



# Application guide

## LXRAB30 remote control



- Providing indoor climate comfort







RAB 30



RAB30.1

## Room Thermostats

## RAB30...

For four-pipe fan coils

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**Room thermostat with manual switch for heating or cooling**

**Two-position control**

**Manual three-speed fan switch**

**Switching voltage AC 250 V**

**Control output ON/OFF**

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### Use

The room RAB30... 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

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### Functions

#### Heating

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

#### Cooling

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

#### Fan speed

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
- b) Automatically by switching to the selected fan speed via the thermostat for controlled operation. In that case – prior to commissioning – the jumper positions corresponding to the thermostat function must be selected. There are two choices of jumper positions available on printed circuit board:

SR1     ⌘     **Selected fan speed as continuous operation**  
 SR2     Auto ⌘     **Fan is switched at the same time as the cooling or heating valve, depending on the switch position.**

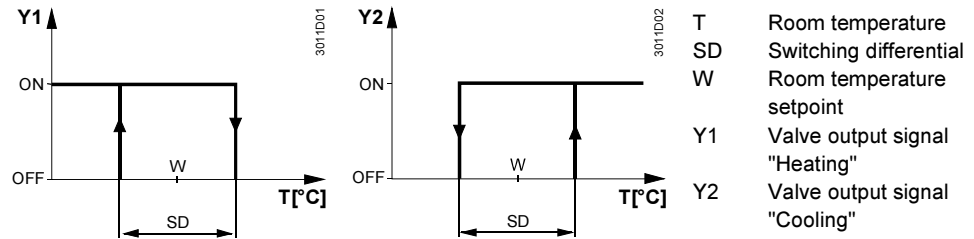
**Ventilation**

When the ventilation function ⌘ is selected (RAB30.1) on the cover by setting the slide switch, the heating and cooling contacts are always open and the fan operates at the selected speed.

**Changeover**

Heating or cooling is selected with a switch located on the front of the thermostat.

**Function diagrams**



**Type summary**

Four-pipe fan coil room thermostat for use with 3-speed fan, manual changeover	<b>RAB30</b>
Four-pipe fan coil room thermostat for use with 3-speed fan, manual changeover and ventilation function	<b>RAB30.1</b>

**Equipment combinations**

Type of unit	Type reference	Data sheet
Motoric on/off actuator	<b>SFA21...</b>	4863
Thermal actuator (for radiator valve)	<b>STA21...</b>	4893
Thermal actuator (for small valve 2,5 mm)	<b>STP21...</b>	4878

**Accessories**

Description	Type reference
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 112x130 mm	ARG70.2

**Technical design**

Key features of the RAB30... fan coil room thermostat:

- Two-position control
- Gas-filled diaphragm

**Adjustments**

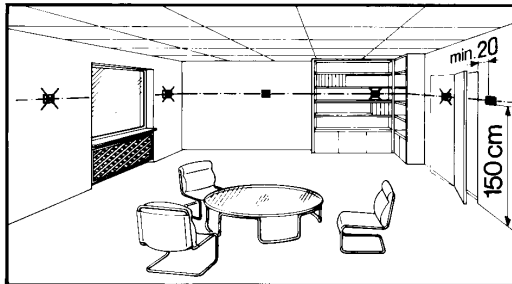
The required temperature can be selected by a setpoint adjuster on the front of thermostat.

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

**Notes**

**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.

**Maintenance**

The room thermostat is maintenance-free.

**Mechanical design**

The gas bellows is filled with environmentally friendly gas.  
 The thermostat housing is made of plastic.

**Technical data**

Power supply

Switching capacity	
Voltage	AC 250 V
Current	0.2...6 (2) A
Frequency	50 or 60 Hz

Operational data

Switching differential SD	≤1°K
Setpoint setting range	8...30 °C

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

Norms and standards

CE conformity to	
Low voltage directive	73/23/EEC and 93/68/EEC
Product standard	EN 60730

**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<sup>2</sup> or 1 x 2.5 mm<sup>2</sup>, min. ( 0.5 mm<sup>2</sup> )

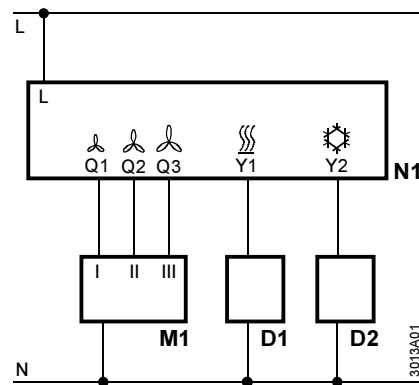
**Weight**

0.14 kg

**Colour**

white, NCS S 0502-G (RAL 9003)

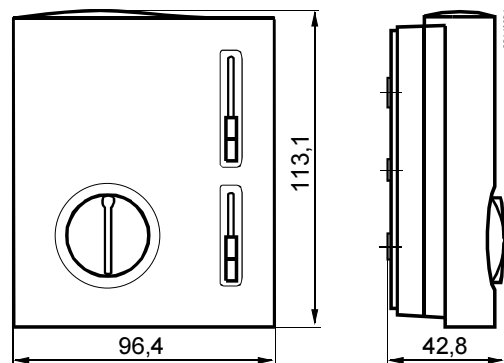
## Connections diagram



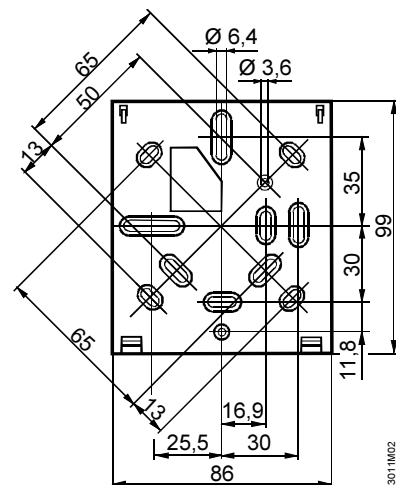
- D1 Zone valve or thermal valve for heating
- D2 Zone valve or thermal valve for cooling
- L Switching voltage AC 250 V
- M1 3-speed fan
- N Neutral
- N1 Room thermostat
- Q1 Control output  
"Fan speed I", AC 250 V
- Q2 Control output  
"Fan speed II", AC 250 V
- Q3 Control output  
"Fan speed III", AC 250 V
- Y1 Control output  
"Valve actuator heating", AC 250 V
- Y2 Control output  
"Valve actuator cooling", AC 250 V

## Dimensions

Unit



Baseplate







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Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury.

Installation and service must be performed by a qualified installer and servicing agency