Instructions manual

Thermostat 02905
User Manual

VIMAR

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1. Thermostat 02905

The thermostat 02905 is designed to control room temperature by acting on the control circuit of the burner or circulation pump (heating) or on the control circuit of the air conditioner (air conditioning), ensuring an ideal temperature.

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.

2. Inserting new / replacement batteries

When replacing batteries, remove the front panel by raising it with a screwdriver. Replace the batteries with Alkaline 1.5V "AA" batteries.
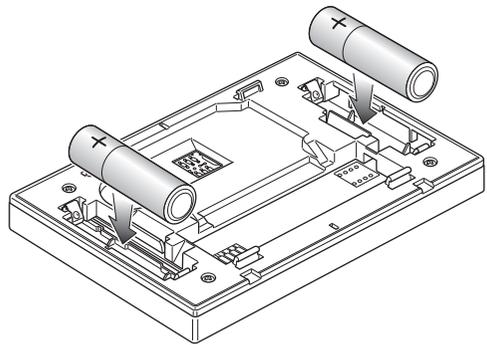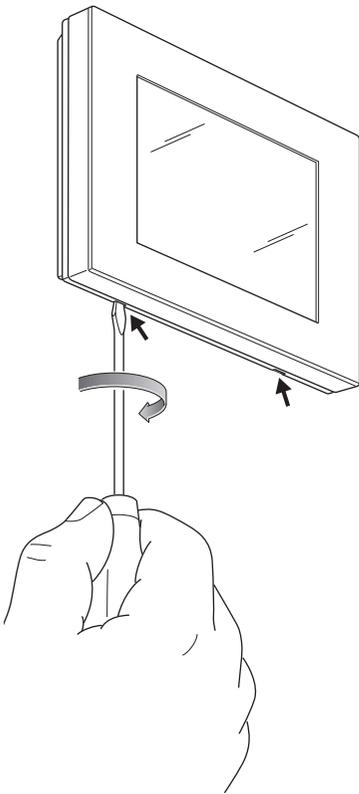
The battery charge status is shown as follows:
- no ▭ icon ➔ battery charged
- flashing ▭ icon ➔ battery almost flat (replace it)
- fixed on ▭ icon ➔ battery flat (the device will go OFF and it is no longer possible to switch to operation).

CAUTION!
In case of replacement, dispose of batteries in the specific differentiated collection bins

Fig. 1: Changing batteries

3. Display

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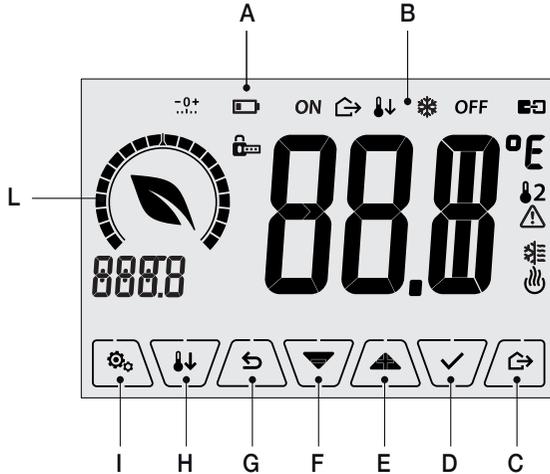

Fig. 2: Graphical interface and buttons

A: Battery charge status

B: Operating mode

C: Away

D: Confirm

E-F: Menu navigation and setting parameters

G: Back

H: Nighttime reduction

I: Settings menu

L: Ring indicating consumption level and energy savings indicator

3.1 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 to the next item** through the available menus. If it "disappears" then you have arrived at the last of the items that can be scrolled.

: during navigation, it **scrolls to the previous item** through the available menus. If it "disappears" then you have arrived at the last of the elements that can be scrolled.

: **confirms** the selected option (activates the submenu if there is one or displays the next parameter/digit).
After each confirmation, the display shows the ✓ icon for approximately 1 s. In addition, if the timer-thermostat is connected to the probe 02960 via the circuit board 02915, it will also be possible to enable its acoustic signal.

↩ : **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.

IMPORTANT: In order to avoid any accidental modifications, first press and hold down the required icon displayed to enable the function.

3.2 Symbols

Depending on the different operating modes, the following icons could also be displayed:

−0+ : Calibration

: Entering the PIN

: Away

ON : Manual (ON)

: Nighttime reduction

❄ : Antifreeze

OFF : OFF

: Multi-function input ON

: Air conditioning

: Heating

✓ : Confirm

: Eco (saving)

3.3 Ecometer

Ring for the level of consumption

Energy saving indicator

Fig. 3: Set of ECOMETER icons

On the left-hand side of the display there is a set of icons called the "ECOMETER" that provide an overview of the expected consumption as an aid to energy saving.

The information displayed is based on a consumption forecast obtained by comparing the currently set temperature setpoint and the estimated average consumption (which therefore has nothing to do with the current room temperature).

- The **consumption level ring** graphically indicates the expected level of consumption.
  If this level is less than half, it means that there will be a saving compared to the conventional average consumption; vice versa, if the level exceeds half, the expected consumption will be higher than the conventional average.

- T**he energy saving indicator** indicates whether the currently set setpoint will allow obtaining savings with respect to the conventional average consumption.

3.4 Locking the interface via PIN

The thermostat lets you set a password (see par. 6.8) 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 🔒 icon.
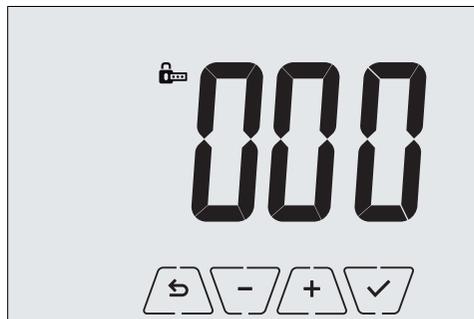

Fig. 4: Locking with PIN

7. Operating mode

The thermostat 02905 is able to adjust the temperature according to the following operating modes:

• **Switched off (OFF)**: switches the system off without making any adjustments

• **Manual (ON)**: lets you set the required temperature set-point manually

• **Away**: is a mode that lets you set the set-point in order to achieve significant energy savings during periods when the user is away

• **Nighttime reduction:** this mode, which can be activated locally, is useful for changing the manual adjustment set point in the hours of nighttime operation.

• **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 thermostat has been suitably configured, you can remotely activate the following modes:

• **Remote reduction**: conceptually similar to nighttime reduction, it acts on the comfort set point instead of the one set locally in manual mode.

• **Remote activation**: lets you activate the system remotely by setting the comfort set point

• **Summer/Winter switching**: the multi-function input automatically switches the thermostat onto air-conditioning mode (when on) or heating mode (when off).

The operating mode is selected via the SETTINGS menu (see chap. 6).

4.1 Switched off (OFF)

With this mode on, the thermostat is turned off and you cannot make any adjustments; in this case, the **OFF** icon is displayed above the temperature indicator.
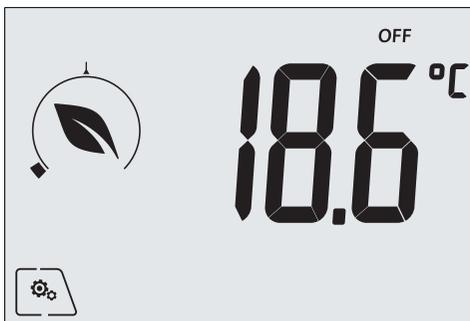When the thermostat is OFF, you cannot perform any operations other than activating the menus.

Fig. 5: Typical screen for OFF mode

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

4.2 Manual (ON)

This is the "traditional" operating mode. The thermostat controls the room temperature and takes it to the value set by the user.
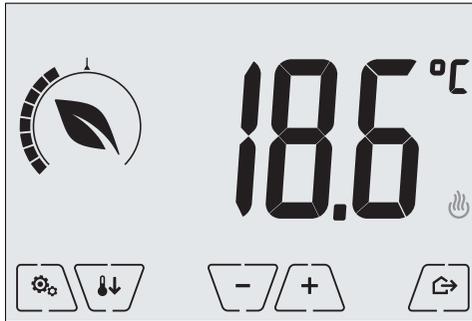

Fig. 6: Typical screen for Manual mode

The set point can always be changed via $\boxed{+}$ or $\boxed{-}$.

In the course of setting, the set point flashes and the circular ring fills up accordingly; this gives an indication of the expected consumption as a function of the set point you are setting:

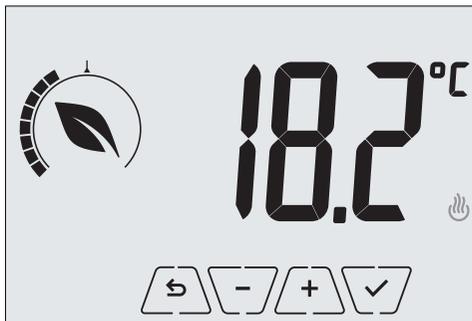*Fig. 7: Manual set point setting*

The selection is confirmed by touching $\boxed{\checkmark}$.

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).

4.3 Away

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

In "Away" mode the system makes the adjustment according to the "away temperature" setpoint TU.

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. 8: Input in away mode showing the away temperature

Activation of this mode is identified by the ⮌ icon above the temperature indicator:

Fig. 9: Away Mode

To exit and return to Manual mode touch the [⮌] button again:

4.4 Nighttime reduction

This is the typical mode to use at night to reduce system consumption significantly.
In "Nighttime reduction" mode the device reduces the consumption of the system, taking the room temperature to a lower value (or higher, if on air-conditioning) than the Manual mode by dTr degrees. For example, if the thermostat is operating in Manual mode with a temperature of 20°C with dTr equal to 4°C, the temperature in heating mode during nighttime reduction will be equal to 20-4=16°C.

"Nighttime reduction" is activated starting from Manual mode by touching ⬇️ or remotely via the multi-function input (if enabled).

The display will show the "nighttime reduction" setpoint for approximately 2 seconds:

Fig. 10: Input in Nighttime Reduction mode showing the reduction set point

Activation of this mode is identified by the 🌡️⬇️ icon above the temperature indicator:

Fig. 11: Nighttime reduction mode

To exit and return to Manual mode touch ⬇️ again:

4.5 Antifreeze

This mode, which can only be activated when the system is operating in heating mode, lets you set a minimum temperature value (To 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. 6.1).
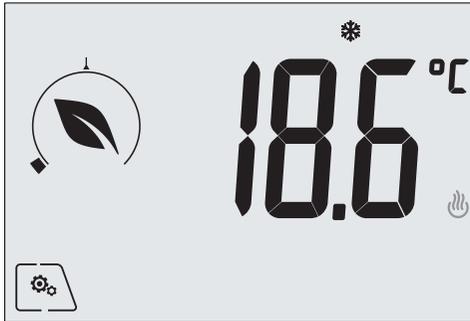Once activated, antifreeze mode is identified by the ❄ icon above the temperature indicator.

Fig. 12: Antifreeze mode

4.6 Remote reduction

Remote reduction is a useful way to "centralize" energy saving if there are multiple 02905 thermostats in different rooms of the same house.

It is similar to Nighttime reduction mode with the only difference being that activation is by remote control.
Example: Before going to bed, using a simple switch, all the 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.

The multifunction input is activated solely when the thermostat is in Manual mode.
In "remote activation" mode, the device sets the temperature to a value equal to Tcomfort - $d\bar{l}r$.

In this condition the display and its buttons have limited functions; access to the settings menu is disabled and you can only change the temperature setpoint within a limited range, if configured.

The "Remote reduction" mode is identified by the ⎍ and ♨↓ icons located simultaneously above the temperature indicator.

The ⌐+⌐ and ⌐−⌐ buttons let the user change the temperature in the range $d\bar{l}u$.
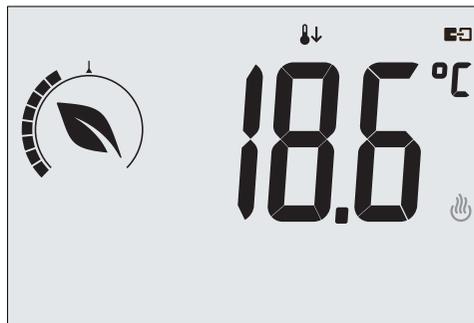

Fig. 13: Input in Remote reduction mode

On disabling the multi-function input, the thermostat returns to manual mode and the user can again manage the device completely.

4.7 Remote activation

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 activation" mode, the device sets the temperature to a value equal to Tcomfort.

In this condition the display and its buttons have limited functions; access to the settings menu is disabled and you can only change the temperature setpoint within a limited range, if configured.

The "Remote activation" mode is identified by the ▣⊡ icon located above the temperature indicator.

The $\boxed{+}$ and $\boxed{-}$ buttons let the user change the temperature in the range dTu.
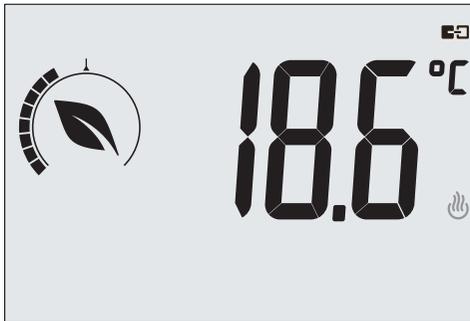

Fig. 14: Input in Remote manual mode

5. Selecting user menu type and resetting default parameters

Switch off the thermostat by removing the batteries and switch back on by replacing them; for approximately 3 s, the display will show the firmware version and the icon [⚙].

• **Easy Menu**

Within 3 secs, touch [⚙] and, using [▼] and [▲] , select *EASY* and then *YES* confirming with [✓] both choices. The thermostat will restart, showing the easy operating mode for which, using [+] and [–], only the desired temperature set point can be set without the need to confirm the entered value.

• **Normal menu**

Within 3 secs, touch [⚙] and, using [▼] and [▲] , select *EASY* and then *NO* confirming with [✓] both choices. The thermostat will restart, showing the normal operating mode.

N.B. When replacing the batteries, the set menu will automatically start when the thermostat is switched back on, without having to repeat the above procedure.

• **Reset default parameters**

This menu is for the sole use of the installer.

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6. Settings of the normal menu

From the settings menu you can configure all the features of the thermostat.

On the main screen (see Fig. 3) tap the ⚙ icon.

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

1. **ON** ❄ **OFF** operating mode setting

2. **°C °F** unit of measurement setting

3. ❄ and ♨ air-conditioning/heating setting

4. **T** temperature setpoint setting

5. **−0+** calibration setting

6. **In** and ▥ multi-function input setting

7. **Out** OnOff/PID temperature control algorithm setting

8. **InF** device info

9. 🔒 lock/unlock PIN setting

Touching ✓ opens the submenu and then the flashing highlights the parameters of the submenu.

6.1 Operating mode setting

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

- **ON** Manual
- **OFF** Off
- ❄ Antifreeze (only if the thermostat is set for "heating")

Using ▲ and ▼ select the required mode and confirm with ✓.

6.2 Unit of measurement setting

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

Using ▲ and ▼ select the required unit of measurement and confirm with ✓.

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6.3 Heating/air-conditioning setting

This menu is for the sole use of the installer.

6.4 Temperature set point setting

This menu is for the sole use of the installer.

6.5 Multi-function input setting

This menu is for the sole use of the installer.

6.6 OnOff/PID setting

This menu is for the sole use of the installer.

6.7 Info

This menu is for the sole use of the installer.

6.8 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.

7. 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.

8. Regulatory compliance

LV directive.
EMC directive.
Standards EN 60730-2-9.