



Room Thermostats

RAA0...

adjustable for heating only or cooling only

ON/OFF thermostat, single-pole changeover contact for automatic room temperature control and other applications in the fields of heating and air conditioning.

Suitable for use in small and medium size plants.

Use

The RAA0... room thermostat is used for controlling the room temperature.

Typical fields of use:

- Control of the room temperature in:
 - Single-family and holiday houses
 - Apartments and individual rooms
 - Schools and workshops
- For control of the following pieces of equipment:
 - Gas solenoid valves
 - Thermal actuators
 - Zone valves (normally closed)
 - Circulating pumps
 - Fans
 - Forced draught gas or oil burners
- As a frost protection thermostat for monitoring the temperature in warehouses, etc.
- For direct or indirect control of electric heating equipment

Type summary

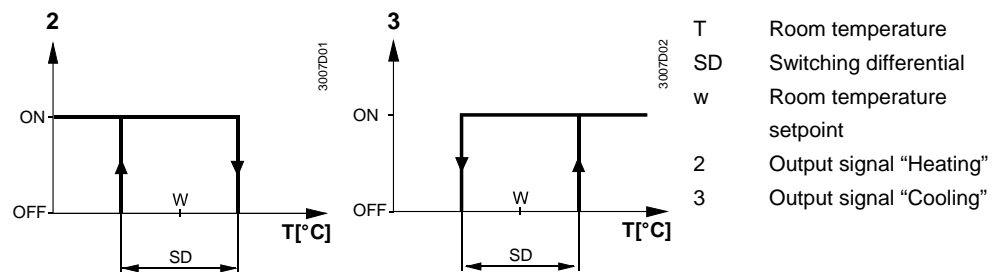
Type reference	Features
RAA02 / RAA02.1N	Room thermostat for heating or cooling, with changeover contact 0.25...16 (6) A, AC 24...230 V
RAA02.16N	Room thermostat for heating or cooling, with changeover contact 0.25...16 (6) A, AC 230 V and operational status indication
RAA03	Room thermostat for heating or cooling, with changeover contact 0.25...16 (6) A, AC 24...230 V, and ON / OFF switch

N = Mounting set (Screws, plugs, mounting plate 82 x 82 mm)

Functions

The RAA0... room thermostat has separate control outputs for heating and cooling. When the room temperature falls below the adjusted setpoint, the heating contact will close. When the room temperature exceeds the adjusted setpoint, the cooling contact will close.

Function diagram



Technical design

The RAA0...

- is an on / off thermostat
- uses a gas-filled diaphragm

Mechanical design

The unit's housing is made of plastic.

The required room temperature is adjusted with the setpoint knob on the front of the unit.

Using the tappets (under the housing cover), the setpoint setting range can be mechanically limited.

Technical data

Operational data

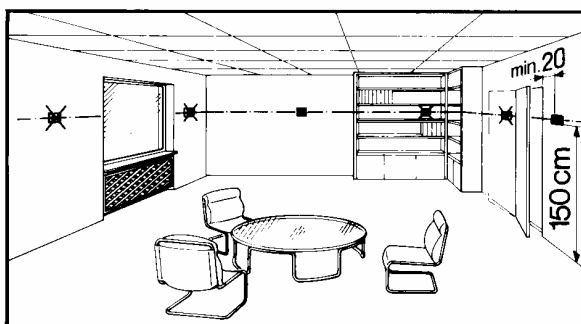
Switching capacity	
Voltage	AC 24...250 V
Current	0.25...16 (6) A
Frequency	50 or 60 HZ
Temperature range	5 ... 30 °C
Switching differential SD	≤ 1 °C
Switching cycle	15 min.
Control accuracy	± 1 °C

Environmental conditions	Electromagnetic compatibility	EN 60730-1
	Immunity	EN 50082-2
	Emissions	EN 50081-1
	Perm. ambient temperature:	
	Operation	-10 ... +50 °C
	Transport / storage	-20 ... +50 °C
Norms and standards	Perm. ambient humidity	
	Operation	class G to DIN 40040
	Transport / stage	class E to DIN 40040
	CE conformity to	
	EMC directive	89/336/EEC
	Low voltage directive	73/23/EEC and 93/68/EEC
Design	Safety class	I to EN 60730
	Degree of protection (when mounted on a closed wall)	IP30 to EN 60529
	Weight	0.14 kg
	Colour of housing front	white, NCS S 0502-G (RAL9003)
	Indicator lamp (LED)	
	Operating voltage	230 V +10 / -15 %
	Power consumption	< 4 VA
	Colour	red

Notes

The room thermostat should be mounted in a location where the air temperature can be measured 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 or directly on the wall.

Only authorised personnel may open the room thermostat.

Caution: AC 24...250 V! The unit must be isolated from the mains supply before opening it.

When mounting the unit, fix the base plate first. Then, make the electrical connections and fit and secure the cover (also refer to separate Mounting Instructions).

The room thermostat must be mounted on a flat wall and in compliance with local regulations.

If there are thermostatic radiator valves in the reference room, they must be set to their fully open position.

The room thermostat is maintenance-free.

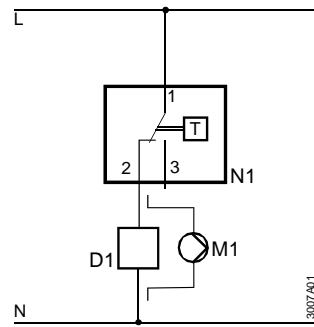
The diaphragm is filled with environmentally friendly gas.



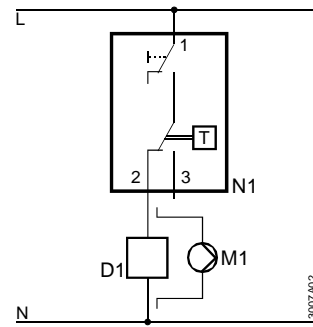
Mounting, installation and commissioning

Maintenance

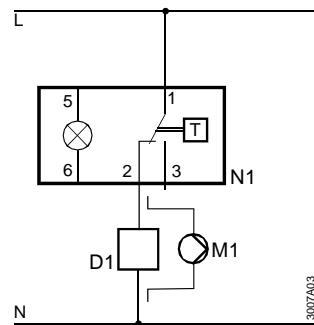
Connection diagrams



RAA02 / RAA02.1N



RAA03

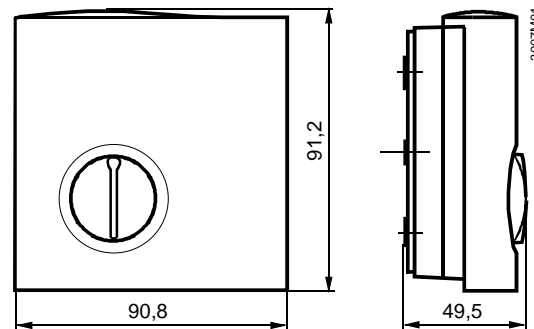


RAA02.16N

L	Switching voltage AC 24... 250 V	N1	Room thermostat
N	Neutral	M1	Pump
D1	Zone valve or thermal valve	2	Control output "Heating", AC 24... 250 V
T	Gas-filled diaphragm	3	Control output "Cooling" AC 24... 250 V
		5, 6	Operational status indication, AC 230 V +10/-15 %, 50Hz

Dimensions

Thermostat



Base plate

