Vaillant

VRT 350f

en Installation instructions

Installation instructions

Contents

1 Safety

1.1 Action-related warnings

Classification of action-related warnings

The action-related warnings are classified in accordance with the severity of the possible danger using the following warning signs and signal words:

Warning symbols and signal words

Danger!
Imminent danger to life or risk of severe personal injury

Danger!
Risk of death from electric shock

Warning.
Risk of minor personal injury

Caution.
Risk of material or environmental damage

1.2 Intended use

In the event of inappropriate or improper use, damage to the product and other property may arise.

The control controls a heating installation with Vaillant heat generators with eBUS interface in a way that is room-temperature-controlled and time-dependent.

The control can control the domestic hot water generation from a connected domestic hot water cylinder.

Intended use includes the following:

– observance of accompanying operating, installation and maintenance instructions for the product and any other system components
– installing and setting up the product in accordance with the product and system approval
– compliance with all inspection and maintenance conditions listed in the instructions.

Intended use also covers installation in accordance with the IP code.

Any other use that is not specified in these instructions, or use beyond that specified in this document, shall be considered improper use. Any direct commercial or industrial use is also deemed to be improper.

Caution.

Improper use of any kind is prohibited.

1.3 General safety information

1.3.1 Risk caused by inadequate qualifications

The following work must only be carried out by competent persons who are sufficiently qualified to do so:

– Set-up
– Dismantling
– Installation
– Start-up
– Inspection and maintenance
– Repair
– Decommissioning

▶ Proceed in accordance with current technology.

1.3.2 Risk of death from live connections

When working in the electronics box of the boiler, there is a risk of death from electric shock. Continuous voltage is present on the mains connection terminals, even if the main switch is turned off.

▶ Switch the main switch off before working on the electronics box of the boiler.
▶ Disconnect the boiler from the power mains by disconnecting the mains plug or by de-energising the boiler via a partition with a contact opening of at least 3 mm (e. g. fuses or power switches).
▶ Check that the boiler is de-energised.
▶ Secure the power supply against being switched on again.
▶ Open the electronics box only when the boiler is disconnected from the power supply.

1.3.3 Material damage due to unsuitable installation room

If you are installing the control in a wet room, the electronics may be damaged by moisture.

▸ The control should only be installed in dry rooms.

1.3.4 Danger due to malfunctions

▸ Ensure that the heating installation is in a technically perfect condition.
▸ Ensure that no safety or monitoring devices have been removed, bridged or decommissioned.
▸ Immediately rectify any faults and damage that may affect safety.
▸ Install the controller in a location where it is not covered by furniture, curtains, or other objects.
▸ If the room temperature modulation is activated, advise the end user that, in the room where the control is installed, all the radiator valves must be fully open.

▸ Do not use the unit's free terminals as supports for other wiring.
▸ Route 230 V connection cables and sensor or bus cables as of a length of 10 m separately.

1.3.5 Risk of material damage caused by frost

▸ Do not install the product in rooms prone to frost.

1.3.6 Risk of material damage caused by using an unsuitable tool

▸ Use the correct tool.

1.4 Regulations (directives, laws, standards)

▸ Observe the national regulations, standards, directives, ordinances and laws.

2 Notes on the documentation

2.1 Observing other applicable documents

▶ Always observe all the operating and installation instructions included with the system components.

2.2 Storing documents

▶ Pass these instructions and all other applicable documents on to the end user.

2.3 Validity of the instructions

These instructions apply only to:

Product article number

VRT 350f	0020124482

3 Product description

3.1 Identification plate

The identification plate is located on the rear panel of the controller casing.

The identification plate contains the following information:

Information on the identific- ation plate	Meaning
Serial number	For identification

Information on the identific- ation plate	Meaning
VRT XXX	Unit designation
V	Operating voltage
mA	Current consumption
CE label	Unit complies with European standards and directives
Waste container	Proper disposal of the unit

3.2 CE marking

$C\epsilon$

The CE marking shows that the products comply with the basic requirements of the applicable directives as stated on the declaration of conformity.

The manufacturer hereby declares that the type of radio equipment that is described in these instructions complies with Directive 2014/53/EU. The complete text for the EU Declaration of Conformity is available at: http://www.vaillant-group.com/doc/doc-radio-equipment-directive/.

4 Installation

You can either install the radio receiver unit within the boiler or install it separately on a wall in the living area.

You must fit the radio controller on a wall in the living area.

4.1 Scope of delivery

Quant-ity	Component
1	Control
1	Radio receiver unit
1	Wall base for radio receiver unit
1	Unit mounting bracket for control
2	Fixing material (2 screws and 2 wall plugs)
1	Battery set (4 x AA)
1	3-pin header
1	Operating instructions
1	Installation instructions

4.2 Fitting the radio receiver unit in the boiler

|	**Note**
i	When fitting the radio receiver unit in the boiler's electronics box, follow the instructions for fitting a radio receiver unit that are given in the boiler's installation instructions.

1. Switch off the boiler.
2. Disconnect the power supply to the boiler.
3. Disconnect the boiler from the power grid by pulling out the mains plug or removing the power supply to the boiler using a partition with a contact gap of at least 3 mm.
4. Secure the power supply against being switched back on.
5. Check that there is no voltage in the boiler.
6. If necessary, open the front panel on the boiler.
7. Remove the control panel fascia from the boiler for the control module.
8. Carefully lever the radio receiver unit from the wall base.
9. **Alternatives 1:**

   Condition: Vertical plug-in connections with pins in the electronics box.

   ▶ If required, remove the 3-pin header.
   ▶ Carefully press the radio receiver unit into the plug-in connection in the electronics box.

9. **Alternatives 2:**

Condition: Horizontal plug-in connections with no pins on the electronics box
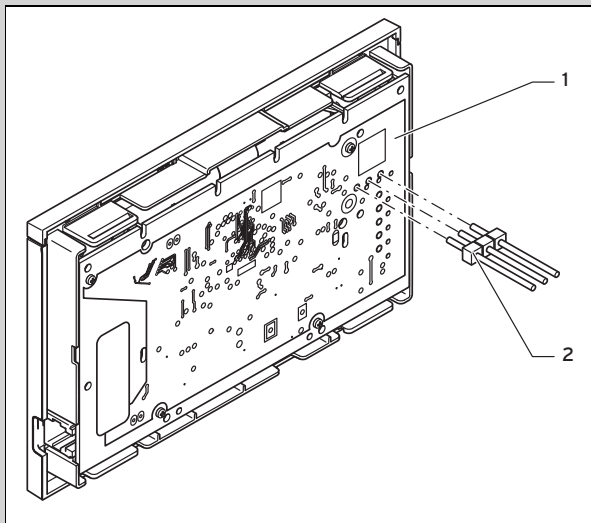
| 1 | Control PCB | 2 | 3-pin header |

▶ Connect the 3-pin header supplied to the control with the short ends in the three horizontal openings on the radio receiver unit PCB.

▶ Carefully press the radio receiver unit with the pin header into the plug-in connection in the electronics box.

10. Switch on the power supply to the boiler.
11. Start up the boiler.
12. If necessary, close the front panel of the boiler.

4.3 Fit the radio receiver unit in the living room
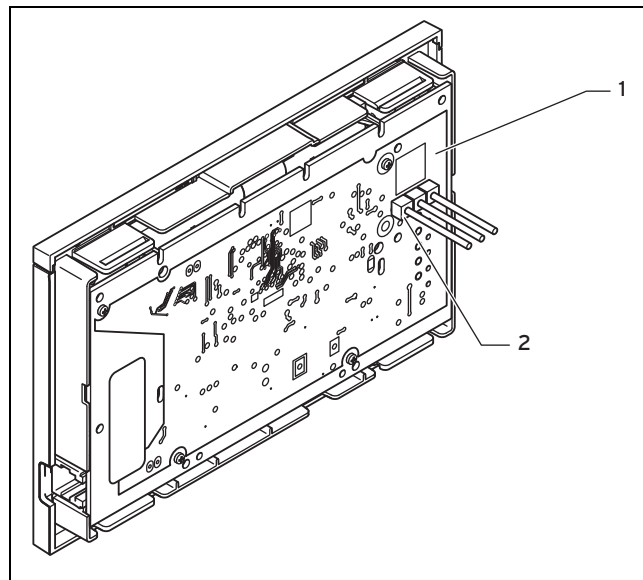
| 1 | Control PCB | 2 | 3-pin header |

1. Check that the 3-pin header is connected to the control PCB.

Result:

The 3-pin header connector is connected to the control PCB.

▶ Remove the 3-pin header connector.

2. Fit the radio receiver unit on an internal wall of the main living room in such a way that ensures that there are no problems with the radio link between the control and the radio receiver unit.

> **i** **Note**
>
> Wall-mounting the radio receiver unit is only necessary if its position needs to be optimised after start-up in order to ensure a good radio link with the control.
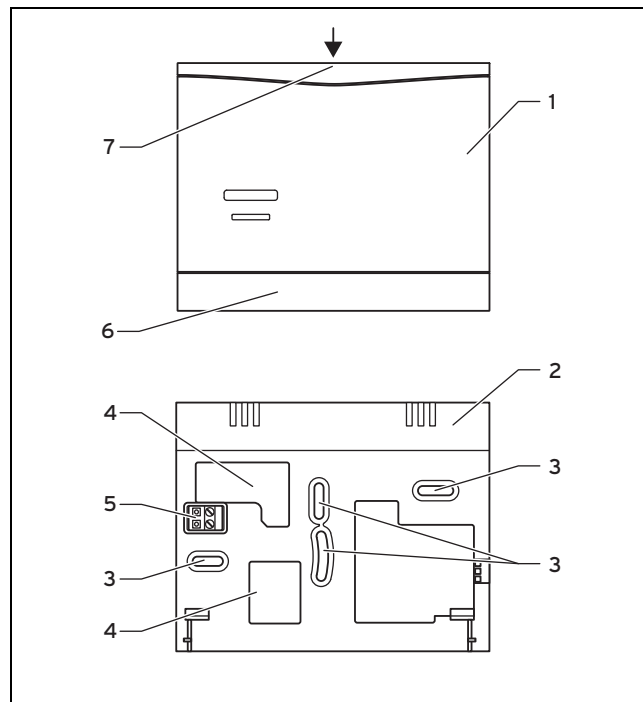
1	Radio receiver unit	5	Pin header with terminals for the eBUS line
2	Wall-mounting base	6	Wall-mounting base cover
3	Mounting holes	7	Slot for screwdriver
4	Openings for cable ducting		

3. Insert a screwdriver into the slot **(7)** on the wall base **(2)**.
4. Carefully lever the radio receiver unit **(1)** from the wall base **(2)**.
5. Mark a suitable position on the wall. Take the eBUS line cable laying into account when doing so.
6. Drill two holes in line with the mounting holes **(3)**.
   – Diameter of mounting hole: 6 mm
7. Route the eBUS line through one of the grommets **(4)**.
8. Insert the wall plugs supplied.
9. Use the screws supplied to secure the wall base.
10. Connect the eBUS line to the terminal block. (→ Page 13)
11. Carefully insert the radio receiver unit in the wall base. Ensure that the pin header connector **(5)** on the wall base fits into the radio receiver unit plug-in connection provided.
12. Carefully press the radio receiver unit into the wall base until the locking tabs on the radio receiver unit are heard to click into place.

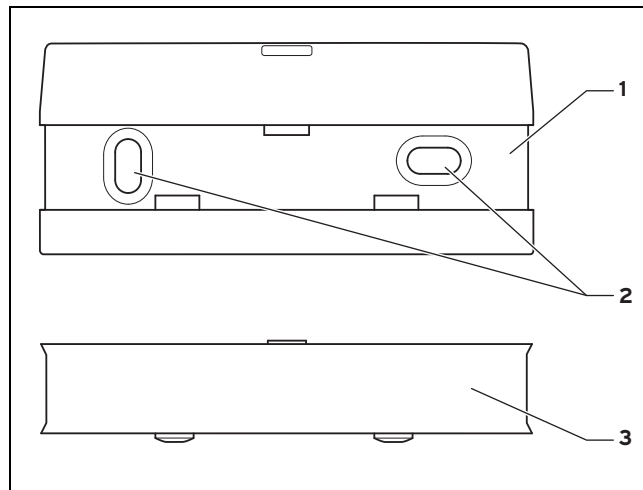## 4.4 Fitting the radio control

1. Fit the control on an internal wall of the main living room in such a way that ensures that there are no problems with the radio link between the control and the radio receiver unit.
   – Height: ≈ 1.5 m

| 1 | Unit mounting bracket | 3 | Finishing panel |
| 2 | Mounting openings | | |

2. Remove the unit mounting bracket from the rear of the control by pulling the bracket downwards.
3. Remove the finishing panel from the unit mounting bracket by pulling the top edge of the panel away from the unit mounting bracket with your fingers.
4. Mark a suitable position on the wall.
5. Drill two holes in line with the mounting holes **(2)**.
   – Diameter of mounting hole: 6 mm
6. Insert the wall plugs supplied.

7. Fix the unit mounting bracket **(1)** to the wall using the screws supplied.

8. Locate the two bottom lugs of the finishing panel **(3)** in the holes in the unit mounting bracket.

9. Press the top edge of the finishing panel into the unit mounting bracket until it clicks into position.
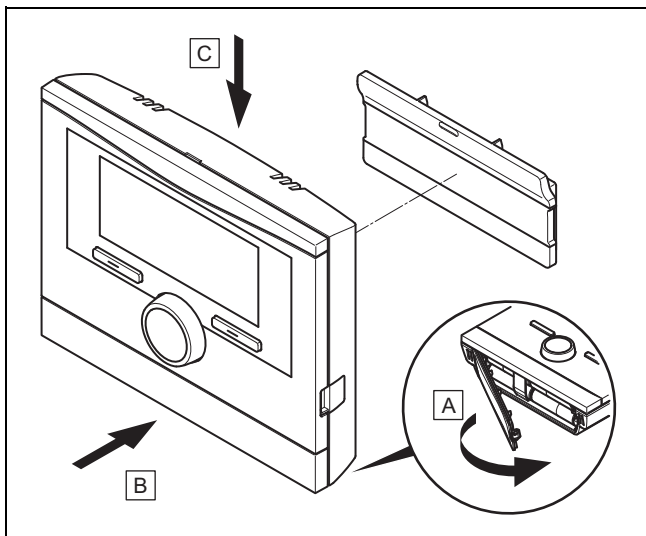
10. Open the battery compartment on the underside of the control.

11. Remove the two plastic strips between the batteries and the contacts.

12. Check that the battery poles are the right way round.

13. Close the battery compartment.

14. Hook the control onto the unit mounting bracket.

15. Press the control down onto the unit mounting bracket until it audibly clicks into position.

16. Check the quality of the radio link.

5 Electrical installation

When connecting the eBUS line, there is no need to pay attention to the polarity. If the two connections are switched around, communication is not affected.

|	**Note**
i	Only qualified electricians may carry out the electrical installation.

5.1 Radio receiver unit fitted in the boiler

If you fit the radio receiver unit in the boiler, the electrical connections are made by contact between the controller's pin header connector and the mating connection on the boiler. Wiring up the radio receiver unit is only required if you have mounted it on a wall.

5.2 Connecting the radio receiver unit installed in the living room

5.2.1 Connecting the radio receiver unit to the boiler with a "3-4-5 Terminal"

1. Switch off the boiler.
2. Disconnect the power supply to the boiler.
3. Disconnect the boiler from the power grid by pulling out the mains plug or removing the power supply to the boiler using a partition with a contact gap of at least 3 mm.
4. Secure the power supply to the boiler against being switched back on again.
5. Check that there is no voltage in the boiler.
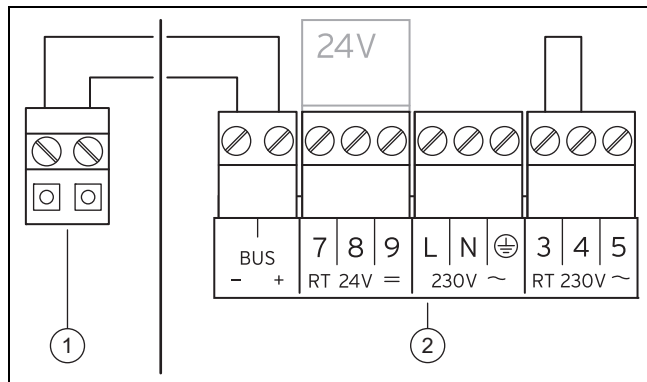
| 1 | Radio receiver unit terminal block | 2 | Boiler terminal strip |

6. Check whether the bridge is installed between terminals 3 and 4 on the PCB of the electronics box and, if required, install the bridge between terminals 3 and 4.
7. Connect the eBUS line to the terminal block **(1)** in the wall base of the radio receiver unit.
8. Connect the eBUS line to the terminal block of the boiler **(2)**.

5.2.2 Connecting the radio receiver unit to a boiler with a "24V=RT terminal"

1. Switch off the boiler.
2. Disconnect the power supply to the boiler.
3. Disconnect the boiler from the power grid by pulling out the mains plug or removing the power supply to the boiler using a partition with a contact gap of at least 3 mm.
4. Secure the power supply to the boiler against being switched back on again.
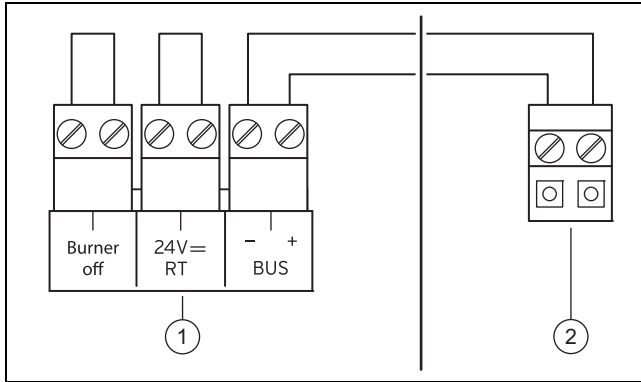5. Check that there is no voltage in the boiler.

| 1 | Radio receiver unit terminal block | 2 | Boiler terminal strip |

6. Check whether the bridge is installed between the 24 V=RT terminals on the PCB of the electronics box and, if required, install the bridge between the 24 V=RT terminals.

7. Connect the eBUS line to the terminal block **(1)** in the wall base of the radio receiver unit.

8. Connect the eBUS line to the terminal block of the boiler **(2)**.

6   Start-up

When you start the controller for the first time after electrical installation or after replacement, the Installation assistant starts automatically. You can use this Installation assistant to make the main settings for the heating installation.

> **Note**
>
> To be able to use the controller to set the temperature for the hot water generation and heating circuit, you must set the maximum value for the temperatures on the boiler.

You can use this Installation assistant to make the main settings for the heating installation.

The operating concept, an operation example, and the menu structure are all contained in the operating manual for the controller.

All settings that you have made using the Installation assistant can be changed again at a later time via the operating level for the system operator **Installer level**. The read-off and setting options at installer level are described in the access level for the competent person (→ Page 24).

7 Operating

The controller has two operating levels, the access level for the operator and the access levels for the competent person.

The setting and read-out options for the operator, the operating concept and an operating example are described in the operating instructions for the controller.

8 Operating and display functions

The path details given at the start of each function description indicate how you can access this function in the menu structure.

The square brackets contain the level of detail to which the function belongs.

You can use the left-hand selection button **Menu** and the list entry **Installer level** to set the operating and display functions.

8.1 Service information

8.1.1 Enter contact details

Menu →Installer level → Service information → Enter contact details

– You can enter your contact details (company name and phone number) in the control.

– As soon as the date of the next service appointment is reached, the end user can view these contact details in the display of the control.

8.1.2 Entering the service date

Menu → Installer level → Service information → Service date

– In the controller, you can save a date (day, month, year) for the next regular service.

When the date for the next service date is reached, the message **Service heater 1** is displayed in the basic display of the controller.

If a service date is saved in the heater, the message **Service heater 1** appears on the heater when this date is reached.

The message is switched off if:

– the date is in the future.
– the initial date 01.01.2011 is set.

> **i** **Note**
> To find out which service date to enter, refer to the instructions for your heater unit.

8.2 System configuration: System

8.2.1 Reading the system status

Menu → Installer level → System configuration [System ---] → Status

– This function allows you to read the status of the heating installation. If there is no fault, the message "**OK**" appears here. If there is a fault, the status "**Not OK**" is displayed. If you press the right-hand selection button, the list of Fault messages (→ Page 27) is displayed.

8.2.2 Reading the water pressure of the heating installation

Menu → Installer level → System configuration [System ---] → Water pressure

– You can use this function to read the water pressure of the heating installation.

8.2.3 Reading the domestic hot water generation status

Menu → Installer level → System configuration [System ---] → Domestic hot water

– You can use this function to read the domestic hot water generation status (**Charged**, **Not charged**).

8.2.4 Reading the software version

Menu → Installer level → System configuration [System ---] → Control modules

– You can use this function to read the software version of the display, the heat generator and the radio receiver unit.

8.2.5 Setting the control type

Menu → Installer level → System configuration [System ---] → Control type

– Select this function to set the type of room temperature control:

– Two-point corresponds to an On/Off control system

– Analogue corresponds to a modulating control system

8.2.6 Setting the distance adjustment

Menu → Installer level → System configuration [System ---] → Distance adjustment

– This function allows you to optimally adjust the switching behaviour of the controller to the room size or the radiator layout:

– Positive values: slower controller switching behaviour

– Negative values: faster controller switching behaviour

The **Distance adjustment** function is only available if you have set **Analogue** under the **Control strategy** function

8.3 Heat generator system configuration

8.3.1 Reading the status of the heater

Menu → Installer level → System configuration [**Heater 1 ----**] → **Status**

– This function allows you to read the current status of the heater (boiler). **Off**, **Heating** (heating mode), **hot water generation**.

8.3.2 Reading the value for the VF1 temperature sensor

Menu → Installer level → System configuration [**Heater 1 ----**] → **VF1**

– You can use this function to read the current value for the VF1 temperature sensor.

8.4 Heating circuit system configuration

8.4.1 Reading the end of the current time period

Menu → Installer level → System configuration [**HEATING 1 ----**] → **Auto day temp until**

– You can use this function to stipulate whether or not a set time period is active for the **Automatic mode** and how much of the period is still remaining. To do this, the control must be in "**Automatic mode**". The information is specified in hr:min.

8.4.2 Setting the day temperature

Menu → Installer level → System configuration [**HEATING 1 ----**] → **Day temperature**

– You can use this function to set the desired day temperature for the heating circuit.

8.4.3 Setting the set-back temperature

Menu → Installer level → System configuration [**HEATING 1 ----**] → **Set-back temperature**

– You can use this function to set the desired set-back temperature for the heating circuit.

The set-back temperature is the temperature to which the heating is to be reduced at times of low heat demand (e.g. overnight).

8.4.4 Reading the target flow temperature

Menu → Installer level → System configuration [**HEATING 1 ----**] → **Flow temp. target**

– You can use this function to read the target flow temperature for the heating circuit.

8.4.5 Reading the actual flow temperature

Menu → Installer level → System configuration [**HEATING 1 ----**] → **Flow temp. current**

– You can use this function to read the actual flow temperature for the heating circuit.

8.4.6 Reading the status of special operating modes

Menu → **Installer level** → **System configuration** [**HEATING 1** ----] → **Advanced functions**

– You can use this function to define whether a special operating mode (special function), such as **Party** etc. is currently active for a heating circuit.

8.5 System configuration: Domestic hot water circuit

8.5.1 Activating the cylinder

Menu → **Installer level** → **System configuration** [**Domestic hot water** ----] → **Cylinder**

– Select this function to specify whether a cylinder is connected:

Active: Cylinder connected

Inactive: No cylinder connected

8.5.2 Setting the target temperature for domestic hot water cylinder (desired domestic hot water temperature)

Menu → **Installer level** → **System configuration** [**Domestic hot water** ----] → **Cylinder temp. target**

– You can use this function to define the target temperature for a connected domestic hot water cylinder (**desired domestic hot water temperature**). Set the target temperat-

ure on the control in such a way that the heat demand of the end user is covered.

The temperature for the domestic hot water cylinder must be set to the maximum value in the boiler.

8.5.3 Reading the actual temperature of the domestic hot water cylinder

Menu → **Installer level** → **System configuration** [**Domestic hot water** ----] → **Cyl. temp. current**

– You can use this function to read the measured cylinder temperature.

8.6 Radio link system configuration

8.6.1 Checking radio communication between controller and radio receiver unit

Menu → **Installer level** → **System configuration** [**RF connection** ----] → **Controller**

– The quality of the RF connection is indicated by a number on a scale of 0 to 10.

0: No reception

1: Poor quality

10: Excellent quality

The display of the quality is updated if there is a change.

You should change the location of the controller or radio receiver unit if the quality rating is below 3. The range of radio transmission inside buildings greatly depends on the local

conditions (e.g. design and structure of the building). Consequently, an indoor range of 25 m cannot always be guaranteed. Outside of enclosed spaces (outdoors), the range is more than 100 m.

8.6.2 Commissioning a replacement radio controller (teach-in)

Menu → **Installer level** → **System configuration** [**RF connection** ----] → **Teach-in**

– You can use this function to start up the new controller after you have replaced a defective controller.

8.7 Changing the code for Installer level

Menu → **Installer level** → **Change code**

– This function allows you to change the access code for the "**Installer level**" operating level.

If the code is no longer available, you must reset the control to the factory setting in order to obtain access to Installer level again.

9 Replacing components

9.1 Change batteries

> **Danger!**
> **Risk of death caused by unsuitable batteries!**
>
> If batteries – whether rechargeable or non-rechargeable – are replaced with the wrong type of battery, there is a risk of explosion.
>
> ▶ Ensure that you use the correct battery type when replacing batteries.
> ▶ Dispose of used batteries in accordance with the instructions in this manual.

1. Pull the radio control upwards and off the unit mounting bracket.
2. Remove the batteries.
3. Dispose of the batteries appropriately.
4. Insert four new batteries of the same type in the control.
5. Only use new AA/LR6 1.5 V alkaline batteries.
6. Check that the battery poles are the right way round.
7. Hook the control onto the unit mounting bracket.
8. Press the control down onto the unit mounting bracket until it audibly clicks into position.

9.2 Recording radio controller settings

1. Before replacing the radio receiver unit and/or the radio controller, make a note of all the settings on the radio controller.
2. Scroll through all display pages on the radio controller and note down all manually configurable values (e.g. target room temperature, programmed time period).

> **i** **Note**
>
> When you replace the radio receiver unit and/or the radio controller, the user-specific settings will be partially or completely lost.

9.3 Replacing the radio receiver unit

▶ Before you start, make a note of all the settings on the radio control.

9.3.1 Removing from the wall

1. Insert a screwdriver into the slot on the wall base.
2. Carefully lever the radio receiver unit from the wall base.
3. Dispose of the faulty radio receiver unit correctly.

9.3.2 Removing from the boiler

1. If necessary, open the front panel on the boiler.
2. Carefully remove the radio receiver unit from the boiler electronics box.

3. If necessary, close the front panel on the boiler.
4. Dispose of the faulty radio receiver unit correctly.

9.3.3 Fitting the radio receiver unit

1. Mount the radio receiver unit on the wall. (→ Page 9)
2. Fit the radio receiver unit in the boiler. (→ Page 8)

9.4 Replacing the radio control

9.4.1 Removing from the wall

1. Pull the radio control upwards and off the unit mounting bracket.
2. Remove the batteries.
3. Dispose of the batteries and the radio control correctly.

9.4.2 Fitting the radio control

1. Insert four new batteries of the same type in the control.
2. Use only new batteries of the type Alkaline AA/LR6 battery 1.5 V.
3. Check that the battery poles are the right way round.
4. Hook the control onto the unit mounting bracket.
5. Press the control down onto the unit mounting bracket until it audibly clicks into position.

9.4.3 Radio receiver unit: Activating pairing

1. Press the pair button to restart the pairing process.
   ◁ The green LED will start flashing.
2. Activate pairing for the radio control. (→ Page 21)

Note

The pairing process is automatically terminated after approximately 15 minutes. If, in these 15 minutes, the radio control was not activated, there is no connection between the radio control and radio receiver unit.

9.4.4 Radio control: Activating pairing

1. On the control, select **Menu → Installer level → System configuration** [**RF connection** ----] **→ Teach-in** (Menu → Installer level → System configuration → [Radio link ----] → Pair).
2. Set the parameter **Teach-in** (Pair) to **On** (On).
   ◁ As soon as radio signals are transmitted between the components, the parameter **Teach-in** (Pair) is automatically reset to **Off** (Off). That can take less than a second in some cases.

Note

If the figure **0** or **--** is displayed, repeat the pairing process for the radio control. Make sure that the pairing function has been activated on the radio receiver unit (→ Page 20).

9.4.5 Radio control: Restoring recorded settings

▶ Reinstate all the settings noted down at the start.

10 Decommissioning

10.1 Removing the radio receiver unit

1. If you want to remove the radio receiver unit, first shut down the heating installation.
2. To do this, follow the instructions for decommissioning in the boiler instructions.
3. Disconnect the power supply to the boiler.
4. Disconnect the boiler from the power grid by pulling out the mains plug or removing the power supply to the boiler using a partition with a contact gap of at least 3 mm.
5. Secure the power supply to the boiler against being switched back on again.
6. Check that there is no voltage in the boiler.

10.1.1 Removing from the wall

1. Insert the screwdriver into the slot on the wall base.
2. Carefully lever the radio receiver unit from the wall base.
3. Disconnect the eBUS line from the pin header connector in the wall base of the radio receiver unit and from the terminal block on the boiler.
4. Unscrew the wall base from the wall.

10.1.2 Removing from the boiler

1. If necessary, open the front panel on the boiler.
2. Carefully remove the radio receiver unit from the boiler electronics box.
3. If necessary, close the front panel on the boiler.

10.2 Removing the radio control

1. Remove the radio control from the wall. (→ Page 20)
2. Remove the finishing panel from the unit mounting bracket by pulling the top edge of the panel away from the unit mounting bracket with your fingers.
3. Unscrew the unit mounting bracket from the wall.

11 Recycling and disposal

This product is an electrical or electronic unit within the context of EU Directive 2012/19/EU. The unit was developed and manufactured using high-quality materials and components. These can be recycled and reused.

Find out about the regulations that apply in your country regarding the separate collection of waste electrical or electronic equipment. Correctly disposing of old units protects the environment and people against potential negative effects.

▶ Dispose of the packaging correctly.
▶ Observe all relevant regulations.

Disposing of the product

If the product is labelled with this symbol:

▶ In this case, do not dispose of the product with the household waste.
▶ Instead, hand in the product to a collection centre for waste electrical or electronic equipment.

Disposing of batteries

If the product contains batteries that are labelled with this symbol:

▶ In this case, dispose of the batteries at a collection point for batteries.
   ◁ **Prerequisite:** The batteries can be removed from the product without causing any destruction. Otherwise, the batteries are disposed of together with the product.
▶ In accordance with the legal regulations, the end user is obligated to return used batteries.

Deleting personal data

Personal data may be misused by unauthorised third parties.

If the product contains personal data:

▶ Ensure that there is no personal data on or in the product (e.g. online login details or similar) before you dispose of the product.

12   Customer service

For contact details for our customer service department, you can write to the address that is provided on the back page, or you can visit www.vaillant.co.uk.

Appendix

A   Overview of installation assistant set-up options

Setting	Values		Increment, select	Default setting	Setting
	Min.	Max.			
Language			Languages available for selection	English	
Control strategy			Two point, analogue	Two point	
Route adjustment[1]	-5	+5	1	0	
Cylinder			Active, Inactive	Active	
1) Appears only if the value **Analogue** is set for the control strategy.					

B   Installer level overview

You can use the left-hand selection button **Menu** and the list entry **Installer level** to access the setting and read-out options.

Setting level	Values		Unit	Increment, select	Default setting	Setting
	Min.	Max.				
Installer level →						
Enter code	000	999		1	000	
Installer level → Service information → Enter contact details →						
* If there is no fault, then the status is **OK**. If there is a fault, **Fault** appears here and you can read the fault message in the "Fault messages" section.						
1) Appears only if the value **Analogue** is set for the control type.						

Setting level	Values		Unit	Increment, select	Default setting	Setting
	Min.	Max.				
Installer	1	11	Figures	A to Z, 0 to 9, Space		
Phone number	1	12	Numbers	0 to 9, Space, Hyphen		
Installer level → Service information → Service date →						
Next service on			Date			
Installer level → System configuration →						
System						
Status	Current value*					
Water pressure	Current value		bar			
Domestic hot water	Current value		℃			
Control modules	Displaying			Software version		
Heat generator						
Status	Current value			Off, Heating, DHW		
* If there is no fault, then the status is **OK**. If there is a fault, **Fault** appears here and you can read the fault message in the "Fault messages" section. 1) Appears only if the value **Analogue** is set for the control type.						

Setting level	Values		Unit	Increment, select	Default setting	Setting
	Min.	Max.				
VF1	Current value					
HEATING 1						
Auto day temp to	Current value		hr:min			
Day temperature	5	30	℃	0,5	20	
Set-back temp.	5	30	℃	0,5	15	
Flow temp. target.	Current value		℃			
Actual flow temperature	Current value		℃			
Advancd functns	Current function			Cylinder boost, Party, Away	None	
Domestic hot water						
Cylinder	Inactive	Active		Active, Inactive	Active	
Target cylinder temperature	35	70	℃	1	60	
Actual cylinder temperature	Current value		℃			
System						
Control strategy	Current value			2-point, analogue	2-point	
Plug adjustment[1]	-5	+5		1	0	
RF connection						
Controller	0	10		1		

* If there is no fault, then the status is **OK**. If there is a fault, **Fault** appears here and you can read the fault message in the "Fault messages" section.

1) Appears only if the value **Analogue** is set for the control type.

Setting level	Values		Unit	Increment, select	Default setting	Setting
	Min.	Max.				
Teach-in	On	Off		On, Off	Off	
Installer level → Change code →						
New code	000	999		1	000	
* If there is no fault, then the status is **OK**. If there is a fault, **Fault** appears here and you can read the fault message in the "Fault messages" section.						
1) Appears only if the value **Analogue** is set for the control type.						

C   Fault messages

If a fault occurs in the heating installation, an error message will appear in the control display instead of the basic display. You can access the basic display again by pressing the **Back** selection button.

You can also read all current error messages under the following menu item:

Menu → Information → System status → Status [Fault]

– If there is a fault, the status "**Not OK**" is displayed. In this case, the right-hand selection button has the function **Display**. Press the right-hand selection button to display a list of fault messages.

i   **Note**
Not all error messages in the list appear automatically on the display.

Display	Meaning	Connected devices	Cause
Heat generator fault 1	Heat generator fault 1	Heat generator 1	See instructions, heat generator 1

Display	Meaning	Connected devices	Cause
0 Communication fault heat generator	Connection fault, heat generator 1	Heat generator 1	Cable defective, plug connection not correct
No RF connection	Fault, RF connection between radio controller and radio receiver unit	Radio controller Radio receiver unit	Installation site unsuitable, controller defective, radio receiver unit defective
Change batteries	Radio controller fault	Radio controller	Batteries in radio controller almost out of power

D Faults

Fault	Cause	Remedy
Display is dark	Unit fault	– The power is switched off/on at the heater – Check the power supply for the heater
No changes in the display via the rotary knob	Unit fault	– The power is switched off/on at the heater
No changes in the display via the selector buttons	Unit fault	– The power is switched off/on at the heater

E   Technical data

E.1   Control

Designation	Value
Operating voltage Umax	4 x 1.5 V (AA)
Rated surge voltage	330 V
Battery service life (alkaline)	≈ 1.5 years
IP rating	IP 20
Protection class	III
Maximum permissible environmental temperature	60 ℃
Transmission frequency	868 MHz
Transmission power	< 10 mW
Range outdoors	> 100 m
Range indoors	≈ 25 m
Pollution degree	2
Mode of operation	Type 1
Height	115 mm
Width	147 mm
Depth	50 mm

E.2 Radio receiver unit

Designation	Value
Operating voltage Umax	24 V
Rated surge voltage	330 V
Power consumption	< 60 mA
IP rating	IP 20
Protection class	III
Maximum permissible environmental temperature	60 ℃
Transmission frequency	868 MHz
Transmission power	< 10 mW
Range outdoors	> 100 m
Range indoors	≈ 25 m
Pollution degree	2
Mode of operation	Type 1
Height	115 mm
Width	147 mm
Depth	50 mm

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