



## Room Thermostats

## RAA0...

adjustable for heating only or cooling only

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**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

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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

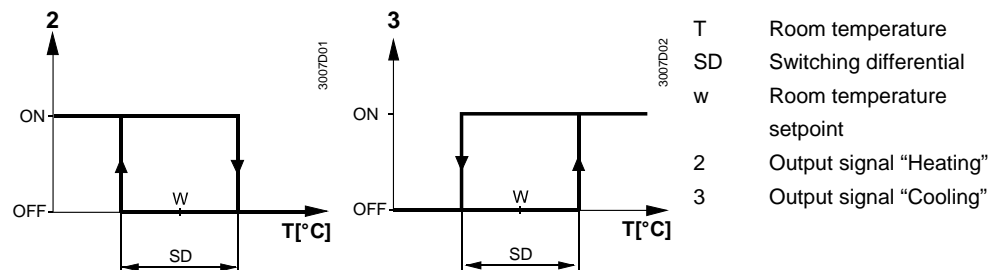
Type reference	Features
<b>RAA02 / RAA02.1N</b>	Room thermostat for heating or cooling, with changeover contact 0.25...16 (2.5) A, AC 24...230 V
<b>RAA02.16N</b>	Room thermostat for heating or cooling, with changeover contact 0.25...16 (2.5) A, AC 230 V and operational status indication
<b>RAA03</b>	Room thermostat for heating or cooling, with changeover contact 0.25...16 (2.5) 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

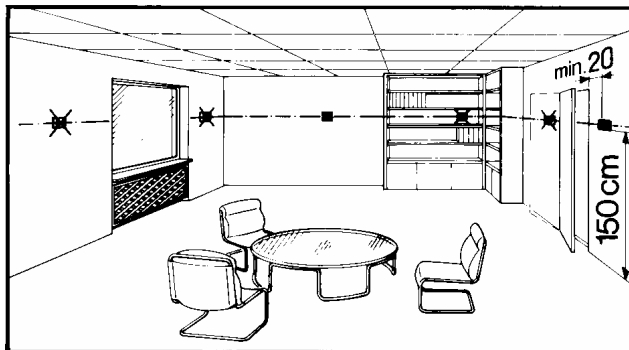
Operational data	Switching capacity	
	Voltage	AC 24...250 V
	Current	0.25...16 (2.5) A
	Frequency	50 or 60 HZ
	Temperature range	8 ... 30 °C
	Switching differential SD	≤ 1 °C
	Switching cycle	15 min.
	Control accuracy	± 1 °C

Environmental conditions	Operation	
	Environmental conditions	Klasse 3K5 nach IEC 721-3-3
	Temperature	0...+50 °C
	Humidity	<95 % r.H.
	Transport / storage	
	Environmental conditions	Klasse 2K3/1K3 nach IEC 721-3-2
Norms and standards	Temperature	-20...+50 °C
	Humidity	<95 % r.F.
	Degree of pollution	(2)
	<b>CE</b> conformity to	
	EMC directive	89/336/EEC
	Low voltage directive	73/23/EEC und 93/68/EEC
	ENEC (European Norms Electrical Certification)	
	Product safety	
	Automatic electrical controls for household and similar use	EN 60730-1, EN 60730-2-9
	Radio interference protection	click rate N ≤5 nach EN 55 014
	Safety class	II nach EN 60730
	Degree of protection (when mounted on a closed wall)	IP30 nach EN 60529
ROHS	2002/95/EC	
Rated impulse voltage	2,5 kV	
Design	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.



## Mounting, installation and commissioning

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.

## Maintenance

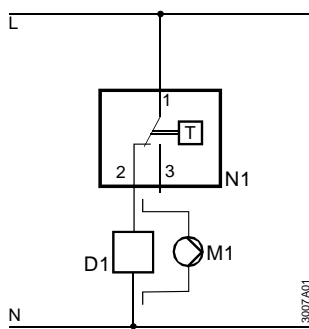
The room thermostat is maintenance-free.  
The diaphragm is filled with environmentally friendly gas.

Disposal

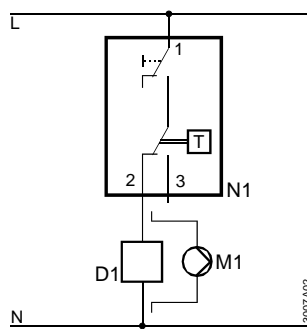


The device is a waste electronic equipment in terms of the European Directive 2002/96/EC (WEEE) and should not be disposed as part of unsorted municipal waste. The relevant national legal rules are to be paid attention. Use for disposal the systems set up to collect electronic waste. Observe all local and applicable laws.

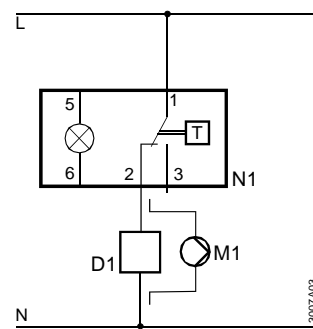
## Connection diagrams



RAA02 / RAA02.1N



RAA03



RAA02.16N

L	Switching voltage AC 24... 250 V
N	Neutral
N1	Room thermostat
M1	Pump
D1	Zone valve or thermal valve

T	Gas-filled diaphragm
2	Control output "Heating", AC 24... 250 V
3	Control output "Cooling" AC 24... 250 V
5, 6	Operational status indication, AC 230 V +10/-15 %, 50Hz

## Dimensions

Thermostat / Base plate

