Room controller T24A1T

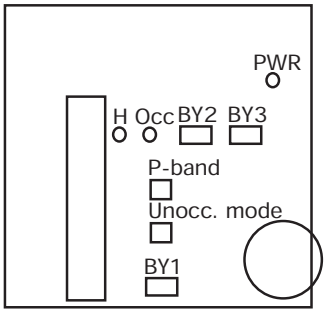
- **For control of heating or cooling in zone control systems**
- **0...10 VDC, 1 mA or 3-point 24VAC, 1A**
- **Setpoint 0...40 °C**
- **P or PI mode selection**
- **Occupancy mode control**
- **Change-over function**
- **External sensor TG-K340B (Optional)**

Technical data

Electrical data	Nominal voltage	AC 24 V / 50/60 Hz
	Power supply range	AC 19.2...28.8 V
	Power consumption	2VA
Functional data	**Input**	
	External sensor	NTC-sensor, 0...40°C TG-K340B (Optional)
	Change-over	Potential-free relay contact or NTC-sensor (0...40°C)
	Occupancy	Potential-free contact
	Output	
	Control signal	0...10 V DC, 1 mA or 3-point 24V AC, 1A
	Settings	
	Setpoint	0...40°C (Base setpoint value is 22°C)
	P-band	0, 5...50 K
	Reset-time(I-time)	2 or 20 min, see jumper setting below
	TrimPot(Occupancy)	+/-6°C
Working conditions	Degree of protection	IP20
	CE	CENELEC EN 50081-1 and EN 50082-1
	Ambient temperature range	...0 ... +50°C
	Non-operation temperature	...-40 ... +50°C
	Ambient humidity	max. 90% RH
Dimensions	Dimensions (l x b x h)	86 x 86 x 30 mm

Function selection (jumpers)

Fig.1



Jumper BY1 Right = Internal sensor (**factory setting**)
Left = External sensor

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

BY2 setting vaild only when jumper BY3 is set to PI-function

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

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

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Product function

Sensor

The controller has a built-in temperature sensor element. External sensor TG-K340B can be connected. See function selection for jumper setting.

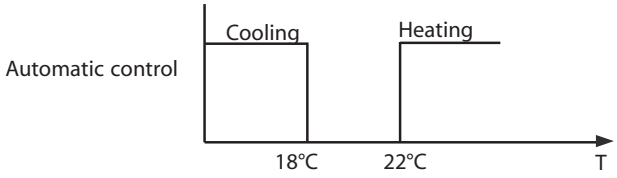
Occupied/Unoccupied mode

The setpoint can be adjusted in accordance to an input for occupancy. On open contact, the thermostat setpoint is determined by the setpoint adjuster (occupied mode). On closed contact, the setpoint is determined by an internal trimpot (unoccupied mode). The base setpoint value is 22 °C.. It can be reset depending on the setting of the potentiometer “Unoccupied”, and is adjustable with a span of +/-6°C. (Factory setting = 3 25°C, 19°C)

Position	0	1	2	3	4	5	6	
Cooling setp.	22	23	24	25	26	27	28	°C
Heating setp.	22	21	20	19	18	17	16	°C

Change-over

An input can be connected to a NTC-sensor or a closing relay contact.(see wiring)
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...40°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 (Short mode) and when the temperature falls below 18 °C the output is set to cooling (Open mode).



Indications

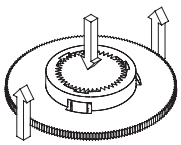
Green LED (PWR): for activated output(see Fig. 1)
Red LED (H): lit for heating function, not lit for cooling function.
Green LED (Occ): lit for occupied mode, not lit for unoccupied mode.

Setpoint

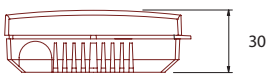
Adjust with knob that extends from the lower right of the casing. The knob setting can be mechanically fixed with a latchscrew located under the front cover.

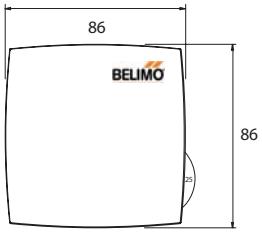
Setpoint calibration

Should the setpoint need calibration the knob rim with the scale can be detatched from the hub and remounted in a new position. Grip across the rim and pull out at the same time as maintaining an inward pressure on the hub (see figure below). When remounting, make sure the parts snap together properly.



Dimensions[mm] & Wiring





1	24 V AC supply
2	System neutral
3	24 V AC (G+) output, for actuator supply
4	3-point output increase
5	3-point output decrease
6	0…10 V DC control output
7	Signal neutral
8	Change-over input
9	Occupancy input
10	External sensor

* Change-over

Terminals 7 and 8	Short	Open	Sensor
Function	Heat	Cool	Automatic control