Instructions manual

Timer-Thermostat 02955 User Manual





# **Table of Contents**

1.	Timer-Thermostat 02955	2
2.	Display	<b>2</b> 3 4 5 6 7
3.	Operating mode	9
	3.1 Switched off (OFF)         3.2 Manual.         3.3 Auto.         3.4 Timed manual.         3.5 Away         3.6 Antifreeze         3.7 Remote reduction         3.8 Remote auto	9 10 11 12 13 13 14
4.	Settings menu	15
	4.1 Operating mode setting	16
	4.2 Programming via smarphone	16
	4.4 Heating/air-conditioning setting	16
	4.5 Unit of measurement setting	16
	4.6 Setting the daily program in AUTO mode	17
	4.6.1 Selecting the day of the week	17
	4.6.2 Temperature selection	1/
	4.8 Calibration setting	18
	4.9 External probe setting	18
	4.10 Multi-function input setting	18
	4.11 OnOtt/PID temperature control algorithm setting	18
	4.13 Setting the audible warning (beep)	19
	4.14 Setting the display colour	19
	4.15 Standby brightness level setting	20
	4.16 Into about the device	20
_	4.17 LOCK/UNIOCK PIN Setting	20
5.	Alarms	20
6.	Cleaning the device	20
7.	Main characteristics	21
8.	Regulatory compliance	21



# 1. Timer-Thermostat 02955

The timer-thermostat 02950 ensures ideal temperature conditions for every hour of the day by acting on the control circuit of the burner or circulation pump (heating) or on the control circuit of the air conditioner (air conditioning).

Thanks to a touch screen display with an extremely user-friendly graphical interface, the user can manage the system easily and comprehensively while keeping the device in a state of energy saving.

Consulting the consumption (or production) of energy (if configured) lets you monitor up to 3 different phases when the device is connected to the energy probe (not included); the timer-thermostat does not activate/deactivate loads according to the power reading but performs only monitoring with an audible alarm when needed. The smartphone app, available for iOS®, Android® and WindowsPhone®, helps facilitate the configuration of the device by programming it with an acoustic signal; the timer-thermostat settings can be made via your smartphone (however, they cannot be read).

# 2. Display

The touchscreen display allows you to control the system using the following buttons and icons:



Fig. 1: Graphical interface and buttons

## 2.1 Functions of the buttons

- increases the numerical values. When it "disappears" from the display it means that the value cannot be increased any more.
   : decreases the numerical values. When it "disappears" from the display it means that the value cannot be decreased any more.
   : during navigation, it scrolls through the available menus. If it "disappears" then you have arrived at the first of the elements that can be scrolled.
  - **\** 
    - . I cluring navigation, it scrolls through the available menus. If it "disappears" then you have arrived at the last of the elements that can be scrolled.





 $\geq$  : confirms the selected option (activates the submenu if there is one or displays the next parameter/digit).

After each confirmation, the display shows the  $\checkmark$  icon for approximately 1 s and (if enabled) the relevant acoustic signal.



5. back (or cancel) exits the current screen/menu and returns to the previous one without saving any changes. In menus with changes to multiple digits it lets you go back to change the previous digit.

#### N.B. The field/value being edited is highlighted by the field/value itself flashing.

- If no operations are performed on the device for 30 seconds, the brightness of the backlighting decreases, and the touch screen does not respond to touch (thus you avoid the effects due to inadvertent touching and the backlighting is less "invasive"); on standby the button symbols are no longer visible because they are disabled.
- To exit standby mode, press the middle of the display; the increase in the level of brightness of the device and the appearance of active buttons will confirm the restoration of normal functions (if enabled, there will also be an audible "unlock" signal)

# 2.2 Symbols

Depending on the different operating modes, the display shows the following icons:

- -0+ : Calibration
- : Entering the PIN
- MR) : Timed manual operation
- $\widehat{}$ : Away
- *(#*) : Manual
- 11 : Nighttime reduction
- \* : Antifreeze
- OFF : OFF
- AUTO : Automatic operation
- : Multi-function input ON
- 12 : External temperature probe
- $\triangle$ : Alarm

狺

<sub>d</sub>lly

- : Air conditioning
- : Heating
- : Power/Energy





T
 : Comfort temperature

# 2.3 Locking the interface via PIN

The timer-thermostat lets you set a password (see par. 4.12) which inhibits any change to the operating mode (eg switching from Manual to OFF), limits setting the temperature values and, more generally, blocks access to the configuration menu.

This feature is useful to prevent the thermostat being used by unauthorized persons: the device prompts you to enter the PIN, indicating a shutdown with the final con.



Fig. 2: Locking with PIN

## 2.4 Alternative views

During normal operation, i.e. when you are not navigating the menus, you can select the information to display on the left-hand side of the display.

If the right side always displays the measured temperature together with other data (which will be explained below), tapping the central area of the display on the left-hand side in succession will display the three following options:



## 2.4.1 Clock and daily program



Fig. 3: Typical view of the time and daily program

This view is the default and gives an indication of the daily temperature control program along with the data on the current moment.

The circular **ring** icon which represents the **program** is divided into 24 sectors, each of which represents one hour of the day; the wedge in the middle at the top represents the time 12:00.

Each sector can be composed of 1, 2 or 3 dashes:

- I = "T away" (**T**�)
- = "T economy" ( **T** )
- IIIr = "T comfort" ( **T**♦ )

The clock shows the current time.

The indicator of the day of the week highlights the current day with a dash under the number associated with it (eg, 4 = Thursday).

The set temperature indicator highlights the current temperature being regulated thus replicating the information represented by the "dashes":

- **T** ↔ = T away
- T♦ = T economy
- **T**♦ = Tcomfort

If the operating mode is not set on *AUTO* (see par. 8.1), the ring will be a circular icon with no "dashes" as there is no active temperature control program and so there will be no set temperature indicator visible.



#### 2.4.2 Ecometer



Fig. 4: Typical view of ecometer mode

The set of icons called "ECOMETER" provides a general indication of the expected consumption facilitating energy saving.

The consumption forecast is given by a comparison between the currently set temperature value and an "average" consumption defined in the device.

- The **ring of the level of consumption** indicates the level of expected consumption; if the level is less than half then savings are expected with respect to the "average" consumption, whereas if the level exceeds half then the expected consumption will be greater than average.
- The energy saving indicator indicates whether, compared to an average consumption, the set temperature setpoint enables you to achieve "savings" in consumption.

#### 2.4.3 Consulting the energy probe (if enabled)

This mode appears only if there is an energy probe that has been suitably configured by your installer.



Fig. 5: Typical screen for consulting the energy probe

This view is used to consult data on the instantaneous power and energy consumed/generated by the system and measured by the energy probe.

CAUTION: Proper operation and proper consultation require:

- The energy probe 02960 to be powered and functioning
- The energy probe 02960 and timer-thermostat 02955 to be connected correctly
- . The clock of the timer-thermostat to be set correctly

If these conditions are met, the indicator LED of the energy probe will flash "occasionally" (1 flash every 2 seconds approximately).



The **measured power** is the value measured by the energy probe; the value shown is the sum of the (active) powers of all the active channels of the probe (eg, all 3 channels could be active, or only channel 1 or channels 1 and 3, etc.).

The unit of measurement (W or kW) is displayed under the measured value.

- If the sum of the powers turns out to be **consumed** (i.e. absorbed by the energy supplier), the value is **positive** and the generation/consumption indicator is off.
- If the sum of the powers turns out to be generated (for example, the photovoltaic system is supplying power to the electricity grid), the value is negative and the generation/consumption indicator is on.

The **circular ring** (only when consulting the instantaneous power) represents the current level of consumption compared to the maximum level recorded in the last 24 h (ring complete with all the dashes = maximum consumption); the number of dashes can therefore vary even if the power is the same since what is displayed depends on the consumption log.

Pressing and holding the **central area** (see fig.7), instead of the instantaneous power, displays the energy consumed (or generated) during the current day; in this case the **circular ring** represents the level of consumption of the current day compared to the last 30 days. If the dashes reach halfway around the ring it means that the consumption in the last 24 hours is in line with that of the last 30 days; vice versa, if the dashes exceed or are less than half of the ring it means that the current consumption is respectively higher or lower than the average of the last 30 days.

## 2.4.3.1 Consulting the energy log

Touching \_\_\_\_\_dt / displays the historical data on energy consumption measured by the energy probe.



Fig. 6: Typical view of historical energy data consultation

Via \_\_\_\_\_ and \_\_\_\_\_ and confirming with \_\_\_\_\_ you set the range of historical consumption that you want to see:

• r b b b (historical data reset): this option lets you delete ALL the historical data saved by the energy probe; since this operation cannot be undone, an additional confirmation screen is displayed (YES to delete the data and NO not to delete them).



- (hourly consumption): enables you to scroll one by one through the hours prior to the current one; the indices range from "Oh" (hourly consumption of 1 hour ago) to "-23h" (hourly consumption of 23 hours ago).
- J (daily consumption): enables you to scroll one by one through the days prior to the current one; the indices range from "*OD*" (daily consumption of 1 day ago) to "-*30D*" (daily consumption of 30 days ago).
- I (monthly consumption): enables you to scroll one by one through the months prior to the current one; the indices range from "-1M" (monthly consumption of the last month) to "-11M" (monthly consumption of 11 months ago).

**N.B.**: Monthly consumption (or generation) is considered to be the consumption (or generation) recorded in a fixed period of 30 days (it does not therefore correspond to a "calendar" month). The month "-*1M*" therefore represents the consumption recorded in the period from 30 days ago until yesterday. The month "-*2M*" represents the consumption recorded in the period from 60 days ago until 31 days ago, etc.

• Y (yearly consumption): enables you to scroll one by one through the years prior to the current one; the indices range from "-1Y" (yearly consumption of the last year) to "-3Y" (yearly consumption of 3 years ago).

**N.B.**: Yearly consumption (or generation) is considered to be the consumption (or generation) recorded in a fixed period of 365 days (it does not therefore correspond to a "calendar" year). The year "-1Y" therefore represents the consumption recorded in the period from 365 days ago until yesterday. The year "-2Y" represents the consumption recorded in the period from 730 days ago until 366 days ago, etc.

Confirming the selection will then display the energy consumed or generated in *Wh* or *kWh*. Obviously, if the energy probe was installed at a time when there were not yet any data for the period of consultation, the historical energy data will be 0.

For example, if the probe was installed 20 days ago and we are consulting the term "-3 months" then the consumption is obviously 0 Wh.

In addition to the numerical data, the **circular ring** gives an idea of the current consumption compared to that of the previous hours/days/months/years.

The dashes reach halfway around the ring when the consumption of the current day/ month/year is in line with that recorded in the corresponding previous periods (the last 24 hours for the hour, last 30 days for the day, last 12 months for the month and last 3 years for the year). Conversely, if the dashes exceed or are less than halfway around the ring it means that the current consumption is respectively higher or lower than the average of the relevant periods (hours/days/months/years).



# 3. Operating mode

The timer-thermostat 02955 is able to regulate the temperature according to the following operating modes:

- Switched off (OFF): switches the system off
- Manual: lets you set the environment temperature set-point manually
- AUTO: lets you set a control program that compares the room temperature with the value set for each hour of the current day; the user defines three levels of temperature distributed over 24 hours which can then be varied for each day of the week.
- Timed manual: starting from AUTO mode, this lets you activate MANUAL operation of the timer-thermostat for any period of time at the end of which the device will return to AUTO mode.
- Away: lets you set the set-point in order to achieve significant energy savings during periods when the user
   is away
- Antifreeze: used to set a minimum temperature level to avoid damage to pipework or prevent the temperature from falling below a safety level.

In addition, if the multi-function input of the timer-thermostat has been suitably configured (your installer will give you the relevant information), you can remotely activate the following modes:

- Remote reduction: lets you vary the set points of MANUAL adjustment to obtain energy savings.
- Remote activation: lets you activate the system remotely, setting AUTO operation.

The operating mode is selected via the SETTINGS menu (see chap. 4).

# 3.1 Switched off (OFF)

- In this mode, the timer-thermostat is turned off and no adjustments are made; in this case, the **OFF** icon is displayed above the temperature indicator.
- In this mode you cannot perform any operations other than activating the menus.



Fig. 7: Typical screen for OFF mode

For heating-only systems this mode is typically used in the summer.



# 3.2 Manual

In this mode the device operates as a simple thermostat that regulates the ambient temperature, taking it to the value set by the user.

When MANUAL mode is active, the  $\mathfrak{V}$  icon is displayed above the temperature indicator.



Fig. 8: Typical screen for Manual mode

The set point can always be changed via \_\_\_\_\_ or \_\_\_\_

In the process of setting, the set point flashes; the colour<sup>1</sup> of the display may also vary, providing an indication of the expected consumption associated with the setting being made:

green	yellow	red
optimum consumption		excessive consumptior

<sup>1</sup> Only if the colour set for the display is white (C0) or ECO, see par. 8.9.



Fig. 9: Manual set point setting

The selection is confirmed by touching

The ∂ and ≇ icons in the lower right corner indicate whether the system is operating in heating or air-conditioning mode respectively (icon illuminated = system on).



# 3.3 Auto

This is the typical mode of operation of the timer-thermostat.

The device automatically changes the ambient temperature according to the time of day and the day of the week, it minimizes user intervention thereby optimizing comfort and energy savings; three different temperatures can be set to cover the needs of normal use, user away or nighttime reduction in the environment. For setting the automatic program, see par. 4.6.

When AUTO mode is active, the AUTO icon is displayed above the temperature indicator.



Fig. 10: Typical screen for Auto mode

By touching \_\_\_\_\_ and \_\_\_\_\_ you can temporarily change the ambient temperature, setting it to a different value to the one associated with the current time slot.

Confirming with // it then goes into TIMED MANUAL mode (see par. 3.4).

The **W** and **#** icons in the lower right corner indicate whether the system is operating in heating or air-conditioning mode respectively (icon illuminated = system on).

## 3.4 Timed manual

This mode allows you to temporarily exit the AUTO program (you enter MANUAL mode) for a certain time after which the timer-thermostat will return to AUTO mode.

For example: take the ambient temperature to 25°C for 2 hours and then resume the Auto program.

Activation is carried out starting from AUTO mode and is recognizable by the DD icon displayed above the temperature indicator.



Fig. 11: Input screen in Timed Manual mode



Using \_\_\_\_\_ and \_\_\_\_\_ you set the temperature and confirm with \_\_\_\_\_.

The next screen, again using \_\_\_\_\_ and \_\_\_\_, lets you set the time for which the temperature you have just set is maintained.



Fig. 12: Regulating the number of hours of Timed Manual mode

Finally confirm with \_\_\_\_\_. At the end of the set time the timer-thermostat goes back into AUTO mode, the Direct icon switches off and **AUTO** reappears.

## 3.5 Away

This mode is useful to achieve energy savings quickly and effectively whenever the user leaves the regulated room.

In "Away" mode the system makes the adjustment according to the "away temperature" setpoint (see para. 4.4.2) which is more cost-effective than the manual setpoint and different to switching off the system completely.

The Away mode can only be activated in manual mode by touching

The display will show the "away temperature" setpoint for approximately 2 seconds:



Fig. 13: Input in away mode showing the away temperature



Activation of this mode is identified by the  $\hookrightarrow$  icon above the temperature indicator:





To exit and return to the previous mode touch the button again:

# 3.6 Antifreeze

This mode, which can only be activated when the system is operating in heating mode (see par. 4.3), lets you set a minimum temperature value ( setpoint) to avoid damage to the pipework or to keep it from falling below a certain safety level when you are away for lengthy periods in the winter.

The "antifreeze" mode is activated directly from the Settings menu (see par. 4.1). Once activated, antifreeze mode is identified by the 3 icon above the temperature indicator.



Fig. 15: Antifreeze mode

# 3.7 Remote reduction

Remote reduction is a useful way to "centralize" energy saving if there are multiple 02955 timer-thermostats in different rooms of the same house.

For example: Before going to bed, using a simple switch, all the timer-thermostats in the house are set onto "reduction" at the same time.

This mode comes into operation when the multi-function input is activated only if this has been suitably configured by your installer. Activation of the multifunction input is acknowledged solely when the timer-thermostat is in Manual mode.



In "Remote Reduction" mode, the device sets the temperature to a value below Tcomfort.

In this condition, the display and the relevant buttons are not active; access to the settings menu is disabled and you cannot interact with the timer-thermostat (as it is controlled remotely).

The "Remote reduction" mode is identified by the CO and U icons located simultaneously above the temperature indicator.



Fig. 16: Input in Remote reduction mode

# 3.8 Remote auto

This mode is typically used in applications where you want to remotely enable or disable temperature control of a room and limit the functions that can be performed by the user (typical mode for hotel room management).

This mode comes into operation when the multi-function input is activated only if this has been suitably configured by the installer.

In "Remote auto" mode, the timer-thermostat is activated in AUTO mode.

In this condition, the display and the relevant buttons are not active; access to the settings menu is disabled and you cannot interact with the timer-thermostat (as it is controlled remotely).

The "Remote auto" mode is identified by the **E:** and **AUTO** icons located simultaneously above the temperature indicator.



Fig. 17: Typical screen in Remote auto mode

When the multi-function input is turned off, the timer-thermostat automatically goes into **Antifreeze** mode (if it is running in heating mode) or **OFF** (if it is working in air-conditioning mode).



# 4. Settings menu

From the settings menu you can configure all the features of the timer-thermostat; these features can be set in the same way also with the smartphone app (see 8.2).

On the main screen (see Fig. 1) tap the \_\_\_\_\_ icon.

From the main menu, using \_\_\_\_\_ and \_\_\_\_ will display the following (flashing) symbols in succession, which provide access to the corresponding submenus:

♥ AUTO ₩ OFF operating mode setting 1. ( 2. programming via smartphone 18:36 3 setting the time and day of the week 淮 ٢ 4. heating/air-conditioning setting ol ob 5. unit of measurement setting 6. daily program setting - 1 7 setting the temperature setpoint -0+ 8. calibration setting **₿**2 9 external probe setting 10. **in** and **C**-D multi-function input setting 11. **Cu t** OnOff/PID temperature control algorithm setting 12. 4 energy probe setting 13. **4)** buzzer (beep) setting 14. **L ol** display colour setting 15 standby brightness level setting 16 0 0 device info 17 lock/unlock PIN setting

Touching \_\_\_\_\_ opens the submenu and then the flashing highlights the parameters of the submenu.



## 4.1 Operating mode setting

This menu is used to select the operating mode of the device:

- 🖤 Manual
- AUTO Automatic
- OFF Off
- \* Antifreeze (only if the thermostat is set on "heating")

Using And Select the desired mode and confirm with

# 4.2 Programming via smartphone

This menu lets you program the device via a smartphone.

On touching \_\_\_\_\_\_ the timer-thermostat is ready to receive the data. The user then needs to initiate data transmission from the smartphone within 10 seconds.

After receiving the configuration packet the timer-thermostat beeps in confirmation and goes back to the previous screen.

If, within 10 seconds, the timer-thermostat receives no data or receives an incorrect configuration (eg, the smartphone has its volume set too low, it is too far away, etc.), the thermostat will display "*Err*"; then, to do the programming, you will need to repeat the procedure again.

# IMPORTANT: To perform the programming correctly, have your smartphone at approximately 10 cm from the timer-thermostat.

#### 4.3 Setting the time and day of the week

This menu lets you set the time and day of the week.

Using \_\_\_\_\_ and \_\_\_\_\_ set the hour, confirm with \_\_\_\_\_ and similarly set the minutes and then the day of the week.

The days of the week are represented by numbers from 1 to 7 and indicate the days from Monday to Sunday.

#### 4.4 Heating/air-conditioning setting

This menu is for the sole use of the installer.

#### 4.5 Unit of measurement setting

This menu lets you set the unit of measurement used for the temperature (°C or °F)

Using \_\_\_\_\_ and \_\_\_\_ select the desired unit of measurement and confirm with



# 4.6 Setting the daily program in AUTO mode

This menu lets you set or modify the time and daily program for the ambient temperature.

The program lets you associate each time of day (and in a different way, for each of the 7 days) with one of the 3 temperatures "T comfort", "T away" and "T economy" set previously by the installer.

For example: During the night, set "T economy", for the morning and evening set "T comfort" and in the middle of the day set "T away" (when no one is in the environment and to obtain savings due to a lower consumption).

#### 4.6.1 Selecting the day of the week

As soon as you enter the menu, the display shows a flashing dash for the day to which the current programming refers (for example: **1234567** = Tuesday).

Using \_\_\_\_\_ and \_\_\_\_ select the day of the week to program and confirm with

#### 4.6.2 Temperature selection

After confirming the day to program, the display shows the screen for setting the temperatures associated with the different times of the day.

Throughout the programming, the colour of the display is similar to the "ECO" view to immediately highlight the expected consumption, if compatible with the current colour setting.



Fig. 18: Setting the time and daily program

Using \_\_\_\_\_ and \_\_\_\_ select the temperature to be associated with the current time (which is shown on the clock on the left). This temperature, highlighted by the blinking, can be selected from:

**T**↔ : away temperature (T away)

T◆ : economy temperature (T economy)



The 3 "dashes" blinking in sequence indicate the time slot that you are setting (there are 24 groups of 3 dashes and each group corresponds to one hour of the day). The selected temperature will be applied beginning at the time indicated on the left for all of the next quarter of an hour.



Using  $\longrightarrow$  and  $\searrow$  you can move respectively between the hours of the day and move forwards or backwards 15 minutes at a time.

During the movement, as well as the clock, also the "dashes" indicate the time of day in which you are working. In addition, below the numbers associated with the days of the week, you will see an icon that identifies the temperature set for that specific time.

The \_\_\_\_\_ and \_\_\_\_\_ buttons permit changing the set temperature.

On touching , the temperature selected for the current time is assigned to the next quarter of an hour too; in this case the temperature symbol is the same but the current time, shown by the clock, is moved forward by 15 minutes.

Programming ends when the temperatures have been set for all the hours of the day and the clock displays the time 23:45; then tap <u>v</u> to confirm.

Finally, using \_\_\_\_\_ and \_\_\_\_, select one of the following options shown in the numeric field of the display:

- : to copy the entire time program for the current day to the next day (useful for replicating working days or holidays).
- : to move on to program the next day without making a copy of the day you have just set (useful when switching between programming working days and holidays).

 $\mathbf{End}$  : to finish programming.

Touch <u>v</u> to confirm the selected option.

# 4.7 Temperature setting

This menu is for the sole use of the installer.

#### 4.8 Calibration setting

This menu is for the sole use of the installer.

## 4.9 External probe setting

This menu is for the sole use of the installer.

#### 4.10 Multi-function input setting

This menu is for the sole use of the installer.

# 4.11 OnOff/PID temperature control algorithm setting

This menu is for the sole use of the installer.



# 4.12 Energy probe setting

This menu is for the sole use of the installer.

## 4.13 Setting the audible warning (beep)

This menu lets you enable/disable the acoustic signals of the timer-thermostat; if it is disabled there will no longer be any sound when you touch the buttons or in cases of confirmation/error.

Whereas, in the event of an alarm, the sound signal will always be guaranteed.

Using And Select "ON" or "OFF" and confirm with

#### 4.14 Setting the display colour

This menu is used to select the background colour of the display.

In addition to the four default colours, you can set a colour to your choice selected from the full range of colours, or set "ECO" mode in which the display colour is a clue to the expected level of consumption in the building.



green	yellow	red	
optimum consumption		excessive consum	otion

ECO mode therefore does not display the colour as a function of the temperature measured at that time but only in relation to the set point.



## 4.15 Standby brightness level setting

The menu lets you set the brightness level when the thermostat is in standby mode.



While scrolling through the values, when the selection stops on a certain level, the brightness of the display will, for approximately 2 s, take on the brightness corresponding to the selected level in order to allow the user to check the visual effect.

#### 4.16 Info about the device

This menu is for the sole use of the installer.

## 4.17 Lock/unlock PIN setting

This menu lets you add/change the password to inhibit use of the thermostat.

Using \_\_\_\_\_\_ and \_\_\_\_\_ set the three digits of the PIN one at a time and then confirm each set digit with \_\_\_\_\_\_.

If you wish to have free access to the thermostat (so without it prompting you for a password) it is sufficient to set the PIN to "000".

# IMPORTANT: Take care to note down the password so that you can use it again for the device when needed.

# 5. Alarms

The system is able to generate and report alarm conditions related to the use of the external temperature probe, when configured for limitation, and monitoring the consumption of electricity.

# 6. Cleaning the device

The device features a touchscreen display with capacitive buttons and therefore requires you to be gentle during the cleaning phase. Avoid using aggressive products. Clean the display with a special cloth for cleaning lenses.



# 7. Main characteristics

- Power supply: 120-230 V~, 50-60 Hz.
- Maximum power draw: 1 VA.
- Output: relay with clean changeover contact 5(2) A 230 V~.
- Type of setting: ON/OFF or PID algorithm.
- Room temperature display: 0°C +40°C.
- Reading resolution: 0.1°C.
- Settings resolution: 0.1°C.
- Accuracy of reading:
  - $\leq \pm 0.5^{\circ}C$  between +15°C and +25°C;
  - $\leq \pm 0.8^{\circ}C$  at the extremes.
- Software calibration: ability to change the probe reading with software calibration (±3°C max) to adapt the measurement to each specific installation condition.
- Hysteresis: adjustable from 0.1°C to 1°C.
- Adjustment range:
  - +4°C +10°C on antifreeze;
  - +10°C +35°C on heating or air-conditioning.
- Clock error:  $\leq \pm 1$  s a day.
- Main functions:
  - 3 programmable temperature levels for heating + 3 temperature levels for air conditioning;
  - weekly programming;
  - possibility of forcing the program, changing the temperature;
  - adjustment for heating and air conditioning;
  - antifreeze function;
  - possibility of timed switch-off;
  - turning on and off with multi-function input;
  - device reset;
  - keypad lock via password with 3-digit PIN to block access to all the functions of the device and protect its operation and programming (for example, if it is installed in a public place).
- Protection class: IP20.
- Appliance of class II
- Number of manual cycles: 3,000.
- Number of automatic cycles: 100,000.
- Type of contact opening: micro-disconnection.
- Action type: 1.B.U.
- Tracking index: PTI175.
- Degree of pollution: 2 (normal).
- Rated pulse voltage: 4,000 V
- Ambient temperature during transport: -25°C +60°C.
- Operating temperature: T40 (0°C +40°C).
- ErP classification (Reg. EU 811/2013):
  - ON/OFF: class I, contribution 1%;
  - PID: class IV, contribution 2%.
- Software class: A

# 8. Standard compliance

LV directive. EMC directive. Standards EN 60730-1, EN 60730-2-7, EN 60730-2-9.



Viale Vicenza, 14 - 36063 Marostica VI - Italy Tel. +39 0424 488 600 - Fax (Italy) +39 0424 488 188 Fax (Export) +39 0424 488 709 www.vimar.com



02955UEN 02 1512 VIMAR - Marostica - Italy