



Wireless multizone receiver RDE-MZ6

for floor heating / zone heating systems

- Mains-powered RDE-MZ6 multizone wireless receiver (AC 230 V)
- DIN rail mounting
- 2-position control with On/Off output for each zone / room
- Room temperature control of each zone/room
- Control output for up to 6 zones with actuators/valves or 5 zones plus pump/boiler release
- Switching voltage AC 24...230V
- Each zone can be connected to a maximum of 3 actuators/valves
- Easy and quick installation due to new design and easily identifiable terminal markings
- Simple pairing of operation helps reduce installation time
- Indication of operating state via LEDs
- Only for use in connection with RDD100.1RF and RDE100.1RF room thermostats (to be ordered separately)
- Optional: External antenna for multizone installation inside a metal enclosure or weak wireless connectivity (provided free)

Use

The RDE-MZ6 is used in connection with room thermostats for zone/room temperature control in heating systems.

Typical applications:

- Apartments
- Commercial spaces

For the control of the following pieces of equipment:

- Thermal valves or zone valves
- Floor heating systems
- Pumps
- Boilers

Functions

- Zone/room temperature control via wireless thermostats
- 6 channels for wireless pairing (default configuration)
- Individual or multiple zone learning
- Resetting the learned wireless ID, if required
- Options for pump or boiler release
- Wireless operating frequency 433 MHz

Type summary

| Product No. | Stock number | Features |
|-------------|--------------------|--------------------------------------|
| RDE-MZ6 | S55770-T285 | Wireless multizone receiver AC 230 V |

Ordering

When ordering, please indicate product No. / stock number and description.
For example:

| Product No. | Stock number | Description |
|-------------|--------------------|--------------------------------|
| RDE-MZ6 | S55770-T285 | Multizone receiver |
| RDD100.1RF | S55770-T319 | Standalone RDD room thermostat |
| RDE100.1RF | S55770-T320 | Standalone RDE room thermostat |

Standalone RF transmitters, valve actuators and manifolds must be ordered separately.

Optional: External antenna for multizone receiver RDE-MZ6

In case of weak connectivity of the RF signal between wireless thermostat (RDD100.. / RDE100..) and the multizone receiver (RDE-MZ6) or special installation inside a metal enclosure, the user has the option to mount an external antenna. Remove the existing white antenna by turning off the antenna screw head and screw on the black external antenna. External antenna has to be placed on a convenient point and open space (it has a magnetic base). It is recommended to pair the units once again if necessary, please refer to the Commissioning Notes below.

Mechanical design

The RDE-MZ6 multizone receiver consists of a plastic housing which accommodates the electronics and features a built-in snap for direct mounting on DIN 35 rails (as per EN 50022).

Operation and settings



- 1) Channel state LEDs for zones 1 to 6. Zone 6 can be reconfigured for pump or boiler release
- 2) LEARN button for zones 1 to 6 (or override)
- 3) RESET button for all zones

Mounting and installation notes

DIN rail installation



- Place the receiver on the DIN rail from the top
- Gently push the receiver downward until it snaps onto the rail

Mounting



- Install the receiver close to the controlled unit, if possible
- 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 electrical cables and equipment like PCs, TVs, microwaves, etc.
 - Do not mount near large metallic structures or constructional elements with fine metal meshes such as special glass or special concrete
 - Use of external antenna if necessary

Wiring

See Mounting Instructions CB1M1428xx enclosed with the multizone receiver.



- Make sure the multizone receiver is not connected to power during wiring



- Ensure that wiring, fusing and earthing comply with local regulations



- Correctly size the cables to the multizone receiver and the valves / manifold / pump



- Use only valve actuators rated for AC 24... 230 V



- If the receiver cannot accommodate all cables, power must be fed to the system via an external terminal block



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 overcurrent protection device.



- The AC 230 V mains supply line must have a circuit breaker with a rated current of no more than 10 A



- Disconnect from power supply before removing the multizone receiver from the DIN rail

Commissioning notes

LED indication on RDE-MZ6

For the pairing process between transmitter and receiver, refer to Operating Instructions CB1B1428en, together with CB1B1431en for the RDD100.1RF, or CB1B1432en for the RDE100.1RF.

The table below describes the behavior of the RDE-MZ6:

| State of receiver | State of LED |
|------------------------------------|---|
| Power up (or reset) | All 6 red and green LEDs flash alternately for 5 seconds and then extinguish. Note: If the receiver zone was programmed before, it will immediately change to constantly red. |
| Learning mode | The respective zone's red and green LEDs flash alternately. |
| Successful learning mode | The respective green LED will flash for 10 minutes if learning was successful. |
| Signal ok and output status change | The respective zone's green LED is constantly lit. If the output state changes, the green LED will flash for 3 seconds and then changes back to constantly green. |
| For boiler or pump release | Zone 6: The green LED is lit when the relay is energized. It extinguished when any other relay is deenergized. |
| Fails to receive wireless data | If the respective zone of the RDE-MZ6 fails to receive wireless data, the red LED will start to flash after 125 minutes. If RDE-MZ6 signal is recovered, it will return to the previous LED state. |
| The specific zone has no ID | The respective LED extinguishes. |

Pump or boiler release

Zone 6 of the receiver can be reconfigured for pump or boiler release. In that case, the user is required to set the DIP switch inside the receiver housing to 1 (ON) (for details, refer to Mounting Instructions CB1M1428xx).

Override

The multizone receiver provides an override function (testing, emergency operation). It allows the installer to override the relay of each zone to be permanently energized, regardless of the wireless data received.

To activate the override function, press and hold the zone button for at least 10 seconds and release. The LED is constantly green and off once every 5 seconds, indicating that the override function is enabled.

To disable the override function, press the zone button once.

Maintenance note

The multizone receiver is maintenance-free.

Disposal



The devices are considered electronics devices for disposal in term of European Directive 2012/19/EU and may not be disposed of as domestic waste.

- Dispose of the device via the channels provided for this purpose.
- Comply with all local and currently applicable laws and regulations.

Technical data

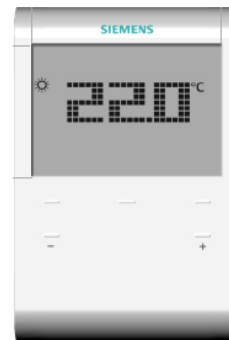
| | | |
|--|---|---|
|  Power supply | Operating voltage RDE-MZ6 at L - N | AC 230 V +10/-15% |
| | Frequency | 50 Hz |
| | Power consumption | 4 VA |
|  Switching outputs zones 1 – 6 | Switching voltage | AC 24... 230V |
| | Switching current At AC 230 V | Max. 8 A res., 2 A ind. Min. 200 mA |
| | Contact life at AC 230 V At 8 A res. | Guide value: 1 x 10 ⁵ cycles |
| | No internal fuse. | |
| | External preliminary protection with max. C 10 A circuit breaker in the supply lines required under all circumstances. | |
| Electrical connections | External protection for incoming cable | |
| | Circuit breaker | Max. 10 A |
| | Circuit breaker tripping characteristic | Type B, C or D to EN 60898 and EN 60947 |
| | Insulating strength | |
| | Between relay contacts and coil | AC 5,000 V |
| | Between relay contacts (same pole) | AC 1,000 V |
| | 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) |
| | Environmental Conditions | Operation |
| Climatic conditions | | As per IEC 60721-3-3 Class 3K5 |
| Temperature | | 0...50 °C |
| Humidity | | <95% r.h. |
| Transport | | |
| Climatic conditions | | As per IEC 60721-3-2 Class 2K3 |
| Temperature | | -25...60 °C |
| Humidity | | <95% r.h. |
| Mechanical conditions | | Class 2M2 |
| Storage | | |
| Climatic conditions | | As per IEC 60721-3-1 Class 1K3 |
| Temperature | | -25...60 °C |
| Humidity | | <95% r.h. |
| Standards and directives | EU Conformity (CE) | CB1T1420xx ^{*)} |
| |  RCM conformity to | |
| | EMC emission standard | AS/NZS 4251.1:1999 |
| | Safety class | II as per EN 60730-1, EN 60730-2-9 |
| | Pollution class | II as per EN 60730-1 |
| | Degree of protection of housing | IP30 as per EN 60529 |
| | The product environmental declaration CE1E1420xx ^{*)} contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal). | |
| General | Weight | 0.482 kg |
| | Color of housing front | RAL9003 |

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

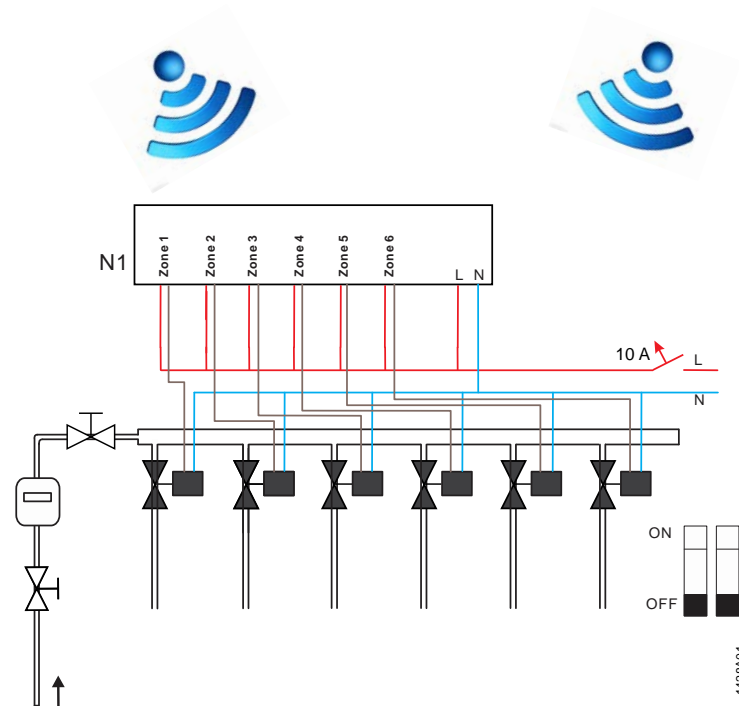
Connection diagrams



RDD100.1RF



RDE100.1RF



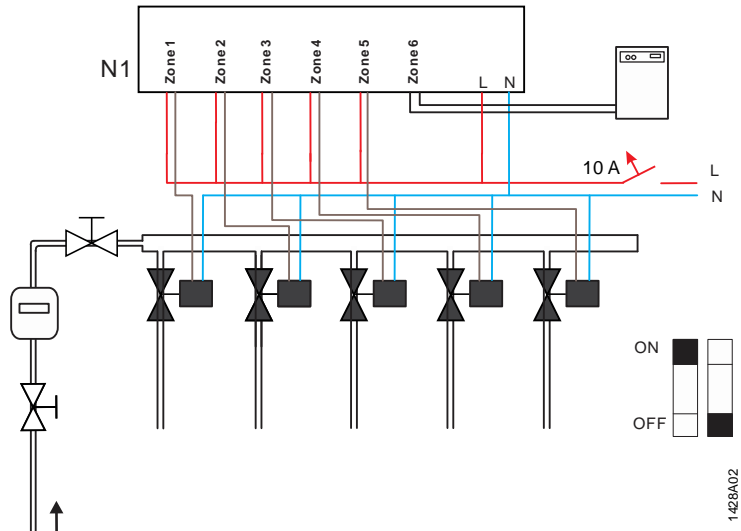
L Live, AC 230 V

N Neutral conductor

N1 Wireless multizone receiver RDE-MZ6

Note:

Use only valve actuators rated for AC24... 230V.



Recirculation or pump application (DIP switch: ON/OFF)

L Live, AC 230 V

N Neutral conductor

N1 Wireless multizone receiver RDE-MZ6

Note:

Use only valve actuators rated for AC24... 230V.

Dimensions

Dimensions in mm

