

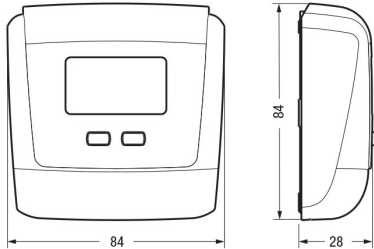
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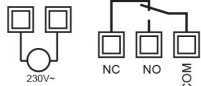
Mod. **KLIMA LCD**

## 2 DIMENSIONS

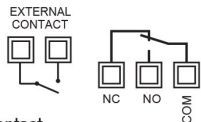


## 3 WIRING DIAGRAMS

### Klima LCD 230



### Klima LCD



With closed external contact  
Setpoint= -3°C programmed setpoint

## 4 LEGEND



- ① "Environment temperature" field
- ② "Off" field
- ③ "Heating activation" field
- ④ "Cooling activation" field
- ⑤ "Active night reduction" field
- ⑥ Key "▲" increases the selected field
- ⑦ Key "▼" decreases the selected field

## 5 INSTALLATION

- Install the thermostat at a height of about 1.5 m above the floor, away from direct sunlight, away from doors, windows, heat sources, locations with excess or total lack of ventilation.
- Remove the front shell acting in accordance with the picture on the right.
- Make the connections by respecting the diagrams described in this manual.
- Insert the batteries in the compartment (for Klima LCD only)
- Fix the instrument to the wall.
- Reposition the front shell, by mating first the teeth on the upper side.

## 1 User Manual

### WALL-MOUNTING ELECTRONIC THERMOSTATS

⚠ Read all instructions carefully

Wall-mounting electronic thermostats for temperature control both in heating and cooling. They perform actions of type 1B and are intended for operating in environments with Pollution Degree 2 and Overvoltage Category III (EN60730-1).

- **Klima LCD**, with battery power supply and an input for the connection of an external contact with whom to reduce the setpoint of 3°C.
- **Klima LCD 230** with mains power supply.

Code	Model	Description
VE729000	Klima LCD	Battery thermostat with digital input
VE730800	Klima LCD 230	230V Thermostat

### SAFETY WARNINGS

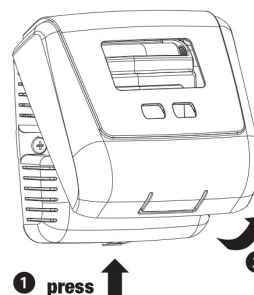
During product installation and operation it is necessary to observe the following instructions:

- 1) The instrument must be installed by a qualified person, in strict compliance with the connection diagrams.
- 2) Do not power or connect the instrument if any part of it is damaged.
- 3) After installation, inaccessibility to the connection terminals without appropriate tools must be guaranteed.
- 4) The instrument must be installed and activated in compliance with current electric systems standards.
- 5) Before accessing the connection terminals, verify that the leads are not live.
- 6) In the electrical system of the building where the instrument must be installed, a protection device from the overcurrents must be present (for Klima LCD 230 model only).

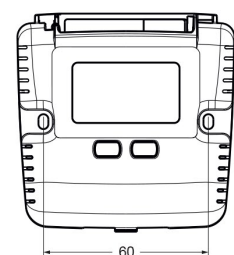
### TECHNICAL SPECIFICATIONS

- Power supply Klima LCD:
  - 2 alkaline batteries 1.5V (AAA type)
  - battery life: 12 months
  - depleted batteries indication
- Power supply Klima LCD 230:
  - 230Vac (-15% ÷ +10%) 50/60Hz
  - max absorption: 2.5 VA / 230Vac
- Terminals Klima LCD:
  - 3 terminals for 1.5 mm<sup>2</sup> cables for output relay 5A / 250 Vac
  - 2 terminals for 1.5 mm<sup>2</sup> cables for digital input (3°C setpoint reduction)
- Terminals Klima LCD 230:
  - 3 terminals for 1.5 mm<sup>2</sup> cables for output relay 5A / 250 Vac
  - 2 terminals for 1.5 mm<sup>2</sup> cables for power supply
- Operating mode: summer/winter/off (with antifreeze)
- Password protected lock keypad
- Regulation type:
  - on/off with settable differential (0.1 ÷ 1°C)
  - P8 proportional with 0.8°C band (-0.3 ÷ +0.5°C) and period 8 minutes
  - P15 proportional with 1.5°C band (-0.7 ÷ +0.8°C) and period 15 minutes
- Measurement precision: ± 0.5 °C
- Measurement temperature resolution: 0.1 °C
- Setpoint range: 2°C ÷ +35°C
- Operating temperature: 0 °C ÷ +50 °C
- Storage temperature: -10 °C ÷ +65 °C
- Operating humidity: 20÷90% non condensing
- Protection degree: IP40
- Insulation: reinforced among accessible parts (frontal) and all other terminals

### Remove the front shell



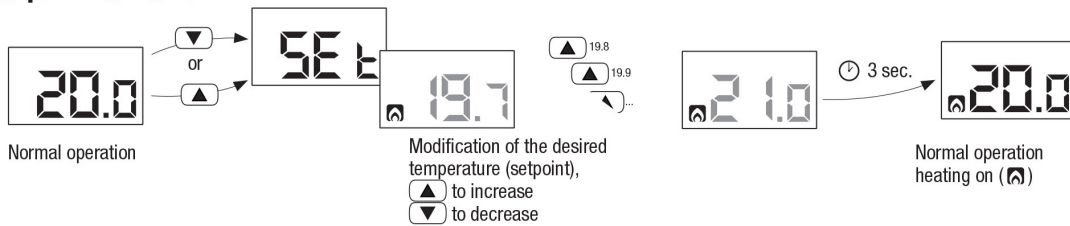
### View wheelbase hole



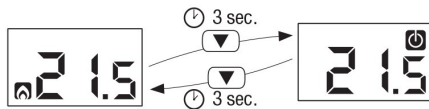
# 6 OPERATION

During the normal operation the thermostat displays the detected temperature value and the relay status is identified by the symbol (heating) or the symbol (cooling).

## Setpoint modification



## Switch off



Note: in heating mode (winter), the instrument if off, it regulates according to the antifreeze temperature **Toff** in order to prevent freezing of the system. **Toff** can have values from 1 to 10° C or be excluded; in this case any minimum temperature is guaranteed.

## Error messages



Occurs for the following values of measured temperature:  
 $t < 0^{\circ}\text{C}$   
 $t > 50^{\circ}\text{C}$

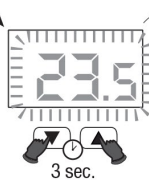
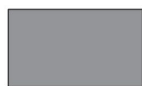


Occurs in case of probe failure. In this case the regulation is inhibited and the relay contacts remain in position NC-COM.

## Reset

Reset to delete the settings you made and reload the default values. To reset:

- 1 remove power from the instrument (Klima LCD 230) or remove the batteries (Klima LCD). Wait until the display goes off.
- 2 Restore power to the instrument (Klima LCD 230) or insert the batteries (Klima LCD). During the flashing press the keys and until the display shows **dEF**.



## Default values

Heating setpoint	21°C
Cooling setpoint	25°C
Minimum settable setpoint - <b>L0</b>	2°C
Maximum settable setpoint - <b>H1</b>	35°C
Operating mode	(heating)
Antifreeze temperature	6°C
Regulation type	On /Off
Differential	0,3°C
Password	--- (disabled)

## Advanced programming

To enter menu Advanced programming keep simultaneously pressed for 3 seconds the keys and until **Pr** will appear. The items of the menu are displayed in succession. For each item is displayed an identification abbreviation and its relative blinking value. Use the keys and to modify the value. The passage to the next parameter occurs after 3 seconds without pressing any key. Once all parameters are set the writing **End** is displayed and the thermostat returns to normal operation saving the effected modifications.

**L0** Minimum settable setpoint - **L0**  
It's the minimum value settable as setpoint.  
Settable values: 2 ÷ h1

**H1** Maximum settable setpoint - **H1**  
It's the maximum value settable as setpoint.  
Settable values: L0 ÷ 35°C

**E-1** Operating mode - **E-1**  
 if connected to the boiler (heating)  
 if connected to a cooling system

**06.0** Antifreeze temperature - **Toff** - (only in heating)  
Minimum temperature maintained with instrument off (see box «Switch off».)  
Settable values: 1 ÷ 10 °C or --- (excluded function)

**rEG** Regulation type - **rEG** - (only in heating)  
G = on/off with settable differential  
PB = proportional with band 0,8°C and period 8 minutes  
P15 = proportional with band 1,5°C and period 15 minutes

**d0.3** Differential - **d0.3** - (only for on/off regulation)  
Differential (or hysteresis) for temperature regulation.  
Settable values: 0.1 ÷ 1°C

**PR5** Password for keypad lock - **PR5**  
Set a value between 001 and 999 to activate the keypad lock. Set "---" to disable the lock.  
If the keypad lock is active, pressing one key **Loc** appears and the password is required. If it's properly inserted the keyboard is unlocked for the next 30 seconds.

## Night reduction (for Klima LCD only)



The Klima LCD has an input to whom to connect an external contact (see wiring diagrams). With closed contact, the setpoint is reduced by 3 °C than the set one and the display shows the symbol .

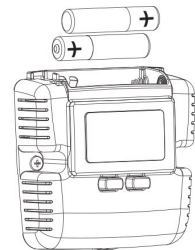
## Depleted batteries signal (for Klima LCD only)



Replace the batteries as soon as possible!  
 Dispose of batteries in the appropriate recycling containers.

## Batteries replacement

- Remove the front shell.
- Insert the batteries in the appropriate compartment (attention to the polarity).
- Reposition the front shell.



## REFERENCE STANDARDS

Compliance with Community Directives  
 2006/95/EC (Low voltage)  
 2004/108/EC (E.M.C.)

is declared with reference to the following harmonized standards:  
 • EN 60730-2-9