

B-Tronic RoomTemperatureControl RTC3100B

en

Assembly and Operating Instructions

Heating actuator

Important information for:

- Fitters / • Electricians / • Users

Please forward accordingly!

These instructions must be kept safe for future reference.



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General

This heating actuator is a high-quality product with the following performance characteristics:

- Optimised for room temperature applications
- Up to 7 switching times can be set for each day via the CentralControl
- Window function
- Limescale protection function
- Frost protection function
- Easy adjustment via the operator unit
- Several freely selectable preferred temperatures can be set

Please observe these Assembly and Operating Instructions when installing and setting up the equipment.

Explanation of pictograms

	CAUTION	CAUTION indicates a hazardous situation which, if not avoided, could result in injury.
	ATTENTION	ATTENTION indicates measures that must be taken to avoid damage to property.
		Denotes user tips and other useful information.

Items included

Quantity	Description
1	Heating actuator RTC3100B
2	Battery LR6 (AA)
3	Adapter
1	Screw M4 x 16 mm
1	Nut M4
1	Assembly and Operating Instructions

Warranty

Structural modifications and incorrect installation which are not in accordance with these and our other instructions can result in serious injuries, e.g., crushing of limbs. Therefore, structural modifications may only be carried out with our prior approval and strictly in accordance with our instructions, particularly the information contained in these Assembly and Operating Instructions.

Any further processing of the products which does not comply with their intended use is not permitted.

The end product manufacturer and fitter have to ensure that all the relevant current statutory, official and, in particular, EMC regulations are adhered to during utilisation of our products, especially with regard to end product manufacture, installation and customer advice.

Safety instructions

General information

- Please keep the instruction manual safe!
- Only use in dry rooms.
- Keep children away from control units.
- Observe all pertinent country-specific regulations.

- Dispose of exhausted batteries properly. Only replace batteries with the identical type (see Technical data).
- Do not use rechargeable batteries.



Caution

- **Device contains small parts that can be swallowed.**

Attention

- **Ensure that the batteries supply sufficient power to guarantee frost protection.**

Intended use

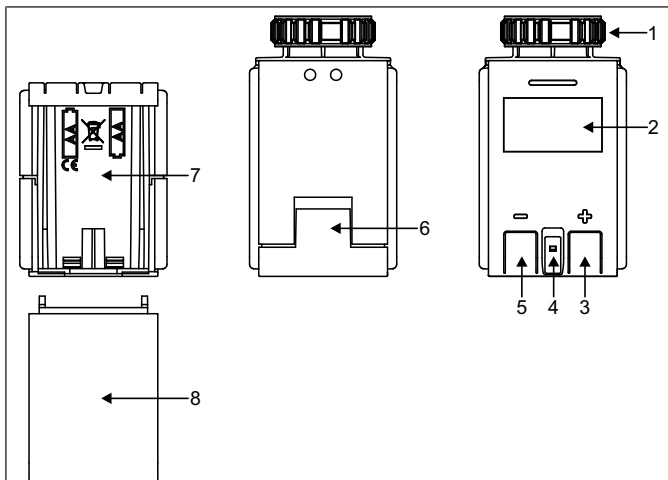
The heating actuator described by the present instructions must only be used for individual room control by means of radiator or underfloor heating in closed rooms. Only use a CentralControl or a compatible KNX media coupler to control the heating actuator.

- Please note that radio-controlled systems may not be used in areas with a high risk of interference (e.g., hospitals, airports).
- The remote control is intended solely for use with equipment and systems in which malfunctions in the hand-held transmitter or receiver would not pose any risk to persons, animals or property, or which contain safety devices to eliminate such risks.
- The operator is not protected from interference from other telecommunications systems and terminal equipment (e.g., even from radio-controlled systems which are properly operated in the same frequency range).
- Only connect radio receivers to devices and systems approved by the manufacturer.



- **Radio-controlled systems transmitting on the same frequency may cause reception interference.**
- **Note that the range of the radio signal is limited by legislation as well as by design.**

Explanation of displays and buttons



1. Knurled nut

5. "-" button

2. Display

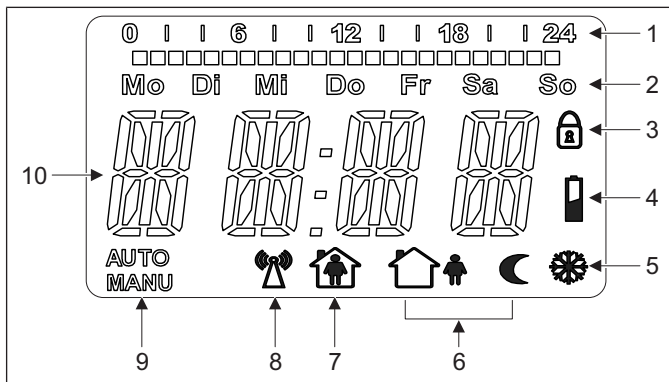
6. Battery compartment cover lock

3. "+" button

7. Battery compartment

4. Room temperature sensor

8. Battery compartment cover



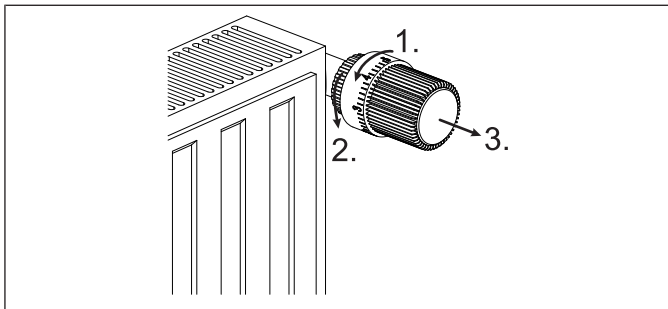
1. Programmed heating phases	6. Eco temperature
2. Day of the week	7. Comfort temperature
3. On-site operation disabled	8. Radio connection
4. Battery status Battery change required (symbol flashes)	9. Automatic or manual mode active
5. Frost protection	10. Status and temperature display

Assembly

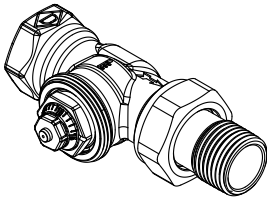
Assembly can be performed without difficulty on the most common valve bases with a thread size of M30 x 1.5 mm; no dirt and water stains, as the heating water circuit is not interrupted.

Removing the old radiator thermostat

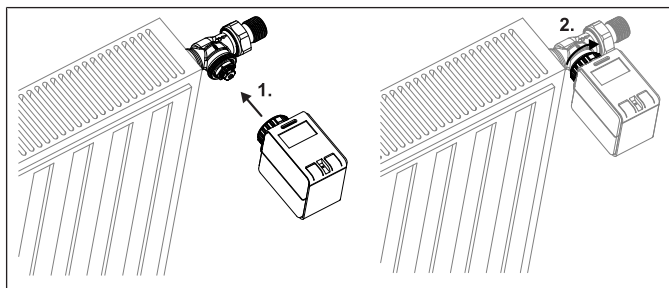
1. Turn the old thermostat head until it is fully open.
2. Now undo the fastening.
3. Finally, pull the thermostat off the valve.



Assembly without adapter

View	Use	Adapter
	Heimeier, Junkers Landys +Gyr, MNG, Honeywell-Braukmann Thread size from M30x1.5	No adapter required

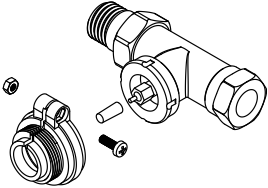
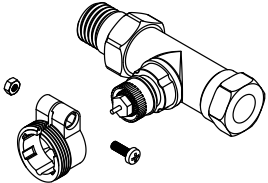
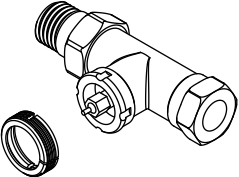
1. Insert the batteries.
2. Wait until the message "LINK" appears on the display for the installation standby state, or if "OPEN" appears, press the "+" or "-" button until the message "LINK" appears on the display. The control unit is now in the program standby state for 15 minutes. For subsequent actions, please refer to the corresponding operating instructions for the device to be programmed.
3. After linking successfully, the message "OK" appears on the display, then changes to "OPEN".
4. Now place the heating actuator on the valve and firmly tighten the knurled nut (approx. 10 Nm).
5. Now press the "+" and "-" buttons for 5 seconds to allow the heating actuator to re-adapt to the radiator valve. "ADJ" appears on the display.



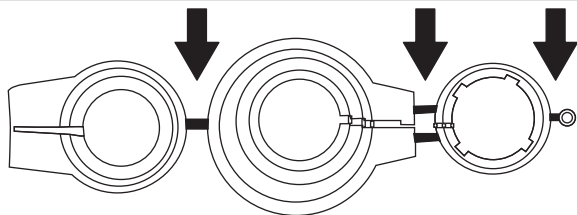
Assembly with the adapter supplied



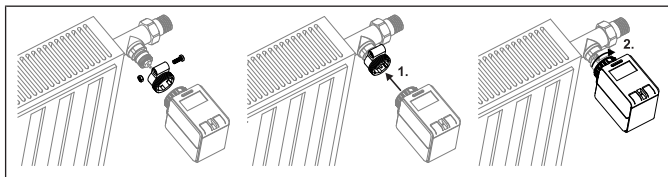
During installation, make sure that the position of the pins on the inside of the adapter coincides with the notches on the Danfoss valve.

View	Use	Adapter
	Danfoss RAV (pin supplied must be inserted into the valve tappet)	Included
	Danfoss RA	Included
	Danfoss RAVL	Included

Remove the connectors with black markings completely before mounting the required adapter.



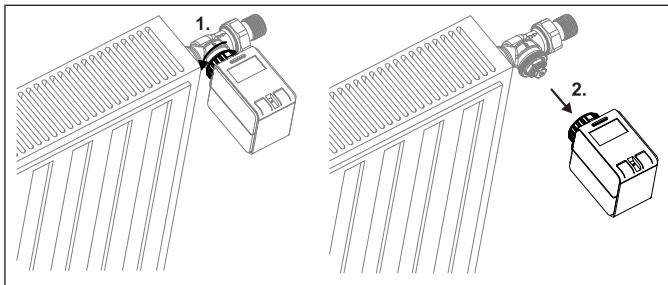
1. Push the appropriate adapter onto the valve and turn it until it audibly engages. Depending on the adapter, it must be secured with the screw and nut supplied.
2. Insert the batteries.
3. Wait until the message "LINK" appears on the display for the installation standby state, or if "OPEN" appears, press the "+" or "-" button until the message "LINK" appears on the display. The control unit is now in the program standby state for 15 minutes. For subsequent actions, please refer to the corresponding operating instructions for the device to be programmed.
4. After linking successfully, the message "OK" appears on the display, then changes to "OPEN".
5. Now place the heating actuator on the valve and firmly tighten the knurled nut.
6. Now press the "+" and "-" buttons for 5 seconds to allow the heating actuator to re-adapt to the radiator valve. "ADJ" appears on the display.



Waking up the device

To wake up the device, press the "+" or "-" button until the display switches on automatically. The current mode appears on the display and changes to the setpoint temperature, or COLD or WINDOW if active.

Disassembly



1. To wake up the device, press the "+" or "-" button until the display switches on automatically.
2. Press the "+" and "-" buttons simultaneously until the message "LINK" appears on the display for the program standby state. When the "+" or "-" button is pressed again, the message "OPEN" appears on the display for the installation standby state. Wait until the installation run is complete.
3. Now undo the knurled nut and pull the heating actuator off the adapter/valve.

Cancelling the installation standby state

Press the buttons "+" and "-" for 5 seconds.

AUTO/MANUAL changeover



The heating plan transferred by the CentralControl is executed in "AUTO" mode. The heating plan transferred by the CentralControl is not executed and displayed in "MANUAL" mode.

To wake up the device, press the "+" or "-" button until the display switches on automatically.

Press the "+" button until the changeover has been implemented on the display.

Manual operation

To wake up the device, press the "+" or "-" button until the display switches on automatically.

You can increase or reduce the temperature manually (in 0.5°C increments respectively) using the "+" or "-" button.

Tap the "+" or "-" button twice to change the setpoint temperature directly (schedule-independent) to the Comfort or Eco temperature.

To change the mode from "AUTO" to "MANU" or from "MANU" to "AUTO", tap the "+" button for longer.

If "AUTO" flashes in the display, the temperature has been changed manually. This setting is only applied until the next switching time and then reverts to the preset value.

Establishing the program/clear standby state

1. To wake up the device, press the "+" or "-" button until the display switches on automatically.
2. Press the "+" and "-" buttons simultaneously until the message "LINK" appears on the display for the program standby state. When the "+" or "-" button is pressed again, the message "UN-LINK" appears on the display for the clear standby state.
3. The control unit is now in the program/clear standby state for 3 minutes. For subsequent actions, please refer to the corresponding operating instructions for the device to be programmed.

For information on configuring the heating actuator using the CentralControl, refer to our homepage:

<https://www.becker-antriebe.de/produktuebersicht/hausautomatisierung-centralcontrol.html>

Cancelling the program/clear standby state

Press the "+" and "-" buttons for 5 seconds.



If the heating actuator is at the limit of the radio range, detach the heating actuator and put it into the program/clear standby state within close range of the CentralControl. You should then test the heating actuator locally using the CentralControl to make sure it is working.

There may be a delay of up to 90 seconds before the settings from the CentralControl arrive at the heating actuator.

Window function

If you open a window and the temperature drops significantly as a result, the heating actuator closes the valve for 10 minutes to save energy. The message "WINDOW" appears on the display. You cannot make any settings during this time.

You can cancel the window function by pressing the "+" button for two seconds.

Limescale protection function

To prevent calcification of the radiator valves, the heating actuator always runs the limescale protection function on Saturdays at 12 o'clock.

Frost protection function

If the temperature falls below 4°C, the heating actuator opens the valve until a temperature of 4°C is maintained. This prevents freezing of the heating appliance.

Switching battery economy mode on/off

To wake up the device, press the "+" or "-" button until the display switches on automatically.


Switching on

Press the "-" button until the message "COLD" appears on the display.

Switching off

Press the "-" button until the temperature is indicated on the display.

On-site operation disabled

You can only disable and re-enable the heating actuator via the control unit. For the setting, please refer to the operating instructions for the operator unit. If on-site operation is disabled, this is indicated by the  symbol in the display. This can only be enabled automatically if the operator unit has not communicated with the heating actuator for at least 1 hour.

Info

In Info mode, information is provided in the following order:

Day – Time – Software version – KNX software version – Battery voltage

Example:

DI – 13H29 – ST 1-13 – KNX 2-02 – BATT 3-23V

You can access "INFO" mode as follows:

1. To wake up the device, press the "+" or "-" button until the display switches on automatically.
2. Press the "+" and "-" buttons simultaneously until the message "LINK" appears on the display for the program standby state.
3. Press the "+" or "-" button until the message "INFO" appears on the display.

The "INFO" mode can be cancelled by changing to a different mode by briefly pressing the "+" or "-" button. If no button is pressed, the device attempts to re-adapt itself after 3 minutes and then reverts to the operating status.

Restoring to factory settings



Before resetting the device to factory settings, you must clear it in all operator units.

1. Remove all batteries (see chapter Changing batteries [▶ 17]) and reinsert them shortly afterwards, then wait until the message "LINK" or "OPEN" appears on the display.
2. Press and hold the "+" and "-" buttons simultaneously until the message "ADJ" appears on the display. The heating actuator adapts itself and changes to normal mode.
3. Press and hold the "+" and "-" buttons simultaneously until the message "OPEN" or "LINK" appears on the display and the control unit has counted down from 10 to 0.
4. "----" now appears on the display.
5. You can now release the "+" and "-" buttons.
6. The factory setting for the control unit has now been restored.

Configuration with the CentralControl

For information on configuring the heating actuator using the CentralControl, refer to our homepage:

<https://www.becker-antriebe.de/produktuebersicht/hausautomatisierung-centralcontrol.html>

Changing batteries

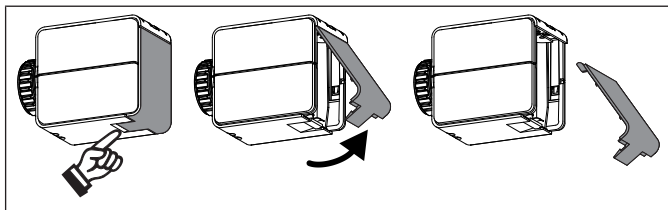
Attention

Do not use rechargeable batteries.

Do not use used and new batteries together.



You will find the appropriate battery type in the "Technical data" chapter.



1. Open the battery compartment.
2. Take out the batteries.
3. Insert the new batteries correctly.
4. Close the battery compartment.
5. "OPEN" appears on the display.
6. Now press the "+" and "-" buttons to allow the heating actuator to re-adapt to the radiator valve. "ADJ" appears on the display.

The date and time is updated automatically via the operator unit.

The saved values are retained.

Cleaning

Only clean the device with a suitable cloth. Do not use aggressive cleaning agents that may damage the surface.

Technical data

Rated voltage	3 V DC
Battery type	LR 6 (AA)
Degree of protection	IP 20
Permissible ambient temperature	0°C to +50°C
Maximum emitted transmission output	≤ 25 mW
Radio frequency	868.3 MHz
Max. actuating force	120N
Max. media temperature	100°C
Max. valve lift	4.5 mm
Actuating time	Approx. 3 s/mm
Dimensions (WxHxD)	65 x 65 x 48 mm
Wiring	M30 x 1.5

The maximum transmitter range on and in the building is up to 25 m, and up to 350 m in the open.

What to do if...?

Problem	Solution
The heating actuator does not open or close the valve automatically.	Bring the operator unit within range of the heating actuator.
	Insert batteries correctly or insert new batteries.
Nothing appears on the display.	Briefly press any button.
	Insert batteries correctly or insert new batteries.
The heating actuator is not controlling the temperature as required.	Check the setting at the operator unit.
	Tighten the heating actuator hand-tight.
	Use the correct adapter.
	Mount the adapter correctly.
The heating actuator is not controlling according to the required times.	Check the setting at the operator unit.
The heating actuator is controlling outside the defined times.	Descaling function active.
The error code ERR0 appears on the display	<p>Assembly error</p> <p>Make sure that coupling ring and heating actuator are seated correctly.</p>
The error code ERR1 appears on the display	<p>Temperature sensor error</p> <p>The device is defective and must be replaced.</p>

Problem	Solution
The error code ERR2 appears on the display	Programming/clearing process in the CentralControl has failed. Start the process at the heating actuator by pressing a button again, and in the CentralControl.
On-site operation is not possible.	Remove the on-site operation block at the operator unit.

Simplified EU declaration of conformity

Becker-Antriebe GmbH hereby declares that this radio control system complies with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following web address:

www.becker-antriebe.com/ce



Subject to technical changes without notice.



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