



FA02013-EN

**TH/700 WH WI-FI****TH/700 BK WI-FI****OPERATING AND INSTALLATION MANUAL**

EN

English

GENERAL PRECAUTIONS FOR INSTALLERS

Important safety instructions. PLEASE READ CAREFULLY. • Installation, programming, commissioning and maintenance must only be carried out by qualified, expert technicians and in full compliance with the applicable law. • The installer must ensure that the information for the user, where there is any, is provided and delivered. • Wear anti-static clothing and footwear if performing work on the circuit board. • Before carrying out any cleaning or maintenance, disconnect the device from the power supply. • Only use this product for its intended purpose. Any other use is hazardous. • Came S.p.A. is not liable for any damage caused by improper, erroneous or unreasonable use. • Only use soft, dry or slightly damp cloths to clean the device. Do not use any chemical products. • Do not obstruct the ventilation or heat dissipation vents or slots. • Keep this information. • Do not expose the LCD screen to direct sunlight. • Install the unit in a position which is suitable for correctly measuring the room temperature, preferably on an internal wall. Avoid installing in alcoves, behind doors or curtains, or near heat sources. • Install the device on a flat surface and do not overtighten the screws.

General precautions for controlling the device remotely

Some features of the system may be managed using smartphones or tablets via the corresponding apps. For the system to be remotely controlled, the device must be connected to a home Wi-Fi network with internet access. • This type of system requires a high-quality Wi-Fi signal to the device to function properly.

 Remotely controlling the device via the app uses your smartphone/tablet/home network's data traffic. The cost of this consumption is borne by the user.

Legislative references

RED Directive

The full EC declaration of conformity and UK Conformity Assessed (UKCA) marking information can be found at www.came.com.

Dismantling and disposal. Dispose of the packaging and the device responsibly at the end of its life cycle, in compliance with the laws in force in the country where the product is used. The recyclable components are marked with the material symbol and ID.

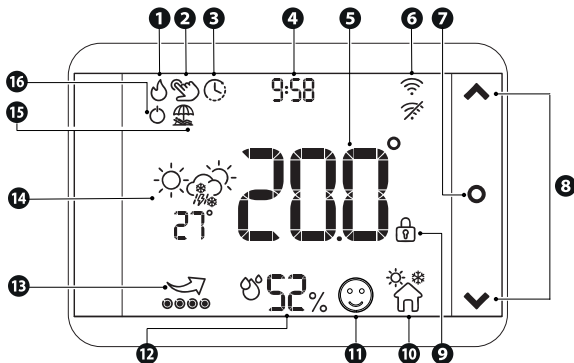
DESCRIPTION

845AA-0100

TH/700 WH WIFI Wi-Fi programmable thermostat with soft-touch keys, recess-mounted, white. Power supply 230 V AC.

845AA-0110

TH/700 BK WIFI Wi-Fi programmable thermostat with soft-touch keys, recess-mounted, black. Power supply 230 V AC.



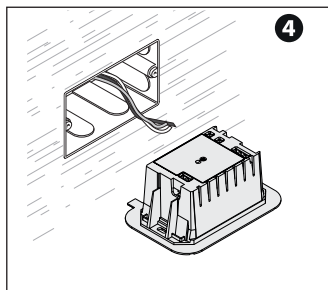
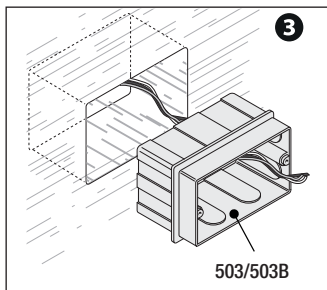
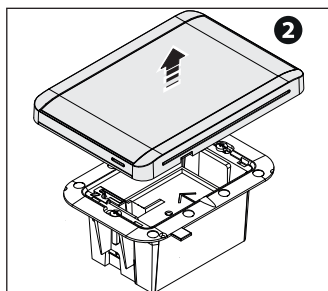
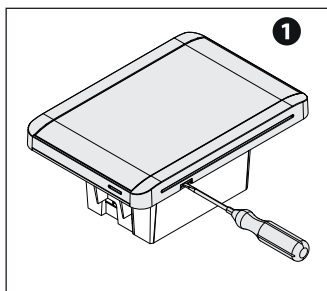
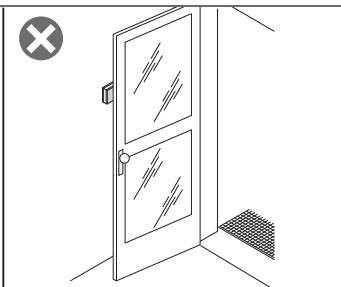
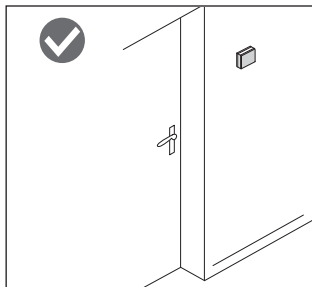
- 1 Heating system in operation
- 2 Thermal zone in manual mode
- 3 Thermal zone in automatic mode
- 4 Clock
- 5 Internal temperature
- 6 Wi-Fi connection status
- 7 Change mode key
- 8 Navigation keys
- 9 Screen lock on
- 10 Heating or cooling mode

- 11 Comfort level
- The level of comfort depends on the temperature, humidity and time of year.
- 12 Internal humidity
- 13 Thermal zone in BOOST mode
- 14 Weather info
- 15 Thermal zone in holiday mode
- 16 Thermal zone off
- If the programmable thermostat is in standby, move your hand near it to activate it.

Technical data

MODELS	TH/700 WH WI-FI	TH/700 BK WI-FI
Protection rating (IP)	30	
Power supply (V)	230 AC	
Frequency (Hz)	50/60	
Maximum absorption (mA)	20	
Autonomous life without power supply (hours)	4	
Operating temperature (°C)	0-40	
Maximum relative operating humidity (%)	93 No condensation	
Software class	To	
Size (mm)	126 x 87 x 12	
Wireless safety	WPA/WPA2-PSK, WEP	
Standard wireless	802.11b, 802.11g, 802.11n	
Wireless frequency field (MHz)	2.412 - 2.472	
Transmission power (dBm)	20	
Item	ABS	
Maximum current with resistive load and 250V relay (A)	5	
Maximum current with inductive load and 250V relay (A)	2	
Number of relay outputs	1 NO-NC	
Type of relay action	1B-U	
Temperature reading resolution (°C)	0,1	
Accuracy of internal probe (°C)	±0.5	
Maximum control unit temperature (°C)	40	
Room-temperature detection interval (s)	15	
ErP classification	ErP Class IV, 2% (Regulation (EU) No. 811/2013 - 813/2013)	

INSTALLATION



ELECTRICAL CONNECTIONS

 Make the electrical connections according to the device controlled by the programmable thermostat. Please consult the technical documentation for the device to be controlled.

 In the event of a loss of power, the relay maintains the status it had prior to the power outage.

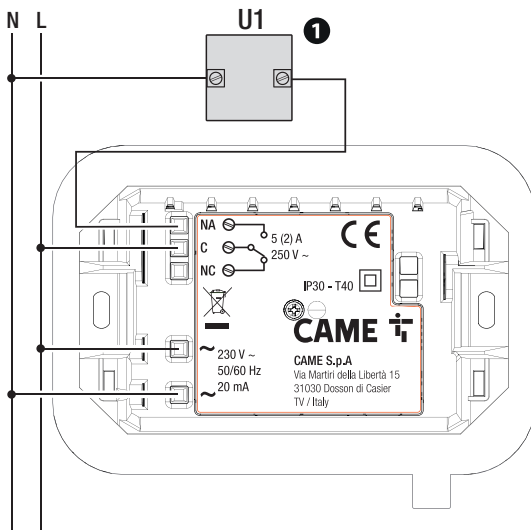
KEY

U1 = Burner, circulation pump, solenoid valve, etc.

U2 = Motorised valve

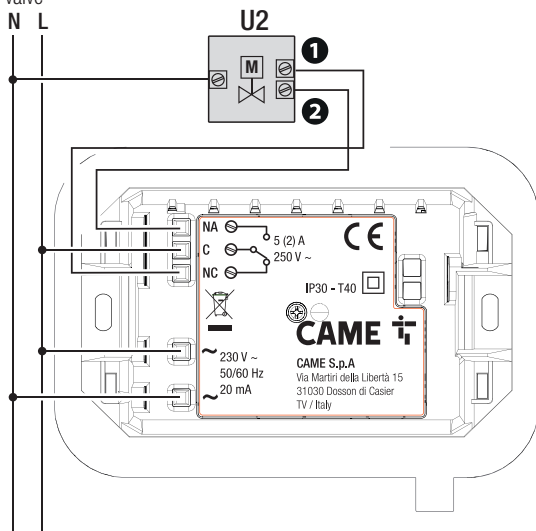
Example 1

1 Load

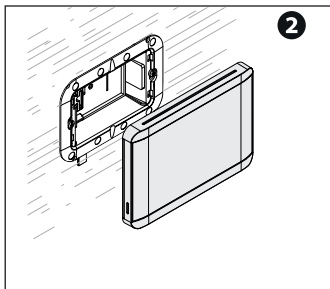
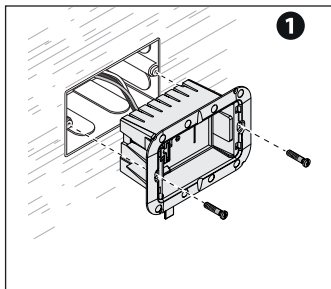


Example 2

- 1 Closed valve
- 2 Open valve



FINAL OPERATIONS



GETTING STARTED

Download the THERMO Wi-Fi app from Google Play Store or the App store.



 Before accessing the THERMO Wi-Fi app, make sure that your smartphone/tablet is connected to the internet with mobile data network exchange or to a Wi-Fi network that allows you to navigate correctly and view the CAMEConnect Cloud (open ports on the router 8883 and 1883).

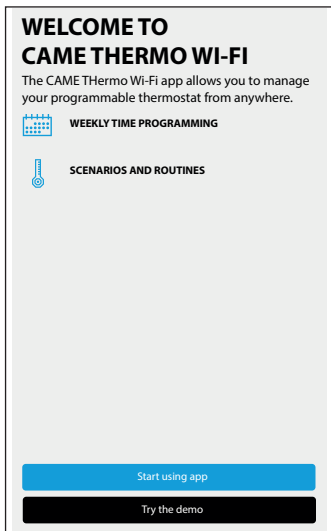
To get started with the programmable thermostat, you first need to identify the username and password for the Wi-Fi network (SSID) you want to use.

Icon key

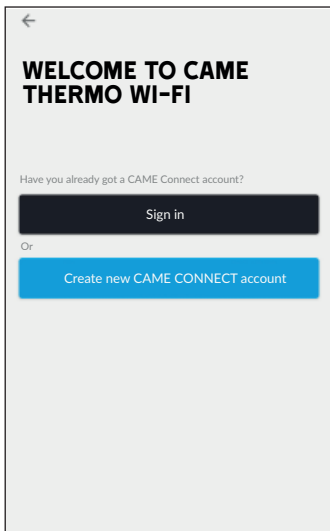
Icon	Status	Meaning
	Flashing icon (1 s ON, 1 s OFF)	The programmable thermostat is generating a Wi-Fi network and is not yet configured.
	Flashing icon (1 short flash every 3 seconds)	The programmable thermostat has been configured and is trying to connect to the set Wi-Fi home network.
	Icon remains on	The programmable thermostat is connected to the set home Wi-Fi network but it is not connected to/registered on CAMEConnect.

In each of the three conditions above, the programmable thermostat can only be controlled locally and not via the THERMO app.

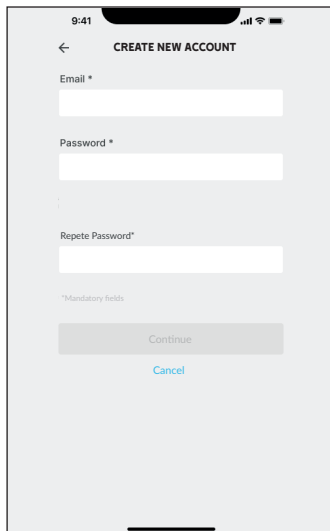
Icon	Status	Meaning
	Flashing icon (1 s ON, 1 s OFF)	The programmable thermostat is generating a Wi-Fi network and is connected to your smartphone in configuration mode.
	Icon remains on	The programmable thermostat is connected to the set home Wi-Fi network and it is connected to/registered on CAMEConnect.



You can start using the app or try out the demo (with reduced functionality) by logging in without having to create an account.



Log in to CAMEConnect as a user or create a new CAMEConnect account.



9:41

← **CREATE NEW ACCOUNT**

Email *

Password *

Repete Password*

*Mandatory fields

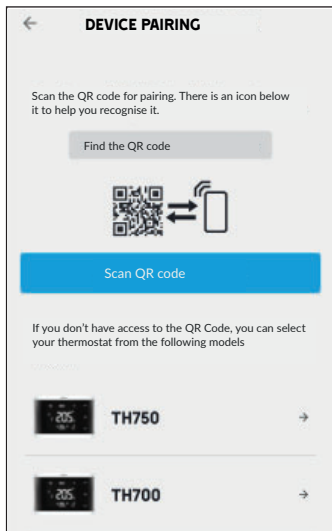
Continue

Cancel

Enter the required data to create a new
CAMEConnect account.
Log in.

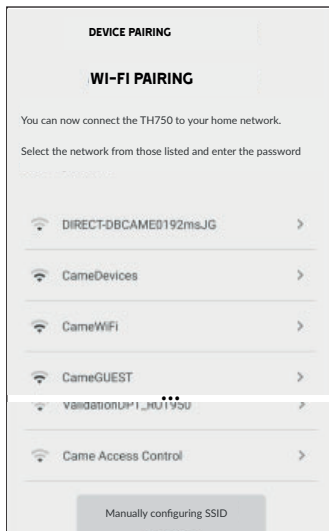
Follow the in-app wizard to add a new device.

 If you do not have access to the QR code to simplify configuration, manually select the model you want to configure. Follow the step-by-step instructions provided in the app.





Enter the four-digit code generated on the display, when requested, to finalise pairing between your smartphone and thermostat.



Select the Wi-Fi network you want to connect your thermostat to and set the network password.



WI-FI PAIRING

This may take a few minutes. During this time, do not switch off the thermostat and do not leave this screen.



**WAIT FOR THE DEVICE TO
CONNECT TO THE CLOUD**

[Cancel](#)

DEVICE PAIRING

HOUSE SETTINGS

Give the zone or room where you thermostat is installed a name.

Zone/Room name *

House name *

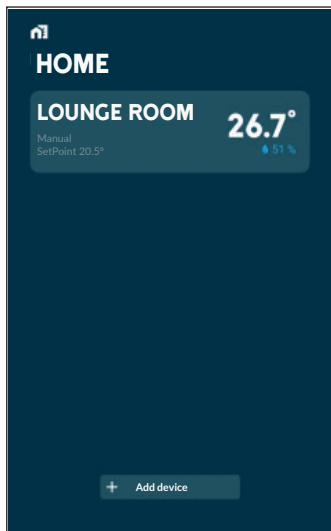
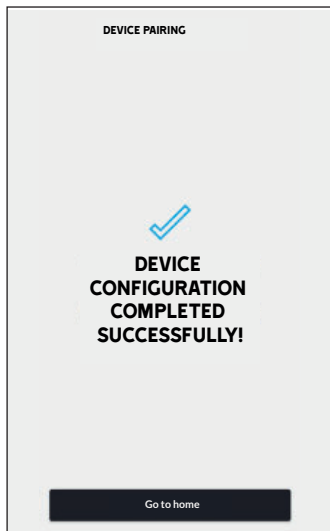
Position

By setting the city the device is installed in, you can see the weather forecast and compare your usage reports with the outside temperatures in your city

* Mandatory fields

[Continue](#)

[Cancel](#)



Resetting the network credentials

If the programmable thermostat is not connected, you may need to set the network login details again.

Select the programmable thermostat to be configured.

Reset the Wi-Fi configuration (reset the programmable thermostat NET menu).

Connect your smartphone to the Wi-Fi network generated by the programmable thermostat and follow the wizard.

USING THE DEVICE

When first switched on, the programmable thermostat is in automatic heating mode. The temperature measured appears on the display.

Weekly preset temperature programming

To get started quickly with the programmable thermostat, you can use the preset programming both for heating and cooling.

Heating

Heating programming table from Monday to Friday

Time	Setpoint temperature level
Midnight to 6 am	T1 = 16°C
6 am to 8 am	T3 = 20°C
8 am to 11 am	T1 = 16°C
11 am to 1 pm	T3 = 20°C
1 pm to 5 pm	T2 = 18°C
5 pm to 10 pm	T3 = 20°C
10 pm to midnight	T1 = 16°C

Heating programming table for Saturday and Sunday

Time	Setpoint temperature level
Midnight to 7 am	T1 = 16°C
7 am to 2 pm	T3 = 20°C
2 pm to 5 pm	T2 = 18°C
5 pm to 10 pm	T3 = 20°C
10 pm to midnight	T1 = 16°C

Cooling

Cooling programming table from Monday to Sunday

Time	Setpoint temperature level
Midnight to 6 am	T3 = 28°C
6 am to 10 pm	T1 = 24°C
10 pm to midnight	T3 = 28°C

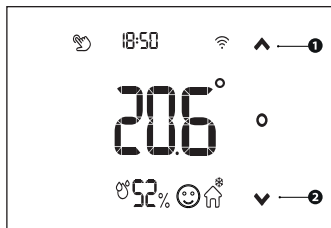
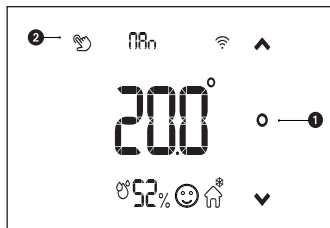
Operating modes

Basic operation

 The following basic operation modes can be selected both from the THERMO Wi-Fi app and from the programmable thermostat itself.

MANUAL mode

With this mode, you can adjust the temperature quickly.



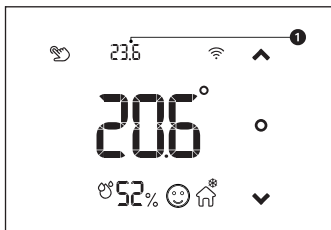
- ① Change mode key
- ② Thermal zone in manual mode

Press ① repeatedly until the ② icon appears.

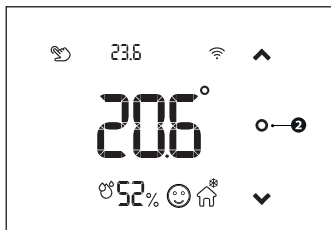
- ① ② Temperature-setting buttons

 Each time you press one of the two buttons, the temperature either increases or decreases by 0.1°C.

- ① Press this button to increase the temperature.
- ② Press this button to decrease the temperature.



1 Set temperature



2 Change mode key

If the programmable thermostat is in standby, move your hand near it to activate the screen.

The set temperature will show in place of the time for a few seconds **1**.

Press **2** to go to the next mode.

 **If no keys are pressed, after a few seconds the detected temperature and time will show again on the programmable thermostat.**

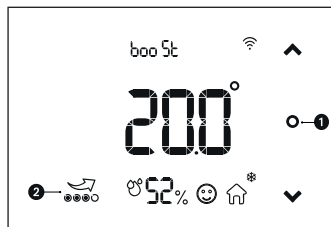
AUTOMATIC mode

In AUTOMATIC mode you can use the programmable thermostat with predefined time programming in heating or cooling mode, at three preset temperature levels.

 **To customise the time programming, use the TThermo Wi-Fi app.**

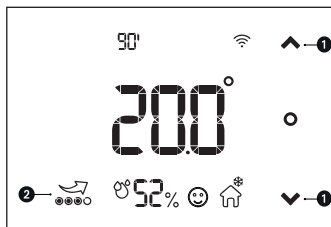
BOOST mode

In BOOST mode, you can activate heating or cooling for a limited period of 30, 60, 90 or 120 minutes, regardless of the programming set and the room temperature.



- 1 Change mode key
- 2 Thermal zone in BOOST mode

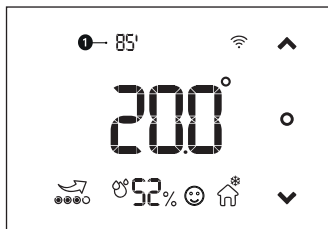
Press and hold **1** until the **2** icon appears.



- 1 Navigation keys
- 2 Activation time

Set the activation time **2** using the **1** keys.

 You can select one of four available options: 30, 60, 90 or 120 minutes.



1 The programmable thermostat will begin a countdown.

 The countdown is visible when the screen is in standby mode.

 Moving your hand close to the device activates the display, and a countdown timer followed by the current time are displayed briefly before the device switches back to stand-by mode.

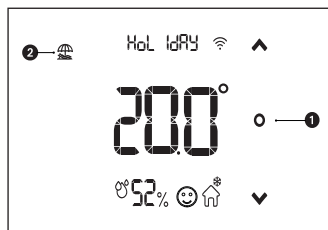
 After the set time has passed, the programmable thermostat resumes operation in the mode set previously.

HOLIDAY mode

With holiday mode, you can set a temperature to be maintained for a chosen number of days.



Holiday mode programming is stored for future use.



- 1 Change mode key
- 2 Thermal zone in holiday mode

Press 1 repeatedly until the 2 icon appears.

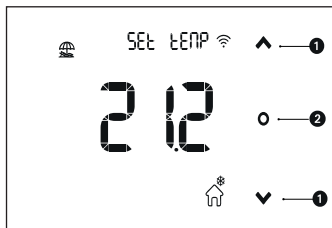


- 1 Navigation keys
- 2 Change mode key

Set the number of days using the 1 keys. Set the temperature to be maintained in the days interval previously set by pressing the 2 key.



Press and hold the 1 keys to set the number of days more quickly.



- 1 Navigation keys
- 2 Change mode key



- 1 Change mode key
- 2 When the screen is activated, the remaining number of holiday days is displayed.

Set the desired temperature using the 1 keys.

Press 2 to confirm the temperature.

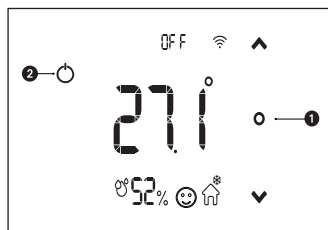
 Press and hold the 1 keys to set the temperature more quickly.

 When the set number of days have passed, the programmable thermostat returns to automatic operation mode.

Press 1 to go to the next mode.

 Days always expire at midnight.

OFF - Exclusion from thermal control

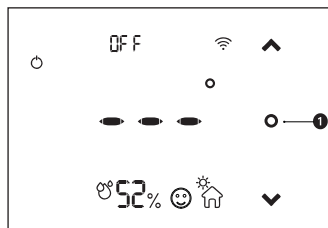


1 Change mode key

2 Thermal zone off

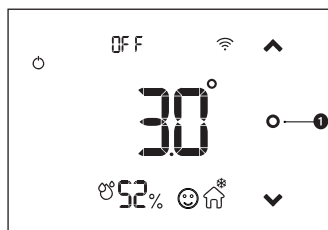
Press **1** repeatedly until the **2** icon appears.

Press **1** to go to the next mode.



If the system is in COOLING mode, thermal control is excluded.

For a few seconds the temperature is not shown, then the current time and temperature detected are displayed.



If the system is in HEATING mode, the antifreeze function remains active.

For a few seconds the temperature set for the antifreeze function is shown, then the current time and temperature detected are displayed.

Advanced operation



The advanced operation modes can be selected from the THERMO app only.

Display mode

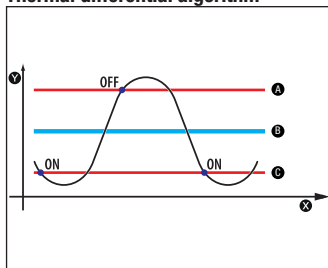


You can choose between a simplified view (temperature setpoint, internal temperature detected and system status) and a full view.

To switch from the simplified to the full view, press one of the navigation keys.

Thermal control algorithm

Thermal differential algorithm



For systems with different thermal inertias. The thermal differential can be adjusted between 0.1°C and 1°C.

X Time

Y Temperature

A = Setpoint + differential

B = Setpoint

C = Setpoint - differential

Proportional-Integral algorithm

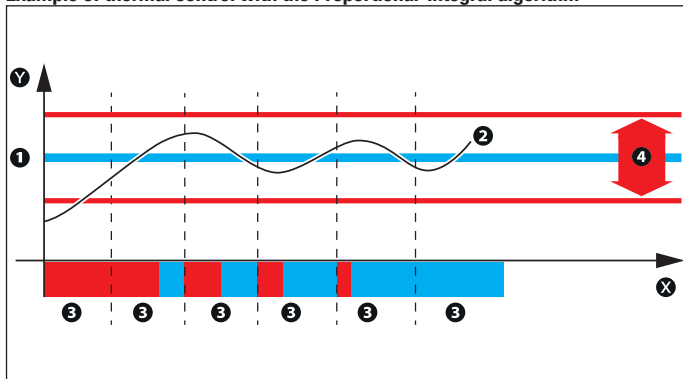
For systems with significant variations in the outdoor temperature.

Optimise consumption and reduce boiler ignition times by setting a minimum boiler ignition time as part of a cycle.

There are 3 pre-configured programmes and 1 manual programme available for setting parameters.

Programme	Cycle duration in minutes	Minimum boiler ignition time in minutes	Proportional band in degrees Centigrade	Types of system inertia
P1	10	1	1,5	Average inertia (e.g. radiators)
P2	5	1	1,5	Fast inertia (e.g. fan coil units)
P3	20	2	1,5	Slow inertia (e.g. floor heating systems)
P4	5 ÷ 40	1 ÷ 5	1 ÷ 3	-

Example of thermal control with the Proportional-Integral algorithm



X Time in minutes

Y Proportional band in degrees
Centigrade

1 Temperature setpoint

2 Internal temperature trend

3 Cycle

4 Proportional band in degrees
Centigrade

Smart backlight

Smart backlighting helps you understand the system status.

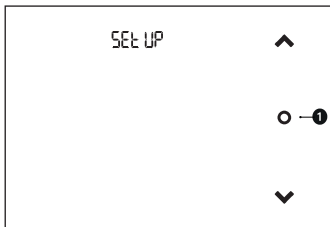
Red smart backlight		Blue smart backlight		White smart backlight
Heating is active.		Cooling is active.		The system is not active.
MODE	White screen backlighting	Red smart backlight	Blue smart backlight	White smart backlight
STANDARD	In standby mode, backlighting is active at low intensity. The screen switches on if the user presses the button.	The light is on if heating is active.	The light is on if cooling is active.	The light switches on if the system is not active only if the user presses the button.
COURTESY LIGHT	In standby mode, backlighting is off. The screen switches on if the user presses the button.	The light is on if heating is active.	The light is on if cooling is active.	The light is on if the system is not active.
NIGHT	In standby mode, backlighting is off. The screen switches on if the user presses the button.	The light switches on if the heating is active, only if the user presses the button.	The light switches on if cooling is active, only if the user presses the button.	The light switches on if the system is not active only if the user presses the button.

SETUP MENU



1 Navigation keys

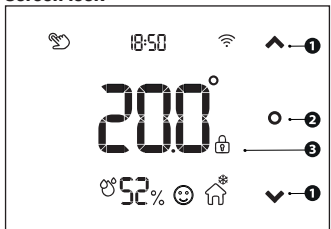
From the main screen, press and hold the **1** keys to enter the [SETUP] menu.



1 Change mode key

Use the **1** key to navigate through the menu.

Screen lock



- 1 Navigation keys
- 2 Change mode key
- 3 Screen lock

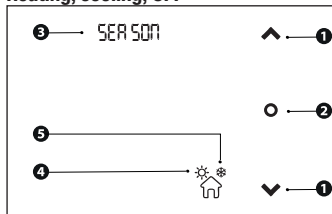
From the SETUP menu, choose [LOCK] using the **2** key.

Use the **1** keys to enable or disable the screen lock.

When [LOCK] is enabled, the **3** icon is displayed on the main screen.

To unlock the screen, go to the SETUP menu and set [LOCK] to OFF.

Heating, cooling, OFF



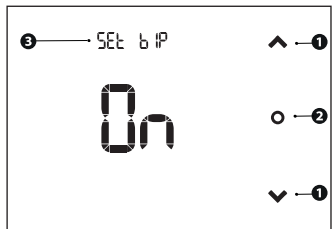
- 1 Navigation keys
- 2 Change mode key
- 3 [SEASON] menu
- 4 Cooling mode
- 5 Heating mode
- 6 OFF



From the [SETUP] menu, choose [SEASON] using the **2** key.

Use the **1** keys to choose between the heating, cooling and OFF system operating modes.

Key sounds



- 1 Navigation keys
- 2 Change mode key
- 3 [SET BIP] menu

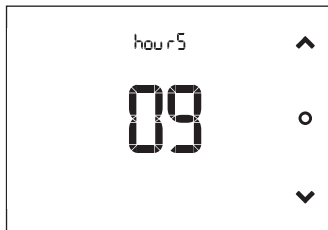
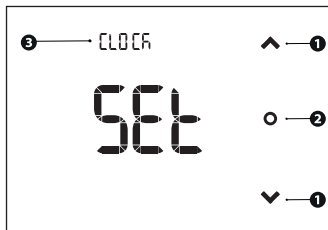
From the [SETUP] menu, choose [SET BIP] using the **2** key.

Use the **1** keys to choose between [ON] and [OFF].

Choose [ON] to enable key sounds.

Choose [OFF] to disable key sounds.

Date/Time



- ① Navigation keys
- ② Change mode key
- ③ [CLOCK] menu

From the [SETUP] menu, choose [CLOCK] using the ② key.

Press one of the two ① keys to open the submenu.

Set the desired value using the ① keys. Press and hold the ① keys to set the desired value more quickly.

Use the ② key to confirm the value set and move on to the next parameter.

The parameters that can be set are: minutes, hours, year, month and day of the month.

Wi-Fi signal



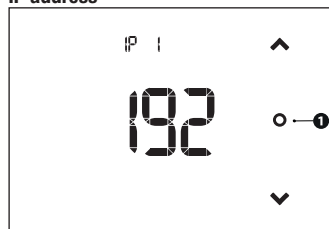
- 1 Navigation keys
- 2 Change mode key

From the [SETUP] menu, choose [SET] using the **2** key.

Use the **1** keys to activate or deactivate the Wi-Fi.

Press the **2** key to go to the next mode.

IP address

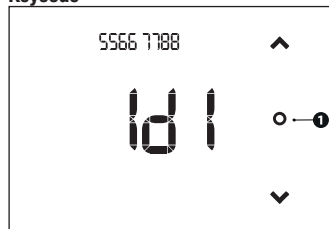


- 1 Change mode key

From the [SETUP] menu, choose [IP 1] using the **1** key.

The screen shows the IP address of the programmable thermostat. IP1, IP2, IP3 and IP4 are shown in sequence.

Keycode



- 1 Change mode key

From the [SETUP] menu, choose [ID I] using the **1** key.

The screen shows the keycode of the programmable thermostat. ID1 and ID2 are shown in sequence.

Firmware version



1 Change mode key

From the [SETUP] menu, choose [Ver] using the **1** key.

The screen shows the firmware version for the programmable thermostat.

Resetting the programmable thermostat



1 Navigation keys

2 Change mode key

From the [SETUP] menu, choose [RESET] using the **2** key.

There are 3 types of reset: [RESET TH] = thermal reset; [RESET NET] = Wi-Fi settings reset; and [RESET ALL], = restore factory settings for the programmable thermostat. Choose the type of RESET using the **1** keys.

To reset, press and hold the **2** until the programmable thermostat restarts.

 By resetting the Wi-Fi settings, the programmable thermostat restarts generating a Wi-Fi network.



ERROR MESSAGES

E1	SSID error not found	The programmable thermostat could not reconnect to the Wi-Fi network. Switch on or try restarting the Wi-Fi router.
E2	Password error	The password is incorrect. Enter the password again, taking care with the numbers and uppercase/lowercase letters.
E3	DHCP service error	The programmable thermostat has not been correctly addressed. Check that the Wi-Fi router has been configured for generating IP addresses automatically (DHCP service).
E4	DNS error or no internet connection	The programmable thermostat cannot access the internet. Try browsing the internet from a smartphone or tablet to check that there is a connection.
E5	Error connecting to the Cloud service	The programmable thermostat could not connect to the Cloud. Wait for it to be restored (it may be temporarily undergoing maintenance).
E6	Configuration data error	The configuration data could not be found on the programmable thermostat. The device may have been restored to factory settings.



CAME.COM

CAME S.P.A.

Via Martiri della Libertà, 15
31030 Dosson di Casier
Treviso – Italy
Tel. (+39) 0422 4940
Fax (+39) 0422 4941