

TFE ZN4 -C

FAN COIL THERMOSTAT WITH NEUTRAL ZONE

- o 230V~ (TFE ZN4 MC) or 24V~ (TFE ZN4 2C) power supply
- o Regulation range 6°C .. 30°C
- o Knob limitation feature through mechanical pins
- o External sensor predisposition



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OVERWIEV

This thermostat (Fig. 1) has been carefully developed to fit in the fan-coil application market.

It is equipped with a manual three-speed fan selector and a two relays output.

The first relay is active whenever the room temperature is above the temperature set with the knob (plus the neutral zone).

The other one has the opposite function (active when the room temperature is below the set temperature).

This electronic circuit in addition to a proper installation provides an accurate ambient temperature regulation.

Its layout together with commands simplicity make this regulator versatile and easy to use.

A special pin stop system beneath the set-point knob gives the user the possibility to define the actual temperature set-point range for the thermostat.

INTERNAL / EXTERNAL SENSOR SELECTION

The device leaves the factory already set for an internal sensor work.

In case the installation requires an external sensor, simply remove the jumper shown in Fig. 6 (located in the bottom right part of the board) and connect to terminals 13 and 14 an NTC 4.700 ohm @ 25°C sensor, with a proper beta value.

In case of doubts about the sensor to be connected, please ask the producer.

INSTALLATION

The mounting of the thermostat is very easy.

Carefully choose the wall where the thermostat has to be installed, away from heat sources, windows and doors.

When an external sensor is selected in place of the internal one please pay attention to make sensor wires run away from power ones (i.e. in different pipes).

According to diagram in Fig. 2 follow these steps:

- Unmount the knob with the help of a screwdriver.

This knob is mounted with a simple click system.

- Unscrew the front panel fixing screw gaining thus access to the internal part of the thermostat and to wire screws.

- Connect wires according to the following page diagrams.

In the device, parked beneath the set-point knob, you can find three pins whose purpose is to reduce the angular excursion of the knob itself.

Their use is very simple: insert one or two of them in the proper holes so that the knob is stopped at the preferred temperatures (Fig. 3)

TECHNICAL FEATURES

- Power supply: TFE ZN4 MC: 230V~ -15% +10% 50Hz
TFE ZN4 2C: 24V~ -15% +10% 50Hz
- Power absorption: 3VA
- Regulation range: 6°C .. 30°C
- Sensor type: NTC 4k7 ohm @ 25°C internal (external opt.)
- Accuracy: ± 1°C
- Resolution: 1°C
- Hysteresis: 0.5°C
- Contact ratings: 5 (1) A @ 250V~ SPDT
- Operating temperature: 0°C .. 40°C
- Storage temperature: -10°C .. +50°C
- Humidity limits: 20% .. 80% rH (non condensing)
- Protection grade: IP 30
- Case: Material: ABS V0 self-extinguishing
Color: Signal white (RAL 9003)
- Size: 150 x 84 x 32 mm. (W x H x D)
- Weight: TFE ZN4 MC: ~ 200gr.
TFE ZN4 2C: ~ 195gr.

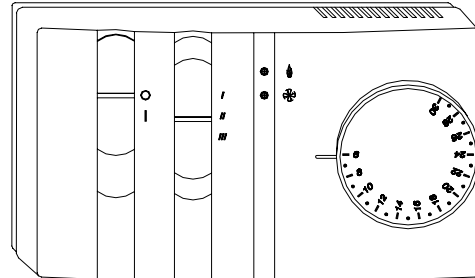


Fig. 1 External aspect

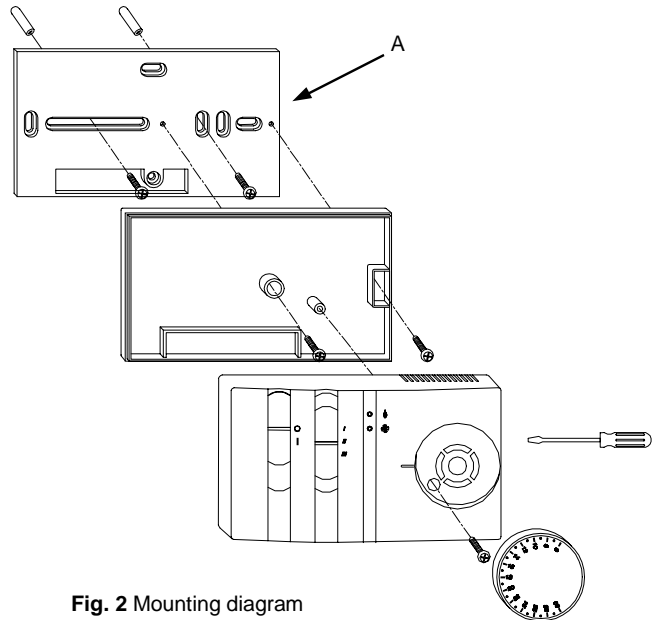


Fig. 2 Mounting diagram

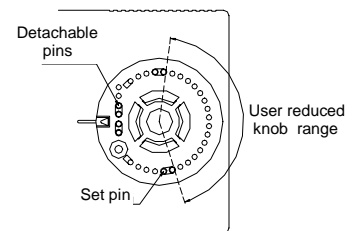


Fig. 3 Knob pin-stop system

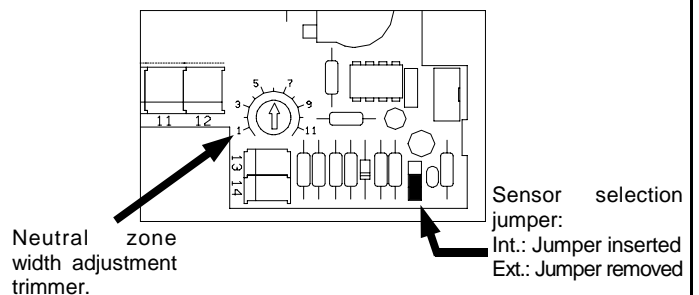


Fig. 4 Internal / external sensor selection

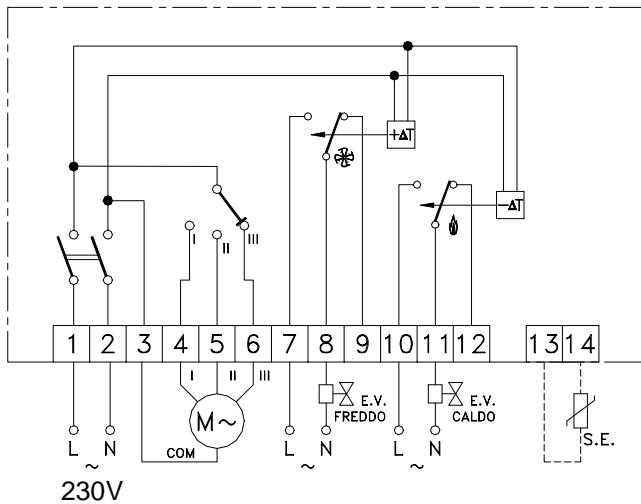


Fig. 5 TFE ZN4 MC wiring diagram

The TFE ZN4 MC is supplied with 230V~, therefore the three speeds fan motor must be 230V~ rated, meanwhile the electro-valves can be supplied with any voltage (see diagram).

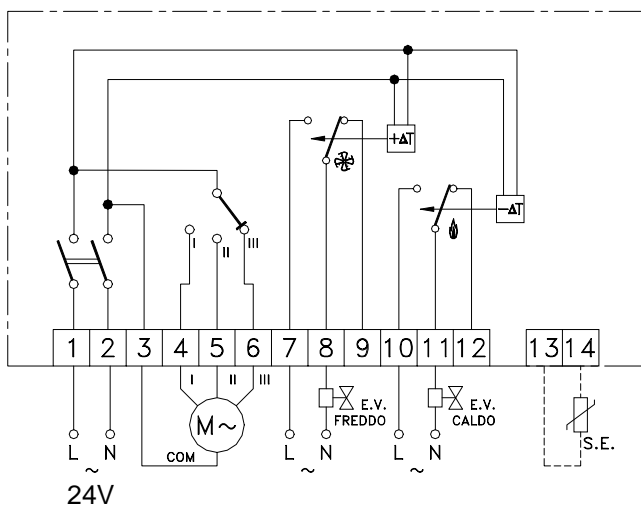


Fig. 6 TFE ZN4 2C wiring diagram

The TFE ZN4 2C is supplied with 24V~, therefore the three speeds fan motor must be 24V~ rated, meanwhile the electro-valves can be supplied with any voltage (see diagram).

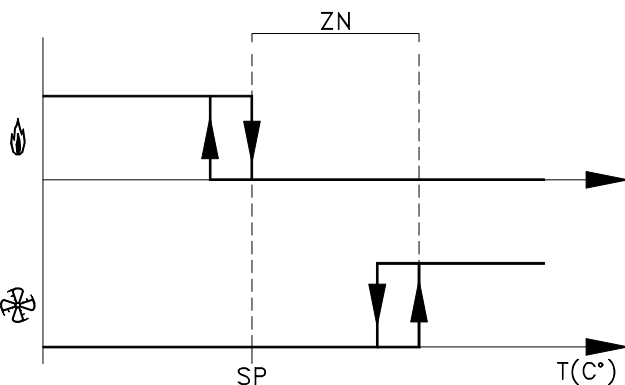


Fig. 7 Activation diagram

LEGEND
 ZN = neutral zone
 SP = set point

⚠ WARNING

- To adjust properly room temperature, install the thermostat far from heat sources, draughts 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 1,5 mm² minimum section and no longer than 25 m. 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 3 mm 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.

In the view of a constant development of its products, Seitron reserves the right for changing technical data and features without prior notice. All products are guaranteed against defects for 24 months from manufacturing date (see internal label).