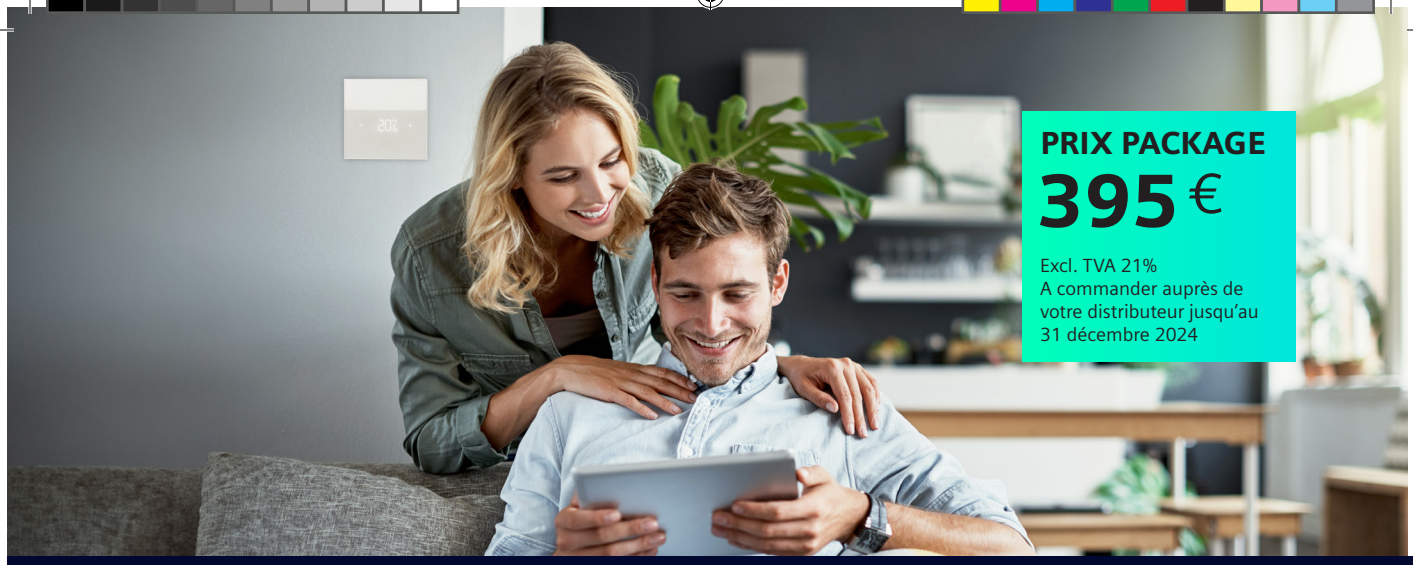

PRIX PACKAGE

395 €

Excl. TVA 21%
A commander auprès de votre distributeur jusqu'au 31 décembre 2024

1 x GTW100ZB

Zigbee Hub

1 x RCR110.2ZB

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1 x RDZ101ZB

Thermostat Zigbee sans fil

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5 x SSA911.02ZB

Actuateur-radiateur Zigbee sans fil

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Découvrez le système d'automatisation intelligent Connected Home et offrez à vos clients un confort personnalisé et d'économies d'énergie. La facilité d'installation et la simplicité d'utilisation offrent une expérience intuitive et conviviale.

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- Une gestion plus durable de vos coûts énergétiques

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CONNECTED HOME_promo 180x250 mm.indd 2 17/07/24 10:35

SIEMENS

Connected Home Hub

GTW100ZB

To create Zigbee system and control connected Zigbee devices

- Mains-powered hub AC 230 V (with external power adapter SA68-050100V)
- Wireless communication based on Zigbee 3.0
- Support of Ethernet and WLAN connection
- Bridge between Internet and Zigbee networks
- Easy binding with mobile application "Connected Home" (downloadable from Google Play™ or Apple App Store®)
- LED indication of power and network connection state

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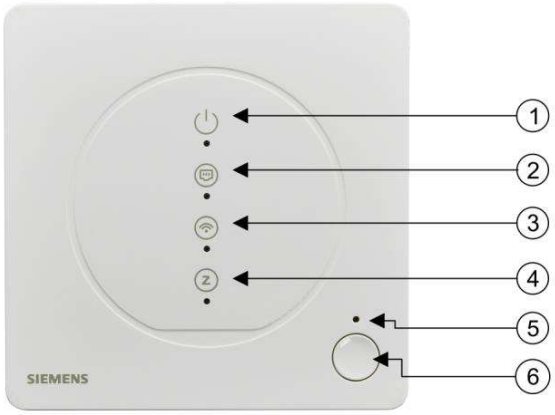
Use

- Part of Siemens Connected Home ecosystem
- Used with the mobile application to add and control RCR110.2ZB, SSA911.02ZB, RDZ100ZB, RDZ101ZB and other devices in the system
- Typical application:
  - Residential apartments
  - Single family homes

Functions

- Different LED behaviors to indicate:
  - Status of power connection, Ethernet connection, WLAN connection and Zigbee connection
  - Device restart
  - Device reset via the mobile application
  - Factory reset
- Remotely configurable using the mobile application
- Remotely controllable of devices on Zigbee network using the mobile application
- Restartable when the hub crashes or encounters unknown errors
- Factory resettable to erase all data including device configurations and device list

Technical design/mechanical design



No.	Description
1	Power LED
2	Ethernet LED
3	WLAN LED
4	Zigbee LED
5	Factory reset hole
6	• Restart button: Press and hold down the button for 10 seconds to restart the hub. • Binding button: Press and hold down the button for six seconds to bind the hub with a created account in the mobile application. The binding process adds the hub to the mobile application. It is initiated from the mobile application end.

Type summary

Type	Stock number	Description
GTW100ZB	S55772-T109	Connected Home Hub

Ordering

When ordering, indicate product number, stock number and description.

Inbox item

Items	Quantity
GTW100ZB	1
Power adapter	1
USB charge-only cable	1
Mounting instructions	1

Equipment combinations

Connected Home Receiver

Product number	Stock number	Description
RCR110.2ZB	S55772-T110	Connected Home Receiver

Wireless actuator

Product number	Stock number	Description
SSA911.02ZB	S55181-A105	Radiator Valve act. Zigbee

Wired/wireless thermostat

Product number	Stock number	Description
RDZ100ZB	S55772-T113	Connected Home Thermostat wired
RDZ101ZB	S55772-T114	Connected Home Thermostat wireless

Accessories

A power adapter and USB charge-only cable are supplied with each GTW100ZB.

Product documentation

Title	Document ID
Mounting instructions	A6V12694180
Quick start guide	A6V12694177

Title	Document ID
CE declaration	A5W00218222A
UKCA declaration	A5W00218223A
Product environmental declaration	A5W00217286A

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.

	For indoor use only
	The hub is for indoor use only. Do not place it outdoors.

Mounting

- Place the hub near a power outlet.
- Place the hub at least 15 cm above the ground.
- There must be sufficient clearance around the power outlet to ensure that the power adapter can be easily plugged in and removed.
- Put the Ethernet and power supply cables out of the way to avoid danger of tripping.
- Keep the hub out of the reach of people (including children) whose physical, sensory or mental capabilities, knowledge or experience prevents them from using the hub safely without supervision or instructions.
- Avoid placing the hub inside or near metal or sources of radio or electromagnetic energy or interference, for example, do not place it under or on top of a WLAN router.
- Do not put the hub on metal surfaces.
- Do not put the hub near large metal structures or other construction elements with fine metal meshes like special glass or special concrete.
- Do not put the hub in a location where it is exposed to dripping water, moisture or excessive heat.
- The local regulations for electrical installations must be complied with.
- To maintain compliance with the RF exposure requirement, a separation distance of 20 cm between the device and the human should be maintained.

Installation

Place the GTW100ZB at a suitable location and then plug in the power adapter.

Commissioning

Prior to commissioning, ensure that the power adapter and Ethernet cable (if used) are correctly connected.

Maintenance

The device is designed for maintenance-free operation.

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
A6V13038924	GTW100ZB

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].

When using the hub with third-party devices, users are responsible for ensuring correct functioning. In that case, Siemens assumes no responsibility for any service and warranty.

The power adapter and USB cable are exclusively designed for GTW100ZB. Siemens rejects any and all warranties in the event they are used with other third-party products.

Technical data - power adapter

Input characteristics	
Rated input voltage	AC 100...240 V
Operation range	AC 90...264 V
Rated input frequency	47…63 Hz
Input current	Max. 0.2 A at AC 100 V input & max. load
Standby power consumption	≤ 0.1 W at AC 230 V input & no load

Output characteristics	
Rated output voltage	5 V
Representative current	1 A
Output voltage range	DC 4.9...5.4 V
Turn on delay time	Max. 3 seconds at AC 100 V & max. load

Cable length	
Length of prefabricated connecting cable	1.5 m

Technical data - GTW100ZB

Power supply	
Operating voltage	DC 5 V
Power consumption	5 W

Interfaces	
Ethernet	Plug: 1 x RJ45 Cable: CAT 5 or CAT 5e, non-shielding Interface type: 100BASE-TX, IEEE 802.3 compatible Bit rates: 10/100 Mbps, auto-sensing
Zigbee	Communication standard: Based on Zigbee 3.0 Zigbee channels: 11...26 Frequency: 2.4...2.485 GHz Maximum radio-frequency power: 12 dBm
WLAN	Interface type: Wireless access point Supported standards: IEEE 802.11 b/g Frequency band: 2.4…2.485 GHz WLAN channels: 1…13 Maximum radio-frequency power: 18 dBm Distance (unobstructed field): Min. 5 m (16 ft)

General technical specification

Ambient conditions and protection classification	
Safety class	Power adapter: Class II Hub: Class III
Degree of protection of housing as per EN 60529	IP30 (excluding power adapter)
Classification	
Function of automatic control devices Operation altitude Degree of pollution Overvoltage category	 < 3,000 m 2 II for the power adapter and I for the hub
Climatic ambient conditions	

Ambient conditions and protection classification	
Transport (packaged for transport) as per EN 60721-3-2 Storage as per EN 60721-3-1 Operation as per EN 60721-3-3	Transport/Storage: Temperature -25...70 °C (-13... 158 °F) Air humidity 5...95 % r.h. (non-condensing) Operation: Temperature 0...50 °C (32... 122 °F) Air humidity 5...95 % r.h. (non-condensing)
Mechanical ambient conditions	
Transport as per EN 60721-3-2 Operation as per EN 60721-3-3	Class 2M2 Class 3M2

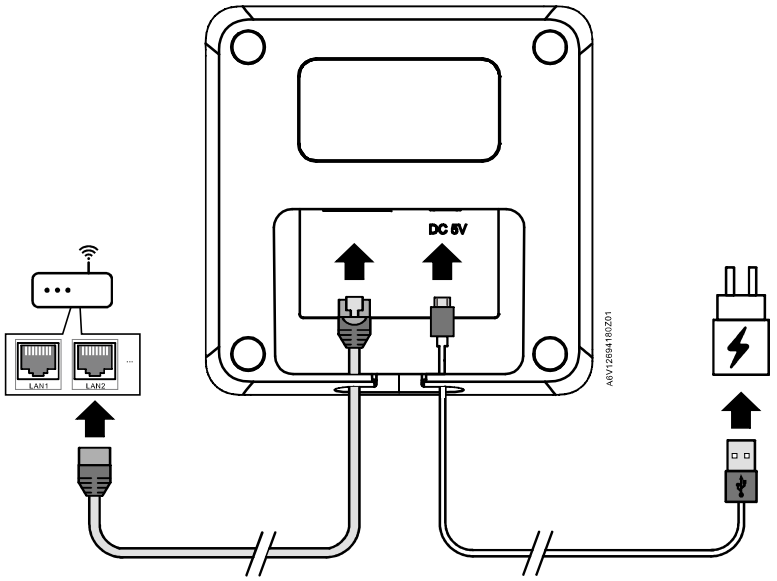
Standards, directives and approvals	
EU conformity (CE)	A5W00218222A*
UKCA	A5W00218223A*
Environmental compatibility	The product environmental declaration A5W00217286A* contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).

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

General	
Hub with box, user document and accessory	285 g
Hub with accessory (power adapter and USB cable)	223.5 g
Housing color	Ivory white

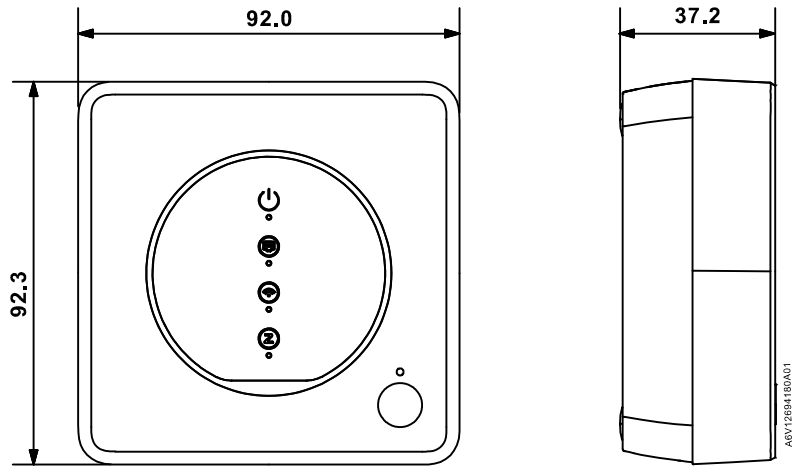
Diagram

Connection diagram

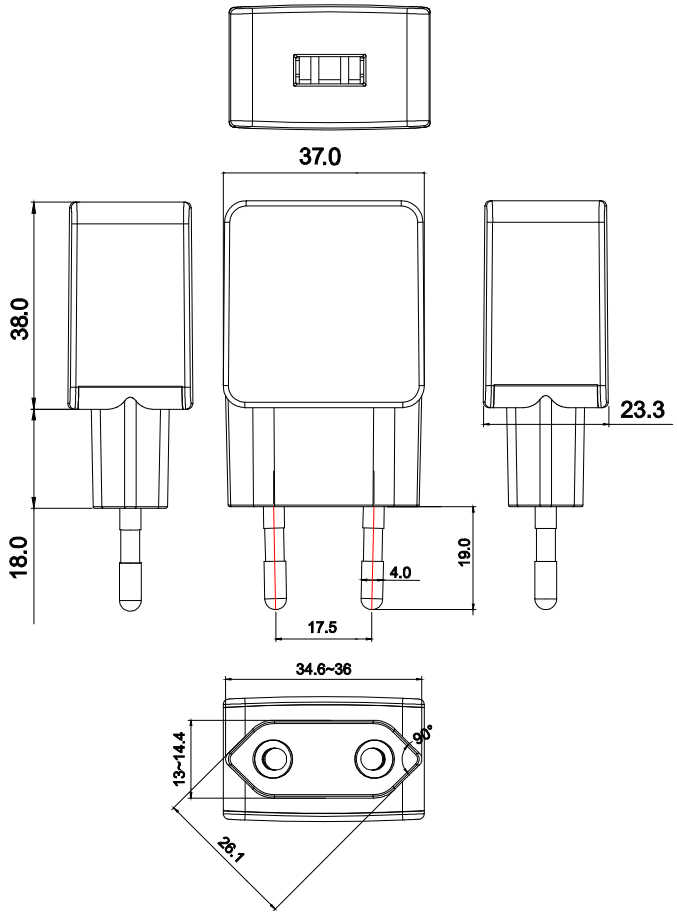


Dimensions in mm

GTW100ZB



Power adapter



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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Edition 2024-02-01

SIEMENS

Connected Home Receiver

RCR110.2ZB

For boiler, pump and DHW release

- Mains-powered receiver AC 230 V
- Communicates with Connected Home Hub via Zigbee network
- Output module in combination with Connected Home Thermostat wireless RDZ101ZB
- Two voltage-free contacts for boiler/pump release or DHW switch
- LED indication of operating state
- Manual override of relay outputs
- Firmware upgrade over the air via Zigbee

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2024-02-01

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Use

The RCR110.2ZB is part of Siemens Connected Home ecosystem.

Typical application:

- Residential apartments
- Single family homes

To control DHW and the following plant components:

- Gas, oil boilers or non-reversible heat pumps
- Zone valves
- Pumps
- Heat exchanger
- Continuous-flow water heater
- Small water heating systems

Functions

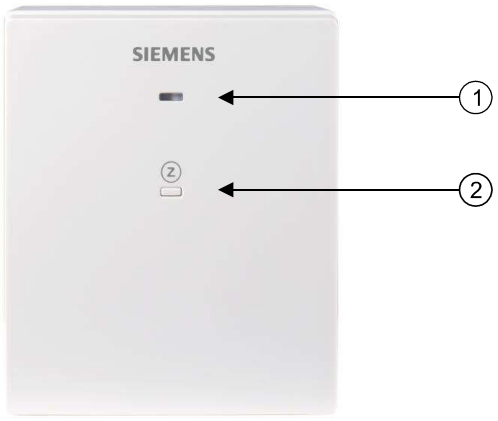
- Network joining initiator
- Configurable function via mobile application "Connected Home" (downloadable from Google Play™ or Apple App Store®) as:
  - Zigbee network repeater
  - Pump/boiler releaser
  - Pump/boiler releaser and DHW switch
- Boiler or pump releaser based on heat demand from individual rooms/zones
- Output module in combination with Connected Home Thermostat wireless RDZ101ZB
- Independent DHW switch controllable via mobile application
- Manual override of relay outputs
- Support of factory reset
- Wireless communication

Mechanical design

The RCR110.2ZB consists of two parts:

- Plastic housing which accommodates the electronics
- Mounting plate

Operation and settings



No.	Description
1	LED for operating state indication
2	Button for user operation

LED indication

Device state	LED state
Idle	Solid orange
Joining the Zigbee network	Flashes green rapidly
Successful connection	Solid green
Zigbee network failure[1)2)3)]	Flashes red slowly
Hardware error	Solid red[4)]
Factory reset	Alternates red and green
Firmware upgrade in process	Flashes orange rapidly
Manually overwriting	Flashes green slowly
Output state change[5)]	Flashes green rapidly for three times (0.5 Hz), and then changes back to the previous state.

1. Relay outputs are turned off when Zigbee network fails.
2. Check if the hub is powered on and try to reduce distance between the device and the hub.
3. Try network reconnection.
   – Remove the device from the mobile application, press and hold down button ▭ on the device for 10 seconds to perform factory reset, and then press and hold down the same button for 5 seconds to re-add the device to the network.
4. The LED indication of hardware error is only supported in product version A. See the product version on the label (the number after "2PFS") on the back of the device.
5. Output state change can be done either on the device or through the mobile application. However, frequent switching is not recommended as the device and mobile application might not be synchronized in a timely manner. The relay outputs maintain their previous states after a reboot and firmware upgrade.

Priority of LED state indication (high to low)

Zigbee network failure > manual override > normal operation (including firmware upgrade).

For example, if you perform manual override when there is a Zigbee network failure, the LED flashes red rather than green slowly.

Type summary

Type	Stock number	Description
RCR110.2ZB	S55772-T110	Connected Home Receiver

Ordering

When ordering, indicate product number, stock number and description.

Inbox item

Items	Quantity
RCR110.2ZB	1
Set of mounting accessories	1
Mounting instructions	1
Wiring sticker	1

Equipment combinations

Connected Home Hub

Product number	Stock number	Description
GTW100ZB	S55772-T109	Connected Home Hub

Wireless actuator

Product number	Stock number	Description
SSA911.02ZB	S55181-A105	Radiator Valve act. Zigbee

Wireless thermostat

Product number	Stock number	Description
RDZ101ZB	S55772-T114	Connected Home Thermostat wireless

Product documentation

Title	Document ID
Mounting instructions	A6V12680334
Quick start guide	A6V12680330
CE declaration	A5W00218224A
UKCA declaration	A5W00218226A
Product environmental declaration	A5W90009801

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.

Mounting

- The device is suitable for wall mounting and surface mounting.
- Enclose the conductors in a conduit when surface mounting.
- Reserve at least 10 cm of free space around the receiver for ventilation.
- Avoid direct solar radiation.
- Adhere to allowed ambient conditions.
- Install the receiver 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.
- Choose the location to ensure largely interference-free reception. When mounting the receiver, observe the following:
  - Do not mount in a control panel
  - Do not mount on metallic surfaces
  - Do not mount near 2.4 GHz wireless electronic devices such as PCs, WLAN routers, microwaves, and so on
  - Do not mount near constructional elements with fine metal or large metallic structures such as a distribution box

Wiring

- The AC 230 V mains supply line must have an external circuit breaker with a rated current of no more than 16 A.
- Ensure that wiring, protection and grounding comply with local regulations.
- Screw down all terminals regardless of whether cables are connected or not.
- Screw down the cables tightly and make sure no bare copper is exposed.
- Observe local regulations for wiring size and the rated value of the installed overcurrent protection device.
- Disconnect from power supply before removing the unit from its mounting plate.
- Ensure that the device is not connected to power during wiring.

Maintenance

The device is designed for maintenance-free operation.

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
A6V13038922 (only for product version A*), A6V13959823	RCR110.2ZB

* See the product version on the label (the number after "2PFS") on the back of the device.

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 [► 4]. Siemens rejects any and all warranties in the event that third-party products are used.

Technical data

Power supply	
Operating voltage	AC 230 V (+10/-15 %)
Frequency	48…63 Hz
Power consumption including connected field devices	5 VA

Radio parameters	
Frequency band	2.4…2.4835 GHz
Maximum radio-frequency power	15 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

Switching capacity of relays	
Voltage	AC 24…230 V
Current	Q11- Q12 Maximum 5 A Q11- Q14 Maximum 8 (2) A Q21- Q22 Maximum 5 A Q21- Q24 Maximum 8 (2) A

⚠ WARNING

No internal fuse.

External preliminary protection with maximum 16 A circuit breaker in the supply lines is required under all circumstances.

External protection for incoming cable	
Circuit breaker	Maximum 16 A
Circuit breaker tripping characteristic	Type B, C or D as per EN 60898 and EN 60947
Contact life at AC 230 V At 8 A res.	Guided value: 1 x 10^5 cycles
Insulation strength Between relay contacts and coil Between relay contacts (same pole)	 AC 5,000 V AC 1,000 V

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

Ambient conditions and protection classification	
Safety class as per EN60730	Class II
Degree of protection of housing as per EN 60529	IP30
Classification as per EN 60730	
Function of automatic control devices Operation altitude Degree of pollution Overvoltage category	Type 1 < 3000 m 2 III
Climatic ambient conditions	
Transport (packaged for transport) as per EN 60721-3-2 Storage as per EN 60721-3-1 Operation as per EN 60721-3-3	Transport/Storage: Temperature -25...60 °C (-13...140 °F) Air humidity 5...95 % r.h. (non-condensing) Operation: Temperature 0...50 °C (32...122 °F) Air humidity 5...95 % r.h. (non-condensing)
Mechanical ambient conditions	
Transport as per EN 60721-3-2 Operation as per EN 60721-3-3	Class 2M2 Class 3M2

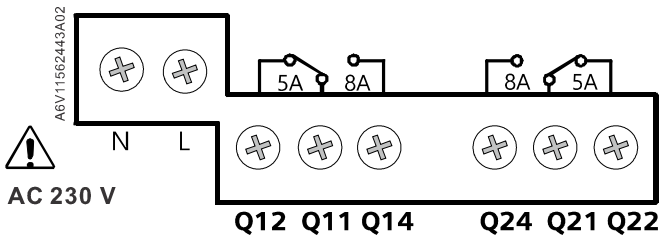
Standards, directives and approvals	
EU conformity (CE)	A5W00218224A*
UKCA	A5W00218226A*
Environmental compatibility	The product environmental declaration A5W90009801* contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).

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

General	
Receiver with box, user document and accessory	262 g
Receiver	174 g
Housing color	RAL9003

Diagrams

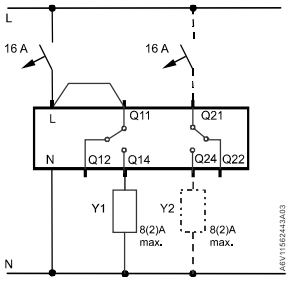
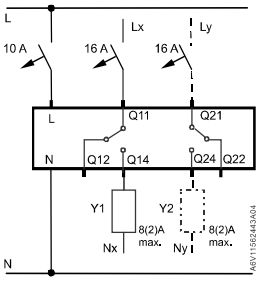
Connection terminals



Terminal	Designation
L, N	Power supply, AC 230 V
Q11, Q21	Control input (com)
Q12, Q22	Control output, NC contact
Q14, Q24	Control output, NO contact

Wiring diagrams

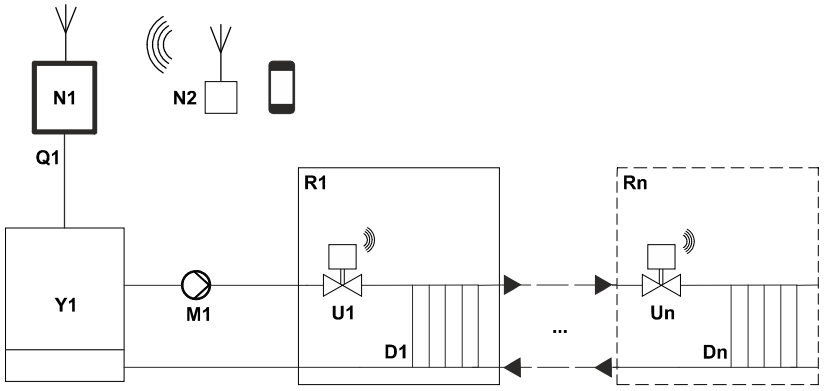
Example 1 illustrates a convenient wiring method (AC 230 V with bridge). If the load is not AC 230 V, see example 2.

Example 1: Loads = AC 230 V	Example 2: Loads Y1, Y2 ≠ AC 230 V
	

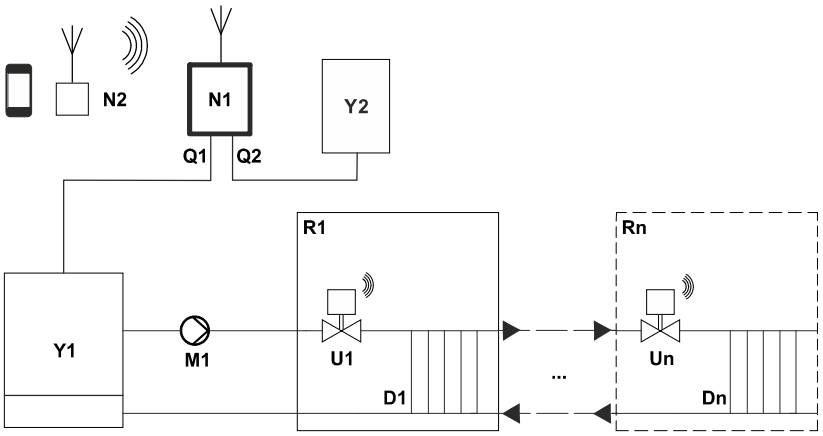
Y1	Boiler, circulation pump, main zone valve or non-reversible heat pump
Y2	DHW

Application examples

Gas boiler, multi-zone

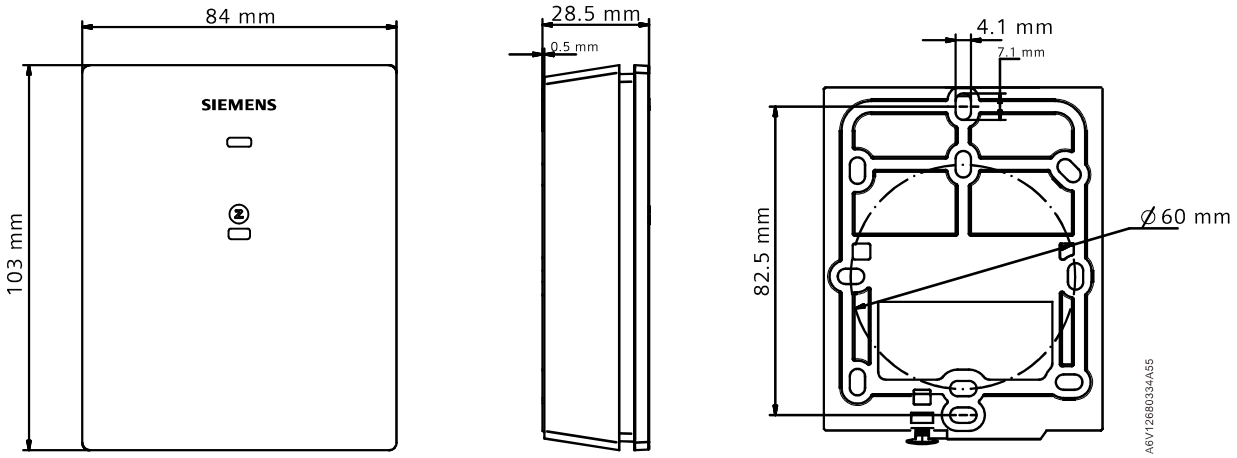


Gas boiler and DHW, multi-zone



N1	Connected Home ReceiverRCR110.2ZB
N2	Connected Home HubGTW100ZB
Q1, Q2	Relay outputs
Y1	Heat generator (e.g., boiler)
Y2	Domestic hot water boiler
M1	Circulating pump
R1, Rn	Individual room/zone
U1, Un	Radiator Valve act. Zigbee
D1, Dn	Radiator

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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Edition 2024-02-01

SIEMENS

Zigbee Room Thermostat, wired and wireless, battery powered

RDZ100ZB, RDZ101ZB

For heating systems

- Room temperature control
- Communicates with Connected Home Hub via Zigbee network
- 2-position/TPI control with On/Off output for heating
  - RDZ100ZB: 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®)
- Adjustable commissioning and control parameters via mobile application
- Battery-powered (2xAA batteries)

Use

The RDZ100ZB/RDZ101ZB is part of Siemens Connected Home ecosystem. It is used to control the room temperature in heating 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

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
- Remote operation and monitoring via mobile application
- Open window detection
- Valve/pump exercising
- Heat demand-based boiler or pump release in combination with e.g. Connected Home Receiver RCR110.2ZB
- 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

Accessories

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

Delivery

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

Inbox item

RDZ100ZB

Items	Quantity
RDZ100ZB mounting plate	1
RDZ100ZB 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
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

[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	A6V13360576
Operation manual	A6V13360586
CE declaration	A5W00270102A
UKCA declaration	A5W00270107A
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

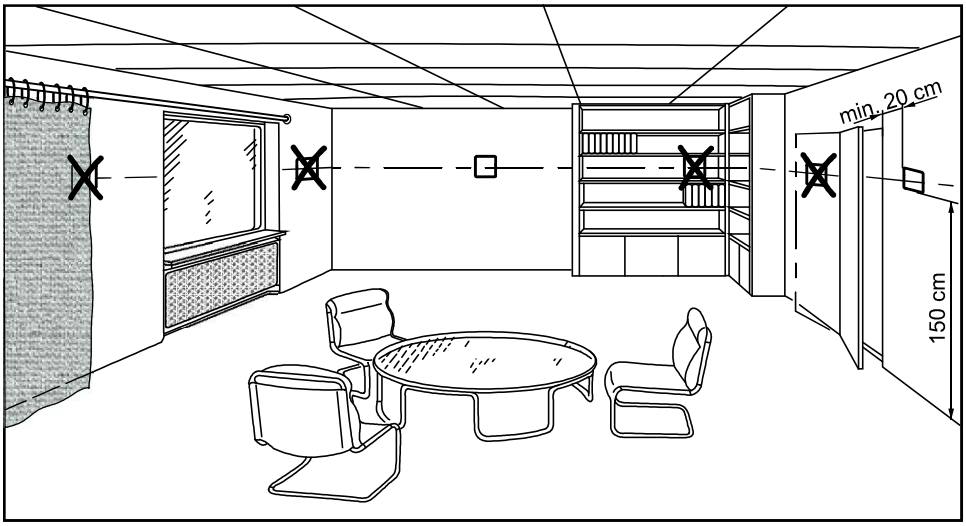
Explosion due to fire or short-circuit, even with discharged batteries

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 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.
- 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 only)

- 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

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	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	III
RDZ101ZB	I
Rated impulse voltage	
RDZ100ZB	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*
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	210 g
RDZ101ZB	226 g
Thermostat	
RDZ100ZB	157 g
RDZ101ZB	173 g

Technical data (RDZ100ZB only)

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

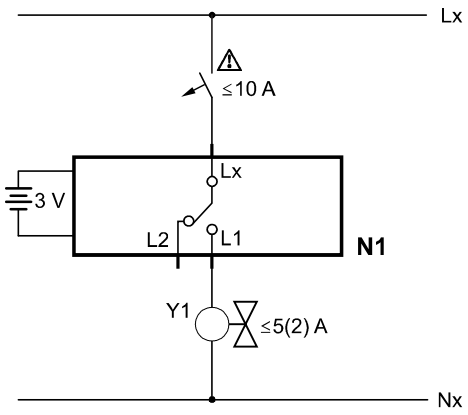
⚠ WARNING	
	No internal fuse. External preliminary protection with maximum 10 A circuit breaker in the supply lines is required under all circumstances.

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

RDZ100ZB

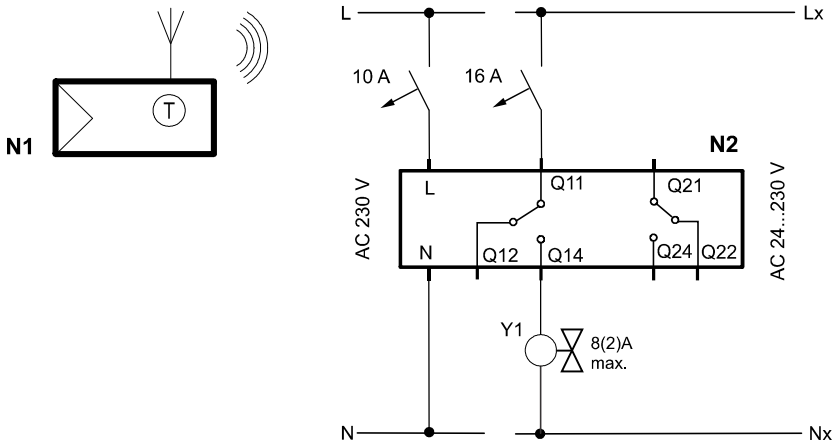


Lx	Live, AC 24...230 V	Nx	Neutral conductor, AC 24...230 V
Lx, L2	NC contact (for NO valves)	N1	Wired room thermostat RDZ100ZB
Lx, L1	NO contact (for NC valves)	Y1	Actuating device

⚠ WARNING

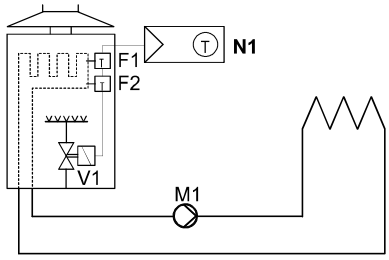
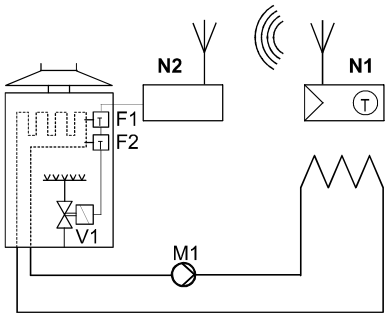
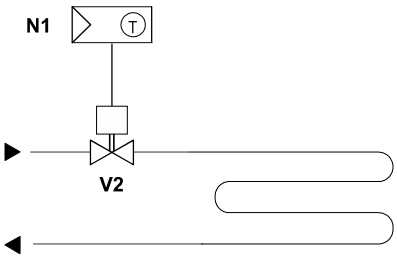
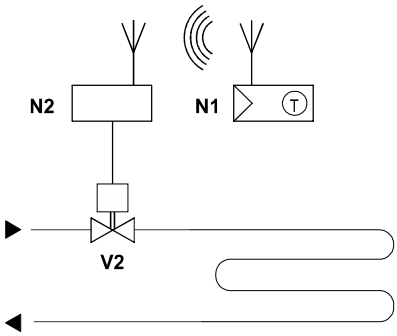
Current higher than 5 (2) A is not allowed to go through RDZ100ZB controller. For high current device, an additional relay or contactor must be installed.

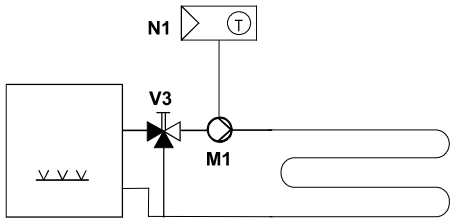
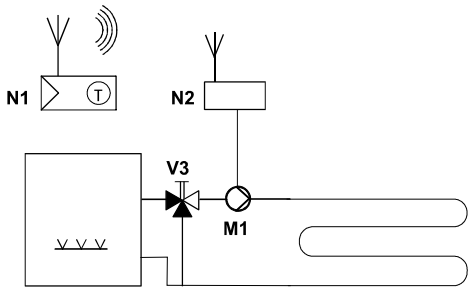
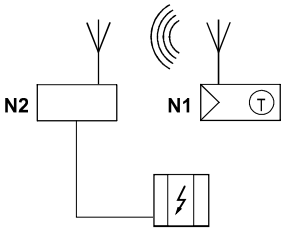
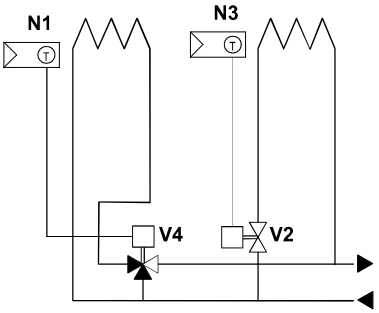
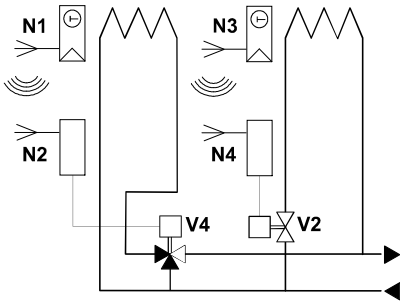
RDZ101ZB



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		

Application examples

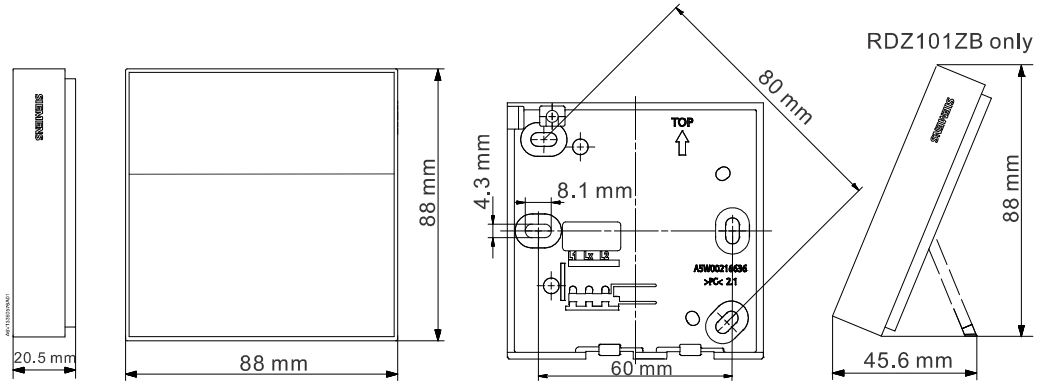
RDZ100ZB	RDZ101ZB (with RCR110.2ZB)
Room thermostat with direct control of a gas-fired wall-hung boiler 	Room thermostat with wireless control of a gas-fired wall-hung boiler 
Floor heating with valve 	Floor heating with valve 

RDZ100ZB	RDZ101ZB (with RCR110.2ZB)
Floor heating with pump 	Floor heating with pump 
Electric radiator* 	Electric radiator* 
Zone valve 	Zone valve 

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

F1	Thermal reset limit thermostat	V1	Magnetic valve
F2	Safety limit thermostat	V2	2-port valve
N1, N3	RDZ100ZB/RDZ101ZB	V3	Mixing 3-port valve with manual adjustment
N2, N4	RCR110.2ZB	V4	3-port valve
M1	Circulating pump		

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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Edition 2024-02-01

SIEMENS

Wireless radiator valve actuator ZigBee, wireless

SSA911.02ZB

Wireless radiator valve actuator

- RF-controlled actuator communication based on ZigBee protocol (2.4 GHz, bidirectional)
- Connects and operates with Connected Home hub and repeater
- Battery-operated with 2 x 1.5 V AA batteries
- Valve thread connection M30x1.5 mm
- Nominal stroke 5 mm
- Valve positioning force 90 N
- Adapts automatically to valve
- Integrated temperature sensor and PI controller
- Set temperature on the radiator valve actuator or via the Siemens Connected Home App
- Touch elements and LED display operation

Application

- The SSA911.02ZB wireless radiator valve actuator is designed to work on radiator valves from different manufacturers in HVAC applications using M30x1.5 thread. It operates the valve to control water flow and room temperature.
- The valve actuator works in combination with Connected Home Hub GTW100ZB and wireless repeater RCR110.2ZB (as an option)
- One Connected Home Hub GTW100ZB can pair with up to 32 radiator valve actuators. Wireless repeaters RCR110.2ZB extend the range of the network.

Basic functions

Functions	Description
Communication	The communication protocol is ZigBee. ZigBee is a low-power wireless mesh networking protocol for device-to-device and device-to-cloud communications. ZigBee is based on IEEE 802.15.4 radio standard.
Parallel operation	A single Connected Home Hub GTW100ZB can pair up to 32 actuators.
Pairing	The Connected Home app pairs the devices.
Calibration	The actuator automatically detects the end positions of the radiator valve.
Temperature setting	Push buttons on the device set the setpoint temperature

Type summary

Type	Article number	Description
SSA911.02ZB	S55181-A105	Radiator valve actuator

Delivery

- Radiator valve SSA911.02ZB
- 2 AA alkaline batteries (LR6)
- Quick guide (A5W00205935A)
- Third-party valve adapter for Danfoss (RA, RAV, RAVL)
- Screw and nut for adapter

Equipment combinations

The SSA911.02ZB is suited for the following Siemens radiator valve types:

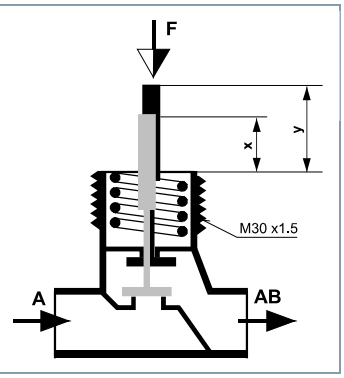
Type		kVS [m3/h]	V̇ [l/h]	PN	Data sheet
VDN1.., VEN1..	Radiator valves	0.63...1.41	-	10	N2105
VDN2.., VEN2.., VUN2..	Radiator valves	0.25...3.4	-	10	N2106
VD1..CLC..	Radiator valves	1.9...2.6	-	10	N2103
VD1.., VE1.. *	MCV MiniCombiValves	0.25...3.4	-	10	N2145
VD2.., VE2.., VU2.. *	Radiator valves	0.25...3.4	-	10	N2146
VPD /VPE/ VPU..	Radiator PICV	-	20...135	10	A6V13599366

k_{vs}= Flow nominal value for cold water (5...30 °C) through a fully opened valve (H_{100}), at differential pressure of 100 kPa (1 bar)

V̇ = volumetric flow rate

*= No longer available

Force	90 N nominal
Fully closed	x ≥ 9.0 mm
Fully open	y ≤ 14.5 mm



Valve pre-adjustment / kv-limitation. For valve pre-adjustments, refer to the relevant technical documentation on the valves. Ensure a minimum valve stroke of > 0.5 mm.

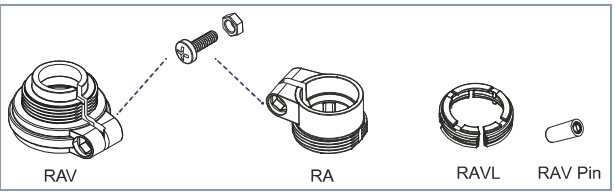
Accessories

Adapters for SSA911.02ZB for use with third-party manufacturers:

Type	Article number	For use with...	Adapter thread
AV52	BPZ:AV52	Comap	M28x1.5
AV56	BPZ:AV56	Giacomini	-
AV57	BPZ:AV57	Herz	M28x1.5
AV58	BPZ:AV58	Oventrop < 2002	M30x1
AV59	BPZ:AV59	Vaillant	-
AV60	BPZ:AV60	TA < 2002	M28x1.5
AV61	BPZ:AV561	MMA Markaryd	M28x1.5

Contact your local office or branch for information on adapters for other radiator valve types and manufacturers.

Adapters for Danfoss RAV / RA / RAVL valves are included in delivery.

✓ Remove the plastic adapter connectors. **1.** Use supplied screw and nut. **2.** Insert pin on valve stem.	

Product documentation

Title	Contents	Document ID
Connected Home Radiator Actuator ZigBee SSA911.02ZB	Data sheet: Product description	A6V13722083
Quick guide Connected Home Radiator Actuator ZigBee SSA911.01ZB	Quick guide for mounting, commissioning and operation SSA911.01ZB	A5W00293080A
Connected Home Hub GTW100ZB	Data sheet: Product description	A6V12640776
Quick guide Connected Home Hub GTW100ZB	Quick guide for mounting, commissioning and operation SSA911.01ZB	A6V12694180
Connected Home Receiver RCR110.2ZB	Data sheet: Product description	A6V12680327
Quick guide Connected Home Receiver RCR110.2ZB	Quick guide for mounting, commissioning and operation RCR110.2ZB	A6V11562443

Related documents such as the environmental declarations, declarations of conformity, etc., can be downloaded from the following Internet address:

www.siemens.com/bt/download

Notes

⚠ 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

Risk of burns from hot surface

The screw nut that fastens the actuator to the radiator valve can become hot. Risk of burns from touching the screw nut.

- Switch off the radiator and allow it to cool down.

⚠ WARNING	
	Explosion due to fire or short circuit, even with empty batteries Risk of injury due to flying parts • Do not expose batteries to water. • Do not recharge batteries. • Do not damage or disassemble batteries. • Do not expose batteries to temperatures over 85 °C.

⚠ WARNING	
	Leakage of electrolyte Severe burns • Wear protective gloves to handle damaged batteries. • In case of contact with electrolytes, rinse eyes immediately with water. Consult a doctor.

Observe the following:

- Correct polarity.
- Use new batteries and check for damage.
- Do not mix old and new batteries.

Store, transport and dispose of the batteries in compliance with local requirements, regulations, and laws. Also observe the instructions of the battery manufacturer.

NOTICE! **Switching off the device or loss of communication to the radiator valve actuator results in an "undefined state" and quickly drain the batteries. Do not switch off the Siemens Connected Home Hub and use a repeater for adequate coverage.**

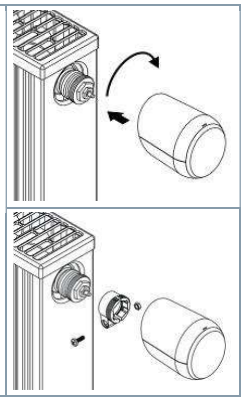
Mounting

SSA911.02ZB is mounted on the radiator valve. There are no preferred mounting positions; actuator SSA911.02ZB can be operated in all mounting positions. Make sure that the display and the touch elements on the radiator valve drive are visible and accessible.

⚠ WARNING	
	Falling objects Overhead installation may result in injury from falling objects. • Do not install the actuator more than 2 m above ground

◈ Turn the screw nut clockwise by hand onto the valve or actuator

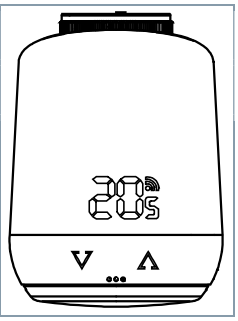
⇨ The radiator valve drive is installed.



Commissioning

- Install the Connect Home mobile app. The app provides step-by-step commissioning instructions.
- Install and commission the Connected Home Hub GTW100ZB (see quick guide A6V12694180).
- Optional: Install and commission the Connected Home Receiver RCR110.02ZB (see quick guide A6V11562443).
- Install and commission the Connected Home radiator valve actuator SSA911.02ZB (see quick guide A5W00293080A).

Operation

The interface consists of an LED display and two touch elements.		
▽	Lower temperature	
△	Increase temperature	

Touch elements		
▽	Confirm once	Lower room temperature by 0.5 °C.
	Press and hold	Immediately lowers room temperature by 0.5 C, followed by another 0.5 C every 0.5 s the button is held or until the lowest temperature is reached. If the settings is less than 8 °C, the LED display indicates — and control is switched off.
△	Press once	Increases room temperature by 0.5 °C.
	Press and hold	Immediately increases room temperature by 0.5 °C, followed by another 0.5 °C every 0.5 s until the highest temperature is reached. The LED display is **ON** if the set temperature is higher than 28 °C. Boost mode is activated for 5 minutes.
▽ and △	Same time as display is shut off press and hold together for 3 s	Lock or unlock buttons
	If **Ad** displays, press together and hold for 3 s	Starts adaptation

LED indication	
	Informs about wireless connection and pairing. On: Connected to gateway. Off: Not connected to gateway.
	Pairing mode is active. ***NOTICE!*** **Do not operate the actuators in pairing mode for longer periods; this quickly drains the batteries. If pairing fails several times, reset a radiator valve actuator to the factory settings and retry pairing per the documentation.**
	Remove mode (exclusion) active.
	Start adaptation.
	Animation: On during adaptation.
	Animation: On if button lock is enabled/disabled.
	On if battery capacity drops below 15%.

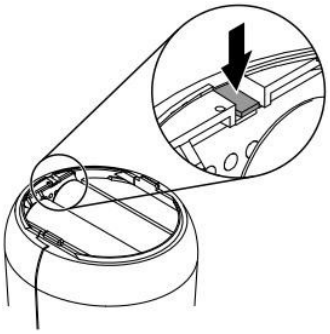
Modes and functions	
OFF mode	Press touch element ∨ and hold until the LED displays **--** and the SSA911.02ZB switches off.
Heating mode	The two touch elements ∨ and ∧ set the temperature between 8 and 28°C. If the device is not in heating mode, use the touch elements to change the temperature between 8 and 28 °C degrees.
Boost mode	In boost mode, heat demand is increased by setting a higher setpoint temperature. Press and hold touch element ∧ if the device is not in boost mode until the LED displays **ON**. Boost mode switches off automatically after 5 minutes.
Window open mode	A sudden drop in temperature activates the window open mode. SSA911.02ZB switches to OFF mode for 10 minutes. Window open mode is automatically terminated after 10 minutes; the previously active mode is restored.
Anti-lime scale function	The anti-scale function is performed weekly as of commissioning. The radiator valve fully opens and closes one time if the SSA911.02ZB receives an anti-scale command. This prevents valve seizing. Control returns to the previous valve position after descaling.
Calibration	The actuator calibrates as part of initial commissioning. The calibration function also triggers if the device detects a difference between the closing value and the previously saved adjustment value. The radiator valve fully opens and closes one time.

An error code displays on the LED display in the event of a communication error with Connected Home Hub. The error codes can be deleted by pressing the ∨ and ∧ touch elements.

Error codes		
C 1	Device is not connected.	• Make connection.
Er	Pairing failed	• Device is not in pairing mode. • Device is out of range. Do not leave the actuator in **Er** mode over longer periods; this quickly empty the batteries. If error cannot be solved immediately, remove batteries and re-insert only when starting the pairing process again.
E 1	No valve detected. Closing point not recognized.	• Is the valve correctly mounted to the radiator. • Use the correct adapter.
E 3	Valve cannot move.	• Check that the valve stem is not stuck.

Reset to factory settings

1. Remove the device from the Siemens Connected Home App.
2. Press the reset button in the battery compartment.



   ⇨ The meter displays on the LED and counts from **5 to 10**.
3. Release the reset button after the number **10** no longer displays.
   ⇨ The meter displays on the LED and counts from 99 down.
   ⇨ The LED display is **C1**.

⇨ The device is reset to factory settings.

Remove from network

1. Remove the device from the Siemens Connected Home App.
2. Press the reset button in the battery compartment.
   ⇨ The LED display indicates the setpoint temperature.
   ⇨ The LED is **LE**.
3. Release the reset button when the LED display indicates **LE**.
   ⇨ The meter displays on the LED display and counts down **99**.

⇨ The radiator valve actuator is ready to connect to the gateway.

⇨ Inclusion starts automatically.

Maintenance

The radiator valve drive is maintenance-free.

Disposal

The device is considered an electronic device for disposal in accordance with European Directive and may not be disposed of as domestic waste.

- Use only designated channels for disposing the devices.
- Comply with all local and currently applicable laws and regulations.
- Dispose of empty batteries at designated collection points.

Warranty

The application-specific technical data is guaranteed only in combination with the Siemens products listed in the 'Device combinations' section. If third-party products are used, any guarantee provided by Siemens will be invalidated.

The device uses a harmonized frequency in Europe and also meets the requirements under the Directive on Radio Equipment (2014/ 53/EU, previously 1999/5/EG).

Cyber security disclaimer

Siemens provides a portfolio of products, solutions, systems and services that includes security functions that support the secure operation of plants, systems, machines and networks. In the field of Building Technologies, this includes building automation and control, fire safety, security management as well as physical security systems. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art security concept. Siemens' portfolio only forms one element of such a concept.

You are responsible for preventing unauthorized access to your plants, systems, machines and networks which should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. Additionally, Siemens' guidance on appropriate security measures should be taken into account. For additional information, please contact your Siemens sales representative or visit:

https://www.siemens.com/global/en/products/automation/topic-areas/industrial-cybersecurity.html

Siemens' portfolio undergoes continuous development to make it more secure. Siemens strongly recommends that updates are applied as soon as they are available and that the latest versions are used. Use of versions that are no longer supported, and failure to apply the latest updates may increase your exposure to cyber threats. Siemens strongly recommends to comply with security advisories on the latest security threats, patches and other related measures, published, among others, here:

https://www.siemens.com/cert/ => 'Siemens Security Advisories'

Technical design

Power supply	
Battery type	2 x alkaline batteries LR6 (AA) 1.5 V
Battery life	Ca. 2 years

Radio communication	
Frequency range	2.4…2.4385 GHz
Transmitter power	<8 dBm
Area	≤ 30 m, depending on use and building
Protocol	ZigBee

Radiator valve actuator	
Stroke	5 millimeters
Positioning force	Typical, 90 N
Noise level	EN ISO 3741 < 35 dB(A)

Integrated temperature sensor	
Measuring range	0...50 °C

Internal controller	
Type	PI
Adjustable temperature range	8-28 °C

Degree of protection	
Protection class	Class III per IEC 60730-1
Housing type	IP 20 [1] per IEC 60529
Degree of pollution	Class 2 per IEC 60730

Environmental conditions		
Operation	Temperature	0...55 °C
	Humidity	< 95 %
Transportation	Temperature	-45...70 °C
	Humidity	< 95 %
Storage	Temperature	-25...55 °C
	Humidity	< 95 %

Environmental conditions	
Permissible temperature of medium in the connected valve	1...70 °C

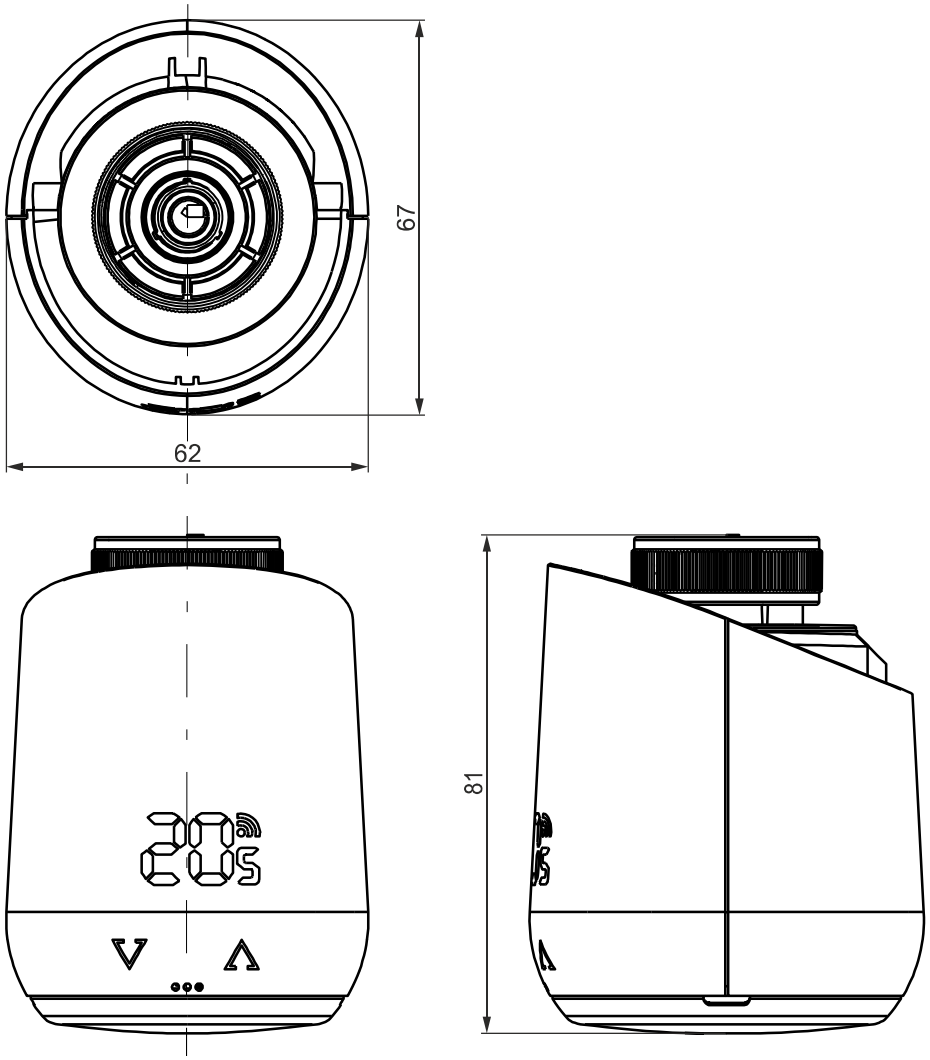
Directives and standards	
Product standard	IEC 60730-1
Electromagnetic compatibility	For residential, commercial, and industrial environments
EU conformity (CE)	A5W00090263A [2]
UKCA	A5W00206069A
EAC Conformity	Eurasian conformity for SSA911.02ZB

Environmental compatibility
The product environmental declaration A5W00285172A [2] contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).

Material and dimensions		
Display	LED	
Housing	Material	Plastic, light ASA+PC
	Color	White NCS S 052-G
Thread	M30x1.5	
W x H x D	See Dimensions [▶ 12]	
Weight		

[1]	Fully mounted
[2]	Documents available at http://www.siemens.com/bt/download

Dimensions



Weight kg	
without batteries	0.16

Revision numbers

Type	Valid from rev. no.
SSA911.02ZB S55181-A105	..01

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