



Room Thermostat

RAB40.1

For air-conditioning and fan coil units

ON/OFF output for cooling

Two-position control

Outputs for three-speed fan

Manual switch for cooling and fan operation, fan only operation or OFF

Manual three-speed fan switch

Operating voltage AC 24...250 V

Use

Typical use:

- Commercial Buildings
- Residential buildings
- Light industrial buildings

Control of the room temperature in individual rooms of air conditioning plants that are cooled in conjunction with:

- Air-conditioner with three speed fan
- Chilled water fan coil unit with three speed fan

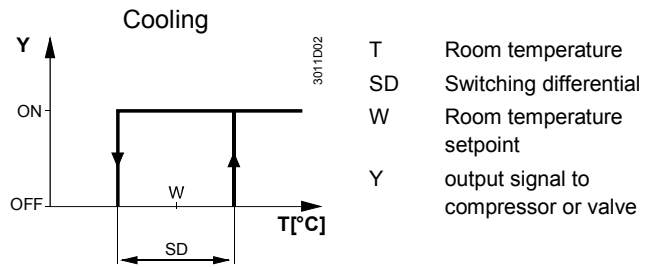
Note

RAB40.1 is especially designed for compressor based application and three-speed fan operation – fan speed adjustment do not interrupt the power supply to the compressor during cooling.

Functions

- Cooling** If the room temperature exceeds the selected setpoint, the cooling contact will be closed.
- Fan speed** The fan speed can be manually controlled by the three-speed fan switch on the thermostat
- Fan operation** The fan will run under the following condition:
When the lower COOL/FAN/OFF switch is set at either COOL position or FAN position
- Ventilation** When FAN position is selected from the lower COOL/FAN/OFF switch, the fan will run continuously at selected speed without cooling.

Function diagrams



Technical design

Key features of the RAB40.1 room thermostat:

- Two-position control
- Gas-filled diaphragm

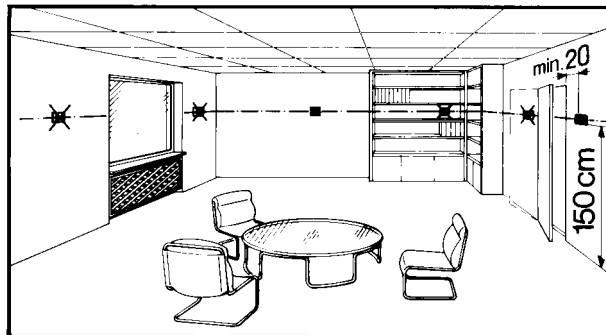
Adjustments

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.

Note

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 authorized personnel may open the unit to perform service
(Caution: AC24...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

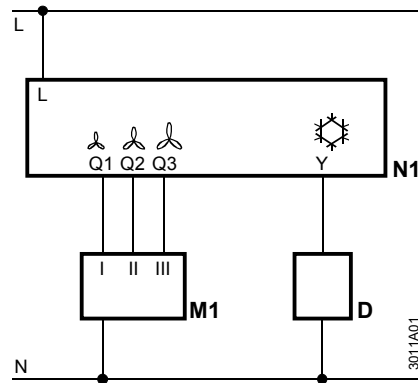
The diaphragm is filled with environmentally friendly gas.

The thermostat housing is made of plastic.

Technical data

 Power supply	Operating voltage	AC 24...250 V
	Frequency	50 or 60 Hz
Operational data	Switching differential SD	≤1 K
	Setpoint setting range	8...30 °C
	Amperage at AC 24...250 V	0.2...6 (2) A
	Operation	to IEC 721-3-3
Environmental conditions	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
Norms and standards	 conformity to	
	Low voltage directive	73/23/EEC and 93/68/EEC
	Product standard	EN 60730
	 ^{N474} C-Tick conformity to	
	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	0.18 kg
	Colour	white, NCS S 0502-G (RAL 9003)

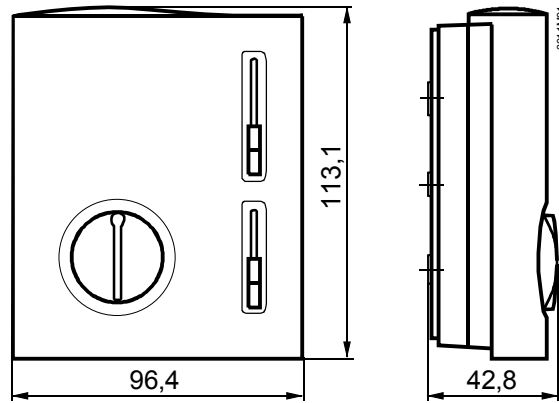
Connection diagram



- L Operating voltage
AC 24...250 V
- M1 3-speed fan
- N Neutral
- N1 Room thermostat
- Q1 Control output
"Fan speed I"
- Q2 Control output
"Fan speed II"
- Q3 Control output
"Fan speed III"
- Y Control output
"compressor" or "valve actuator
cooling"
- D compressor or valve actuator

Dimensions

Unit



Baseplate

