

TAE-ZN4 Electronic Room Thermostats with Dead Band

The TAE ZN4 -C (Fig. 1) is a neutral zone thermostat designed to be used in conjunction with heat pumps or similar heating and cooling combined systems. The device outputs consist of two double throw relays which are separated for driving the heater and the cooler.

Features

- 230V~ (TAE-ZN4-MC) or 24~/= (TAE-ZN4-2C) power supply
- Heating and cooling modes with neutral zone
- Adjustable neutral zone width between 1°C and 11°C
- Combined sensor (internal + optional external)
- Knob limitation feature through mechanical pins
- Fixing with distance between holes 60mm
- Compliant with directives EEC 89/336, 73/23 and 93/68 CE



Model Types	Model	Description
	TAE-ZN4-MC	Dual Electronic Room Thermostat
	TAE-ZN4-2C	Dual Electronic Room Thermostat (24Vac)
Technical Data	Power supply	TAE-ZN4-MC 230V~ -15% +10% 50Hz TAE-ZN4-2C 24V~/= -15% ±10%
	Power absorption	<3VA
	Regulation range	Set-point 6°C...30°C Neutral zone 1°C...11°C
	Sensor type	NTC 4k7 ohm @ 25°C internal
	Remote sensor (optional)	Cod. STL NTS A150
	Contact rating	5 (1) A @ 250V~ SPDT
	Protection class	IP30
	Contact type	2 x SPDT
	Operating temperature	0°C...40°C
	Storage temperature	-10°C...+50°C
	Humidity limits	20%...80% rH (non condensing)
	Enclosure	Material: ABS V0 self-extinguishing Colour: Signal white (RAL 9003)
	Size	85W x 85H x 34D mm
	Weight	~153 gr.

OPERATION

Once the set-point is defined, the thermostat will activate the 'Heating' or 'Cooling' relay according to the following relations:

said: **Ta:** Current room temperature (°C)
S.P.: Set-point (°C)
Z.N.: Neutral zone width (°C)

is:

Ta < S.P. (Heating relay active)

or:

Ta > S.P.+Z.N. (Cooling relay active)

According to the active stage, the green LED (1) is lit for 'Cooling' and the red LED (2) is lit for 'Heating'. The activation diagram is sketched in Fig. 2.

SET-POINT KNOB

Through the set-point knob the user can set the desired temperature.

NEUTRAL ZONE ADJUSTMENT TRIMMER

Through trimmer (7) of Fig. 6 the user is allowed to adjust the neutral zone width between 1°C and 11°C as indicated on the circuit board.

REMOTE SENSOR

It is possible to connect a remote sensor (optional) in place of the internal one (factory supplied). In order to activate the external sensor, wire it at terminals 9 and 10 and then remove the jumper (8) located on the circuit board (Fig. 6).

INSTALLATION

For installation of TAE ZN4 -C follow these steps:

1. Remove plastic cover by moving to the inner side, through the use of a tool, the two plastic teeth (3) located on the right side of the thermostat, (Fig. 3).
2. Fix the thermostat base plate to the wall through the two screw holes with distance between axes of 60mm.
3. Make electrical wirings according to the diagram of Fig. 5.
4. Close the thermostat by carefully positioning the cover so that the LEDs match the relevant holes and then by slightly pressing the cover in order to make the four plastic teeth snapping.

KNOB ROTATION LIMITATION

It is possible to limit the rotation range for the set-point knob by following these steps:

1. Remove the knob by tilting it, eventually with the help of a screwdriver placed in the slot.
2. Pick up the plastic pins (4) parked at one side of the knob area and set them (5) as in the example of Fig. 4. In this example (6) the rotation range is reduced as in the shown angle.

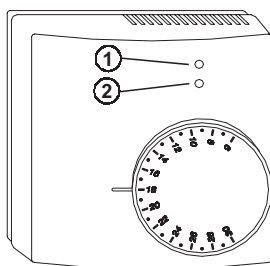


Fig. 1

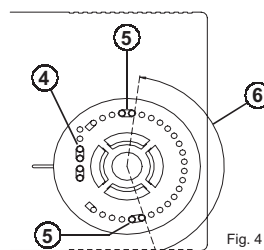


Fig. 4

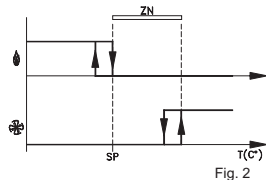


Fig. 2

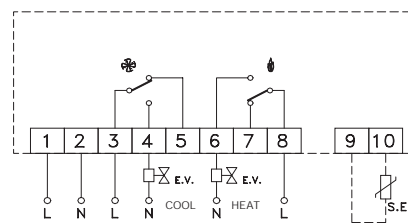


Fig. 5

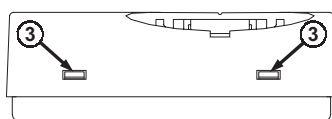


Fig. 3

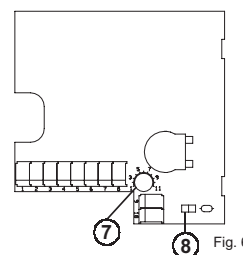


Fig. 6

WARNING:

To adjust properly room temperature, install the thermostat far from heat sources, airstreams or particularly cold walls (thermal bridges). When the remote sensor is used in conjunction with the thermostat, then this note is to be applied to the remote sensor itself.

For remote version all wirings must be made using wires with 1.5mm² minimum section and no longer than 25m. Do not use same duct for signal wires and mains.

The appliance must be wired to the electric mains through a switch capable of disconnecting all poles compliant to the current safety standards and with a contact separation of at least 3mm in all poles.

Installation and electrical wirings of this appliance must be made by qualified technicians and in compliance with the current standards.

Before wiring the appliance be sure to turn the mains power off.

Notes: In the view of a constant development of their products, the manufacturer reserves the right for changing technical data and features without prior notice.
The consumer is guaranteed against any lack of conformity for 24 months from the time of delivery, according to the European Directive 1999/44/EC. The full text of guarantee is available on request from the seller.

