

**02907**

Wi-Fi touchscreen thermostat

VIMAR S.p.A., as required by Italian Legislative Decree no. 196/2003, is authorized to manage the information needed to perform the services described below, when registering the device on the Cloud servers of Vimar S.p.A. The software platform of the Cloud servers of Vimar S.p.A. collects information from the device that is needed to perform the services relating to the registered devices: the device ID, application version and the services provided by it, the device configuration, as well as the pairing between the device and the authorized applications for the remote control function, as well as signals for verifying correct access and operation of these services and devices. The above information is all necessary and functional in order to enable correctly performing the functions of remote control and maintenance of the applications and devices supported by the platform.

The ID of the device and the rest of the information are automatically recorded on the Cloud servers of Vimar S.p.A. after WiFi configuration and access to the Internet. Users can disable the services that provide remote access to their device, thereby deleting all the data relating to their device from the Vimar S.p.A. Cloud.

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## Thermostat 02907 - Configuration via WiFi interface

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### 1. Thermostat 02907

WiFi thermostat (802.11 b/g/n, 2.4GHz), wall-mounting, mains-powered (230 V~), with interface with capacitive keys and equipped with user-friendly functions to facilitate energy saving. WiFi connectivity lets you control/consult the device remotely, directly from your smartphone or tablet. The appliance 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. The graphical user interface, thanks to special views, facilitates system management helping the user to operate while maintaining a state of energy saving.

### 2. Configuration via WiFi interface

The thermostat 02907 features a WiFi interface that lets you configure and control your device remotely. In addition to configuring your home network you can also specify whether you want to take advantage of the Vimar cloud service.

#### 2.1 Cloud Service

Vimar lets users easily access their thermostat from all over the world over the Internet thanks to its cloud service.

This service enables:

- Fully controlling your thermostat from all over the world.
- Receiving notifications from your thermostat directly on your mobile device.
- Updating the thermostat software.
- Saving all the thermostat settings should you need to replace it.

Registration with the Vimar cloud is automatic and is linked to the thermostat (creating a user is not required: **no login**).

By pairing a mobile device with the thermostat, the smartphone/tablet is merged (at the logic level) with the registration of the thermostat in the cloud.

#### 2.2 Use without the cloud

If you do not wish to register on the cloud, the thermostat can still be set to run without the cloud (for example, only via a local WiFi network without the Internet).

Not activating the cloud will prevent you from doing the following:

- Operating the device over the Internet (control only within the local WiFi network)
- Receiving software updates
- Receiving notifications from your thermostat on your mobile device
- Saving all the thermostat settings should you need to replace it.

**NOTE:** We recommend the installer keep the thermostat in this operating mode and let the customer choose whether to use the Vimar cloud.

#### 2.3 Pairing additional mobile devices with the thermostat

The thermostat 02907 can be controlled only with mobile devices that have been paired with the first configuration or pairing procedure.

**A new mobile device (on which the By-clima App has previously been installed) can be paired at any time by using the By-clima App on the mobile device itself but only by also interacting with the local interface of the thermostat and within the same WiFi network (you cannot pair mobile devices remotely/over the Internet).**

When pairing, you are prompted to enter a 4-digit PIN code to pair the mobile device with the thermostat, which can only be controlled if:

## Display

- the mobile device is paired with the thermostat;
- the PIN code of the mobile device and that of the thermostat coincide.

If you change the PIN of the thermostat but not that of the tablet/smartphone, the mobile device (which is still set to the old PIN) will no longer be able to manage the thermostat; it will then be necessary to update the PIN of the tablet/smartphone device(s).

### CAUTION:

- The PIN for accessing the thermostat 02907 from your mobile device can only be changed with the By-clima App.
- The PIN code is very important because it protects the thermostat from previously paired mobile devices too (eg that of the installer). The end user is advised to change the default PIN code so as to disable control of the device from all smartphones/tablets (even if already paired with the device) that do not have the updated PIN code.

## 3. Display

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

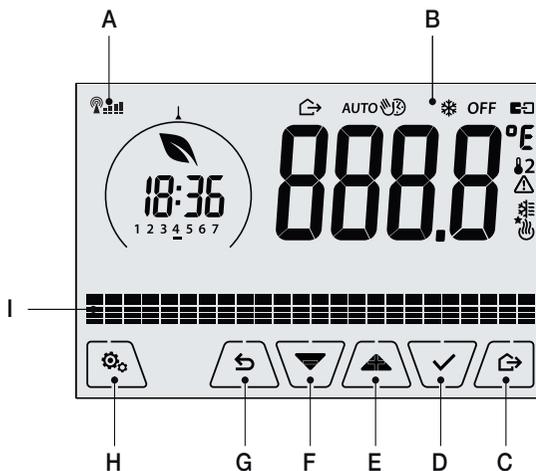


Fig. 1: Graphical interface and buttons

- A: WiFi radio signal strength indicator
- B: Operating mode
- C: Away
- D: Confirm
- E-F: Menu navigation and setting parameters
- G: Back
- H: Settings menu
- I: AUTO programme temperature trends

## Display

### 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 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 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.



: **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.**

### 3.2 Symbols

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



: Calibration



: WiFi radio signal strength indicator



: Timed manual operation



: Away



: Manual



: Antifreeze



: Switched off (OFF)



: Automatic operation



: Connection status of the vCloud (flashing ➡ connection attempt in progress; fixed ➡ active link)



: Alarm



: Availability new software update



: Air conditioning



: Heating

## Display

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: Eco (saving)



: Confirm

**1 2 3 4 5 6 7** : Day of the week indicator

**T↔** : Away temperature

**T◊** : Economy temperature

**T◆** : Comfort temperature

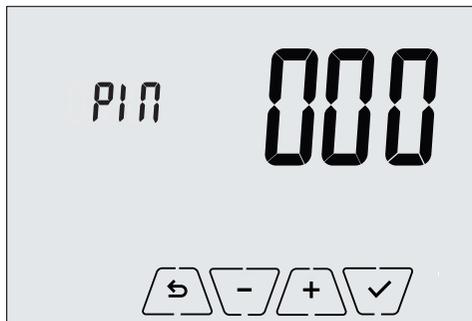
### 3.3 Standby

If no operations are carried out on the device for 30 seconds, it automatically activates standby mode which lowers the brightness level of the device.

### 3.4 Locking the interface via PIN

The thermostat lets you set a password 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 **PIN**.



*Fig. 2: Locking with PIN*

## Display

### 3.5 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.

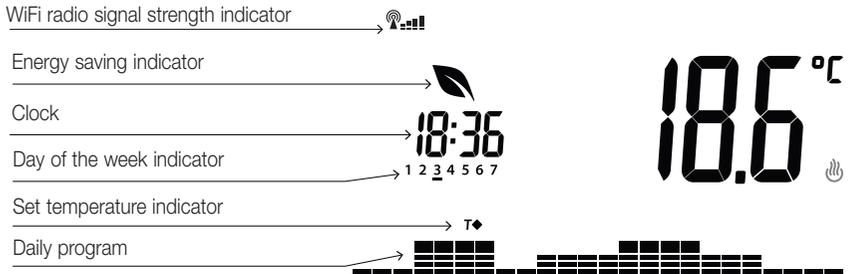


Fig. 3: Typical view of the time and daily program

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

**The program area**, represented by histograms, is divided into 24 sectors each of which represents the corresponding hour of the 24 hours in a day.

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

— equivalent to “T away” ( T↔ )

≡ equivalent to “T economy” ( T◇ )

≡≡ equivalent to “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◆ = T comfort

**The energy saving indicator** indicates whether, compared to a conventional average consumption, the set temperature setpoint enables you to achieve “savings” in consumption.

If the operating mode is not set on **AUTO**, the program area will not be active.

## Operating mode

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### 4. Operating mode

The thermostat 02907 is able to regulate the temperature according to the following operating modes:

- **Switched off (OFF):** switches the system off
- **Manual (ON):** 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 quarter of an 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 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.

The operating mode is selected via the **SETTINGS** menu or with the shortcut keys.

#### 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.

In this mode you cannot perform any operations other than activating the menus or changing the view mode.



*Fig. 4: Typical screen for OFF mode*

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

#### 4.2 Manual

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

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

## Operating mode

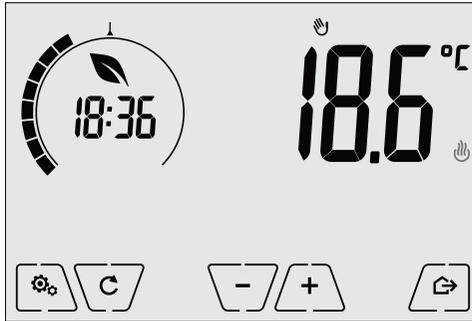


Fig. 5: Typical screen for Manual mode

The set point can always be changed via  or .

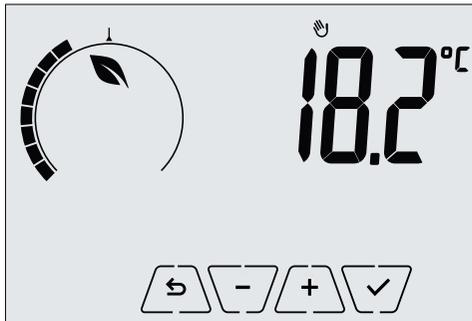


Fig. 6: Manual set point setting

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).

### 4.3 Auto

This is the typical mode of operation of the 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.

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

## Operating mode

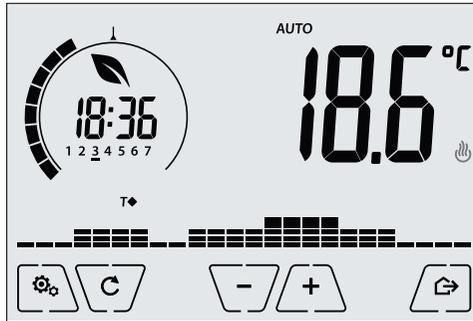


Fig. 7: Typical screen for Auto mode

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.

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).

### 4.4 Timed manual

This mode allows you to exit the AUTO program (you enter MANUAL mode) for a certain time after which the 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  icon displayed above the temperature indicator.

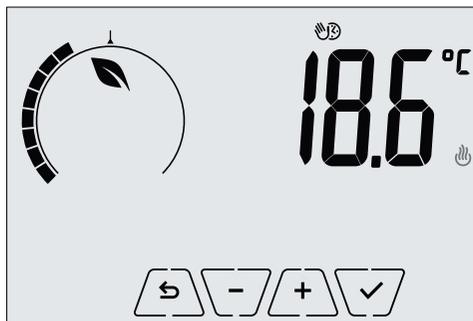


Fig. 8: Input screen in Timed Manual mode

Using  and  you set the temperature and confirm with .

## Operating mode

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

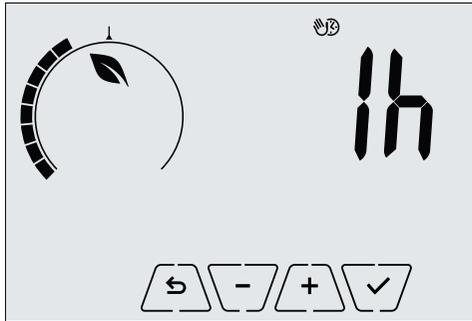


Fig. 9: Regulating the number of hours of Timed Manual mode

Finally confirm with .

At the end of the set time the thermostat goes back into AUTO mode, the  icon switches off and **AUTO** reappears.

### 4.5 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 **T0**.

The Away mode can only be activated by touching .

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



Fig. 10: Input in away mode showing the away temperature

## Operating mode

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Mode activation is identified by the  icon:



Fig. 11: Away Mode

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

### 4.6 Antifreeze

This mode, which can only be activated when the system is operating in heating mode, lets you set a minimum temperature value ( $T_0$  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.

Once activated, antifreeze mode is identified by the  icon above the temperature indicator.



Fig. 12: Antifreeze mode

## Settings menu

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### 5. Settings menu

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

On the main screen 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.  **AUTO**  **OFF** operating mode setting
2.  **WiFi** setting WiFi functionality
3.  **Standby** setting the brightness level of the display during Standby
4.  **Info** device info

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

#### 5.1 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 .

#### 5.2 Standby brightness level setting

The menu lets you set the display brightness level when the thermostat goes onto Standby.

Using  and  select one of the 7 available levels and confirm with  (there is also the ability to turn off the display completely).

#### 5.3 WiFi setting

The menu lets you configure the settings for the WiFi module.

Via  and  you can select:

##### 5.3.1 On/Off

The **On/Off** menu lets you turn the WiFi module on or off (completely); if it is turned off, in addition to eliminating any wireless transmission/reception of the device, some of the following submenus are inhibited.

Using  and  select "**ON**" or "**OFF**" and confirm with .

## Settings menu

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### 5.3.2 Enable Cloud Service

The **CLd** menu lets you select whether or not to take advantage of the cloud service offered by Vimar. If you do not intend to use this service some of the following submenus will be inhibited.

Using  and  select "ON" or "OFF" to use or not use the cloud service and confirm with .

### 5.3.3 Automatic time synchronization

The **SYNC** menu enables automatic synchronization of the clock directly from the cloud.

Using  and  select "ON" or "OFF" to enable or disable clock synchronization and confirm with .

### 5.3.4 First configuration

The **CONF** menu enables activating the thermostat configuration procedure with the App. This procedure lets you (via a smartphone or tablet) configure the WiFi network to which the thermostat is to connect during normal operation and it lets you program all the functions of temperature control.

Touch  and then  to start the configuration procedure; then follow the instructions displayed directly on your smartphone/tablet.

### 5.3.5 Pairing with a mobile device

The **BYCL** menu enables activating the procedure for pairing the thermostat with **a mobile device (smartphone or tablet) on which the By-clima App has been installed and that was not used during the first configuration**; this procedure should be carried out on every mobile device with which you want to control/query the thermostat. (The interaction takes place on both the smartphone/tablet and on the thermostat at the same time; this ensures that the device cannot be controlled by undesired users who have not performed the pairing phase.

Touch  and then  to start the pairing procedure; then follow the instructions displayed directly on your smartphone/tablet.

### 5.3.6 WiFi Info

#### 5.3.6.1 WiFi FW version

The **VER5** menu lets you view the version of the firmware for the WiFi interface. It should be used, if required, when seeking support.

Touch  to display the FW version.

## Settings menu - Cleaning the device - Features

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### 5.3.6.2 Statistics

The **STAT** menu lets you view the device statistics (ie its error codes). It should be used, if required, when seeking support.

Touch  to display the statistics.

### 5.3.6.3 FWuP

This is an advanced menu which lets you start updating the WiFi module.

Touch  to start the update.

### 5.3.6.4 Reset WiFi parameters

The **RESET** menu lets you reset ALL WiFi related configurations to their factory values. In particular the following values are reset:

- Access to the cloud service.
- Automatic clock synchronization.
- Alarm/notification threshold values.
- Enabling alarms/notifications.

Touch  to return the parameters to their factory values; since this operation cannot be undone, you will see a confirmation notice and you will need to tap  again.

## 5.4 Info about the device

This menu is for the sole use of the installer.

## 6. Cleaning the device

The thermostat, featuring a display with capacitive buttons, requires you to be gentle during the cleaning phase. Avoid using aggressive products. Clean the display with a special cloth for cleaning lenses.

## 7. Features

- Rated supply voltage: 230 V~, 50-60Hz
- Max power drawn from the grid: 3 VA
- Operating temperature range: 0-40°C (-T40)
- Temp. measurement accuracy (built-in probe): 0.5°C between +15°C and 30°C, 0.8°C at the ends.
- Relay output with clean change-over contacts: 5(2) A 230 V~
- Terminals: Relay C, Relay NC, Relay NO, 2 external temp. probe (art. 02965.1)
- WiFi network: complies with 802.11 b/g/n; IP address: static or DHCP
- Controlled via local interface (touchscreen) or remotely via WiFi (with Vimar By-clima App for Android, iOS, Windows Phone).
- WiFi access via cloud (for queries/updates/notifications) and via private network
- WiFi network configuration via the Vimar By-clima App
- Configurable in Heating/Air-Conditioning mode (winter/summer)

## Installation rules - Regulatory compliance

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- Temperature control algorithms: ON/OFF or PID selectable via user interface.
- Operating modes: Off, Antifreeze (heating only), Away, Manual, Automatic, Timed Manual.
- 6 settable temperature set-point/offset (economy, comfort, manual, away, antifreeze, reduction).
- Action type: 1.CU. Degree of pollution: 2 (normal).
- Rated pulse voltage: 4000 V.
- ErP classification (Reg. EU 811/2013): ON/OFF: class I, contribution 1%; PID: class IV, contribution 2%.
- Frequency range: 2412-2472 MHz
- RF transmission power: < 100 mW (20dBm)
- Appliances of class II: 
- Number of handling cycles for manual (3000) and automatic (100000) operation;
- Disconnection type: micro switch;
- PTI=175;
- Room temperature during transport: -25°C ÷ 60°C;
- Pollution level: 2;
- Software class: A;
- Nominal pulse voltage: 4000V;
- Clock error: ≤ 1s per day

## 8. Installation rules

Installation should be carried out by qualified personnel in compliance with the current regulations regarding the installation of electrical equipment in the country where the products are installed.

## 9. Regulatory compliance

RED Directive.

Standards EN 60730-2-7, EN 60730-2-9, EN 301 489-17, EN 300 328, EN 62311.

Vimar SpA declares that the radio equipment complies with Directive 2014/53/EU. The full text of the EU declaration of conformity is on the product sheet available at the following Internet address: [www.vimar.com](http://www.vimar.com).



### WEEE - Information for users

If the crossed-out bin symbol appears on the equipment or packaging, this means the product must not be included with other general waste at the end of its working life. The user must take the worn product to a sorted waste center, or return it to the retailer when purchasing a new one. Products for disposal can be consigned free of charge (without any new purchase obligation) to retailers with a sales area of at least 400 m<sup>2</sup>, if they measure less than 25 cm. An efficient sorted waste collection for the environmentally friendly disposal of the used device, or its subsequent recycling, helps avoid the potential negative effects on the environment and people's health, and encourages the re-use and/or recycling of the construction materials.



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**VIMAR**

Viale Vicenza, 14  
36063 Marostica VI - Italy  
[www.vimar.com](http://www.vimar.com)