



**AL24A1 is a room controller with one 0...10 V output. The controller is primarily intended for control of heating or cooling in zone control systems.**

- \* Setpoint 0...30°C
- \* Internal or external sensor
- \* Setting for heating or cooling output
- \* Change-over input for sensor or relay contact
- \* P or PI - function
- \* P-band and I-time adjustable

## Function

AL24A1 is a room controller for wall mounting. It has temperature sensor built-in and 0...10 V control signal output. The output is reversible, making the controller able to control heating or cooling. The control function can be set to P- or PI-control.

P-band can be set to 0,5...50 K and reset time to 2 or 20 minutes.

### Sensor

The controller has a built-in temperature sensor element.

External sensor can be connected. The jumper BY1 is to be set to position External. See description overleaf.

### Setpoint

Is set by the knob on the right side of the housing. The setting can be fixed with a locking screw under the cover.

### Change-over

AL24A1 has an input for change-over, that causes the control function to switch between heating or cooling. This input can be connected to a REGIN NTC-sensor or a closing relay contact. On closed contact the controller works with heating output and on open contact cooling.

When using sensor for change-over, the temperature range must be 0...30°C and the sensor mounted on the supply to the battery in order to give accurate temperature values.

When the temperature at the sensor exceeds 22°C, the output function is switched to heating and when the temperature falls below 18°C the output is set to cooling.

### SPC (SetPoint Control)

The setpoint can be remote-controlled by an external signal, 0...10 V. At 5 V input the SPC-signal gives no change, higher voltage raises and lower voltage lowers the setpoint.

The setpoint shift +/-15 K corresponds to the input signal shift of +/- 5 V.

If the SPC is not in use the input is left open.

### Setting heating/cooling function

If the external change-over function is not in use, and heating output is desired, a wire must be connected between terminals 6 and 8.

If using cooling output, the input is left open.

### Indications

The unit has indication for activated output with a red LED inside.

There is also indication for heating/cooling function with two different coloured LEDs. Red light indicates heating, green light indicates cooling.

## Technical data

Supply voltage	24 V AC +/- 15 % 50-60 Hz
Power consumption	2VA
Ambient temperature	0...50°C
Storage temperature	-40...+50°C
Ambient humidity	Max 90% RH
Protection class	IP20



This product conforms with the requirements of European EMC standards CENELEC EN 50081-1 and EN 50082-1 and carries the CE mark

### Inputs

External sensor	Regin NTC-sensor, 0...30°C
Change-over	For Regin NTC-sensor (0...30°C) or potential-free relay contact
SPC	0...10 V-signal

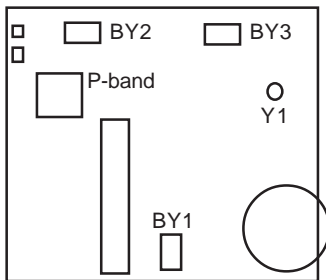
### Output

Control signal	0...10 V DC, 1 mA
----------------	-------------------

### Settings

Setpoint	0...30°C
P-band	0,5...50 K
Reset-time (I-time)	2 or 20 min, is set by jumpers, see below.

## Function selection (jumpers)

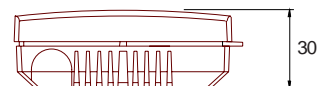
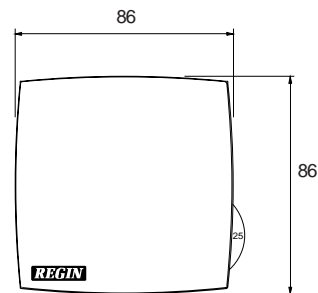


Jumper BY1	Down	= Internal sensor ( <i>delivery setting</i> )
	Up	= External sensor
Jumper BY2	Closed	= Reset time (I-time) is 2 min
	Open	= Reset time (I-time) is 20 min ( <i>delivery setting</i> )
BY2 has function only when jumper BY3 is set to PI-control		
Jumper BY3	Closed	= P-function
	Open	= PI-function ( <i>delivery setting</i> )

To obtain open position place the jumper on one pin only.

## Wiring and dimensions

1	Supply 24 V AC
2	System neutral 24 V AC
3	Output 0-10 V
4	Signal neutral
5	External sensor
6	Signal neutral
7	SPC
8	Change-over



### Head Office Sweden

Phone: +46 31 720 02 00  
 Web: [www.regin.se](http://www.regin.se)  
 Mail: [info@regin.se](mailto:info@regin.se)

### Sales Offices

France: +33 14 171 46 46  
 Hong Kong: +852 24 07 02 81  
 Singapore: +65 67 47 82 33



THE CHALLENGER IN BUILDING AUTOMATION