

**Ferrol**

CONNECT



**CE EAC**

<b>1.</b>	<b>Introduction</b> .....	<b>29</b>
<b>2.</b>	<b>General safety rules</b> .....	<b>29</b>
<b>3.</b>	<b>Control class according to ErP regulations</b> .....	<b>29</b>
<b>4.</b>	<b>For the installer</b> .....	<b>30</b>
4.1	Contents .....	30
4.2	Installing the receiver.....	31
4.3	Thermostat installation.....	33
4.4	Thermostat support assembly .....	34
<b>5.</b>	<b>For the end user</b> .....	<b>35</b>
5.1	Buttons and Icons .....	35
5.2	Functional diagram .....	37
5.3	System configuration .....	38
5.3.1	Creating the account .....	38
5.4	RF configuration (Receiver - Thermostat) .....	38
5.5	Wi-Fi configuration (Receiver-Router) .....	39
5.6	<b>APP CONNECT</b> .....	<b>40</b>
5.6.1	Manual mode .....	43
5.6.2	Weekly programming mode .....	44
5.6.3	Vacation mode .....	48
5.6.4	Thermostat mode off .....	48
5.7	Thermostat.....	49
5.7.1	Basic operations.....	49
5.8	Receiver.....	52
<b>6.</b>	<b>Technical specifications</b> .....	<b>52</b>

## 1. INTRODUCTION

Dear customer, thank you for choosing the CONNNECT smart thermostat. It will allow you to accurately control the room temperature and, thanks to Wi-Fi connectivity, can be controlled remotely via the dedicated APP.

This manual is intended for installers and end users.

The main component of the system is the programmable thermostat that can manage the time programs set by the APP, measure the zone temperature and send on/off commands to the remote control unit, connected directly to the boiler.

## 2. GENERAL SAFETY RULES

- Read the instructions in this manual carefully
- After installation, inform the user about the device's functions, and giving the user this booklet to be kept carefully as an integral part of the product and subsequently used for future reference
- Installation and maintenance must be carried out by qualified personnel, according to the rules in force and the manufacturer's instructions. Do not perform any operation on the sealed control parts.
- Remove the electrical power supply before cleaning.
- Do not place the device near heat sources.
- Keep out of the reach of children

## 3. CONTROL CLASS ACCORDING TO ERP REGULATIONS

With reference to the applicable regulation (EU) No. 811/2013, the data shown in the table can be used to complete the labeling of heating units.

Possible combinations with CONNNECT, related configuration classes and energy contribution to the system.

Boiler type	CONNECT	Class and contribution
Boiler with fixed flow temperature (On-Off)	On-Off type	I = 1%
Boiler with variable flow temperature (set point with communication bus)	Connection via communication bus. Flow set point calculated according to room temperature	V = 3%
	Connection via communication bus. Flow set point calculated according to the room and outdoor temperature.	VI = 4%
	Connection via communication bus. Flow set point calculated according to at least 3 different ambient temperatures (at least 3 thermostats and 3 zone valves required)	VIII = 5%

## 4. FOR THE INSTALLER

### 4.1 Contents

The box includes the following parts:



Transmitter  
programmable thermostat



Receiver



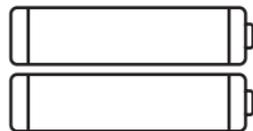
Manual



USB cable



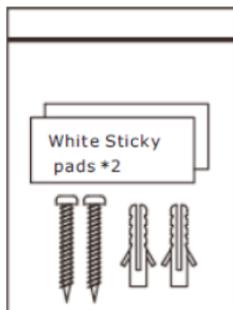
Power supply



AAA type batteries



Table support



Accessories

## 4.2 Installing the receiver

**ATTENTION:** To protect the device, remove the power supply from the boiler before making the connection. The operation must be carried out by qualified personnel. The receiver can work with the OpenTherm protocol or with the On-Off contact.

Use the magnetic plate or the double-sided adhesive (supplied with the accessories) to place the receiver in the best position according to the quality of the surface, or use the screws to secure it directly to the wall.

The gateway must be installed inside the building and should not be shielded by any metal enclosures.

**OpenTherm option (A fig. 1):** connect the two terminals of the receiver with label **OT-Bus** to the boiler that supports the OpenTherm protocol. In this case, more information is available on boiler status (see “5.7.1 Basic operations” on page 49).

**On-Off option (B fig. 1):** connect the two terminals of the receiver with label **ON/OFF** to boilers that do not have the OpenTherm communication protocol.

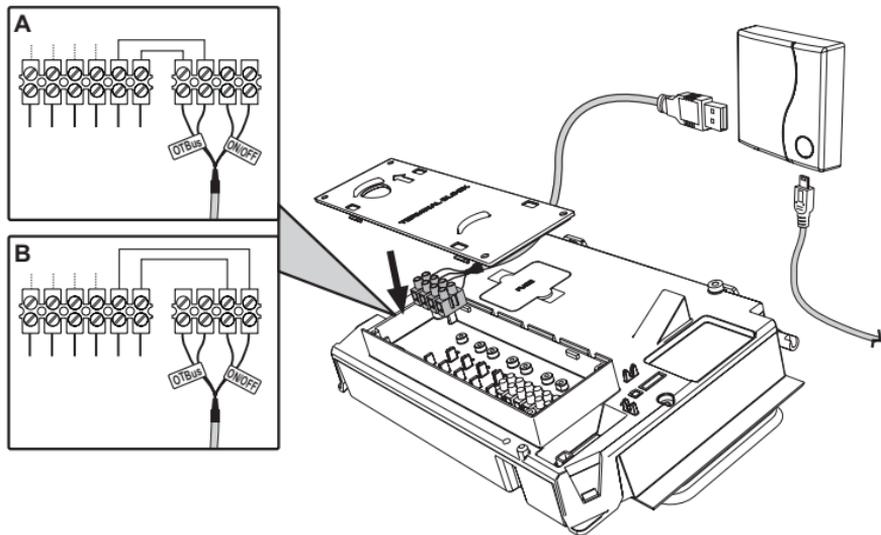


fig. 1

Once powered, the LEDs flash briefly.

### 4.3 Thermostat installation

Separate CONNECT from the base fig. 2.

Secure the base using the screws provided fig. 3.

In case of thermostat directly connected to the boiler or to a zone valve, the cables must be connected in the appropriate terminal fig. 4.

Insert two 1.5V AAA batteries fig. 5.

Hook CONNECT on the base fig. 6.

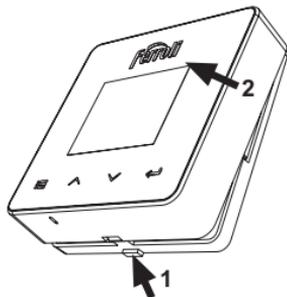


fig. 2

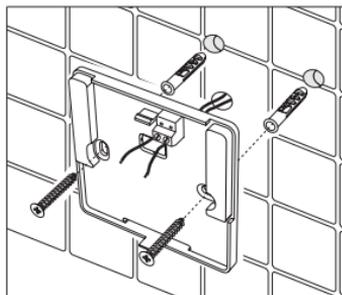


fig. 3

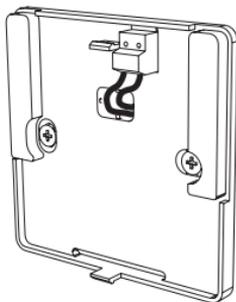


fig. 4

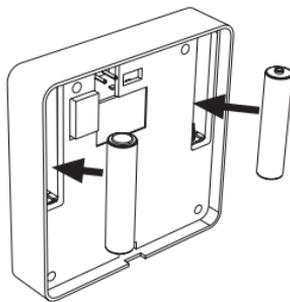


fig. 5

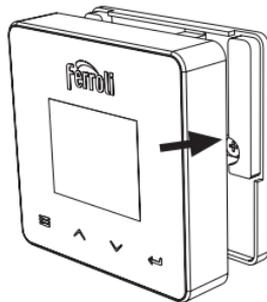


fig. 6

## 4.4 Thermostat support assembly

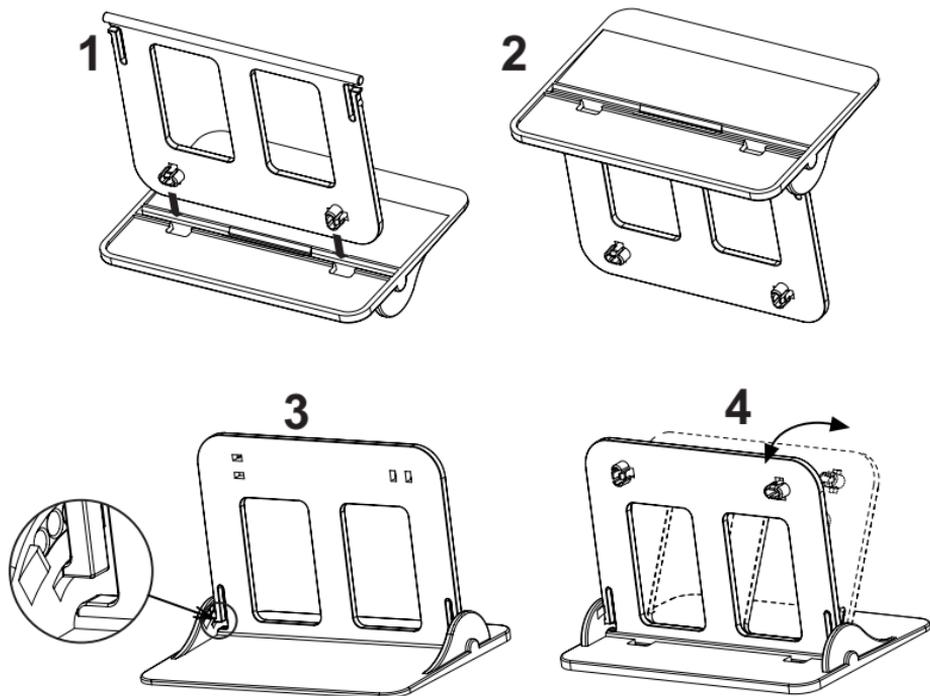


fig. 7 - Thermostat support

## 5. FOR THE END USER

### 5.1 Buttons and Icons

A description of the symbols on the display and the meaning of the buttons is given below.

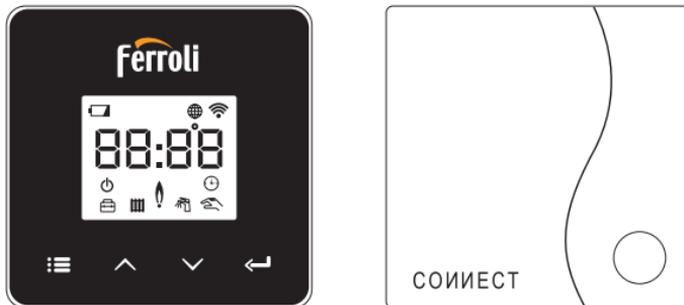


fig. 8

Icon	Description
	Heating
	DHW (domestic hot water)
	Flame
	On / Off
	AUTO mode
	MANUAL mode
	VACATION mode

Icon	Description
	Wireless
	WiFi
	Low battery level
	Temperature and time
	mode/save/exit
	increase
	decrease
	set
	LED button

**Battery:** The icon on the screen is activated when the battery level is too low.

## **Flame**

- » Thermostat connected to an on-off boiler, the icon indicates request status.
- » Thermostat connected to an OpenTherm boiler, the icon indicates burner status.

**Note:** *At first activation the thermostat is configured automatically in **On-Off** wire connection mode.*

*When the thermostat and the WiFi receiver are connected to the wireless network, the thermostat automatically switches to **RF On-Off** mode.*

*When the WiFi receiver is connected to an OpenTherm boiler, the thermostat automatically switches to **RF OpenTherm** mode.*

*If the thermostat has been configured as RF (on-off or OpenTherm) it does not automatically switch to **on-off wire** mode. This can only be done by removing and putting back the batteries.*

**DHW:** in manual or automatic mode, the icon indicates that the appliance is active.

**Note:** *The icon is only present in the case of RF connection with OpenTherm boilers.*

**Heating:** the icon indicates that heating is active.

**Note:** *The icon is only present in the case of RF connection with OpenTherm boilers.*

**Temperature:** the room temperature or errors are displayed:

**E82:** *RF communication error*

**E83:** *OpenTherm communication error*

## 5.2 Functional diagram

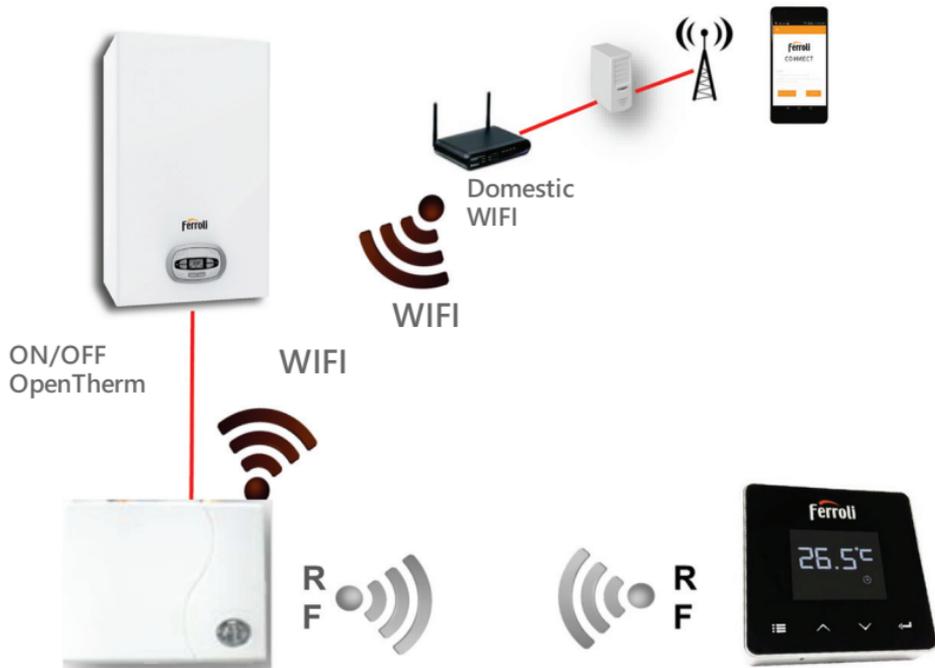


fig. 9

## 5.3 System configuration

To allow proper operation with your device (Tablet or smartphone), proceed as follows:

- Download the App (CONNECT) directly from the App Store of your device or using the QR CODE on the outside of the package.
- After installation, create the account.

### 5.3.1 Creating the account

- Make sure your SMARTPHONE/TABLET device is connected to the Wifi network.
- Open the dedicated APP, and click on “Register”.
- Enter the requested data and press code verification.
- To confirm the registration, enter the code received via the email previously entered.

To manage the boiler from several users, enter with the same account.

### 5.4 RF configuration (Receiver - Thermostat)

To establish the RF connection between the thermostat and the receiver, proceed as follows:

- Press the receiver LED button until it flashes (about 7 seconds).
- In the thermostat keep the “set”  button pressed for a few seconds until the display flashes.
- Press the button  until displaying  and press “set” .
- When the message "r0X" appears, the connection has been made. Press “set”  again.

***Note: Data exchange between thermostat and receiver occurs within 2 minutes***

## 5.5 Wi-Fi configuration (Receiver-Router)

Connect with your Smartphone / Tablet device to the local WiFi network.

### **Method 1**

- Click “+” and enter the local network password
- Press “next” ⊖.
- In the receiver, briefly press the WPS button with a dedicated tool
- Press “next” ⊖.
- Follow the APP instructions

*If the procedure was unsuccessful:*

- Check the WiFi connection of the mobile device (the configuration must be done with WiFi)
- Check the router, restart the mobile device and repeat the operations (Method 1)

*If the procedure of method 1 was unsuccessful, continue with **method 2**.*

### **Method 2**

- Open the APP and enter login
- In the receiver, press the WPS button (for at least 7 seconds) with a dedicated tool, until the LED button flashes red
- Select the smartphone/tablet WiFi “**EasyLink\_XXXXX**” (ignore the no Internet connection message)
- Rename the SSID network “**EasyLink\_XXXXX**” with the local one and enter the password
- Check that the AP option is active
- Press “next” ⊖.
- Follow the APP instructions

## 5.6 APP CONNECT

On the main screen, press to access the control of one of the configured boilers

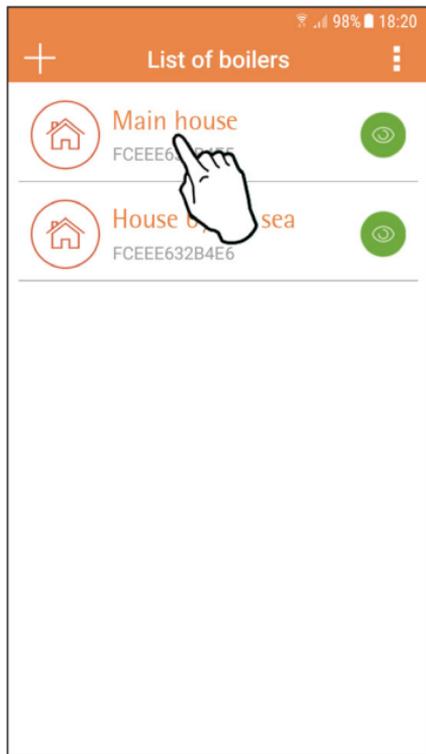


fig. 10 - Main screen

On the next screen, press A to manage the room temperature control or press B to display boiler status.

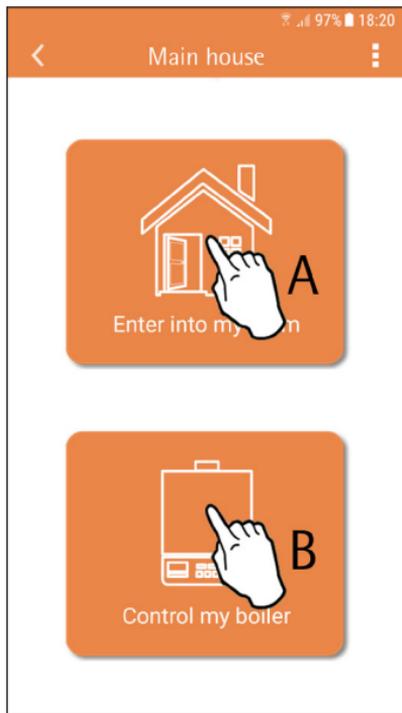


fig. 11 -



The connected remote timer control setting can be accessed on this screen.

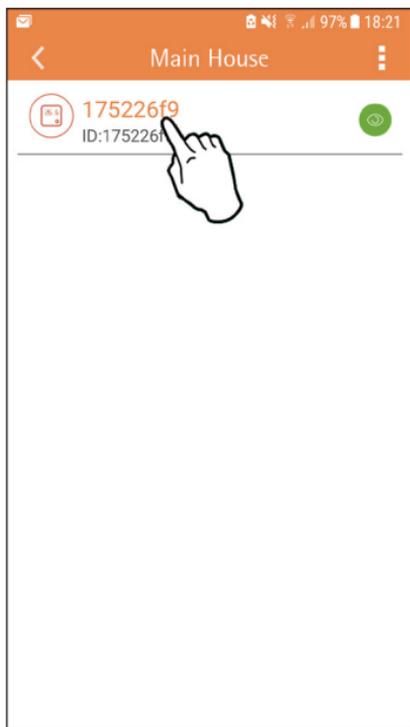


fig. 12 - Remote Timer Control

The possible modes are:

-  Manual mode
-  Weekly programming
-  Vacation mode
-  Thermostat off



fig. 13 - Possible modes



On this screen boiler status can be displayed, if it is connected via OpenTherm protocol.

If the boiler is connected to a room thermostat, no information is displayed.



fig. 14 - With OpenTherm

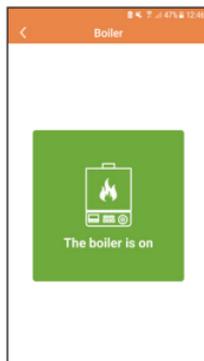


fig. 15 With room thermostat



## 5.6.1 Manual mode

The desired room temperature can be set in this mode.



fig. 16

## 5.6.2 Weekly programming mode

In this mode it is possible to set the desired temperature in the various time slots of all the days of the week.

Pressing at the place shown in fig. 17.

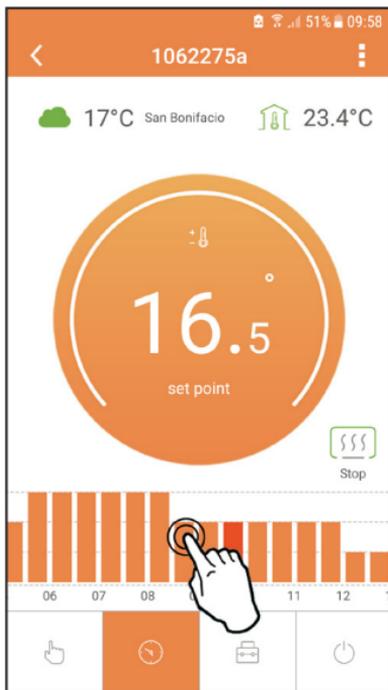


fig. 17

3 temperature levels are available: **T3** (COMFORT level), **T2** (ECO level) and **T1** (FROST PROTECTION level - Not modifiable via APP but only via remote timer control). To set the temperature of level **T2** and **T3**, follow the sequence.

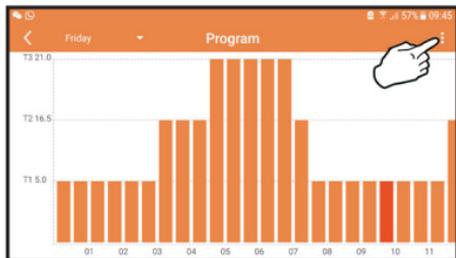


fig. 18

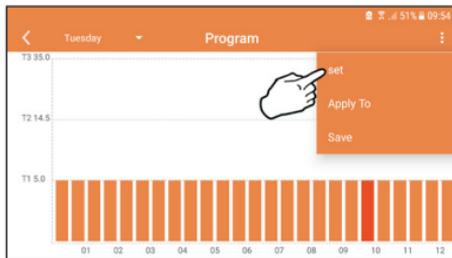


fig. 19

Set the temperatures and confirm.

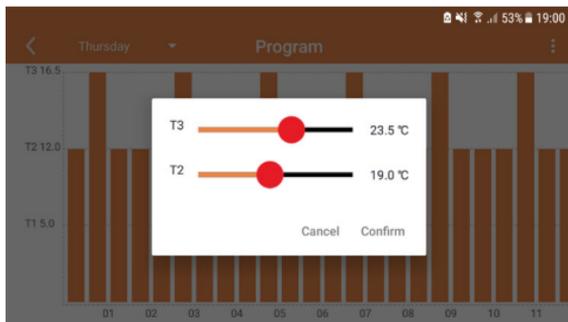


fig. 20 Setting temperatures

Press in the time slot to be changed.

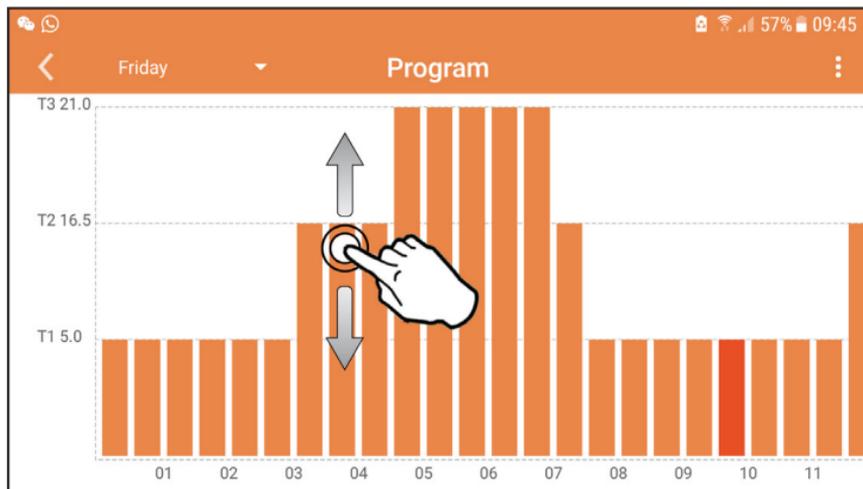


fig. 21

After programming the temperatures, save the configuration.

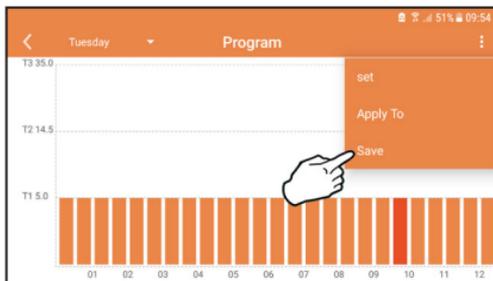


fig. 22

Click "apply" to select the days in which to copy the settings just made.

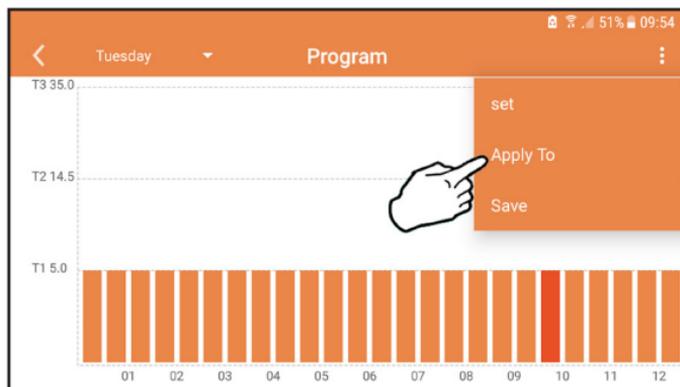


fig. 23

When level **T1** (FROST PROTECTION level) is selected, to prevent freezing damage, the system sends a heat request to the boiler only when the temperature falls below 5°C.

If the outside temperature information is available (via WEB or OpenTherm), the temperature set in the boiler takes this value into account to adjust the flow.  
If the outside temperature is not available, the flow is adjusted according to the set room temperature.

### 5.6.3 Vacation mode

In this mode the boiler is switched off and will be reactivated if the temperature drops below 5°C.

The vacation end date can be set by pressing the setting icon .

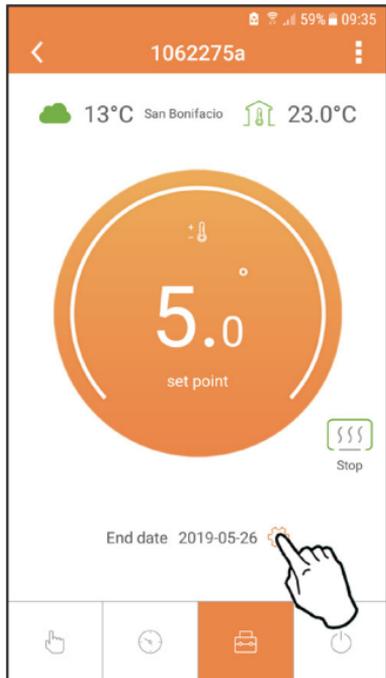


fig. 24

### 5.6.4 Thermostat mode off

In this mode the boiler is switched off and will be reactivated if the temperature drops below 5°C.

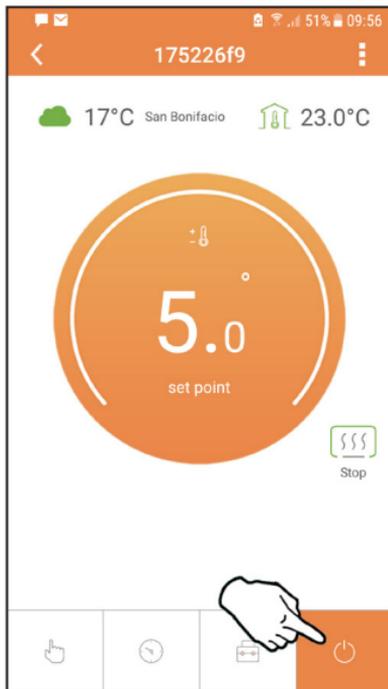


fig. 25

## 5.7 Thermostat

### 5.7.1 Basic operations

1. Press the “mode”  button to switch between the various modes:
  - a. **Off** : in this mode the heat request is disabled; only the frost protection mode remains active.
  - b. **Vacation** : the set temperature is that of frost protection energy saving for a number of days set via the buttons  .
  - c. **Automatic** : the required temperature is that of the weekly program set via APP. If the program has not been set, the system default one is used.
  - d. **Manual** : the temperature is set manually, directly on the thermostat.
2. **Temperature setting:**
  - a. **Manual:** press the buttons  .
3. **Settings menu:** press “set”  for about 2 seconds to access the settings menu.
  - a. “ and  access the selected parameter
  - c. “mode”  return to the main menu
4. In case of a boiler fault, the error code is also shown on the thermostat display. It is possible to reset the fault via the “set”  button.

For a description of the fault, refer to the boiler handbook.

No.	Parameter	Display	description
1)	Clock	14:05	Set hours, minutes, year (y), month (m), day (d).
2)	Temperature	23.0°C ■	Set comfort temperature (CFT) / economy temperature (ECO) / frost protection (FRT)
3)	COUP code	COUP	RF code (see par. 5.3)
4)	DHW temperature	DHW ⚙	Set DHW temperature, function available only with OpenTherm connection
5)	Boiler information	INFO	Reading of some boiler parameters only with OpenTherm connection
6)	Installer data	PL	Installer parameters
7)	Exit	EXIT	Return to the home page

### 1) Clock

- » Press the buttons  and  to select the clock menu, and then “set”  to enter.
- » Press the “set”  button to select the data to be changed with this sequence: 13:00 hour, 13:42 minutes, 19 y year, 02 m month, 21 d day.
- » Press the buttons  and  to change the value.
- » Press “mode”  to go back.

### 2) Temperature

- » Press the buttons  and  to select the temperature menu, and then “set”  to enter.
- » Press the buttons  and  to select the temperatures to be changed:
- » **comfort** (CFT) – **economic** (ECO) – **frost protection** (FRT)
- » Press the buttons  and  to change the value of the selected temperature.
- » Press “set”  or “mode”  to return to the previous menu.

### 3) Coupling code

- » See par. 5.3.

#### 4) DHW temperatures (OpenTherm boilers only)

- » Press the buttons   to select the DHW temperature, and then “set”  to enter.
- » Press the buttons   to change the value.
- » Press “set”  or “mode”  to return to the previous menu.  
*Note: If the thermostat receives the data from the boiler, then it displays this value, otherwise the setting range is 30 – 60°C.*

#### 5) Information from the boiler (OpenTherm boilers only)

- » Press the buttons   to select information, and then “set” to enter.
- » When “-- --” is displayed, it means the data is not available in the boiler
- » Press “set”  or “mode”  to return to the previous menu.

No.	information	4 <sup>th</sup> digit on the display
1	Set temperature	1
2	Flow probe	2
3	Return probe	3
4	DHW temperature	4
5	Outside temperature	5
6	Power percentage	6
7	DHW draw	7
8	System pressure	8

#### 6) Advanced settings (PL)

- » Installer parameters

#### 7) Exit

- » Press “set”  to return to the main menu.

## 5.8 Receiver

The receiver unit allows data exchange between the thermostat and the boiler. A button with coloured LEDs indicates system status.

LED	Status	Functionality
Green	ON	Power ON
Green	FLASHING	Data transmission
Red	FLASHING	WiFi or RF connection search

## 6. TECHNICAL SPECIFICATIONS

Electrical/ mechanical	Power supply	100 ~ 240Vac, 50 / 60 Hz
	Consumption	1.2W
	Relay output	Voltage-free - 0.25A – 230Vac, 2A - 30Vdc
	Thermostat	90 x 90 x 22
	Receiver	86 x 86 x 21
	Colour	Black + silver
	Casing material	ABS + aluminium
	Temperature sensor	built-in
Wi-Fi	Wi-Fi standard	802.11 b/g/n
	Wi-Fi frequency	2.412 GHz – 2.484 GHz
	RF frequency	868 MHz [FSK]
	RF distance	max 40m in free field (*)
	Antenna	built-in
	Safety	WEP / WPA - PSK / WPA2 - PSK
	Protocol	IPv4, TCP
Network type	STA	

*(\*) Any obstacles or walls can reduce the WiFi signal range. In this case, bring the gateway closer to the router, or use a WiFi extender.*

The logo features the word "ferroli" in a bold, lowercase, sans-serif font. A grey, curved graphic element arches over the top of the letters "er" and "ro".

**ferroli**

**FERROLI S.p.A.**

Via Ritonda 78/a

37047 San Bonifacio - Verona - ITALY

[www.ferroli.com](http://www.ferroli.com)