



RAB10
RAB10.2



RAB10.1

Room thermostats

RAB10...

For 2-pipe fan coils

- Room thermostat with manual switch for heating or cooling mode and fan function
- 2-position control
- Manual 3-speed fan switch
- Switching voltage AC 250 V
- Control output ON/OFF
- Fan in heating mode released by aquastat (RAB10.2)

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

If the room temperature falls below the selected setpoint, the thermostat's heating contact will close.

Cooling

If the room temperature exceeds the selected setpoint, the thermostat's cooling contact will close.

Fan speed


There are 2 possibilities to control the fan speed:

- Manually by means of the thermostat's 3-speed fan switch for continuous operation (RAB10 and RAB10.1).
- Automatically by switching to the selected fan speed via the thermostat for controlled operation. In that case – prior to commissioning – the jumper position corresponding to the thermostat function must be selected. There are 2 choices of jumper positions available on the printed circuit boards of the RAB10 and RAB10.1.

Jumper SR1  | **Selected fan speed as continuous operation**
 Jumper SR2  Auto | **Fan is switched at the same time as the valve**

Note on RAB10.2: In heating mode, the fan is released together with the control output (Y) and depending on the water temperature acquired by the aquastat. This means that, for switching on the fan, the room temperature must lie below the selected setpoint and the aquastat contact must have closed. In cooling mode, the fan is released with the control output (Y).

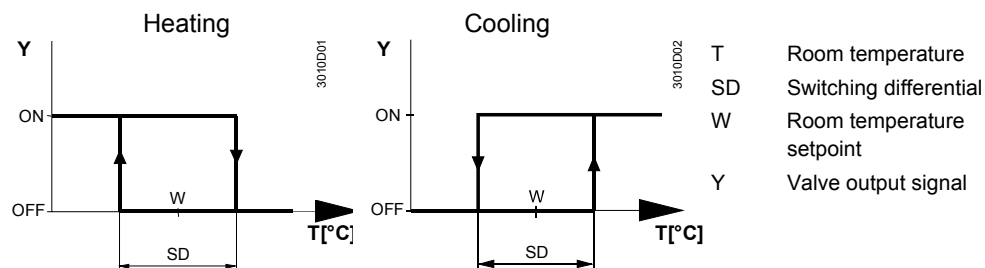
Ventilation

When the ventilation function  is selected (RAB10.1) with the slide switch on the unit front, the heating and cooling contacts are always open and the fan operates at the selected speed.

Changeover

Heating or cooling mode is selected with the switch located on the unit front (RAB10...).

Function diagrams



Type summary

2-pipe fan coil room thermostat for use with 3-speed fan, manual changeover	RAB10
2-pipe fan coil room thermostat for use with 3-speed fan, manual changeover and ventilation function	RAB10.1
2-pipe fan coil room thermostat for use with 3-speed fan, manual changeover and aquastat terminals for releasing the fan speed in heating mode	RAB10.2

Equipment combinations

Description	Product no. (ASN)	Data sheet
Motoric on / off actuator	SFA21...	4863
Thermal actuator (for radiator valves)	STA21...	4893
Thermal actuator (for small valves 2.5 mm)	STP21...	4878
Aquastat (changeover thermostat)	RYT182	1295

Accessories

Description	Product no. (ASN)
Adapter plate 120 x 120 mm for 4 x 4" conduit boxes	ARG70
Adapter plate 96 x 120 mm for 2 x 4" conduit boxes	ARG70.1
Adapter plate for surface wiring 112 x 130 mm	ARG70.2

Technical design

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

- 2-position control
- Gas-filled diaphragm

Adjustments

The required temperature setpoint is selected with the setting knob on the front of the thermostat.

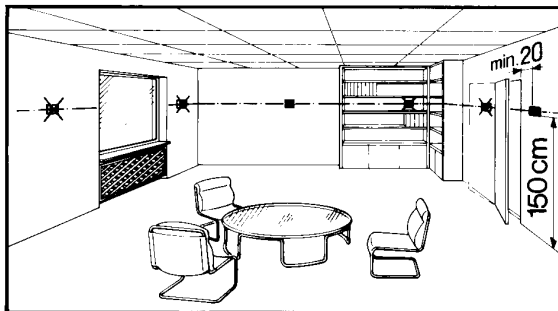
The setpoint setting range can be mechanically limited by means of a setpoint limiter under the unit cover.

Note

Mounting, installation and commissioning

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



Only authorized 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.

Maintenance

Mechanical design

The room thermostat is maintenance-free.

The diaphragm is filled with environmentally friendly gas.

The housing is made of plastic.

Technical data



Power supply

Switching capacity control output: Y

Voltage / frequency

AC 250 V / 50 or 60 Hz

Current

0.2...6(2) A

Switching capacity fan: Q1, Q2, Q3

Voltage / frequency

AC 250 V / 50 or 60 Hz

Current RAB10 /RAB10.1

0.2...6(2) A

Current RAB10.2

0.2...max. current aquastat at D1-D2,
but no more than 6(2) A

Aquastat terminals D1-D2

AC 250 V / 0.2...6(2) A

Operational data

Switching differential SD

≤1 K

Setpoint setting range

8...30 °C

Environmental conditions

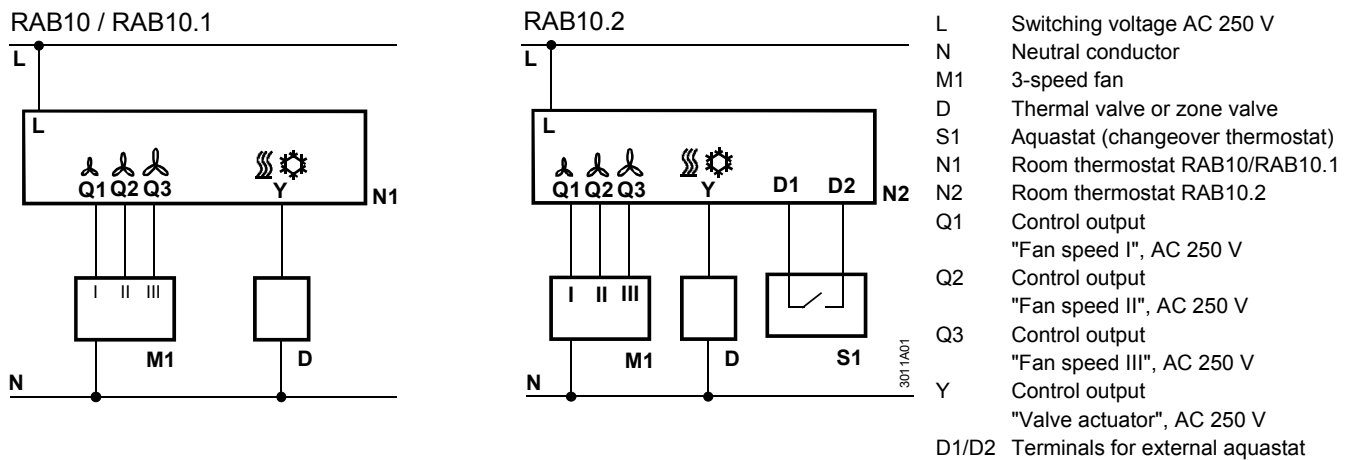
Operation

To IEC 721-3-3

Norms and standards

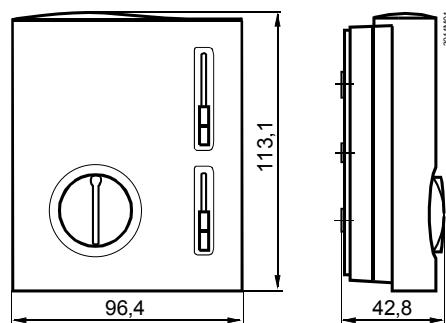
Climatic conditions	Class 3K5
Temperature	0...50 °C
Humidity	<95% r.h.
Pollution degree	Normal, to EN 60730
Transport / storage	To IEC 721-3-2
Climatic conditions	Class 2K3/1K3
Temperature	-20...50 °C
Humidity	<95% r.h.
Mechanical conditions	Class 2M2
Packaging	Single packages / min. order 20 pcs
CE conformity	
EC directive on EMC	2004/108/EC
Low-voltage directive (LVD)	2006/95/EC
Product standards	
Automatic electrical controls for household and similar use	EN 60730-1 and EN 60730-2-9
EMC – standards	
Emissions	EN 61000-3-2 and EN 61000-3-3
C^{N474} C-Tick conformity to EMC emission standard	
AS/NSZ 4251.1:1994	
Safety standard	
Degree of protection of housing	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
Color	White, NCS S 0502-G (RAL 9003)

Connection diagram



Dimensions

Roomthermostat



Baseplate

