# Installation instructions

**for contractors**

**Vitotrol 100**
**Type UTDB-RF**

Room temperature controller with digital time switch and wireless receiver
Part no: 7426 466, 7426 539

# VITOTROL 100


5418 852 GB 10/2009

## Safety instructions

Please follow these safety instructions closely to prevent accidents and material losses.

### Safety instructions explained

***Note***
*Details identified by the word "Note" contain additional information.*

### Target group

These instructions are exclusively designed for qualified personnel.
- Work on gas appliances must only be carried out by a qualified gas fitter.
- Work on electrical equipment must only be carried out by a qualified electrician.

### Regulations

Observe the following when working on this system
- all legal instructions regarding the prevention of accidents,
- all legal instructions regarding environmental protection,
- the Code of Practice of relevant trade associations,
- all current safety regulations as defined by DIN, EN, DVGW, TRGI, TRF, VDE and all locally applicable standards.

### Working on the system

- Isolate the system from the power supply and check that it is no longer 'live', e.g. by removing a separate fuse or by means of a mains isolator.
- Safeguard the system against unauthorised reconnection.
- When using gas as fuel, also close the main gas shut-off valve and safeguard against unauthorised reopening.

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# Index



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## Before installation

### Function

The Vitotrol UTDB-RF controls the room temperature via the wireless receiver, by starting and stopping a heating circuit pump, for example.

### Installation location

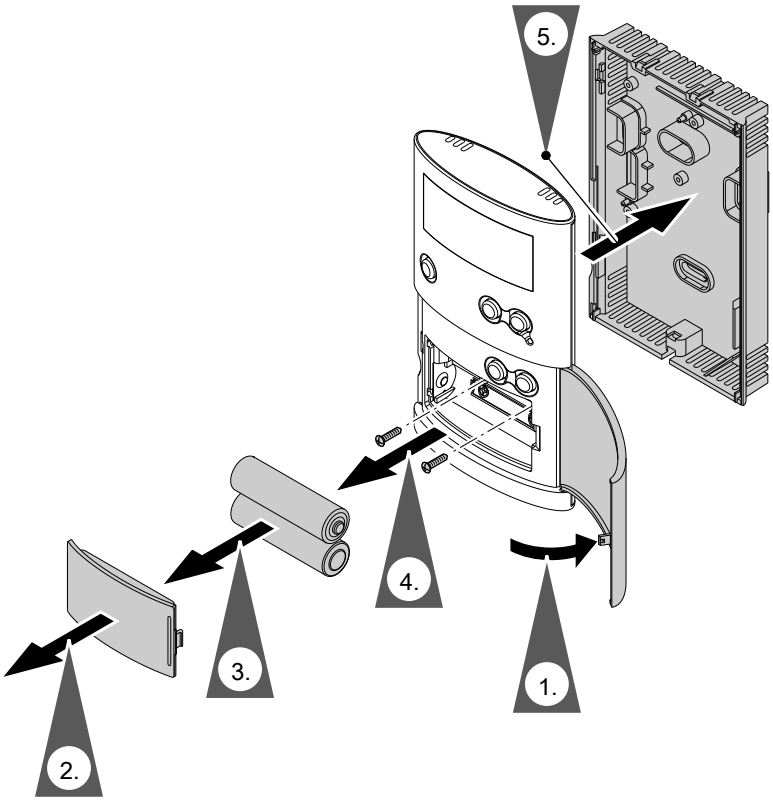
Vitotrol 100
- In the main living room on an internal wall opposite radiators.
- Approx. 1.5 m from the floor.
- Not near windows or doors.
- Not on shelves or in recesses.
- Not near heat sources (radiators, direct sunlight, fireplace, TV set, etc.).
- Wireless reception (good communication with the wireless receiver) must be possible (see page 17).

Do not install further controllers in this main living room. Open any thermostatic radiator valves fully.

Wireless receiver
- Immediately next to the component to be switched (heat source, heating circuit pump).
- A power supply must be available.
- Wireless reception must be possible (see page 17).
  (Subject to the material used and the thickness of walls and ceilings, the range may be 10 to 30 m).

  ***Note***
  *Conducting metallic materials have a strong negative effect on reception.*

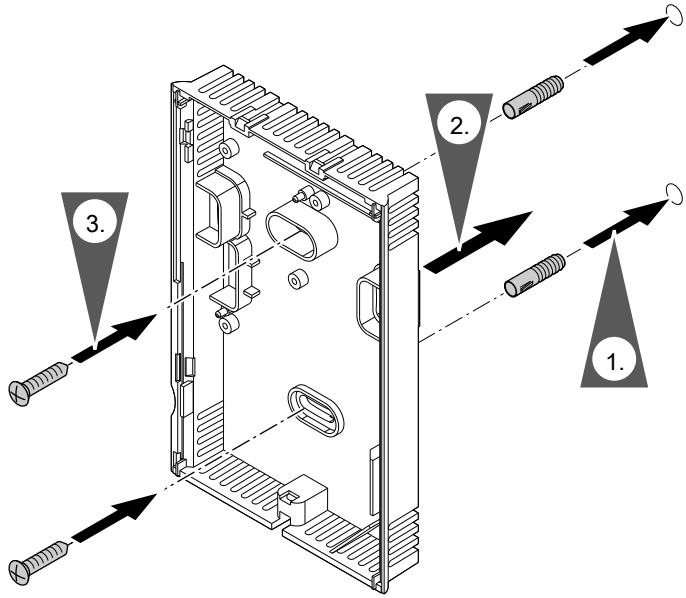
## Opening the Vitotrol 100




## Fitting the wall mounting base

Power is supplied by batteries (see chapter "Specification").
Always check reception prior to fitting to the wall (see page 17).

## Fitting the wall mounting base (cont.)




## Fitting the wireless receiver

Always check reception prior to installation (see page 17).

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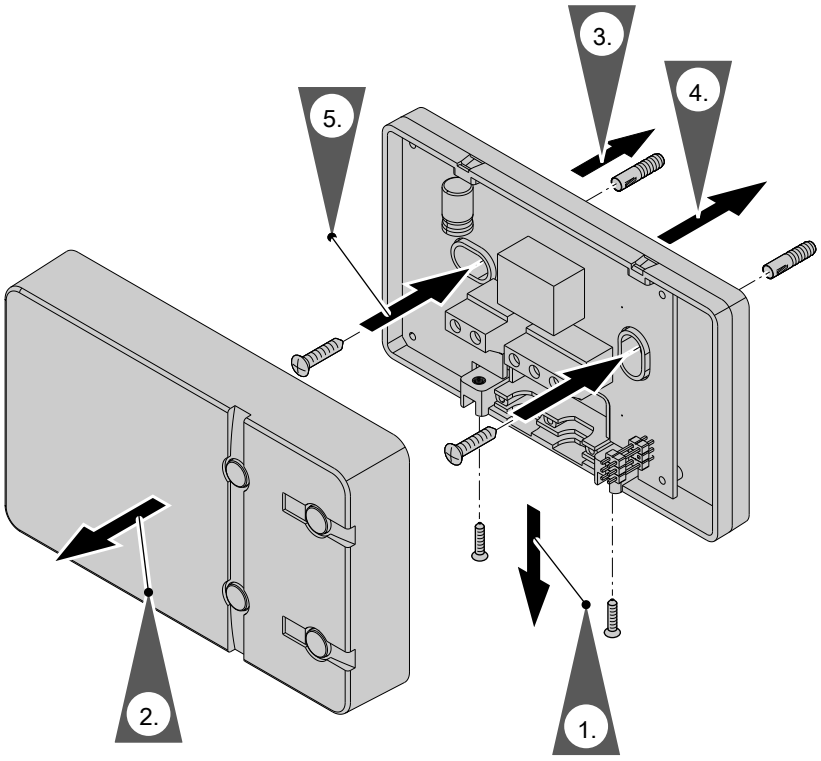
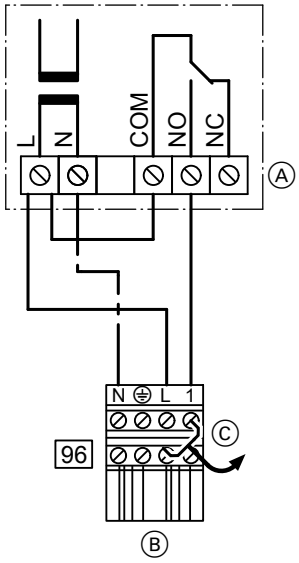
## Fitting the wireless receiver (cont.)



## Electrical connection to the control unit

### Connection to the control unit with plug 96




Insert the jumper between terminals L and COM in the wireless receiver.

Recommended connecting cable
- Cable with a cross-section of 1.5 mm² for 230 V~

***Note***
*Leave terminal NC in the wireless receiver free.*

Ⓐ Terminals inside the wireless receiver
Ⓑ Plug 96 to the control unit
Ⓒ Remove the jumper when making this connection

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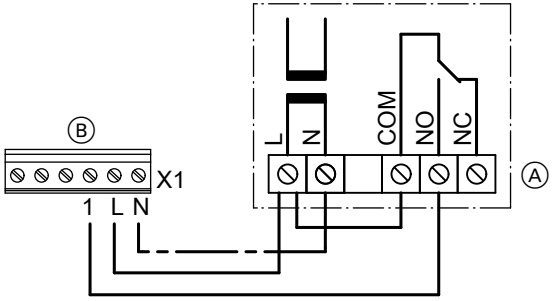
## Connection to the Vitodens 100-W

### Connection to terminals X1



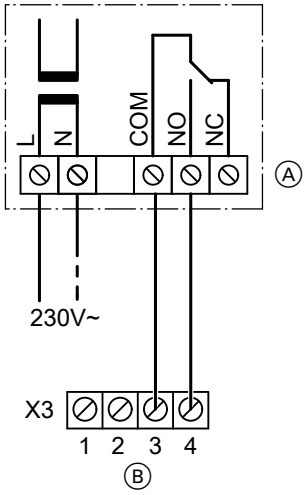

Ⓐ Terminals inside the wireless receiver
Ⓑ Terminals "X1" on the control unit

Recommended connecting cable
- Cable with a cross-section of 1.5 mm² for 230 V~

***Note***
*Leave terminal NC in the wireless receiver free.*

## Electrical connection to the control unit (cont.)

**Connection to terminals X3**




Ⓐ Terminals inside the wireless receiver
Ⓑ Terminals "X3" on the control unit

230 V cables and low voltage cables must be routed separately.

Recommended connecting cable to the control unit
- 2-core cable with a cross-section of 0.75 mm² for low voltage

***Note***
*Leave terminal NC in the wireless receiver free.*

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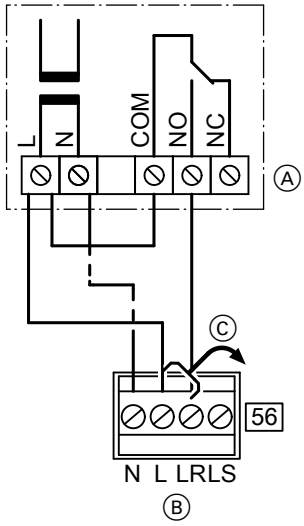
## Electrical connection to the control unit (cont.)

### Connection to the control unit with plug 56




Insert the jumper between terminals L and COM in the wireless receiver.

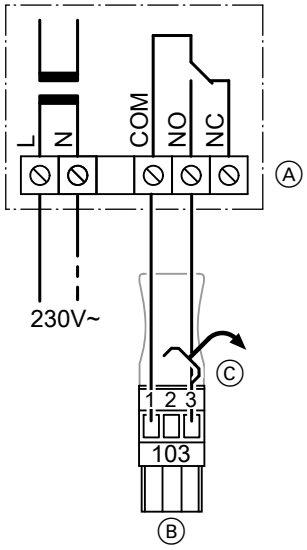
Recommended connecting cable
- Cable with a cross-section of 1.5 mm² for 230 V~

***Note***
*Leave terminal NC in the wireless receiver free.*

Ⓐ Terminals inside the wireless receiver
Ⓑ Plug 56 to the control unit
Ⓒ Remove the jumper when making this connection

## Electrical connection to the control unit (cont.)

### Connection to the control unit with plug 103




Ⓐ Terminals inside the wireless receiver
Ⓑ Plug 103 to the control unit

1. Remove jumper Ⓒ between terminals 1 and 3 in plug 103.

2. 230 V cables and low voltage cables must be routed separately.

   Recommended connecting cable to the control unit
   - 2-core cable with a cross-section of 0.75 mm² for low voltage

   ***Note***
   *Leave terminal NC in the wireless receiver free.*

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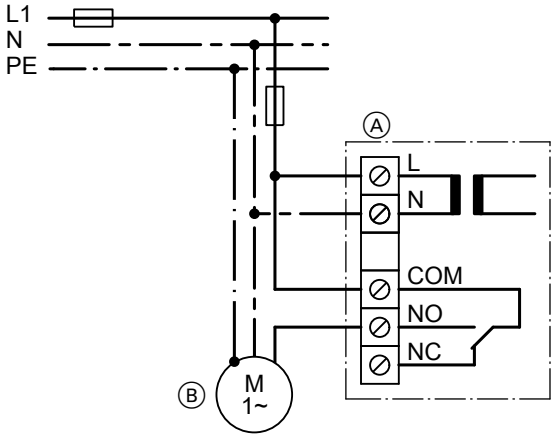
## Electrical connection to the control unit (cont.)

### General connection



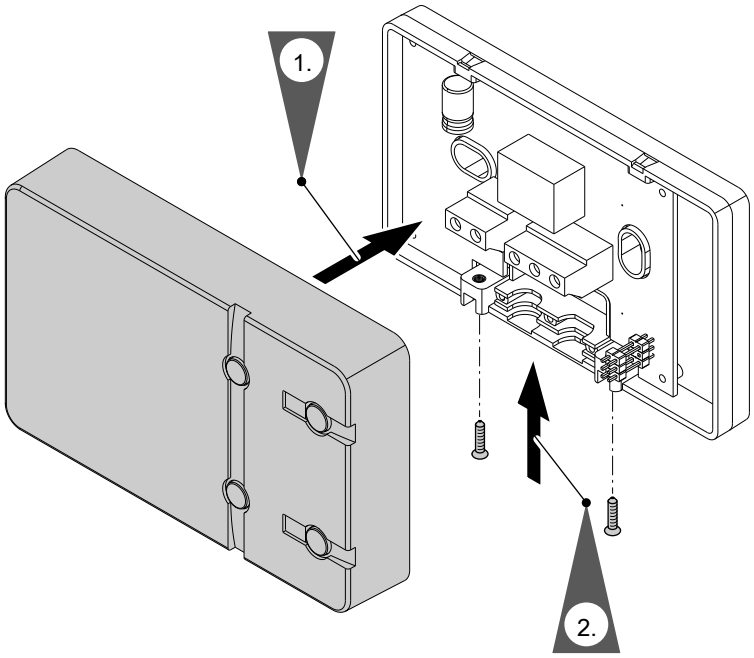

Ⓐ Terminals inside the wireless receiver

Ⓑ Components to be switched, e.g. heating circuit pump

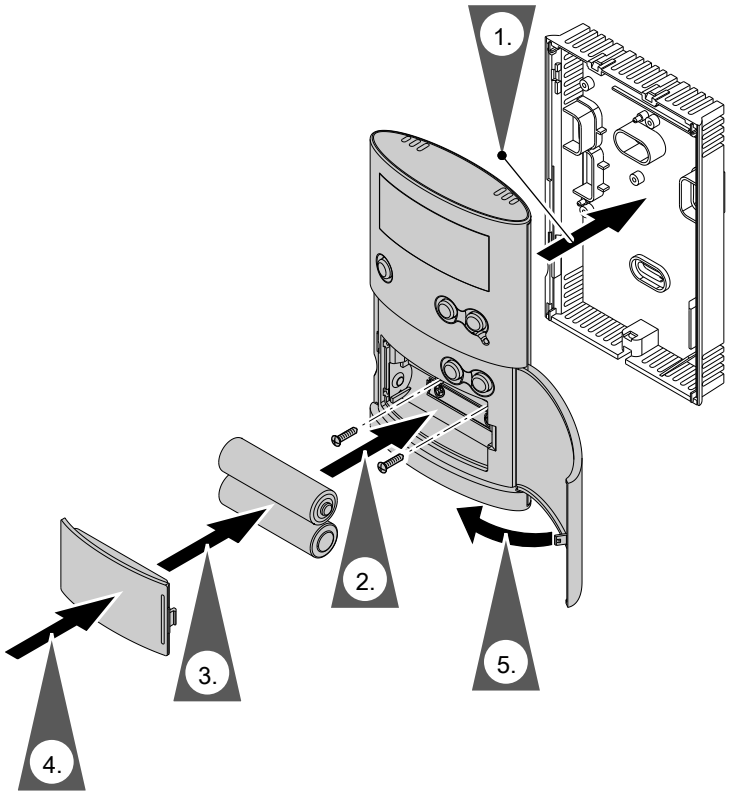
Recommended connecting cable

- Cable with a cross-section of 1.5 mm² for 230 V~

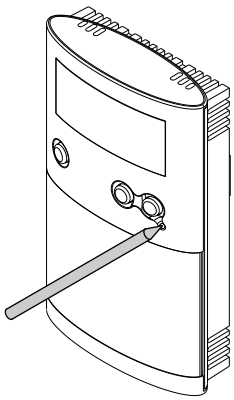
## Assembling the wireless receiver



## Assembling the Vitotrol 100



## Commissioning the Vitotrol 100



1. Open flap.
2. Use a pointed object to press reset.
3. Select language with ▼/▲.
4. Confirm with **OK**.
5. Set current time and date with ▼/▲.
6. Confirm with **OK**.

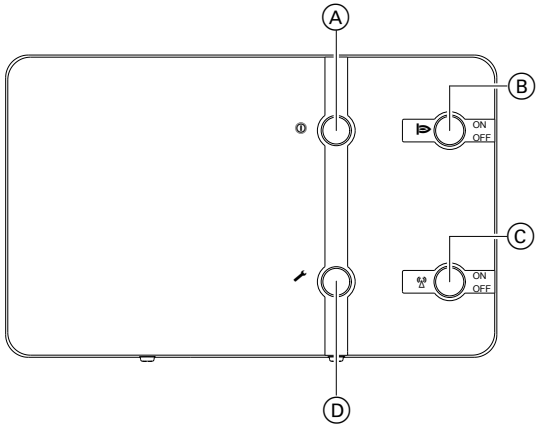
## Commissioning the wireless receiver

Several Vitotrol 100 appliances with wireless receiver can be installed in one building. Each pair is matched in the factory. If several Vitotrol 100 appliances with wireless receiver are fitted in one building complex, never interchange a Vitotrol 100 and/or wireless receiver, as every Vitotrol 100 is matched to the wireless receiver allocated to it.

***Note***

*If display flashes, the wireless receiver has not recognised the signal from the Vitotrol 100. If this is the case, change the address code (see page 18).*

### Testing the strength of reception




Ⓐ ON indicator
Ⓑ Indicator/pushbutton for switching contact
Ⓒ Address recognition indicator/push-button for service function
Ⓓ Service function indicator

1. Press and hold on the wireless receiver for approx. 5 s until flashes.
2. Open the flap on the Vitotrol 100.

   Vitotrol 100 operating instructions
3. Press twice.
4. Select **"Settings"** with ▼/▲.
5. Confirm with **OK**.
6. Select **"Service"** with ▼/▲.

## Commissioning the wireless receiver (cont.)

7. Press **OK** four times to confirm.
   **"Send data"** appears on the display.
   The transfer takes 30 s.
   If the signal strength is sufficient, LED shows green. If the signal strength is insufficient, LED shows red.

### Changing the address code

1. Press and hold on the wireless receiver for approx. 10 s until flashes.
2. Open the flap on the Vitotrol 100.
3. Press twice.
4. Select **"Settings"** with ▼/▲.
5. Confirm with **OK**.
6. Select **"Service"** with ▼/▲.
7. Press **OK** three times to confirm.
8. Select **"Address code"** with ▼/▲.
9. Confirm with **OK**.
   **"Send data"** appears on the display.
   The transfer takes 30 s. flashes during the transfer.
   If the receiver recognises the address code, and go out. If the address code is not recognised, repeat the procedure.

### Checking the zero volt contact (switching output)

Press on the wireless receiver.
- LED lights up: Output "ON"
- LED off: Output "OFF"

This function ends automatically at the next changeover or when the signal from the Vitotrol 100 is resent (every 20 min).

## Specification

**Vitotrol 100**

| | |
|---|---|
| Rated voltage | 3 V–<br>2 batteries LR 6/AA |
| Ambient temperature | |
| ■ during operation | 0 to 40 °C |
| ■ during storage and transport | -25 to 65 °C |
| IP rating | IP 20 to EN 60529; |

**Wireless receiver**

| | |
|---|---|
| Reception frequency | 868 MHz |
| Rated voltage | 230 V~ +/–10% 50 Hz |
| Rated breaking capacity of the zero volt contact | 6(1) A, 230 V~ |
| Ambient temperature | 0 to 40 °C |
| IP rating | IP 20 to EN 60529; |
| Protection class | II to EN 60730-1 |
| Terminals suitable for the following cables | |
| ■ solid, single core cables | up to 2.5 mm² |
| ■ flexible cables | up to 2.5 mm² |

- With each heat demand and draw-off as well as cyclically every 20 min, the clock thermostat transmits its data.
- All switching data is saved in case of power failure.
  No heat demand is executed during power failure.

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5418 852 GB Subject to technical modifications.