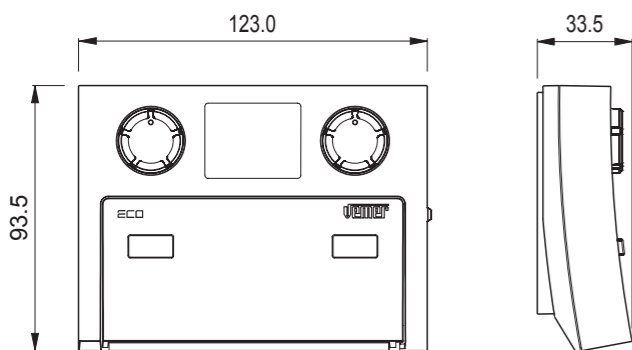
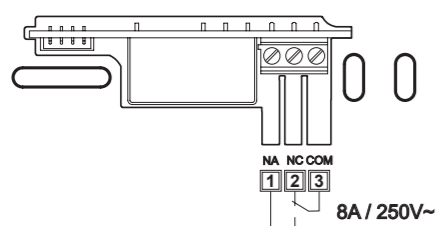




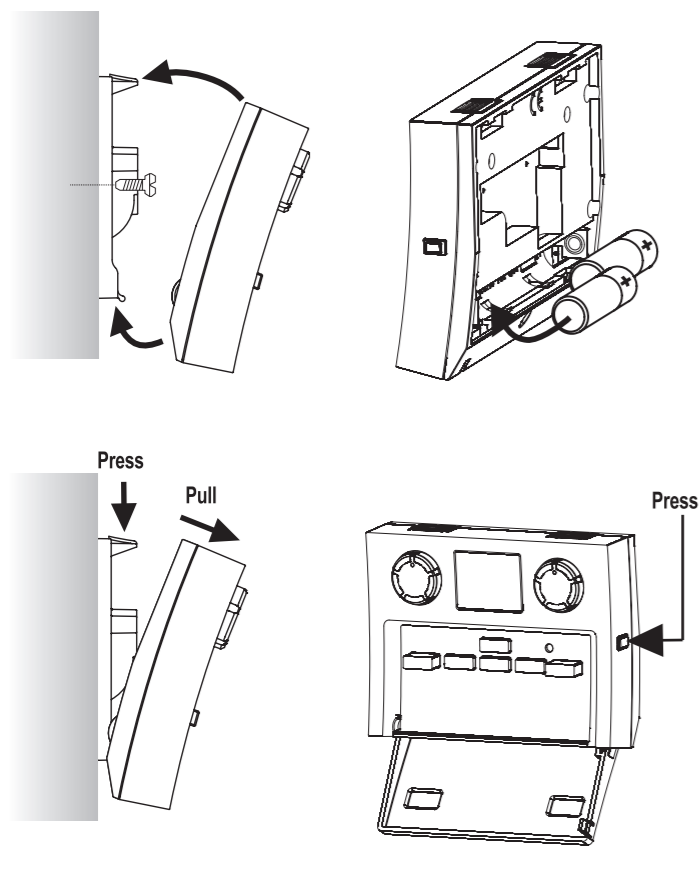
## Dimension (A)



## Wiring diagram (B)



## Installation (C)



## User Manual

### PROGRAMMABLE THERMOSTAT

Read all instructions carefully

- The ECO wall-mounted electronic programmable thermostat is an automatic control device for daily thermoregulation. It performs actions of type 1B and is aimed for operation in household and similar environments having a normal pollution degree.

## SAFETY WARNINGS

During the installation and operation of the instrument, follow the instructions below:

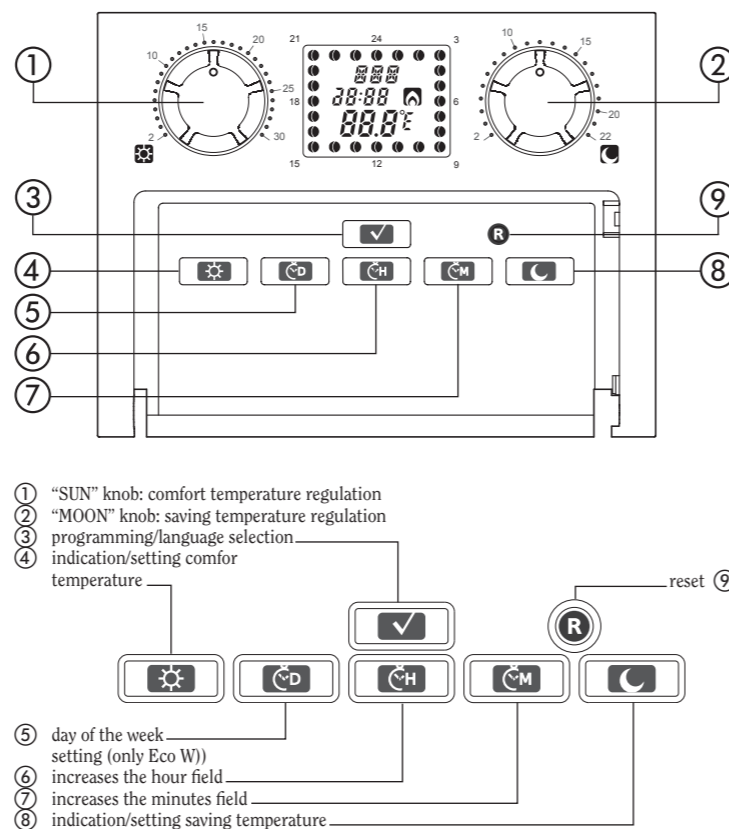
- The instrument should be installed by qualified personnel
- Before gaining access to the connection terminals make sure that the conductors to be connected to the instrument or already connected are not live
- Do not power or connect the instrument if any part of it is damaged
- Follow the connection diagrams in this manual and on the instrument

Code	Model	Description
VE082400	Eco D	Daily programmable thermostat
VE083200	Eco W	Weekly programmable thermostat

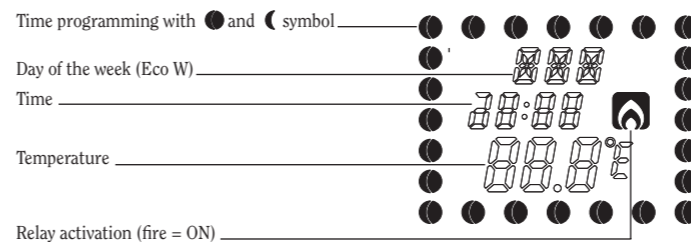
## TECHNICAL SPECIFICATIONS

- Daily (Eco D) or weekly (Eco W) programming versions
- Power supply: 2x1,5 V stylus alkaline batteries (AA)
- Autonomy: 12 months about (with alkaline batteries 2800 mA/h at 23 °C)
- Charge reserve: about 2 minutes for batteries replacement
- Battery charge condition indication with "failed batteries" signalling
- Output: bistable relay with max. 8(5)A 250V AC exchange contact
- 2 temperatures, "SUN" and "MOON", are settable by means of a knob:
  - SUN ☀: +2 °C ÷ +30 °C "comfort" temperature regulation
  - MOON ☾: +2 °C ÷ +22 °C "saving" temperature regulation
- ON/OFF temperature regulation with fixed differential of 0,3 °C
- Clock: weekly/daily
- Language selection for the display of the day of the week chosen between: Italian, English, French, German, Spanish (in Eco W only)
- Programming resolution: 1h
- Temperature measured resolution: 0,1 °C
- Precision: ±0,5 °C
- Temperature measurement update every 60s
- Temperature measured: 0 °C ÷ +40 °C
- Operating temperature: 0 °C ÷ +50 °C
- Temperature regulation field: +2 °C ÷ +30 °C
- Storage temperature: -10 °C ÷ +65 °C
- LCD display with visualization of temperature, time, daily programme and relay activation state and day of the week (in Eco W only)
- Protection level: IPXXD
- Test on each device

## KEYS AND KNOBS



## DISPLAY



## INITIAL SETTINGS

## START UP / RESET

Insert the batteries and press reset key R with a pencil or a pointed object.

- This operation will reset all the data and programmes previously set, which will be initialised as default. For all the days of the week this condition will set the following data:

- SUN ☀ comfort temperature from 07:00 to 21:59
- MOON ☾ saving temperature from 22:00 to 06:59

All the segments of the display will be switched on and the relay will be activated for about 3s. The display will be switched off, the clock will restart from "00:00" on Monday (in Eco W only). Until the first clock set the display shows the ambient temperature and the time (flashing). Regulation begins only after the time setting.

## CLOCK SETTING

Press C/D, C/H and C/M to set respectively the day (in Eco W only), the hour and the current minutes.

Press one of these keys to increase their respective value of one. Once the clock has been set, the programmable thermostat moves to the automatic operation.

- At any time it is possible to change the current day and time by pressing C/D, C/H and C/M and following the above mentioned instructions

## LANGUAGE SELECTION

Press V for at least 3 seconds to modify the language display of the day of the week. In "Temperature" field the word "SEt" is shown and in the "Day" field the select language is displayed. The available languages are (in order):

- Italian (I t A)
- English (E N G)
- French (F R A)
- German (d E U)
- Spanish (E S P)

Press C/D, C/H or C/M to select the language. It is possible to abandon the selection by pressing V or after 30s from the last key pression.

## OPERATION

## AUTOMATIC OPERATION

When in automatic operation mode, temperature adjustment enables the user to select, for every hour of the day, one of the two available temperature levels (comfort and economy) to be maintained in the environments.

As a rule, at night or when we are not at home, we actually keep a lower temperature than when we are there; on the other hand, when we're back we enjoy a warm and comfortable room.

These 2 temperature levels can be set using the knobs:

- ☀ SUN for the adjustment of comfort temperature (the higher temperature)
- ☾ MOON for the adjustment of economy temperature (the lower temperature)

The LCD display shows the following information:

- Symbols ☀ and ☾ on the edge of the display show what hours of the day will be applied the temperature selected by the SUN (comfort) or MOON (economy) knob
- Current time (HH:MM)
- Temperature measured
- Temperature unit of measure (°C)
- FIRE symbol (if the relay is ON)
- Day of the week in the selected language (in Eco W only)

## PROGRAMME SETTING

Once the device is operating, the programmable thermostat is set with the default programme ("SUN ☀ from 07:00 to 21:59 and "MOON ☾ from 22:00 to 06:59). Press V to modify this programme.

"Temperature" field of the display shows the word "SEt", "Time" field shows the current time (without minutes), "Day" field shows the day of the current week (weekly version only) and the "SUN"/"MOON" symbol, relating to the displayed time, flashes.

Press ☀ or ☾ to set, for the time displayed, respectively the comfort or saving temperature (see paragraph "TEMPERATURES SETTING").

Once the programme has been set, it is possible to move to the next hour and update the "hour" field: the flashing graphic field "SUN"/"MOON" will step up clockwise.

To modify the programme of a particular hour, press C/H till reaching the chosen hour then press ☀ or ☾ to set the temperature desired.

Press C/D: (in Eco W only) to change the day of the week; each time this key is pressed the day increases of one.

Press V to return to the automatic operation.

- If no key is pressed for 30s, the programmable thermostat will abandon the programming function and memorize the modified settings
- During the programme setting, regulation and relay operation are suspended

## TEMPERATURES SETTING

Comfort (SUN) and saving (MOON) temperatures are set by means of two 3/4 turn knobs. Press ☀ or ☾ in "Temperature" field to display the temperature (flashing) set by means of the respective knob; in the "Day" field the word "SEt" is displayed. Rotate the respective knob to modify the temperature. The temperature stops flashing for about 2s. Press ☀ or ☾ a second time to return to the display of the temperature measured. It is possible to return to the automatic operation by pressing V too.

- It is also possible to modify the "SUN"/"MOON" temperatures without pressing the respective keys, operating just the knobs. In this case the set temperature is not displayed
- If no key is pressed or if the knob is not operated for about 30s, the programmable thermostat will return to the automatic operation and memorize the modified settings

## MANUAL OPERATION

Press ☀ or ☾ for at least 3s to move from automatic to manual operation.

In manual operation the regulation temperature is prefixed in SUN ☀ or MOON ☾ for each time of the day.

The operation type is indicated by the word "MAN" in "Day" field and by all the suns and moons switched on.

Press ☀ or ☾ to modify the regulation temperature. In "Day" field the word "SEt" is shown and the temperature begins to flash. To change the temperature operate the respective knob (as in the automatic operation).

Temperature can be modified without pressing one of the ☀ or ☾ keys too. In this case the set temperature is not displayed.

During the setting it is possible to move from "SUN ☀" temperature to the "MOON ☾" one and vice versa by pressing the respective key.

Press ☀ or ☾ or V again to move back to the manual operation. 30s after the last regulation the programmable thermostat automatically returns to the manual operation.

- In MANUAL operation it is possible to modify hours and minutes, display SUN ☀ and MOON ☾ temperatures. On the contrary, it is not possible to modify neither the set programmes nor the selected language (in Eco W only)
- If the day of the week is modified (in Eco W only) you move back to the AUTOMATIC operation

Press ☀ or ☾ for at least 3s to move back to the automatic operation.

## REPLACING THE BATTERIES

When the batteries are close to exhaustion, the display will flash and show the word "bAt" in "Day" field (both in Eco D and in Eco W).

The programmable thermostat operates regularly, regulation included.

When batteries are removed, the display switches off and all the functions are interrupted, except for the clock update, until the next batteries are inserted.

- The maximum battery replacement time is about 2 minutes

When the new batteries are inserted the programmable thermostat immediately restarts. In case this does not happen press R (reset key).

## REFERENCE STANDARDS

Conformity with EU Directives:

2006/95/EC (Low Voltage Electrical Equipment)

89/336/EEC amended by 92/31/EEC and 93/68/EEC (E.M.C.)

is declared with reference to the following standards:

EN 60730-2-7, EN 60730-2-9, EN 61000-6-1, EN 61000-6-3