SIEMENS



Room Thermostats

For two-pipe fan coils

RAB10...

RAB10.1

Room thermostat with manual switch for heating or cooling and fan function Two-position control Manual three-speed fan switch Operating voltage AC 250 V Control output ON/OFF

Use

The RAB10... room thermostat is used in heating or cooling systems to maintain the selected room temperature.

Typical use:

- Commercial buildings
- Residential buildings
- Light industrial buildings
- In conjunction with
- zone valves
- thermal valves
- fans

Functions

Heating Cooling Fan speed If the room temperature falls below the selected setpoint, the heating contact will close. If the room temperature exceeds the selected setpoint, the cooling contact will close. There are two possibilities to control the fan speed:

a) Manually by means of the three-speed fan switch on the thermostat for continuous operation

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 b) Automatically by switching to the selected fan speed via the thermostat for controlled operation. In that case – prior to commissioning – the thermostat function must be changed. There are two choices available:

k Selected fan sped as continuous operation

 A_{Auto} Fan is switched at the same time as the value

Ventilation

Changeover

When the ventilation function & is selected (RAB10.1), the heating and cooling contacts are always open and the fan operates at the selected speed. Heating or cooling is selected with a switch located on the front of the thermostat (RAB10...).

Function diagrams



Type summary

Two-pipe fan coil room thermostat for use with 3-speed fan, manual
changeoverRAB10Two-pipe fan coil room thermostat for use with 3-speed fan, manual
changeover and ventilation functionRAB10.1

Equipment combinations

Designation	Type reference	Data sheet
2-way zone valve DN15	MVE21.15	CE1N4828
2-way zone valve DN20	MVE21.20	CE1N4828
2-way zone valve DN25	MVE21.25	CE1N4828
3-way zone valve DN15	MXE21.15	CE1N4828
3-way zone valve DN20	MXE21.20	CE1N4828
3-way zone valve DN25	MXE21.25	CE1N4828
Thermal actuator (suitable for radiator valves VD / VE / VU and 2T)	STE21.1	CA1N4874

Technical design

Key features of the RAB10... fan coil room thermostat:

- Two-position control
- · Gas-filled diaphragm

Adjustments

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

The setpoint setting range can be mechanically limited by means of tappets under the unit over.

Mounting, installation and Commissioning

The 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: 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.

The room thermostat is maintenance-free.

The diaphragm is filled with environmentally friendly gas.

The thermostat housing is made of plastic.

Technical data

Mechanical design

Maintenance

Operating voltage AC 250 V Power supply 50 or 60 Hz Frequency Operational data Switching differential SD ≤1 K 8...30 °C Setpoint setting range Amperage at AC 250 V 0.2...6 (2) A **Environmental conditions** Operation to IEC 721-3-3 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 **C€** conformity to Norms and standards Low voltage directive 73/23/EEC and 93/68/EEC Product standard EN 60730



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 diagram



- L Operating voltage AC 250 V
- M1 3-speed fan
- N Neutral
- N1 Room thermostat
- Q1 Control output
- "Fan speed I", AC 250 V
- Q2 Control output
- "Fan speed II", AC 250 V Q3 Control output
- "Fan speed III", AC 250 V
- Y Control output
- "Valve actuator", AC 250 V
- D Thermal valve or zone valve

Dimensions

Unit



Baseplate

4/4



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