AL24T

Room controller

AL24T is a micro processor based room controller intended for wall mounting.

* One 3-point output (or)
  Two on/off outputs cooling/heating
* Time proportional outputs
* Change-over input for sensor or relay contact
* External or internal sensor
* Setpoint 0...30°C

Function

AL24T has two running positions, one of them is intended for traditional increase/decrease actuator. The other position is intended for use with two thermal actuators in heating and cooling configuration.

The controller is intended for wall-mounting. It has built-in sensor, input for external sensor, input for change-over and output. The output signal is pulse/pause type, where the ratio between on- and off-time is proportional to the temperature offset. The total pulse-period is constant 4 seconds.

Sensor

The controller has a built-in temperature sensor. External sensor can also be used. This function is set by means of a jumper under the cover.

Setpoint

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

Change-over

AL24T 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 it works with cooling.

When using sensor for change-over, the temperature range must be 0...30°C and the sensor must be 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.

Indications

The unit indicates output status with two LEDs inside. L1 indicates that output increase or heating is active and L2 indicates output decrease or cooling is active (when terminal 8 is open, see change-over).

Typical applications

Individual room control of valve or damper actuators in hotels, offices, conference rooms etc. For heating or cooling applications. When running thermal actuator control the controller can be used for applications with heating and cooling valve actuators.

Technical data

Supply voltage	24 V AC +/-10% 50-60Hz
Power consumption	Max 5 VA
Ambient temperature	0...50°C
Storage temperature	-40...50°C
Ambient humidity	Max. 90%RH
Protection class	IP30
Mounting	Two holes (c:c 60mm) to fit over wallbox
CE	This product conforms with the requirements of European EMC standards CENELEC EN50081-1 and EN50082-1

Inputs

Sensor input	One (1) input for external sensor, (*See section 6-100 for choice of sensor*)
Change-over	For Regin NTC-sensor (0...30°C) or potential-free relay contact

Output (Selectable, one output type activated at a time)

Three-point (floating)	24V AC (heating / cooling) 0,5 A, 12 VA
Or Thermal actuator control	One 24 V AC 500 mA heating, and one 24 V AC 500 mA cooling (connection see fig 2)

Settings

Setpoint		0...30°C
Jumper BY 1	”Closed”	Control of three-point actuator (increase/decrease) *factory setting* P-band = 20 K
	”Open”	Control of two thermal actuators (heating and cooling) P-band = 1 K, Neutral zone (fixed) 1 K
Jumper BY 2	”Closed”	External sensor
	”Open”	Internal sensor *factory setting*

Indicators

L1 (green LED)	Indicates that output increase or heating is active
L2 (red LED)	Indicates that output decrease or cooling is active

Wiring and Dimensions

1	Supply voltage 24V AC
2	Neutral 24V AC
3	Output Decrease or Cooling (thermal)
4	24V AC Actuator suply (500 mA)
5	Output Increase or Heat (thermal)
6	Input external sensor
7	Neutral
8	Change-over input

- For proper function when using a change-over sensor the system must have constant primary-water circulation.
- Function heat/cool at 3-point output terminal 3 will give a decrease signal while terminal 5 gives an increase signal. The above condition applies to cooling valve when terminal 8 is left open. If a 3-point actuator for heat is desired, invert the controller function by shorting terminals 7 and 8.

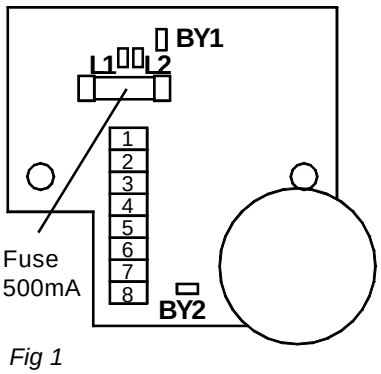


Fig 1

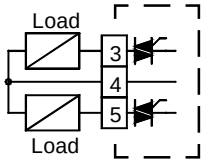
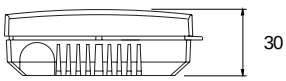
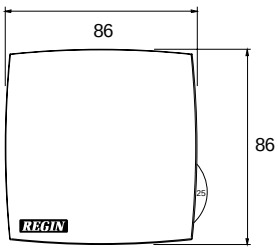


Fig 2





AB Regin
Box 116, SE-428 22 Kållered, Sweden
visiting address: Bangårdsvägen 35

Phone: +46 31 720 02 20
Fax: +46 31 94 01 46
www.regin.se, info@regin.se

REGIN
ONE STEP FURTHER...