



Room Thermostat

RAA40

Adjustable for heating only or cooling only

Room thermostat with manual changeover switch for heating or cooling systems

Two-position control

Operating voltage AC 24...250 V

Use

The RAA40 room thermostat is used in heating or cooling systems to maintain the selected room temperature.

Typical use:

- Residential buildings
- Light industrial buildings

In conjunction with

- zone valves
- thermal valves

Functions

OFF

The front of the unit carries a selector with three positions for Heating / OFF / Cooling.

In the OFF position, the input voltage is physically separated from the output voltage.

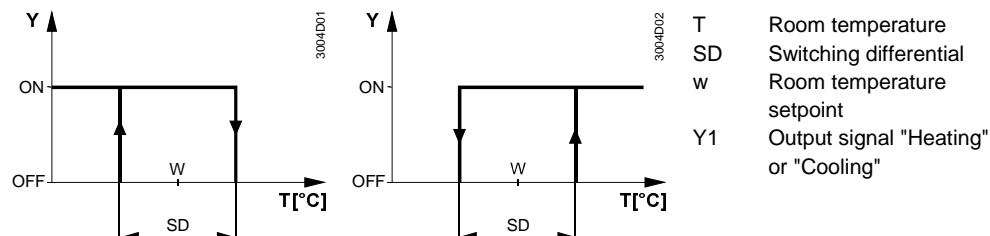
Heating

If the room temperature falls below the selected setpoint, the heating contact will close (cooling contact open). If the room temperature exceeds the selected setpoint, the heating contact will open and the cooling contact will close but remains inactive because the selector is set to "Heating".

Cooling

Action reversed.

Function diagrams



Equipment combinations

Designation	Type reference	Data sheet
2-way zone valve DN 15	MVE22.15	CA2N4825
2-way zone valve DN 20	MVE22.20	CA2N4825
2-way zone valve DN 25	MVE22.25	CA2N4825
3-way zone valve DN 15	MXE22.15	CA2N4825
3-way zone valve DN 20	MXE22.20	CA2N4825
3-way zone valve DN 25	MXE22.25	CA2N4825
Thermal actuator (suitable for radiator valves VD... / VE... / VU... and 2T...)	STE21.1	CA1N4874

Technical design

Key features of the RAA40 room thermostat:

- Two-position control
- Manual switch for Heating / OFF / Cooling
- Gas-filled diaphragm

Adjustments

The required temperature is selected by a setpoint adjuster on the front of the thermostat.

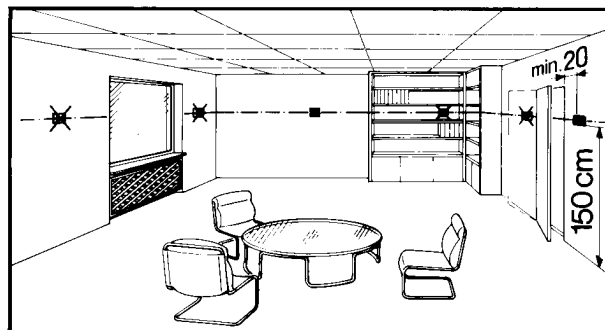
The setpoint setting range can be mechanically limited by means of setpoint limiter under the unit cover.

Notes

Mounting, installation and Commissioning

The room thermostat should be located where the air temperature can be sensed 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 most commercially available recessed conduit boxes or directly on the wall.

Only authorised personnel may open the unit to perform service. **(Caution: AC 250 V)**

The unit must be isolated from the mains supply before opening.



When installing the unit, fix the baseplate first, then hook on the thermostat body and make the electrical connections. Then fit the cover and secure it (also refer to separate mounting instructions).

The thermostat must be mounted on a flat wall.

The local electrical regulations must be complied with.

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

Maintenance




The room thermostat is maintenance-free.

Mechanical design

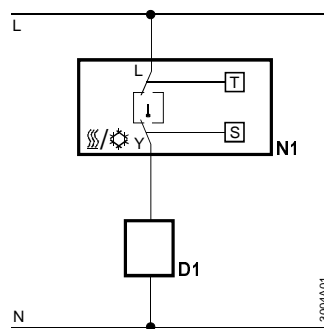
The diaphragm is filled with environmentally friendly gas.

The thermostat housing is made of plastic.

Technical data

 Power supply Operational data	Operating voltage	AC 24...250 V
	Frequency	50 or 60 Hz
Environmental conditions	Switching differential SD	≤1 K
	Setpoint setting range	8...30 °C
	Amperage at AC 250 V	0.2...6 (2) A
	Operation	to IEC 721-3-3
Norms and standards	Climatic conditions	class 3K5
	Temperature	0...+50 °C
	Humidity	<95 % r.h.
	Pollution degree	normal, to EN 60730
	Transport / storage	to IEC 721-3-2
	Climatic conditions	class 2K3/1K3
	Temperature	-20...+50 °C
	Humidity	<95 % r.h.
	Mechanical conditions	class 2M2
	Packaging	single packaging / min. order 20 pieces
 conformity  ^{N474} C-Tick conformity to	Low voltage directive	73/23/EEC and 93/68/EEC
	Product standard	EN 60730
	EMC emission standard	AS/NSZ 4251.1:1994
	Safety standard	II to EN 60730
	Degree of protection	IP30 to EN 60529
	Screw terminals for	2 x 1.5 mm ² or 1 x 2.5 mm ² , min. (0.5 mm ²)
	Weight	0.14 kg
	Colour	white, NCS S 0502-G (RAL 9003)

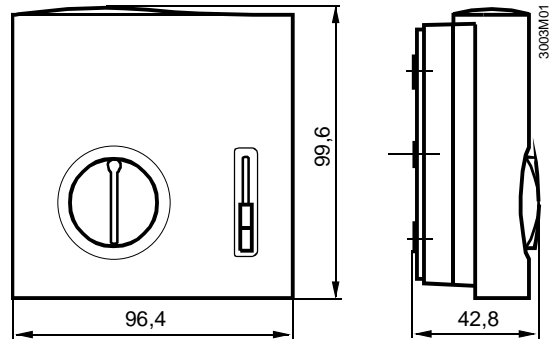
Connection diagrams



- D1 Zone valve or thermal valve
- L Operating voltage AC 24...250 V
- N1 Room thermostat
- S Selector for Heating / OFF / Cooling
- Y Control output "Heating" or "Cooling", AC 24...250 V
- N Neutral
- T Thermostat element (gas-filled diaphragm)

Dimensions

Unit



Baseplate

