



## Description

The RTA02 controller is designed to control fan coil in heating and cooling systems. RTA02 controls heating and/or cooling valves, fan speeds with 2 or 4-pipe fan coil.

## Technical specifications

- 2 and 4 pipes selectable fan coil applications
- Fan control with manual 3-speeds setting
- ON-OFF control action for actuators
- Analog input for water temperature sensor
- Output voltage for valves 230 V AC, fan motor 230 V AC
- Power supply: 230 Vac, 50/60 Hz
- Frost protection function
- Display with blue backlight
- CE certification



## Technical features

<b>Control range</b>	5...35 °C		
<b>Power supply</b>	230 V AC, 50/60 Hz		
<b>Outputs</b>	On-Off (valves)		
	3 speed output, 230 V AC. max 2 A resistive, 1 A inductive		
<b>Knob and selectors</b>	Fan	OFF - LOW - MED - HIGH	Power on, fan speed
	Set point	Push bottom ▲ ▼	Set point setting
	Operating mode	Push bottom <b>M</b>	Heat, cool, auto or fan
	Analogue Inputs	Water temperature	Strap-on
<b>Accuracy</b>	±1 K		
<b>Application</b>	2- or 4-pipe-fan coil		
<b>Housing</b>	Single housing 86 x 86 x 23,5 mm		
<b>Protection class</b>	IP30		
<b>Working temperature</b>	0...45° C		
<b>Storage temperature</b>	-10...+50° C		
<b>Working humidity</b>	5...95% RH non condensing		

## Operation

- On / off: Move the switch to LOW, MED or HIGH to turn on. Move the switch to OFF to turn off the thermostat.
- Set the temperature: Press ▼ to decrease the set-point, press ▲ to increase the set-point.
- Operation selection: With the thermostat on, press M to change mode:
  - With manual season change (F0 or F4 in table 1): Cooling ❄, heating or ventilation, the relative symbol will flash.
  - With automatic season change (F2 or F5 in table 1): Cooling ❄, Auto or ventilation, the relative symbol will flash.
  - If set F5 (2 pipes with automatic season change) it requires a temperature sensor on the flow pipe for Auto mode △.
  - If set F2 (4 pipes with automatic season change) in Auto mode △ it will automatically change to heating or cooling based on the temperature difference between ambient and the set-point.



- When the thermostat is ON, press the M button for 3 seconds to display the water temperature (only with F5 set) (See table 3).
- Fan speed selection: move the slide switch to the LOW, MED or HIGH position.
- Control of the motorized valve in 2-pipe systems (F0 or F5 in table 1): if the temperature difference between the ambient and the set-point is greater than 1 K, the valve will open in cooling mode and close in heating mode. If the temperature difference is 1 K or less than the valve will close in cooling and open in heating but the fan will continue to run.
- In the 2-pipe versions (F0 or F5 in table 1), if the water sensor is present, when the pipe temperature is higher than the upper limit temperature, the thermostat will close the valve until the circuit temperature is 5 K below the upper limit temperature.

When the circuit temperature is lower than the frost protection temperature the thermostat will close the valve until the circuit temperature is 3 K higher than the frost protection temperature (See table 2).

- Control of motorized valves in 4-pipe systems (F2 or F4 in table 1): In cooling mode, when the ambient temperature is higher than the set-point, the cooling circuit valve will open; otherwise it will remain closed. The heating circuit valve is always closed in cooling mode. In heating mode, when the room temperature is lower than the set-point, the heating circuit valve will open; otherwise it will remain closed. The cooling circuit valve is always closed in heating mode.

## Frost protection

If the thermostat is off (but powered), when the ambient temperature is lower than 5 °C, the thermostat will open the hot water valve. When the temperature reaches 7 °C or more it will close the valve.

## Frost protection temperature setting

To activate this protection, turn off the thermostat (OFF), press **M** until the display lights up and the icon ☺ and 00 are displayed, set 01 by pressing ▲ or ▼. „00“ indicates that the protection is deactivated; „01“ indicates that the protection is activated (See table 1).

## Offset of the displayed temperature

Switch on the thermostat and press the ▲ and ▼ buttons simultaneously for 3 seconds: „RT“ will flash and you can set the displayed temperature. The new value will be confirmed after a few seconds when „RT“ stops flashing.

Note: During commissioning it may occur that the temperature reading is not real even if it is locked to a certain value. It starts the offset process (▲ and ▼ simultaneously for 3 seconds) but not the adjustment of the values, the thermostat has an automatic self-calibration process indicated by the icon that will lead to the right temperature, normally making recalibration useless.

Table 1 (in OFF mode press M for about 10 seconds until the display switches on)

Display (symbol)	Description	Default value	Range	Function
☺	Frost protection	0	0...1	0: disabled 1: enabled
	Operation mode	F0	F0...F5	F0: Standard 2-pipes F1: Reserved F2: 4 pipes with automatic s/w changeover F3: Reserved F4: Standard 4-pipes F5: 2 pipes with automatic s/w changeover
△ ❄	Sensor	0	0...2	0: internal room sensor 1: remote room sensor (the internal sensor is disabled) 2: internal room sensor and water sensor for pre-heating, post-heating and automatic s/w change over in a 2-pipe system



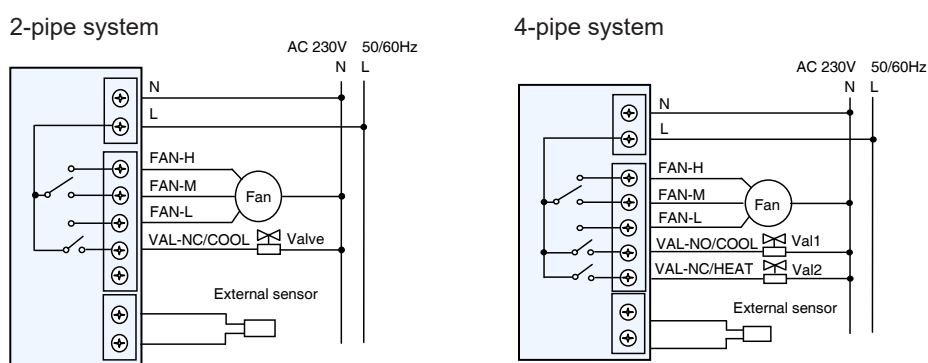
Table 2 (in OFF mode press M and contemporary ▼ for about 10 seconds until the display switches on)

Display (symbol)	Description	Default value	Range	Function
△ ☀	Hot water pipe temperature	22	10...95	°C
△ ☾	Cold water pipe temperature	18	2...40	°C
☀ ☀	Upper limit temperature	75	40...95	°C
☀ ☾	Frost protection temperature	2	2...10	°C
☀ ☾	Delay time in mode change	1	1...20	minutes
△ ☀ ☀	Delay of valve closure	3	1...99	seconds

Table 3 (in ON mode press M for about 3 seconds)

Display (symbol)	Description	Default value	Range	Function
△ ☀ ☀ ☾	Outdoor temperature sensor reading		0...95	°C

## Electrical wiring



## Mounting

