SIEMENS

3069

Room temperature controller with large LCD

RDH10

Non-programmable, for heating or cooling systems

- **Large LCD**
- **Battery-powered: 2 x alkaline batteries type AA, 1.5 V**

Use

The RDH10 is used to control the room temperature in heating or cooling systems.

Typical applications:

- Homes
- Residential buildings
- Schools
- Offices

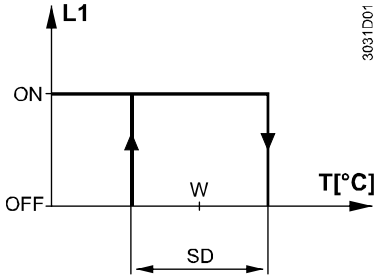
The controller is used together with the following equipment:

- Thermal valves or zone valves
- Combi boilers
- Gas or oil burners
- Fans
- Pumps

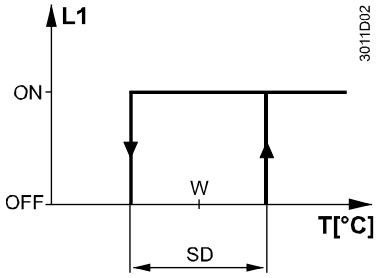
Functions

The controller acquires the room temperature with its integrated sensor.

Function diagram



T Room temperature
SD Switching differential
W Room temperature setpoint
L1 Output signal for heating



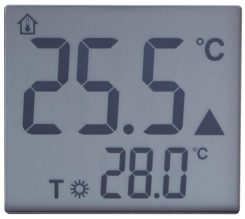
T Room temperature
SD Switching differential
W Room temperature setpoint
L1 Output signal for cooling

Temperature sensor

The RDH10 provides control of the room temperature only.

Display

The digital display shows the actual room temperature and the Comfort temperature setpoint. When the heating output is active, the triangle symbol appears.



Backup

When taking out the batteries, the setpoints and the information required for operating mode changeover are retained for maximum 2 minutes.

Ordering

When ordering, please give name and product number: Room temperature controller RDH10.
Valves and actuators are to be ordered as separate items.

Equipment combinations

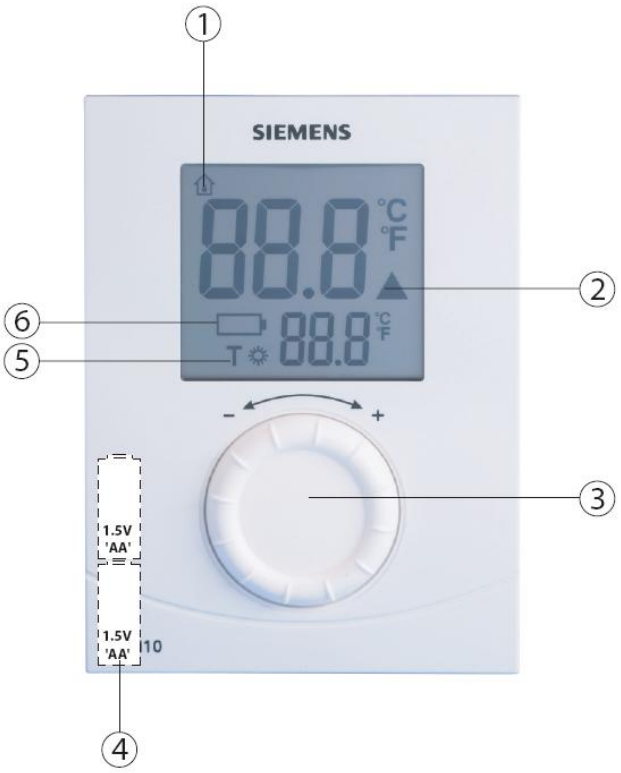
Type of unit	Product number	Data sheet*)
Electromotoric actuator	**SFA21...**	4863
Electrothermal actuator (for radiator valves)	**STA21...**	4877
Electrothermal actuator (for small valves 2.5 mm)	**STP21...**	4878
2- or 3-port zone valve	**MXI/MVI421…**	4867
Electromotoric actuator for zone valves V..146..	**SUA21**	4830
Electric actuator	**SUA11/22**	4832
Air damper actuator	**GDB…**	4624
Air damper actuator	**GSD/GQD…**	4606
Air damper actuator	**GXD…**	4622

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

The unit consists of 3 parts:

- Plastic housing with digital display accommodating the electronics, operating elements and built-in room temperature sensor
- Baseplate (mounting base)
- Removable battery compartment

The housing engages in the baseplate and snaps on. The baseplate carries the screw terminals. There is a reset button on the rear of the unit.



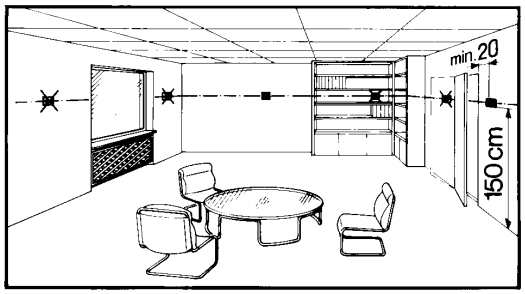
Key

1 Display of the room temperature in °C
2 ▲ Indicates a request for heat
3 Temperature setting knob
4 Battery compartment
5 T☼ Comfort temperature setpoint
6 ▭ Indicates low battery power; replace batteries

Notes

Mount the room temperature controller in a location where the air temperature can be acquired as accurately as possible without getting adversely affected by direct solar radiation or other heat or refrigeration sources.

Mounting height is about 1.5 m above the floor.



The unit can be fitted to a recessed conduit box.

Mounting, installation and commissioning

When mounting the unit, fix the baseplate first. Then, make the electrical connections and fit and secure the controller (also refer to the separate mounting instructions).
Mount the controller on a flat wall and in compliance with local regulations.
If there are thermostatic radiator valves in the reference room, set them to their fully open position.

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 power supply lines must have an external circuit breaker with a rated current of no more than 10 A.

Maintenance

The controller is maintenance-free.

Change of batteries

If the battery symbol appears, the batteries are almost exhausted and must be replaced.

Reset

To reset, press the reset button on the rear of the unit. All individual settings are then reset to their default values.

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.
- Dispose of empty batteries at designated collection points.

Technical data

Power supply	Operating voltage	DC 3 V (2 x 1.5 V AA alkaline batteries)
	Battery life	>1 year (with AA alkaline batteries)
Sensor inputs	**Internal:**	
	Thermistor	10 kΩ ± 1% at 25 °C
Outputs	Relay contacts	
	Switching voltage	Max. AC 250 V
		Min. AC 24 V
Switching outputs (LX, L1, L2)	Switching current	Max. 5 A res., 2 A ind.
	At AC 250 V	Min. 200 mA
	Contact life at AC 250 V	Guide value:
	At 5 A res.	1 x 10^5 cycles
	Insulating strength	
	Between relay contacts and coil	AC 3,750 V
	Between relay contacts (same pole)	AC 1,000 V
	No internal fuse External preliminary protection with max. C 10 A circuit breaker in the supply line required under all circumstances.	
Operational data	Switching differential SD	1 K
	Setpoint setting range	5…30 °C
	Factory setting comfort setpoint	20 °C
	Resolution of settings and displays	
	Temperature setpoint	0.5 °C
	Display of actual temperature value	0.5 °C
Electrical connections	Connection terminals (via baseplate)	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	IEC 60721-3-3
	Climatic conditions	Class 3K5
	Temperature	0…+40 °C
	Humidity	<90% r.h.
	Transport	IEC 60721-3-2
	Climatic conditions	Class 2K3
	Temperature	-25…+60 °C
	Humidity	<95% r.h.
	Mechanical conditions	Class 2M2
	Storage	IEC 60721-3-1
	Climatic conditions	Class 1K3
	Temperature	-10…+60 °C
	Humidity	<90% r.h.
Standards	EU Conformity (CE)	CE1T10885xx *)
	N474 **C-tick** conformity to	
	Test standards and requirements	EN 61000-6-3, AS/NZS 4251.1
	Safety class	II as per EN 60730-1
	Pollution degree	2
	Degree of protection of housing	IP20
General	Weight (incl. packaging)	
	RDH10	340 g
	Color of housing front	Signal-white RAL 9003
	Housing material	ABS (LCD lens: PC)

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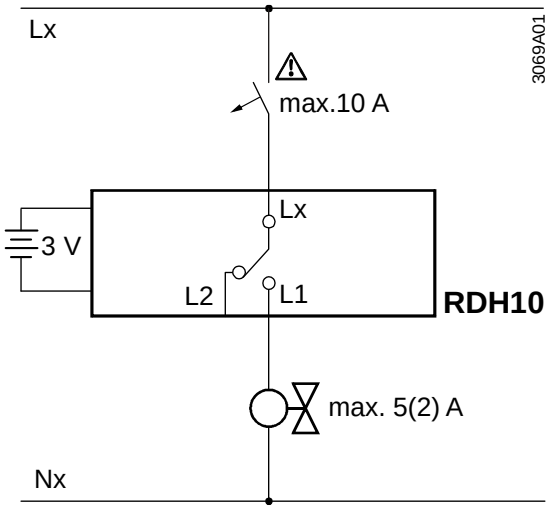
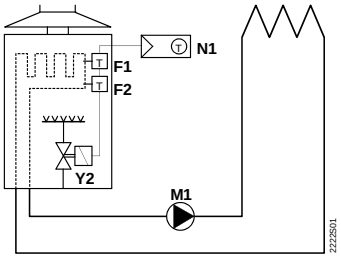
Connection diagram

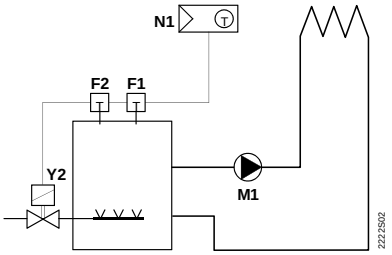


Lx, Nx 24...250 V	Live, neutral conductor, AC
Lx, L2	N.C. contact (for N.O. valves)
Lx, L1	N.O. contact (for N.C. valves)

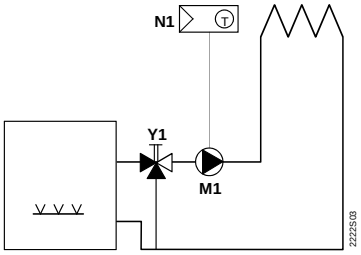
Application examples



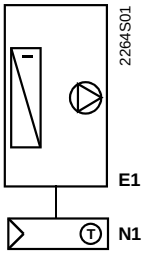
Room temperature controller with direct control of a gas-fired wall-hung boiler



Room temperature controller with direct control of a gas-fired floor-standing boiler



Room temperature controller with direct control of a heating circuit pump (precontrol by manual mixing valve)

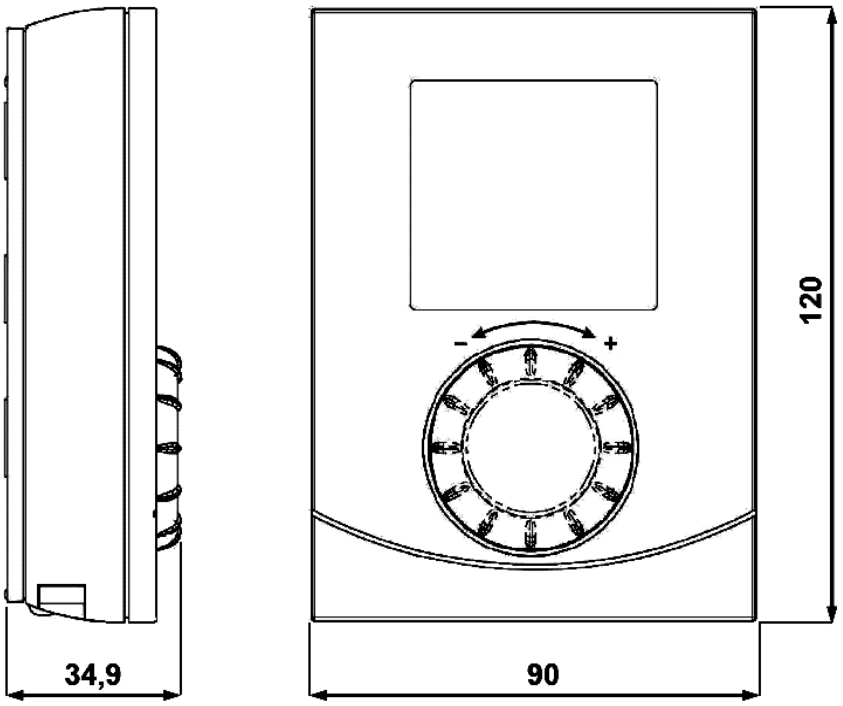


Room temperature controller with direct control of cooling equipment

F1	Thermal reset limit thermostat
F2	Safety limit thermostat
M1	Circulating pump
E1	Cooling equipment
N1	Room temperature controller RDH10
Y1	3-port valve with manual adjustment
Y2	Magnetic valve

Dimensions

Room temperature controller



Baseplate