ... HK 8) its own remote control unit can be connected. It permits the adjustment of the method of operation and the target room temperature and takes account of the room temperature using the integrated room sensor.

It is also possible to adjust the parameters for the associated heating circuit (time programme, heating curve etc.) and to select the special functions (party etc.). In addition, it is possible to call up the displays of heating circuit and maintenance and faults on the boiler. Communication with the heating control unit is via the eBus.

VR 80 remote control device

The VR 80 is a remote control unit for controlling a heating circuit within a control system with an auroMATIC 620 or VRC 630 controller or the Vaillant geoTHERM VW.. .../2 heat pump. Regardless of whether this remote control unit is used, all the settings for this heating circuit are possible using the auroMATIC 620 or VRC 630 controllers, or the operating section of the Vaillant geoTHERM VW.. .../2 heat pump.

4.3 Assembling VR 60 mixer module

The connection rails of the mixer module VR 60 are of the type System ProETechnik. All onsite connections must be made using these rails.

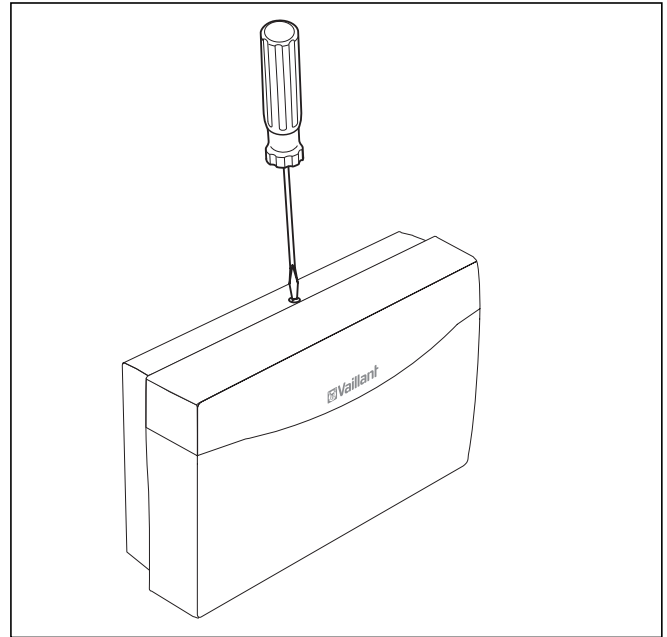


Fig. 4.1 Opening the casing

- Release the screw on the top of the casing.
- Tilt the casing cover forwards slightly and remove.

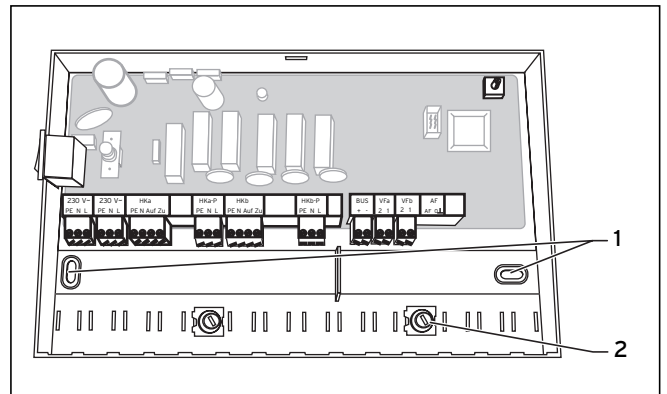


Fig. 4.2 Fitting the mixer module VR 60

- Mark the two fixing points at a suitable position in accordance with the fixing openings (1).
- Drill two holes for the suitable plugs and screw the casing securely in position.
- The electrical installation is carried out as described in Chapter 5.
- Insert the casing cover back into the hinges and hinge the casing cover back up into position.
- Screw the casing cover in position in accordance with Fig. 4.1.

5 Electrical installation

The electrical connection must be done by a suitably qualified heating engineer who is responsible for complying with the existing standards and guidelines.



Danger of death by electric shock!

Before carrying out work on the controller, switch off the power supply and secure it against being switched on again.

Operating the mains switches on the VR 60 mixer module and on the auroMATIC 620 or VRC 630 controllers or the Vaillant geoTHERM VW.. .../2 heat pumps is not in itself sufficient to ensure that all the terminals on the system are voltage free.

If the casing of the VR 60 mixer module is closed, open it as described in Chapter 4.3.

5.1 Connecting the mixer module to the building

- Wire up the VR 60 mixer module as shown in Fig. 5.1.
- Use the supplied eBus connection cable to incorporate the mixer module VR 60 in the communication system. The eBUS can be branched at any part of the system.

In the entire system the mains infeed should be provided by the building works on one component.



Note!

Please make sure that the VR 60 mixer module has a mains switch with which you can switch off the internal electronics as well as all connected actuators (pumps, mixers) for the purposes of tests and maintenance.

5 Electrical installation

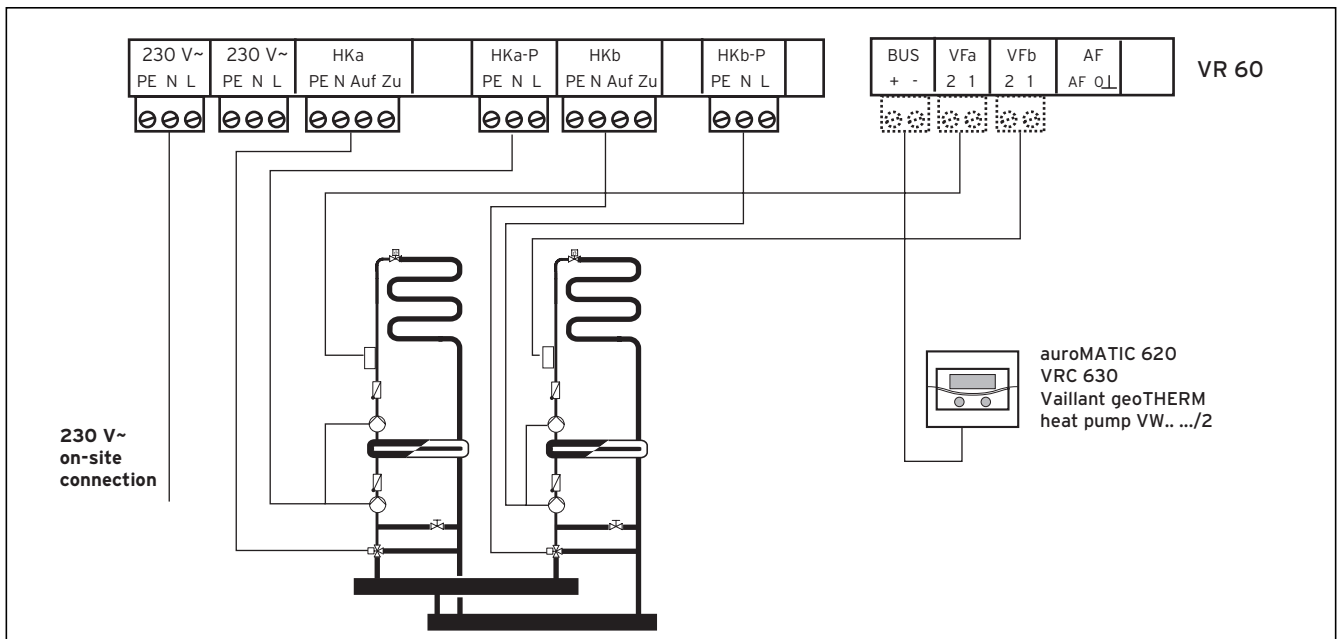


Fig. 5.1 Connecting the VR 60 mixer module

5.2 Connecting the heating circuit as a cylinder charging circuit (not with Vaillant geoTHERM VW.. .../2 heat pump.)

You can also configure the heating circuits of the mixer module VR 60 as storage tank charging circuits (additional hot water circuits).

- Wire up the VR 60 mixer module as shown in Fig. 5.2.

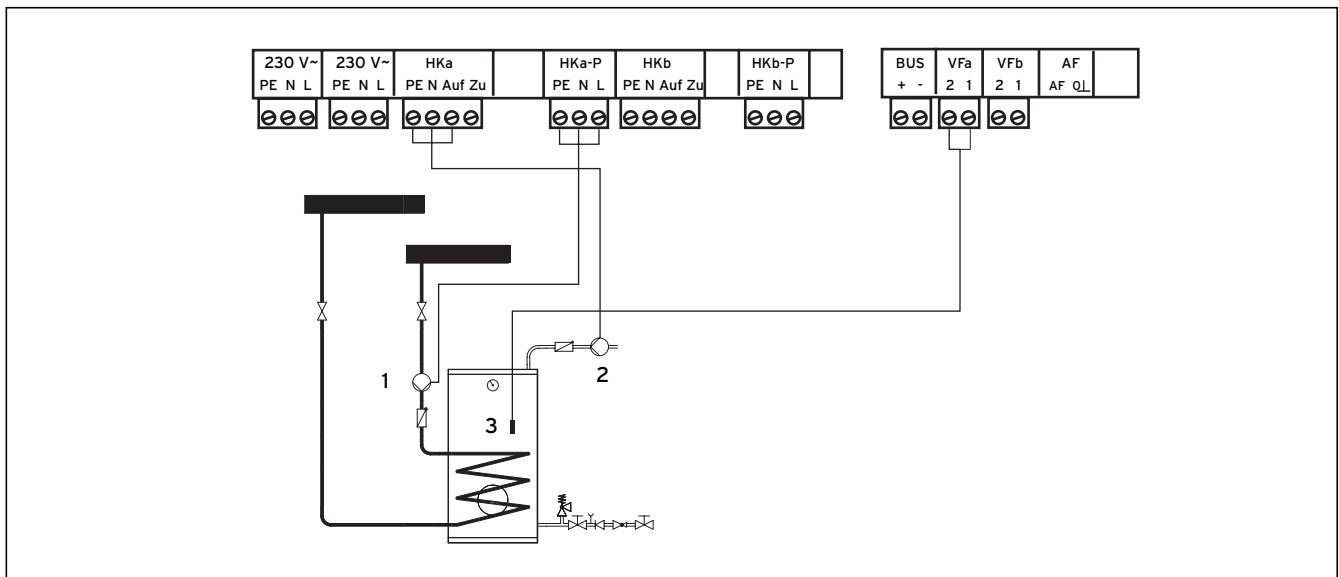


Fig. 5.2 Connection of a heating circuit as a cylinder charging circuit

Key

- 1 Cylinder charging pump
- 2 Circulation pump
- 3 Cylinder sensor

5.3 Setting the Bus address

Communication within the system takes place via an eBus. To ensure flawless communication between all the components it is necessary to allocate a unique address to the individual mixer circuit. To do this set the value 4, 6, 8, 10, 12 or 14 on the address switch (Fig. 5.3 (3)) depending upon whether the VR 60 mixer module has already been integrated in the system.

Addresses 0 to 3 are used by the system circuits in the auroMATIC 620 and VRC 630 controllers or the Vaillant geoTHERM VW.. .../2 heat pump and are not therefore available for addressing.

Addresses to be set	Assignment in the auroMATIC 620/ VRC 630	
	Heating circuit a	Heating circuit b
4	HK 4	HK 5
6	HK 6	HK 7
8	HK 8	HK 9
10	HK 10	HK 11
12	HK 12	HK 13
14	HK 14	HK 15

Table 5.1 Bus addresses to be set

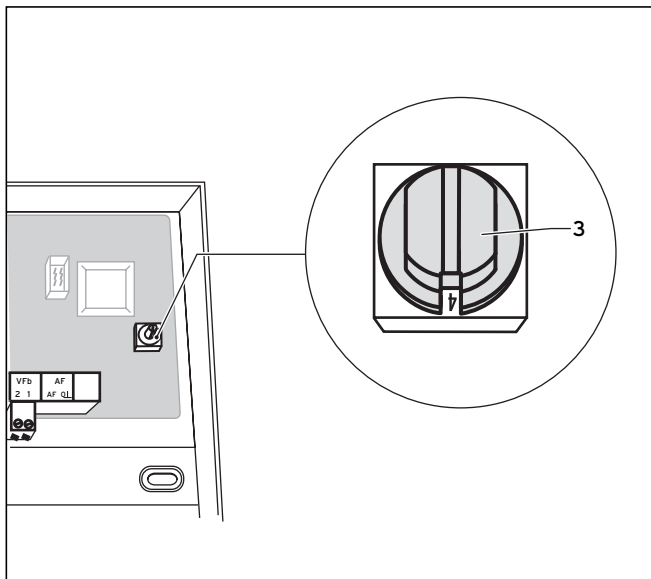


Fig. 5.3 Setting the bus address

After connecting the electrical installation:

- Fix all cables with the accompanying cable clamps (Fig. 4.2 (2)).
- Insert the casing cover back into the hinges and hinge the casing cover back up into position.
- Screw the casing cover in position in accordance with Fig. 4.1.

6 Start-up

Starting up the VR 60 mixer module is carried out in conjunction with starting up the auroMATIC 620 or VRC 630 controller or the Vaillant geoTHERM VW.. .../2 heat pump. To do this, proceed in accordance with the instructions in the manual for the auroMATIC 620 or VRC 630 controller or the Vaillant geoTHERM VW.. .../2 heat pump.

7 Technical data

	Unit	VR 60
Operating voltage	V	230
Power consumption	VA	2
Contact load of the output relays (max.)	A	2
Maximum total current	A	4
Maximum permissible ambient temperature	°C	40
Operating voltage sensor	V	5
Minimum cross-section of the sensor cables, eBUS cables	mm ²	0.75
Minimum cross-section of power cable (rigid cable, NYM)	mm ²	1.5
Dimensions of wall mounting base		
Height	mm	174
Width	mm	272
Depth	mm	52
Level of protection		IP 20
Protection rating for regulator		II

Table 7.1 Technical data

8 Warranty and customer service

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8.1 Vaillant warranty

We only grant a Vaillant manufacturer's warranty if a suitably qualified engineer has installed the system in accordance with Vaillant instructions. The system owner will be granted a warranty in accordance with the Vaillant terms and conditions. All requests for work during the guarantee period must be made to Vaillant Service Solutions (0870 6060 777).

8.2 Vaillant service

To ensure regular servicing, it is strongly recommended that arrangements are made for a Maintenance Agreement. Please contact Vaillant Service Solutions (0870 6060 777) for further details.

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