

SIEMENS



Connected Home Thermostats **RDZ100ZB, RDZ101ZB, RDZ200ZB** **Operation Manual**

Imprint

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Table of contents

- 1 About this document.....5**
 - 1.1 Revision history5
 - 1.2 Reference documents5
 - 1.3 Before you start5
- 2 Product overview.....7**
 - 2.1 Screen display mode overview8
 - 2.2 Screen display icon overview9
- 3 Mounting and installation.....10**
- 4 Adding the thermostat to the hub (GTW100ZB).....11**
- 5 Operation on the device12**
- 6 Parameter settings13**
- 7 Replacing batteries16**
- 8 Upgrading firmware.....17**
- 9 Cyber security disclaimer.....18**

1 About this document

1.1 Revision history

Edition	Date	Changes
1	January 2023	First edition
2	February 2024	Removed a note from "Upgrading firmware [→ 17]".
3	July 2025	Added information about RDZ200ZB in the following sections: • Product overview [→ 7] • Mounting and installation [→ 10] • Parameter settings [→ 13]

1.2 Reference documents

Ref.	Document title	Document number
[1]	RDZ100ZB and RDZ101ZB mounting instructions	A6V13360576
[2]	RDZ200ZB mounting instructions	A6V14359485
[3]	RDZ100ZB, RDZ101ZB and RDZ200ZB datasheet	A6V13360592
[4]	Siemens Connected Home system description	A6V13661932

Download the above documents from <http://siemens.com/bt/download> by searching the document numbers listed above.

1.3 Before you start

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These documents were prepared with great care.

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- All necessary corrections are included in subsequent versions.
- Documents are automatically amended as a consequence of modifications and corrections to the products described.

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Symbol identifications

<i>NOTICE</i>	
	This symbol identifies an important notice that you should be aware of when you are using the product.



The 'i' symbol identifies supplementary information and tips for an easier way of working.

2 Product overview

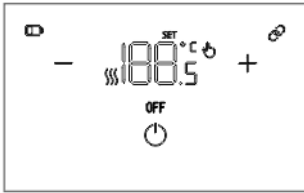
Connected Home thermostats RDZ100ZB, RDZ101ZB and RDZ200ZB are designed to control temperature in apartments, single family homes, dormitories and other types of residences:

- RDZ100ZB controls heating directly using the built-in relay.
- RDZ101ZB controls heating by wireless connection to Connected Home Receiver (RCR110.2ZB) via Connected Home Hub (GTW100ZB).
- RDZ200ZB controls heating/cooling by sending heating/cooling demands to a multi-zone controller (SCH-MZ6 or SCH-MZ10).

All thermostats can connect to mobile application "Connected Home" (downloadable from Google Play™ or Apple App Store®) for advanced functions such as setting schedules and adjusting parameters.

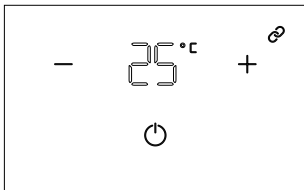
2.1 Screen display mode overview

Initial power-up mode



When the thermostat starts up for the first time, all icons are lit for about three seconds before entering **ON** mode.

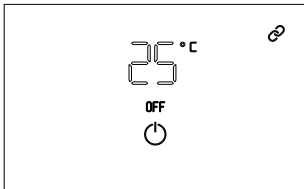
ON mode



In **ON** mode, the current room temperature, plus, minus and status icons (i.e., connection state) are displayed on screen. This mode allows you to adjust the temperature setpoint and switch between **OFF** and **ON**.

The  icon shows if the setpoint is adjusted manually via thermostat or mobile application and indicates if the thermostat is in manual mode. It disappears after the thermostat receives the next setpoint via schedule, scene and automation from the mobile application.

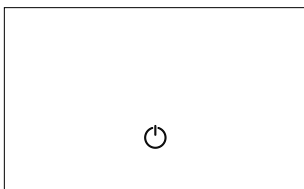
Protection mode (OFF mode)



The thermostat activates frost protection mode (OFF) when you touch the Power button in **ON** mode. **OFF** is displayed. If the temperature drops below 8 °C, the thermostat activates the heating output automatically until the temperature reaches 8 °C.

In **OFF** mode, the present room temperature and state icons (i.e., connection state) are displayed. Switch to **ON** mode by pressing the Power button again.

Sleep mode



After 20 seconds of inaction, the thermostat enters sleep mode. The screen is turned off. Previous setpoint adjustment or operating mode (AUTO, manual or protection mode) works in the background. Wake up the thermostat by touching the Power button.

2.2 Screen display icon overview

State	Description
	The setpoint is manually adjusted to a value different from the scheduled value. It disappears after the thermostat receives the next setpoint via schedule, scene, and automation from the mobile application. Note: If the thermostat does not receive the next scheduled setpoint due to network error, the icon continues to be displayed on screen. The thermostat remains on the temporary setpoint until it receives a new scheduled setpoint after network resumes working.
	Demand for heating
	Demand for cooling
	Low battery level
OFF	Thermostat in OFF mode.
	Ready to join the Zigbee network (blinking), or Zigbee network joined (steady ON)
SET	Setpoint is being adjusted.

Operation	Description
 	- Tap to decrease/increase temperature setpoint. - Tap and hold to decrease/increase temperature setpoint continuously until the setpoint limit is reached. - Tap and hold both icons at the same time for more than 10 seconds to reset the thermostat to factory settings. - After three seconds of inaction, the thermostat returns to the present room temperature. In the meantime,  is displayed on screen, showing that the manually-adjusted setpoint overrides the scheduled one.
	- Tap to turn on display or turn on/off mode. - Tap and hold for more than five seconds to set the thermostat to joining/rejoining mode.

3 Mounting and installation

NOTICE



We strongly recommend hiring licensed installers to mount and install the device.
See document [A6V13360576](#) or [A6V14359485](#) for graphical instructions.
See document [A6V13360592](#) for more information on mounting and wiring.



If the ARG101 adapter plate is used, assemble its mounting frame and mounting plate so that the larger round spot embossed on the mounting frame is at the top. Cover the thermostat's mounting plate on the assembled adapter plate, then follow the steps below to mount and install the thermostat.

Mounting and installing RDZ100ZB/RDZ200ZB

1. Switch off power using your home's breaker box.
2. Screw the mounting plate onto a conduit box.
3. Insert wires to the terminals on the mounting plate and tighten all inserted wires by screwing down the screws.
4. Push the small rectangle on the upper right corner of the back of the front panel to open and remove the battery cover.
5. Attach the front panel by aligning the inner side of the back of the front panel with the mounting plate from bottom to top.
6. Press the left and right sides of the front panel to secure physical connection to the terminals.
7. Tighten the screw on the top.
8. Insert the batteries and cover the battery door.
9. Switch on power.

Mounting and installing RDZ101ZB

RDZ101ZB comes with two mounting plates: One for wall mounting (without a stand) and one for standing on a table (via stand). Select a desired method to mount and install the device.

1. Screw the mounting plate (without stand) on a wall or place the mounting plate (with stand) at a desired place in a room.
2. Push the small rectangle on the upper right corner of the back of the front panel to open and remove the battery cover.
3. Attach the front panel by aligning the inner side of the back of the front panel with the mounting plate from bottom to top.
4. Tighten the screw on the top.
5. Insert the batteries and cover the battery door.

4 Adding the thermostat to the hub (GTW100ZB)

Add the thermostat to the hub from the mobile application following on-screen instructions.



After being added to the hub, the wireless room thermostat RDZ101ZB can be bound to RCR110.2ZB automatically, if they are grouped in the same room in the mobile application and the RCR110.2ZB has been added to the mobile application as "Thermostat relay".



Re-add the thermostat to the hub, if the latter is reset to factory settings.

5 Operation on the device

You can carry out the following operations on the device:

- Add the thermostat to the hub after the mobile application initiates the joining process.
- Adjust temperature setpoints.
- Turn on/off mode operation.
- Reset the thermostat to factory settings.

See Screen display icon overview [→ 9] for information on basic operation via icons on the thermostat. Other advanced operations such as setting schedules and adjusting parameters are only available in the mobile application.

6 Parameter settings

Parameters are set to default values after the thermostat is powered up. Adjust the parameter settings later in the mobile application.

Parameter	Description	Default value
Measured temperature value correction	Temperature offset value for the built-in room temperature sensor. If the temperature on the display does not match the measured room temperature, calibrate the temperature sensor using this parameter. The sensor can be offset by ± 2.5 K.	0 K
Min. temperature setpoint for heating	Minimum temperature setpoint for heating	5 °C
Max. temperature setpoint for heating	Maximum temperature setpoint for heating	30 °C
Min. temperature setpoint for cooling	Minimum temperature setpoint for cooling. This parameter only works with RDZ200ZB.	21 °C
Max. temperature setpoint for cooling	Maximum temperature setpoint for cooling. This parameter only works with RDZ200ZB.	30 °C
Open Window detection	This function works with RDZ10xZB, and with RDZ200ZB when the thermostat is operating in the heating mode. If the parameter is set to ON, this function detects if a window is opened and the room temperature drops rapidly. If yes, the heating is switched off, but the frost protection still runs in the background (with no change in the on-screen display). The thermostat resumes automatic operation when: • The room temperature rises faster than 1 °C/h. • The automatic schedule changes via the mobile application. • The setpoint is adjusted either locally or via the mobile application. • 20 minutes have passed even if the window is still open.	OFF
Valve exercising	If set to ON, the parameter activates valves periodically (2 min per week) to prevent valve seizing after valve inactivity for at least one week. This function is also active when the thermostat is in OFF mode.	OFF

Parameter	Description	Default value
Control behavior	The thermostat offers the following temperature control modes: • 2-position, 1 K • 2-position, 0.3 K • TPI slow • TPI medium • TPI fast The first two control modes use a 2-position control algorithm while the last three use TPI (Time Proportional Integral) control algorithm: • 2-position control switches on and off heating (for heating-only systems) or heating/cooling (for heating/cooling systems) within a switching differential as per the comparison between the setpoint and the measured room temperature. • TPI control switches on and off heating periodically. Both period and pulse length of the control signal (PWM) are determined by the setpoint and the measured room temperature. Different control modes are intended for different applications. See the text following this table for more details. Note: • When RDZ200ZB is in the cooling mode, only the first two control modes are available. • When you switch between heating and cooling for homes where RDZ200ZB is installed, the mobile application clears the option you've selected and resets this parameter to the factory default. To switch between heating and cooling, go to ≡ > "Home settings" > "Changeover" in the mobile application.	TPI slow (heating) 2-position, 0.3 K (cooling)

2-position, 1 K

- 2-position controller with 1 [K] switching hysteresis
- For systems with small capacity that appear slow
- For applications requiring extended runtimes or where frequent switching causes problems
- For difficult control loops where hunting may result

Typical applications:

- Dry floor heating
- Heat pumps
- Electric heating with contactors

2-position, 0.3 K

- 2-position controller with 0.3 [K] switching hysteresis
- For general control. Provides better comfort than 1 [K] switching hysteresis
- Can also be used for difficult control situations.

TPI slow

TPI control behavior for slow heating systems requiring longer minimum **On** times and limited numbers of switching cycles per hour.

Typical applications:

- Wet floor heating, oil-fired boilers
- Can be used for all other types of heating applications (alternative setting)

Minimum switch-on/off time	> 4 minutes
Minimum period	Approximately 12 minutes

TPI medium

TPI control behavior for general heating applications such as radiators and thermal actuators.

Minimum switch-on/off time	> 1 minute
Minimum period	Approximately 20...25 minutes

TPI fast

TPI control behavior for fast heating systems tolerating a high number of switching cycles.

Typical applications:

- Electric heaters with current valve
- Gas boilers
- Fast thermal actuators

Minimum switch-on/off time	> 1 minute
Minimum period	Approximately 6 minutes

WARNING

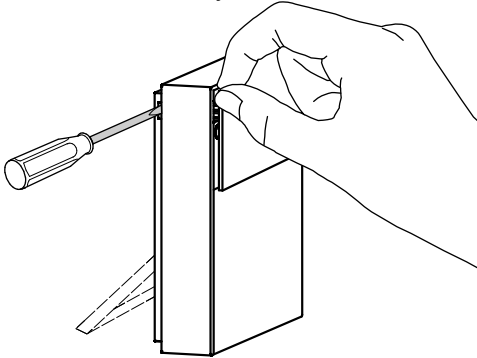


Do not use TPI fast for oil boilers or electric mechanical actuators!

7 Replacing batteries

The thermostat is powered by two alkaline batteries type AA. If battery level is low, notifications are sent to the mobile application and  is displayed on the local screen. Replace the batteries when notified of a low battery level.

1. Get two new alkaline batteries type AA.
2. Remove the battery door as shown in the following illustration.



3. Remove the old batteries and insert the new ones.
4. Replace the battery door.
⇒ The thermostat will rejoin the hub automatically within 20 minutes.
5. Dispose of the exhausted batteries in compliance with environmental requirements.

8 Upgrading firmware

The firmware version of the device is displayed in the mobile application. When a new firmware version is available, you can upgrade the firmware from the mobile application. It is recommended that you enable the "Automatic firmware update" in the mobile application to keep the thermostat firmware up to date.

9 Cyber security disclaimer

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