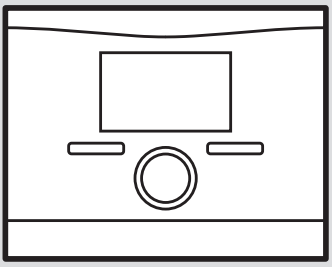
Remote control unit

VR 91



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en Operating and installation instructions

Operating and installation instructions

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1 Safety

1.1 For the end user

1.1.1 Intended use

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

The product enables a zone to be controlled remotely via an eBUS interface.

The following components are required for operation:

– VRC 700

Intended use includes the following:

– observance of the operating instructions included for the product and any other installation components
– compliance with all inspection and maintenance conditions listed in the instructions.

This product can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the product in a safe way and understand the hazards involved. Children must not play with the product. Cleaning and user maintenance work must not be carried out by children unless they are supervised.

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.

1.2 General safety information for the end user

1.2.1 Danger caused by improper operation

Improper operation may present a danger to you and others, and cause material damage.

- ▸ Carefully read the enclosed instructions and all other applicable documents, particularly the "Safety" section and the warnings.
- ▸ Only carry out the activities for which instructions are provided in these operating instructions.

1.2.2 Risk of material damage caused by frost

- ▸ Ensure that the heating installation always remains in operation during freezing conditions and that all rooms are sufficiently heated.

▸ If you cannot ensure the operation, have a competent person drain the heating installation.

1.3 For the competent person

1.3.1 Intended use

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

The product enables a zone to be controlled remotely via an eBUS interface.

The following components are required for operation:

– VRC 700
– 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.

1.4 General safety information for the competent person

1.4.1 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.

1.4.2 Risk of material damage caused by frost

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

1.5 Regulations (directives, laws, standards)

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

2 For the end user

2.1 Notes on the documentation

2.1.1 Observing other applicable documents

► Always observe all operating instructions enclosed with the installation components.

2.1.2 Storing documents

► Store these instructions and all other applicable documents for further use.

2.1.3 Validity of the instructions

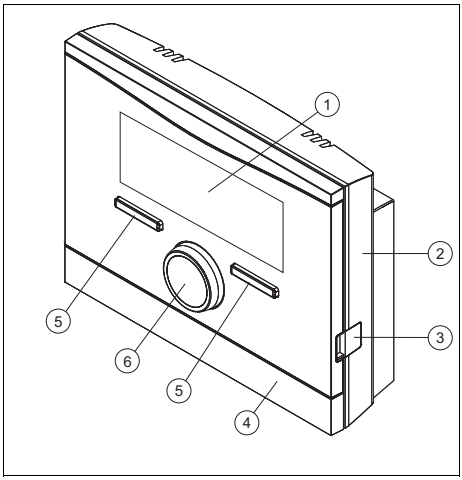
These instructions apply only to:

VR 91 – article number

Great Britain	0020171334

2.2 Product description

2.2.1 Product design



1	Display	4	Wall base cover
2	Wall base	5	Selection button
3	Diagnostics socket	6	Rotary knob

2.2.2 Main function

The product sends data, such as the current room temperature, to the system control. The product receives data from the system control that you can read on the display.

On the product you can, for example, set the operating mode, the time periods or the temperature.

2.2.3 Preventing malfunctions

► Ensure that room air can circulate freely around the system control, and that the system control is not covered by furniture, curtains or other objects.

► Ensure that all thermostatic radiator valves in the room where the system control is fitted are fully open.

2.2.4 Data plate

The data plate is located inside the product and is not accessible from the outside.

2.2.5 Serial number

You can call up the serial number to the display under **Menu** → **Information** → **Serial number**. The 10-digit article number is located in the second line.

2.2.6 CE marking

CE

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

The declaration of conformity can be viewed at the manufacturer's site.

2.3 Operation

You can only operate the remote control unit in combination with the **VRC 700** system control. This means that it is also necessary to read through the operating instructions for the **VRC 700** system control.

The operating instructions for the system control will provide you with

– Information on the operating structure.

– Information on the operating concept with examples.
– A detailed description of the operating and display functions that the remote control unit also has.

Operating modes (→ Page 13)

Operating levels (→ Page 13)

2.4 Maintenance message

If maintenance is required, the text **Maintenance** and the symbol appear in the remote control unit display.

You can read the specific maintenance messages on the system control display and find out which measures you need to take from the instructions for the system control.

2.5 Fault message

If a fault occurs in the heating installation, ⟨!⟩ will appear in the display together with a fault message. The competent person must clear or rectify the fault in the heating installation, otherwise it could cause material damage or make the heating installation malfunction.

► Inform a competent person.

2.6 Troubleshooting

Troubleshooting faults (→ Appendix A.3)

2.7 Care

2.7.1 Caring for the product

► Clean the casing with a damp cloth and a little solvent-free soap.
► Do not use sprays, scouring agents, detergents, solvents or cleaning agents that contain chlorine.

2.8 Decommissioning

2.8.1 Decommissioning the product

If you want to replace or remove the product, you must decommission the heating installation.

► This work should be carried out by a competent person.

2.9 Guarantee and customer service

2.9.1 Guarantee

We only grant a Vaillant manufacturers 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.

2.9.2 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.

3 For the competent person

3.1 Notes on the documentation

3.1.1 Observing other applicable documents

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

3.1.2 Storing documents

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

3.1.3 Validity of the instructions

These instructions apply only to:

VR 91 – article number

Great Britain	0020171334

3.2 Product description

3.2.1 Data plate

The data plate is located on the product's PCB and cannot be accessed from the outside once the product has been mounted on the wall.

The data plate contains the following information:

Information on the data plate	Meaning
Serial number	for identification; 7th to 16th digits = product article number
VR 91	Product designation
V	Rated voltage
mA	Rated current
	Read the instructions

3.2.2 CE marking

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

The declaration of conformity can be viewed at the manufacturer's site.

3.3 Set-up

3.3.1 Checking the scope of delivery

Quantity	Contents
1	Remote control unit
1	Fastening material (2 bolts and 2 wall plugs)
1	Documentation

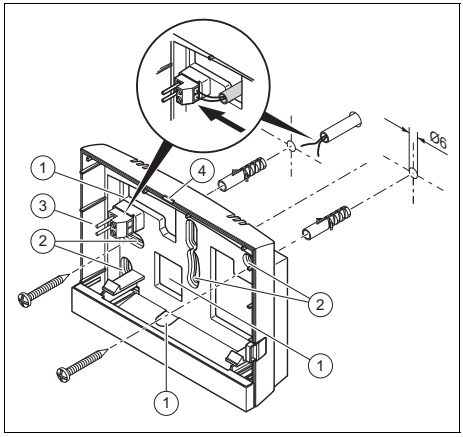
3.3.2 Requirements for lines

► Use standard commercial lines for the wiring.

– Minimum cross-section: ≥ 0.75 mm²
– Maximum line length: ≤ 125 m

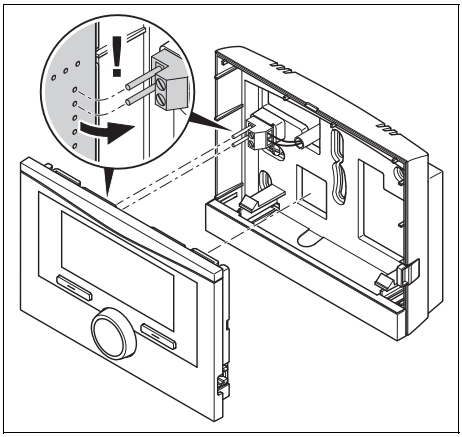
3.4 Installing the remote control unit in a living room

1. Mount the remote control unit on an interior wall of the main living room in a position that ensures accurate measurement of the room temperature.
   – Installation height: 1.5 m



1 Openings for grommet
2 Mounting openings
3 Pin header with terminals for the eBUS line
4 Opening slot

2. Screw in the wall base in accordance with the figure.
3. Connect the eBUS line. (→ Page 9)



4. Carefully push the remote control unit into the wall base.

3.5 Electrical installation

Only qualified electricians may carry out the electrical installation.

3.5.1 Polarity

When connecting the eBUS line, there is no need to pay attention to the polarity. If the connection cables are switched over, communication will not be adversely affected.

3.5.2 Connecting the remote control unit to a heat generator

1. At lengths of 10 m or more, power supply cables and bus lines must be laid separately.
2. When opening the electronics box in the heat generator, proceed as described in the installation instructions for the heat generator.

Condition: The heat generator is not connected to the eBUS via the **VR 32**.

- ► Connect the eBUS line to the eBUS terminals in the wall base of the remote control unit.
- ► Connect the eBUS line to the eBUS terminals in the heat generator.

3.6 Start-up

When you are operating the heating installation for the first time after installing the electrical wiring, the installation assistants for the system components and the remote control unit start automatically.

All settings that you have applied using the installation assistant can be changed again at a later date via the level for the end user and competent persons.

Installation assistant (→ Page 15)

3.6.1 Configuring the settings on the remote control

1. Select the required language in the **Language** function.
2. Enter the address the system control needs in order to communicate with the remote control unit in the **Remote control address** function.

3.6.2 Configuring the settings on the system control

1. If you would also like to use the room temperature sensor in the remote control unit, select the **Temp. mod.** or **Thermost.** setting in the **Room temp. mod.** function.
2. Specify in which zone the remote control unit has been installed.
3. Scroll through the display to the zone in which the remote control unit has been installed.
4. Reduce the setting in this zone to **Yes** in the **Zone activated** function.
5. Assign the address for the remote control unit that should be triggered in the **Zone assignment** function in this zone.

3.6.3 Changing the settings later

All settings that you have made via the installation assistant can be changed again at a later date via the end user or installer level.

Operating levels (→ Page 13)

Installer level (→ Page 16)

3.7 Handing over to the end user

- ▶ Inform the end user of how to handle and operate their product.
- ▶ Provide the end user with all relevant instructions and unit documentation for safe-keeping.
- ▶ Go through the operating instructions with the end user.
- ▶ Answer any questions the end user may have.
- ▶ In particular, draw the end user's attention to the safety warnings that they must follow.
- ▶ Inform the end user that room air must be able to circulate freely around the product, and that it should not be covered by furniture, curtains or other objects.
- ▶ Inform the end user that all the radiator valves in the room where the product is installed must be fully open.

3.8 Operation

You can only operate the remote control unit in combination with the **VRC 700** system control. This means that it is also necessary to read through the operating instructions for the **VRC 700** system control.

The operating instructions for the system control will provide you with

– Information on the operating structure.
– Information on the operating concept with examples.
– A detailed description of the operating and display functions that the remote control unit also has.

Operating modes (→ Page 13)

Operating levels (→ Page 13)

3.9 Resetting to factory setting

You can use this function to reset all the set values that you configured using the remote control installation assistant.

You can access the **Reset to default setting?** function directly by activating the remote control using the rotary knob or one of the selection buttons and then pressing and holding both selection buttons at the same time for at least 10 seconds.

3.10 Operating and display functions

The remote control has an end user level and an installer level.

The setting and read-out options for the competent person can be found via the selection button **Menu** → **Installer level** → **Enter code**.

If you do not know the code, you can clear the code using the **Default setting** function. All the set values will be lost if you do this.

Operating modes (→ Page 13)

Operating levels (→ Page 13)

Installer level (→ Page 16)

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

3.10.1 Reading the fault status

Menu → **Installer level** → **System configuration** [**System** ----] → **Fault status**

– This function allows you to read the status of the heating installation. If there is no fault present, the **No fault** message appears. If a there is a fault, then **Fault list** appears as a status. If you press the right-hand selection button, the fault messages (→ Page 11) will be displayed.

3.10.2 Reading the software version

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

– You can use this function to read the software versions of the remote control unit.

3.10.3 Setting the address for the remote control unit

Menu → Installer level → System configuration [**System** ----] → **Remote control address**

– You can use this function to set the address for the remote control unit.

Every remote control unit has a unique address, starting with Address 1. Increase the number in the address consecutively for each additional remote control unit used.

3.11 Troubleshooting

3.11.1 Fault messages

If a fault occurs in the heating installation, ⚠ will appear in the display together with a fault message.

Troubleshooting faults (→ Appendix B.3)

Troubleshooting errors (→ Appendix B.4)

3.12 Decommissioning

3.12.1 Decommissioning the heating installation

► Decommission all system components of the heating installation, as described in the installation instructions for the individual system components.

3.12.2 Removing the product from the wall

1. Insert the screwdriver into the slot on the wall base.
2. Lever the product off the wall base.
3. Disconnect the eBUS line from the pin header on the product and from the terminal block on the heat generator.
4. Unscrew the wall-mounting base from the wall.

3.13 Recycling and disposal

Packaging

► Dispose of the packaging correctly.

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.

3.14 Customer service

Customer service addresses can be found in the installation instructions for the system control.

3.15 Technical data

3.15.1 Remote control unit

Rated voltage	9 to 24 V ⎓
Rated surge voltage	330 V
Pollution degree	2
Rated current	< 50 mA
Supply line cross-section	0.75 to 1.5 mm²
IP rating	IP 20
Protection class	III
Temperature for the ball pressure test	75 °C
Maximum permitted environmental temperature	0 to 60 °C
Current room air humidity	20 to 95 %
Mode of operation	Type 1
Height	115 mm
Width	147 mm
Depth	50 mm

Appendix
A For the end user

A.1 Operating modes

Operating mode	Setting	Default setting
Operating mode		
Heating	**off**, **Auto**, **Day**, **Set-back**	**Auto**
Cooling	**off**, **Auto**, **Day**	**Auto**
Advanced functions		
1 day at home	**active**	–
1 day away from home	**active**	–
Ventilation boost	**active**	–
Party function	**active**	–

A.2 Operating levels

A detailed description of the functions can be found in the operating instructions for the system control.

Setting level	Values		Unit	Increment, select	Default setting
	Min.	Max.			
Information → System status →					
System ----					
Fault status	Current value			**No fault**, **Fault list**	
Curr. room air hum.	Current value		%		
Current dew point	Current value		°C		
ZONE1 ----					
Day temp. heating	Current value		°C	0.5	20
	5	30			
Day temp. cooling	Current value		°C	0.5	24
	15	30			
Set-back temp. heat.	Current value		°C	0.5	15
	5	30			
Room temperature	Current value		°C		
Information → Contact details →					
Installer, **Phone number**	Current values				
Information → Serial number →					
Unit number	Permanent value				
Desired temperature → ZONE1 →					
Day temp. heating	5	30	°C	0.5	20
Day temp. cooling	15	30	°C	0.5	24
Set-back temp. heat.	5	30	°C	0.5	15

Setting level	Values		Unit	Increment, select	Default setting
	Min.	Max.			
Time programmes → ZONE1: Heating →					
Individual days and blocks				**Monday**, **Tuesday**, **Wednesday**, **Thursday**, **Friday**, **Saturday**, **Sunday** and **Monday - Friday**, **Saturday - Sunday**, **Monday - Sunday**	Mo - Fr: 06:00-22:00 Sa: 07:30-23:30 Su: 07:30-22:00
Period 1: Start – End **Period 2:** Start – End **Period 3:** Start – End	00:00	24:00	h:min	00:10	
Time programmes → ZONE1: Cooling →					
Individual days and blocks				**Monday**, **Tuesday**, **Wednesday**, **Thursday**, **Friday**, **Saturday**, **Sunday** and **Monday - Friday**, **Saturday - Sunday**, **Monday - Sunday**	Mo - Fr: 06:00-22:00 Sa: 07:30-23:30 Su: 07:30-22:00
Period 1: Start – End **Period 2:** Start – End **Period 3:** Start – End	00:00	24:00	h:min	00:10	
Days away from home scheduling →					
Start	01.01.01	31.12.99	dd.mm.yy	Day.Month.Year	01.01.14
End	01.01.01	31.12.99	dd.mm.yy	Day.Month.Year	01.01.14
Temperature	5	30	℃	1	15
Days at home scheduling →					
Start	01.01.01	31.12.99	dd.mm.yy	Day.Month.Year	01.01.14
End	01.01.01	31.12.99	dd.mm.yy	Day.Month.Year	01.01.14
Basic settings → Language →					
				Selectable language	**English**
Basic settings → Display →					
Display contrast	1	15		1	9
Button lock				**off**, **On**	**Off**
Preferred display				**Heating**, **Cooling**	**Heating**
Basic settings → Offset →					
Room temperature	-3.0	3.0	K	0.5	0.0

Setting level	Values		Unit	Increment, select	Default setting
	Min.	Max.			
Basic settings → Enter zone name →					
ZONE1	1	10		A to Z, 0 to 9, space	**ZONE1**
Installer level →					
Enter code	000	999		1	000

A.3 Troubleshooting

Symptom	Possible cause	Measure
Display remains dark	Software error	1. Switch off the mains switch on all heat generators for approx. 1 minute and then switch them on again. 2. If the fault persists, inform the competent person.
No changes in the display when the rotary knob is turned	Software error	1. Switch off the mains switch on all heat generators for approx. 1 minute and then switch them on again. 2. If the fault persists, inform the competent person.
No changes in the display when the selection buttons are pressed	Software error	1. Switch off the mains switch on all heat generators for approx. 1 minute and then switch them on again. 2. If the fault persists, inform the competent person.
Lines appear instead of set and read-out values	Software error	1. Switch off the mains switch on all heat generators for approx. 1 minute and then switch them on again. 2. If the fault persists, inform the competent person.

B For the competent person

B.1 Installation assistant

Setting	Values		Increment, select	Default setting
	Min.	Max.		
Language			Languages available for selection	**English**
Remote control address	1	8	1	1

B.2 Installer level

Setting level	Values		Increment, select	Default setting
	Min.	Max.		
Installer level →				
Enter code	000	999	1	000
Installer level → System configuration →				
System ----				
Fault status	Current value*			
Control modules	Display		Software version	
Remote control address	1	8	1	1

* If no fault is present, the status is **No fault**. If there is a fault, **Fault list** appears and you can read the fault message in the "Fault messages" section.

B.3 Remedy

Code/meaning	Possible cause	Measure
Room temp. sensor fault	Room temperature sensor defective	▶ Replace the remote control.
No zone assignment for the remote control or the controller	No remote control address	▶ Set the correct address on the remote control unit in the **Remote control address** function.
	No zone assignment	▶ Set the correct address for the remote control unit on the system control in the **Zone assignment** function.
System fault	Fault in the heating installation	▶ Assess the fault messages in the system control.

B.4 Faults

Symptom	Possible cause	Measure
Display remains dark	Software error	▶ Switch the mains switch on the heat generator that feeds the control off and back on again.
	No power supply on the heat generator	▶ Re-establish the power supply to the heat generator; this is the same power supply that feeds the control.
	The product is defective	▶ Replace the product.
No changes in the display when the rotary knob is turned	Software error	▶ Switch the mains switch on the heat generator that feeds the control off and back on again.
	The product is defective	▶ Replace the product.
No changes in the display when the selection buttons are pressed	Software error	▶ Switch the mains switch on the heat generator that feeds the control off and back on again.
	The product is defective	▶ Replace the product.

Symptom	Possible cause	Measure
Lines appear instead of set and read-out values	Communication fault	1. Check the plug connection. 2. Replace the cable.

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