AL24A2 is a room controller with built-in sensor and two 0...10 V outputs. The controller is primarily intended for control of heating and cooling in zone control systems.

* Setpoint 0...30°C
* Internal or external sensor
* Heating and cooling output in sequence

* P or PI - function
* SPC-input
* Adjustable P-band and settable I-time

Function

AL24A2 is a room controller for wall mounting. It has temperature sensor built-in and two 0...10 V outputs. There is one heating and one cooling output with adjustable neutral zone. The control function can be set to P- or PI-control.

The P-Band is adjustable 0,5...50 K and the I-time can be set by a function switch in 2 or 20 minute steps.

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.

Neutral zone
The neutral zone is adjustable 0...3 K and affects the starting point of the cooling sequence. Only when the room temperature exceeds the setpoint by set neutral zone value is the output allowed to raise.

SPC (SetPoint Control)
The setpoint can be remote-controlled from 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.

Example: By input 6 V (5 + 1) the setpoint is shifted to be 3 degrees higher than set value on the setpoint knob.

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

Indications
The unit has indication for activated outputs with two LEDs inside.

Red means that the heating output is activated and green means cooling output is activated.

Technical data

Supply voltage	24 V AC +/- 15 %, 50...60 Hz
Power consumption	2 VA
Ambient temperature	0...50°C
Storage temperature	-40...+50°
Ambient humidity	Max 90% RH
Protection class	IP20
CE	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	NTC-sensor, 0...30°C
SPC	0...10 V-signal

Outputs

Control signals	Two, 0...10 V DC, 1 mA

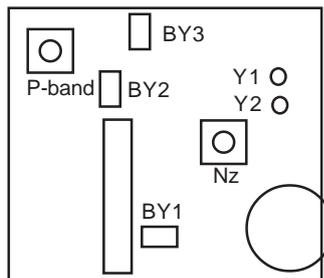**Settings**

Setpoint	0...30°C
P-band	0,5...50 K
Reset time (I-time)	2 or 20 min, is set by jumpers, see below.
NZ (neutral zone)	0...3 K

Indications

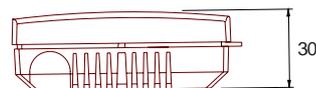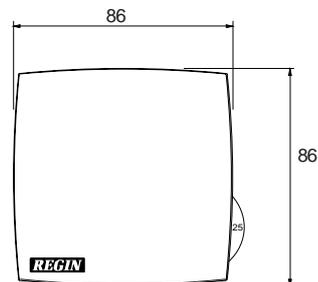|	
Output indication	Red LED, proportional intensity according to the output voltage level
Output function indication	Green LED for cooling control and a red LED för heating control

Function selection (jumpers)

Jumper BY1   Right = Internal sensor *(delivery setting)*
Left (towards the terminal block) = External sensor

Jumper BY2   Closed = Reset time (I-time) is 2 min
Open = Reset time (I-time) is 20 min *(delivery setting)*

BY2 is functional only when jumper BY3 is set to PI-control

Jumper BY3   Closed = P-function
Open = PI-function *(delivery setting)*

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 heating
4	Signal neutral
5	Output 0...10 V cooling
6	Signal neutral
7	External sensor
8	SPC

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