SIEMENS

Connected Home Thermostats

RDZ100ZB, RDZ101ZB, RDZ200ZB

For heating-only and heating/cooling systems

- Room temperature control for heating (RDZ100ZB, RDZ101ZB)
- Room temperature control for heating and cooling (RDZ200ZB)
- Heating/cooling changeover via mobile application "Connected Home" (downloadable from Google Play™ or Apple App Store®) (RDZ200ZB)
- Communicates with Connected Home Hub via Zigbee network
- 2-position/TPI control with On/Off output for heating
- 2-position control with On/Off output for cooling (RDZ200ZB)
- RDZ100ZB and RDZ200ZB: With built-in relay
- RDZ101ZB: With wireless output module
- Open window detection
- Frost protection
- Schedule via mobile application "Connected Home" (downloadable from Google Play™ or Apple App Store®)
- Commissioning and adjustable control parameters via mobile application
- Battery-powered (2xAA batteries)

Use

The thermostats are part of Siemens Connected Home ecosystem. RDZ100ZB/RDZ101ZB is used to control the room temperature in heating systems. RDZ200ZB is used to control the room temperature in floor heating and cooling systems.

Typical application:

- Apartments
- Single family homes

To control the following pieces of equipment:

- Thermal valves or zone valves
- Gas or oil boilers
- Heat pumps
- Circulating pumps
- Floor heating
- Floor cooling (RDZ200ZB)
- Ceiling heating
- Ceiling cooling (RDZ200ZB)

Functions

- Room temperature control via built-in sensor
- Selection of operating mode “On” or “Off” (protection mode, frost protection active)
- Setting schedule via the mobile application
- Display of current room temperature
- Setpoint override (manual mode) until the next scheduled switching point
- Limitation of minimum/maximum setpoint adjustments for heating or cooling
- Remote operation and monitoring via mobile application
- Open window detection
- Valve/pump exercising
- Heating/cooling changeover via mobile application (RDZ200ZB)
- Heat or cool demand-based boiler or heat pump release in combination with e.g. Connected Home Receiver (RCR110.2ZB) or Connected Home multizone controller (SCH-MZ6 and SCH-MZ10)
- Factory reset
- Wireless communication
- Firmware upgrade via Zigbee
- Auto sleep function to save battery

Type summary

Type	Stock number	Description
RDZ100ZB	S55772-T113	Wired, heating, battery powered
RDZ101ZB	S55772-T114	Wireless, heating, battery powered
RCR110.2ZB	S55772-T110	Wireless output module for RDZ101ZB
RDZ200ZB	S55772-T124	Wired, heating and cooling, battery powered

Accessories

Type	Stock number	Description
ARG101	S55772-T112	Italian adapter plate for RDZ100ZB, RDZ101ZB and RDZ200ZB

Delivery

RCR110.2ZB and ARG101 are not included in the delivery and must be ordered separately.

Inbox item

RDZ100ZB/RDZ200ZB

Items	Quantity
Mounting plate	1
Front panel	1
Battery	2
Mounting instructions	1

RDZ101ZB

Items	Quantity
RDZ101ZB mounting plate	1
RDZ101ZB table stand	1
RDZ101ZB front panel	1
Battery	2
Mounting instructions	1

Equipment combinations

Type of unit		Product number	Data Sheet[1)]	Use with the type of temperature control[2)]
Electromotoric actuator		SFA21...	4863	2-position & TPI slow
Thermal actuator (for radiator valves) AC 230 V, NO		STP321	A6V12986007	2-position & All TPI
Thermal actuator AC 230 V (for small valves 2.5 mm), NC		STA321	A6V12986007	2-position & All TPI
Damper actuator		GDB...	4634	2-position & TPI slow

Type of unit		Product number	Data Sheet[1)]	Use with the type of temperature control[2)]
Damper actuator		GSD...	4603	2-position & TPI slow
Damper actuator		GQD...	4604	2-position & TPI slow
Rotary damper actuator		GXD...	4622	2-position & TPI slow
Underfloor multizone controller		SCH-MZ6	A6V14632884	2-position & TPI slow
Underfloor multizone controller		SCH-MZ10	A6V14632884	2-position & TPI slow

1) The documents can be downloaded from www.siemens.com/bt/download.

2) See more information on 2-position and TPI control in document A6V13360586, which can also be found in the above link.

Product documentation

Title	Document ID
Mounting instructions (RDZ100ZB, RDZ101ZB)	A6V13360576
Mounting instructions (RDZ200ZB)	A6V14359485
Operation manual	A6V13360586
CE declaration	A5W00270102A
UKCA declaration	A5W00270107A
RCM declaration	A5W02940086A
Product environmental declaration	A5W00269582A
Siemens Connected Home system description	A6V13661932

Related documents such as environmental declarations, CE declarations, and so on, can be downloaded at: http://siemens.com/bt/download.

Notes

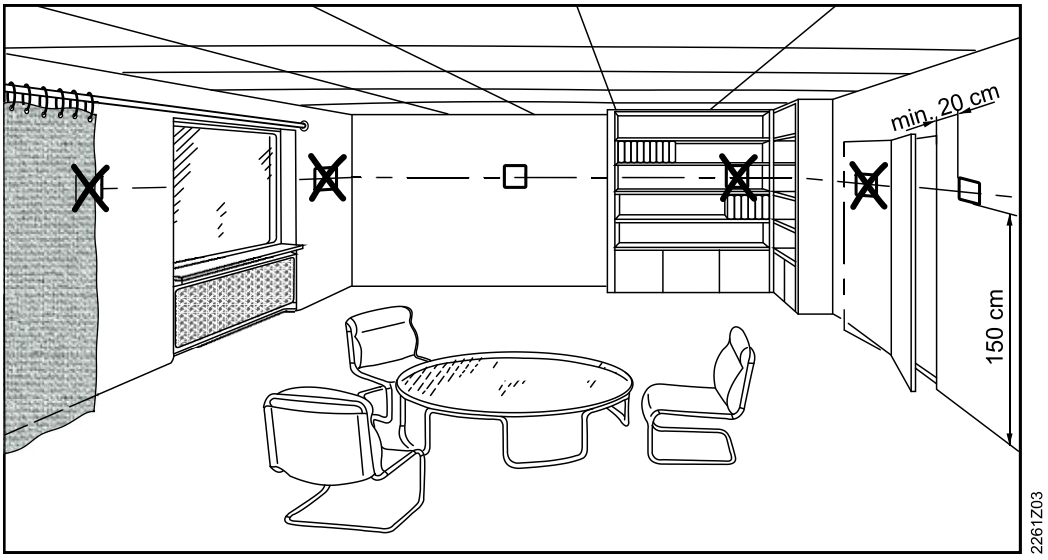
Safety

⚠ CAUTION	
	**National safety regulations** Failure to comply with national safety regulations may result in personal injury and property damage. ● Observe national provisions and comply with the appropriate safety regulations.

⚠ WARNING	
	**Explosion due to fire or short-circuit, even with discharged batteries** Risk of injury due to flying parts ● Prevent the batteries from coming in contact with water. ● Do not recharge batteries. ● Do not damage or disassemble batteries. ● Do not heat batteries over 60 °C.

⚠ WARNING	
	**Electrolyte leakage** Chemical burns ● Only grasp damaged batteries using suitable protective gloves. ● If electrolyte comes into contact with eyes, immediately rinse eyes with plenty of water. Consult a doctor.

Mounting



Mounting

- RDZ100ZB/RDZ200ZB is suitable for wall mounting.
- RDZ101ZB is suitable for wall mounting and table standing.
- Recommended height for wall mounting: 1.50 m above the floor.

- Mount the thermostat close to Connected Home Hub if possible. Note that the communication range can vary because walls, floors, wireless interference and other factors may reduce the signal strength. The signal strength can be improved with network repeaters such as Connected Home Smart Plug (SCH030ZB) units or Connected Home Receiver (RCR110.2ZB) units.
- Do not mount or place the thermostat in recesses, behind curtains or doors, or above or near heat sources.
- Do not mount or place the thermostat near large metal structures or other construction elements with fine metal meshes like special glass or special concrete.
- Do not mount or place the thermostat in a location where it is exposed to dripping water, moisture or excessive heat.
- Do not mount or place the thermostat on metal surfaces.
- Avoid placing RDZ101ZB inside or near metal or sources of radio or electromagnetic energy or interference, for example, do not place under or on top of a WLAN router.
- Avoid direct sunlight.
- Seal the conduit box or the installation tube if any, as air currents can affect sensor readings.
- Observe allowed ambient conditions.
- Keep the thermostat out of the reach of people (including children) whose physical, sensory or mental capabilities, knowledge, or experience prevents them from using the thermostat safely without supervision or instructions.
- If the adapter plate ARG101 is used, assemble its mounting frame and mounting plate in such a way that the bigger round spot embossed on the mounting frame is atop.

Wiring (for RDZ100ZB/RDZ200ZB)

- Make sure wiring, protection, and earthing comply with local regulations.
- Disconnect from power supply before mounting/dismantling and wiring.
- Correctly size the cables to the thermostat and the valve actuators.
- Use only valve actuators rated for AC 24…230 V.
- External preliminary protection with maximum C 10 A circuit breaker in the supply lines is required under all circumstances.

Installation

⚠ WARNING	
	**No internal line protection for supply lines to external consumers** Risk of fire and injury due to short-circuits ● Adapt the line diameters as per local regulations to the rated value of the installed fuse.

⚠ CAUTION	
	**Risk of explosion** Personal injury and property damage ● Insert the battery at the correct polarity (+/-) using the illustration in the battery compartment. ● Insert only the correct battery types according to the indication in the battery compartment. ● Store, transport and dispose of the batteries in compliance with local requirements, regulations and laws, and observe the instructions of the battery manufacturer.

Observe the following:

- The batteries must be undamaged.

- Do not mix new and used batteries.

Commissioning

Commissioning

- The thermostat is ready for commissioning after batteries are inserted.
- After joining is initiated from the mobile application, tap and hold  for more than five seconds on the thermostat to join the Zigbee network.
- After joining the network, set schedules and change parameters in the mobile application to ensure optimum performance of the entire system. See the operation manual (http://www.siemens.com/download?A6V13360586) for more information about parameters.

Wireless output module

The wireless room thermostat RDZ101ZB requires a wireless output module, e.g. RCR110.2ZB, to control HVAC equipment. Binding the thermostat to the output module is automatic, if located in the same room. Max. 5 wireless output modules can be bound to one wireless room thermostat RDZ101ZB.

Operation

See the operation manual (http://www.siemens.com/download?A6V13360586) for detailed information.

Maintenance

Apart from replacing batteries upon low battery notification on the local screen or in the mobile application, the thermostat is maintenance-free. See the operation manual (http://www.siemens.com/download?A6V13360586) for information about battery replacement.

Open Source Software (OSS)

Software license overview

These devices use Open Source Software (OSS). All Open Source Software components used in the product (including copyrights and licensing agreement) are available at http://siemens.com/bt/download.

OSS document ID	Device
A6V13562630	RDZ100ZB, RDZ101ZB
A6V12774334	RDZ200ZB

Disposal

	This symbol or any other national label indicate that the product, its packaging, and, where applicable, any batteries may not be disposed of as domestic waste. Delete all personal data and dispose of the item(s) at separate collection and recycling facilities in accordance with local and national legislation. For additional details, refer to Siemens information on disposal.

Warranty

Technical data on specific applications are valid only together with Siemens products listed under Equipment combinations [▶ 3]. Siemens rejects any and all warranties in the event that third-party products are used.

General technical data

Power supply	
Operating voltage	DC 3 V (2 x 1.5 V AA alkaline batteries)
Battery life	1 year

Radio parameters	
Frequency band	2.4…2.4835 GHz
Maximum radio-frequency power	6 dBm
Communication standard	Based on Zigbee 3.0
MAC protocol	IEEE 802.15.4
Zigbee channels	11...26
Pairing method with GTW100ZB	Global Link Key

Functional data	
Protection mode	8 °C
Setpoint setting range	5…35 °C
Built-in room temperature sensor	
Accuracy at 25 °C	< ±0.5 K
Temperature calibration range	±2.5 K
Resolution of settings and displays	
Setpoints	0.5 °C
Room temperature	0.5 °C

Ambient conditions and protection classification	
Degree of protection of housing as per EN 60529	IP30
Protection against electrical shock as per EN 60730-1	
RDZ100ZB/RDZ200ZB	Protection class II
RDZ101ZB	Protection class III
Classification as per EN 60730-1	
Function of automatic control devices	Type 1
Degree of pollution	2

Ambient conditions and protection classification	
Overvoltage category	
RDZ100ZB/RDZ200ZB	III
RDZ101ZB	I
Rated impulse voltage	
RDZ100ZB/RDZ200ZB	4000 V
RDZ101ZB	330 V
Climatic ambient conditions	
Transport and storage (in packaging)	• Temperature: -25…+70 °C (-13…+158 °F) • Ambient humidity: < 95 % r.h. (non-condensing)
Operation (in dry locations having no temperature or humidity control)	• Temperature: 0...50 °C (32...122 °F) • Ambient humidity: < 95 % r.h. (non-condensing)
Mechanical ambient conditions	
Transport (in transport packaging) as per IEC/EN 60721-3-2	Class 2M4
Operation as per IEC/EN 60721-3-3	Class 3M11

Standards, directives and approvals	
EU conformity (CE)	See EU declaration of conformity A5W00270102A*
UK conformity (UKCA)	See UK-declaration of conformity A5W00270107A*
RCM conformity	See RCM declaration of conformity A5W02940086A*
Environmental compatibility	The product environmental declaration (A5W00269582A*) contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).

* The documents can be downloaded from www.siemens.com/bt/download.

Eco design and labeling directives		
Based on EU Regulation 813/2013 (Eco design directive) and 811/2013 (Labelling directive) concerning space heaters, combination heaters, the following classes apply:		
Application with On/Off operation of a heater	Class I	value 1%
TPI (PWM) room thermostat, for use with On/Off output heaters	Class IV	value 2%

General	
Housing color	RAL9003
Thermostat with box, user document and accessory	
RDZ100ZB/RDZ200ZB	210 g
RDZ101ZB	226 g
Thermostat	
RDZ100ZB/RDZ200ZB	157 g
RDZ101ZB	173 g

Technical data (RDZ100ZB/RDZ200ZB)

Switching capacity of relay	
Voltage	AC 24...230 V
Lx rating min., max. resistive (inductive)	8 mA...5 (2) A
Contact life at AC 230 V At 5 A res.	Guided value: 1 x 10^5 cycles

⚠ WARNING	
	**No internal fuse.** External preliminary protection with maximum 10 A circuit breaker in the supply lines is required under all circumstances.

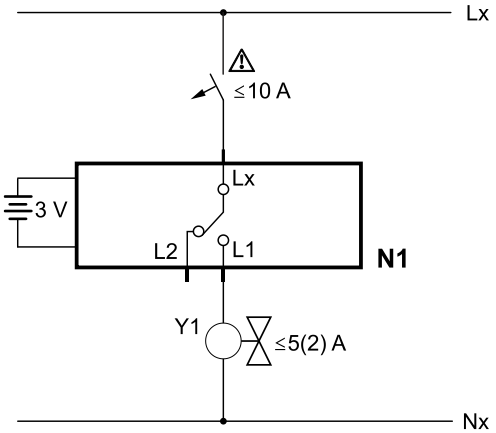
External protection for the thermostat	
Circuit breaker	Maximum 10 A
Circuit breaker tripping characteristic	Type B, C or D as per EN 60898 and EN 60947

Electrical connections	
Connection terminals	Screw terminals
For solid wires or prepared stranded wires	2 x 1.5 mm^2 or 1 x 2.5 mm^2 (min. 0.5 mm^2)

Connection diagrams

Connection to an actuating device

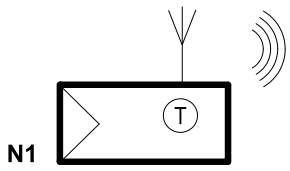
RDZ100ZB

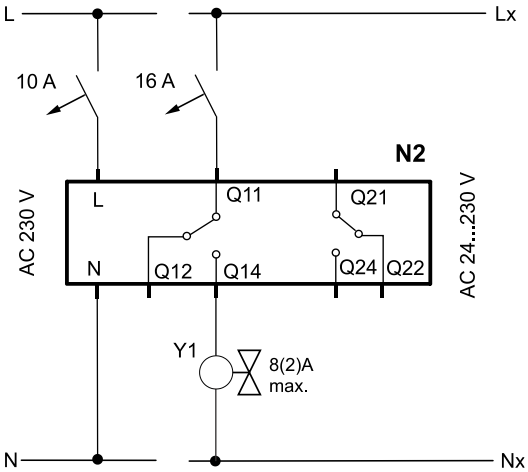


Lx	Live, AC 24...230 V	Nx	Neutral conductor, AC 24...230 V
Lx, L2	NC contact (for NO valves)	N1	Wired room thermostat RDZ100ZB
Lx, L1	NO contact (for NC valves)	Y1	Actuating device

⚠ WARNING	
	Current higher than 5 (2) A is not allowed to go through RDZ100ZB controller. For high current device, an additional relay or contactor must be installed.

RDZ101ZB

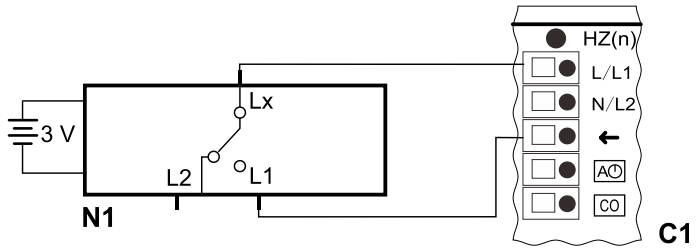




L	Live, AC 230 V	Nx	Neutral conductor, AC 24...230 V
Lx	Live, AC 24...230 V	N1	Wireless room thermostat RDZ101ZB
Q11, Q12	NC contact (for NO valves)	N2	Wireless output module RCR110.2ZB
Q11, Q14	NO contact (for NC valves)	Y1	Actuating device
N	Neutral conductor, AC 230 V		

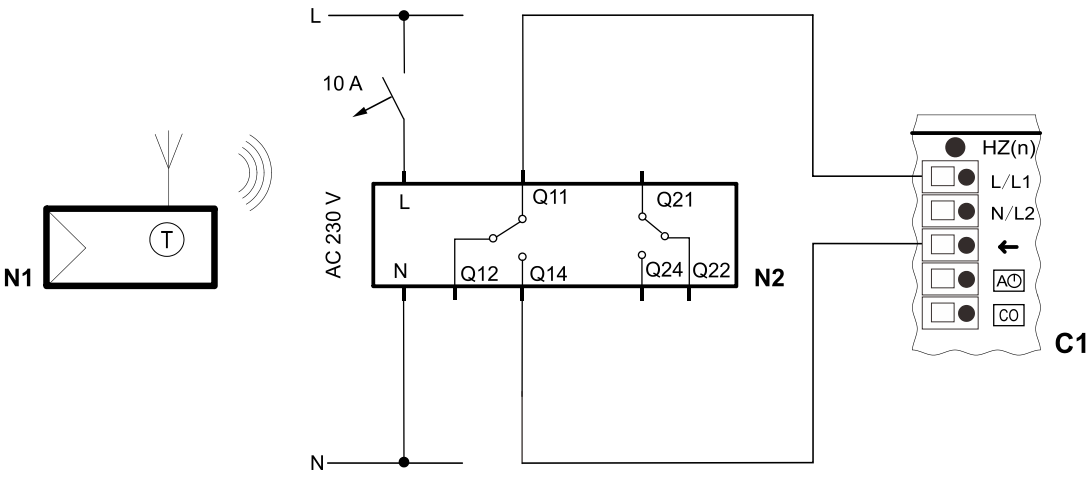
Connection to a multizone controller

RDZ100ZB/RDZ200ZB



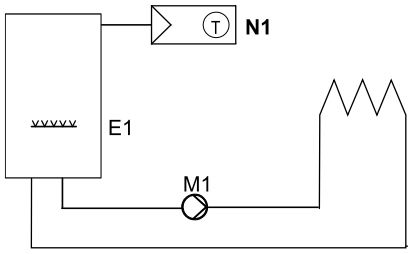
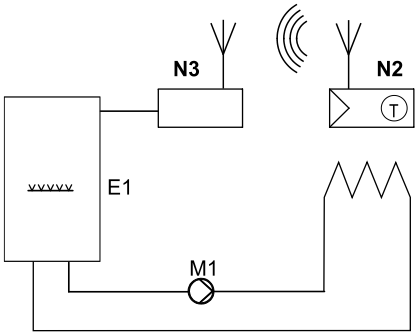
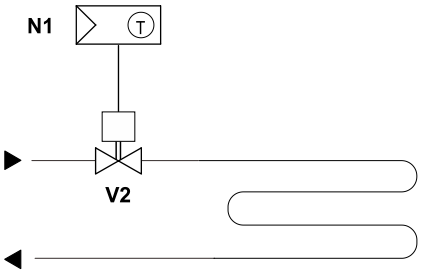
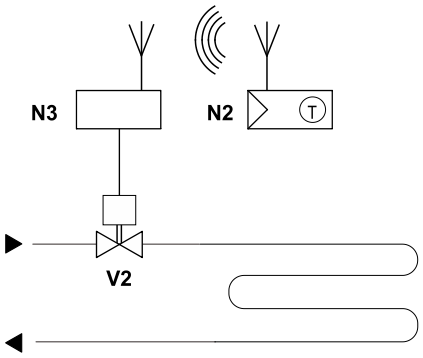
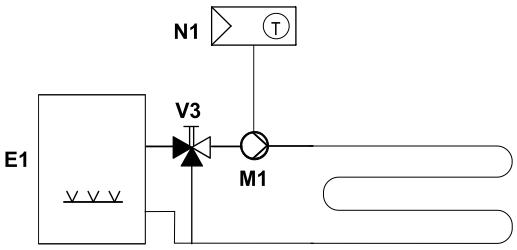
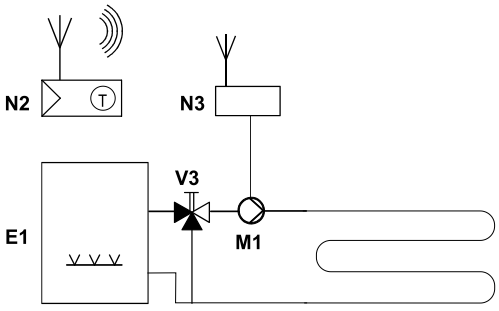
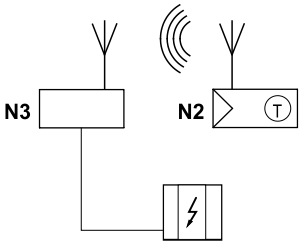
Lx, L2	NC contact	C1	Multizone controller SCH-MZ6 or SCH-MZ10
Lx, L1	NO contact	N1	RDZ100ZB/RDZ200ZB

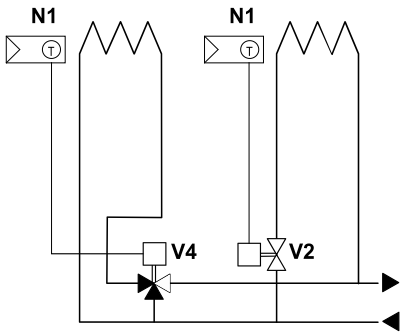
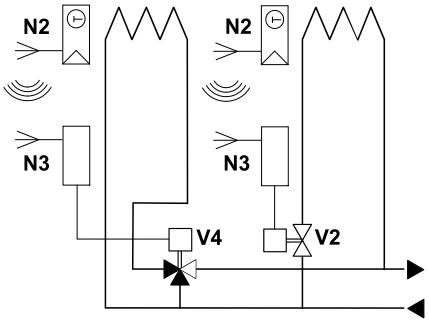
RDZ101ZB

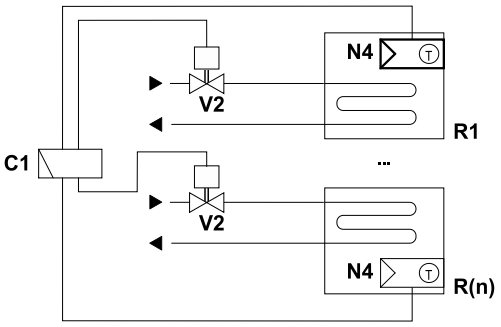
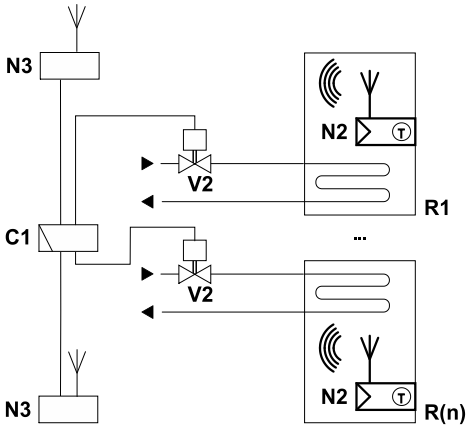
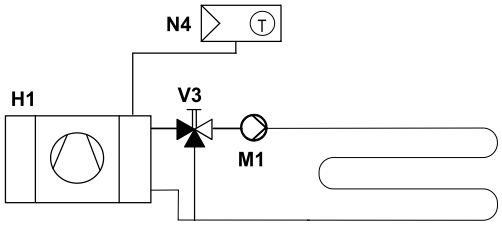


L	Live, AC 230 V	N1	Wireless room thermostat RDZ101ZB
N	Neutral conductor, AC 230 V	N2	Wireless output module RCR110.2ZB
Q11, Q12	NC contact	C1	Multizone controller SCH-MZ6 or SCH-MZ10
Q11, Q14	NO contact		

Application examples

RDZ100ZB	RDZ101ZB (with RCR110.2ZB)
Room thermostat with radiators and direct boiler control 	Room thermostat with radiators and wireless boiler control 
Room thermostat with floor heating and direct valve control 	Room thermostat with floor heating and wireless valve control 
Room thermostat with floor heating and direct pump control 	Room thermostat with floor heating and wireless pump control 
Room thermostat with direct electric radiator control* 	Room thermostat with wireless electric radiator control* 

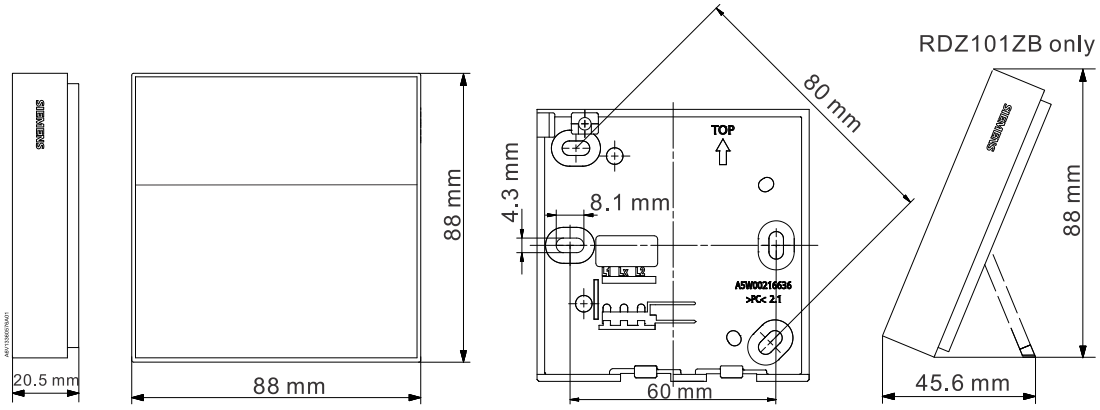
RDZ100ZB	RDZ101ZB (with RCR110.2ZB)
Room thermostats with radiators and direct zone valve control 	Room thermostats with radiators and wireless zone valve control 

RDZ100ZB/RDZ200ZB	RDZ101ZB (with RCR110.2ZB)
Room thermostats with floor heating and cooling with direct connection to multizone controller (floor cooling with RDZ200ZB only) 	Room thermostats with floor heating with wireless connection to multizone controller 
Room thermostat with floor heating and cooling with direct connection to the heat pump (floor cooling with RDZ200ZB only) 	

* Check relay ampere limit to control electric heater: max. 5 (2) A for RDZ100ZB and max. 8 (2) A for RCR110.2ZB.

C1	Multizone controller	N3	RCR110.2ZB
E1	Boiler	N4	RDZ100ZB/RDZ200ZB
H1	Heat pump	R1, R(n)	Room
M1	Circulating pump	V2	2-port valve
N1	RDZ100ZB	V3	Mixing 3-port valve with manual adjustment
N2	RDZ101ZB	V4	3-port valve

Dimensions



Regulatory compliance information

Radio equipment directive

The equipment uses harmonized frequency in Europe and complies with Radio Equipment Directive 2014/53/EU (formerly 1999/5/EC).

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