FantiniCosmi

Intellicomfort+

WIRELESS TOUCH-SCREEN
WEEKLY PROGRAMMABLE THERMOSTAT

CH180RF

ATTENTION!
The documentation reflects the characteristics of the product, however for regulatory or commercial developments, it is recommended that customers verify the availability of updates relating to this documentation on the Fantini Cosmi website: **pdf.fantinicosmi.it**

For a quick guide to the basic operation of this system, Fantini Cosmi video tutorials are available in the dedicated section.

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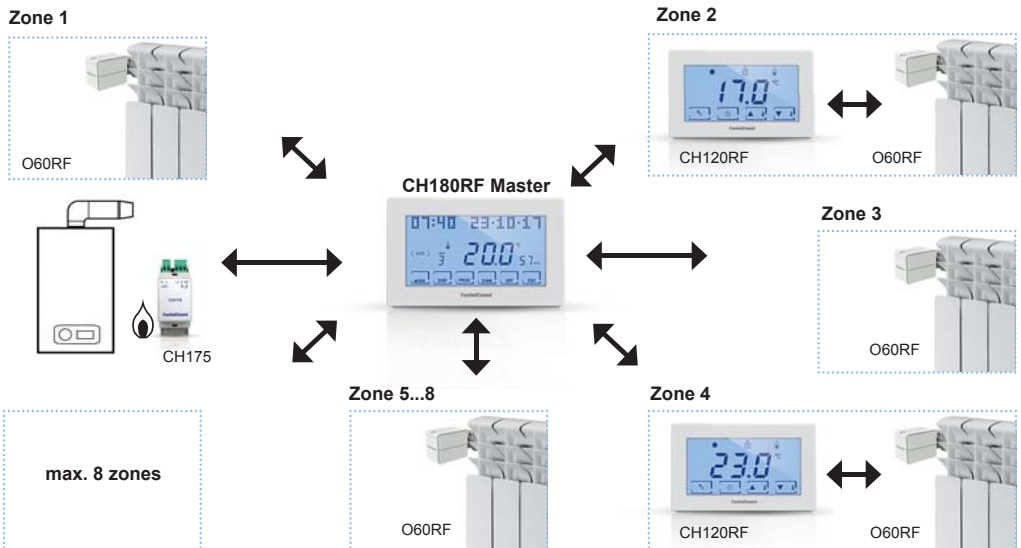
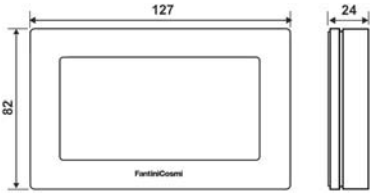
THE MULTI-ZONE SYSTEM

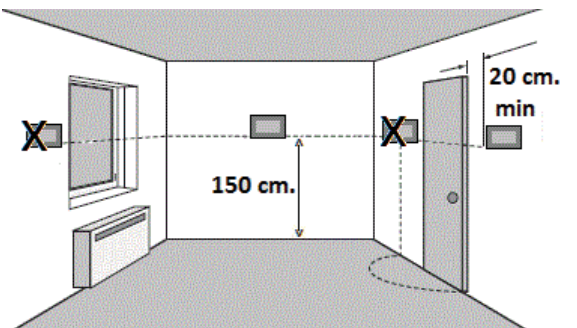
The multi-zone system enables different temperature levels to be controlled within the same home.
The temperature of each zone is set on a main device and controlled by one or several devices installed within the rooms.
Communication between all devices takes place through radio waves.



INSTALLATION

The programmable thermostat comes with a cover plate suitable for mounting on recessed or wall mounted boxes.





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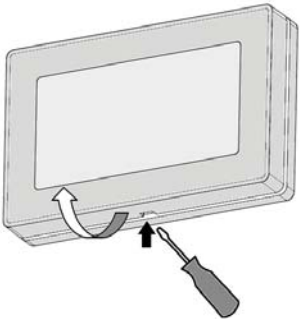

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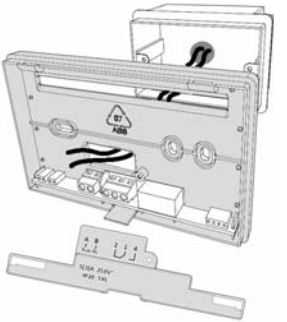

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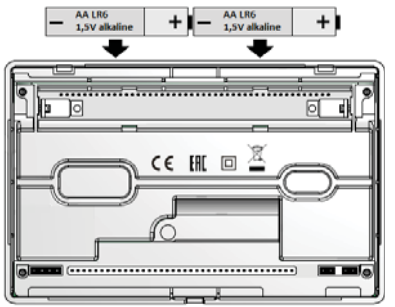

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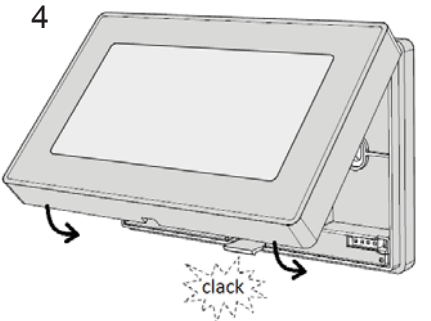
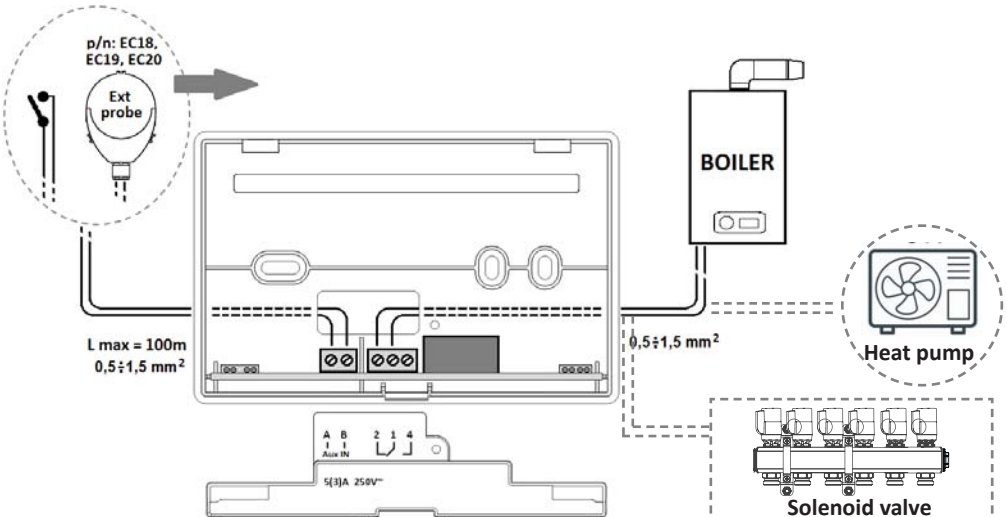


Installation must be carried out by qualified personnel, in compliance with the requirements concerning installation of electrical devices. Make sure that the power supply is disconnected before making any connections or working on the device. Make the electrical connections as shown in the connection diagrams.

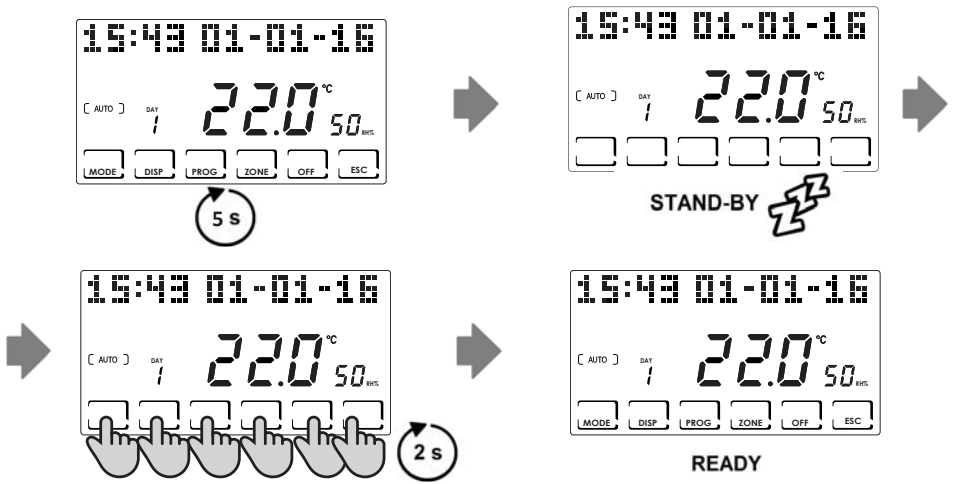
CONNECTION EXAMPLE



DESCRIPTION OF KEYS/DISPLAY AND OPERATING INSTRUCTIONS

The CH180RF programmable thermostat has 6 multi-function keys through which the entire system can be controlled.

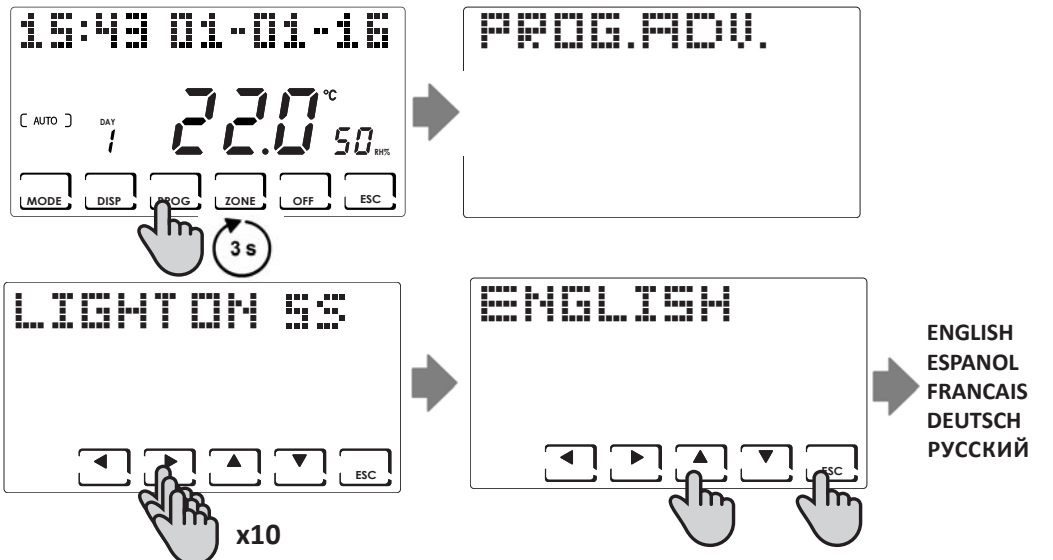
When not in use, the programmable thermostat switches off the backlight and the messages on the keys and goes into **Stand-by mode** (battery saving). To exit this mode, press and hold one of the 6 keys until the backlight turns on. The backlight duration and its intensity can be changed in the PROG.ADV. advanced programming menu (see page 40).



PLEASE NOTE: to use the multi-zone functions, exit the stand-by mode and then press the desired function key

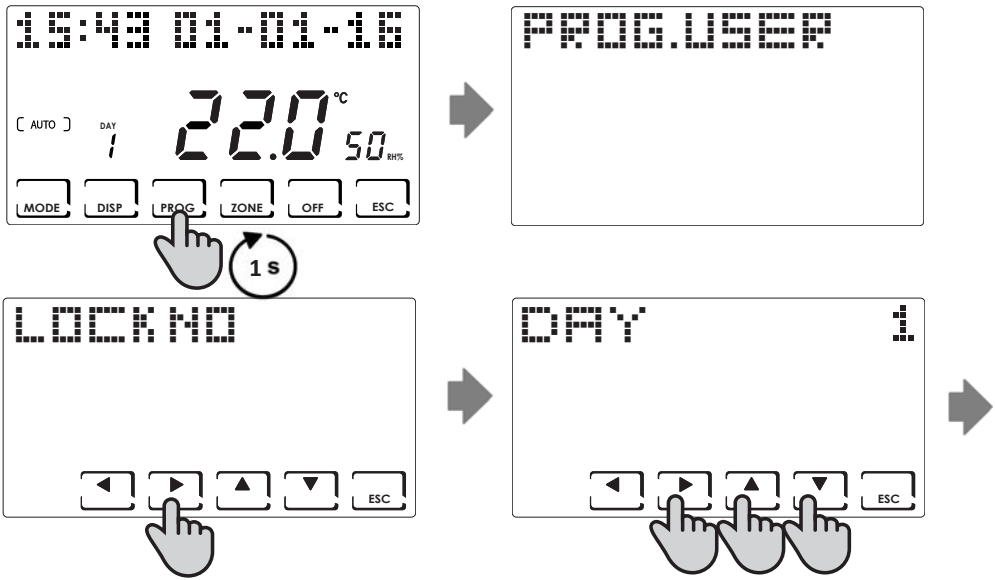
MENU LANGUAGE SELECTION

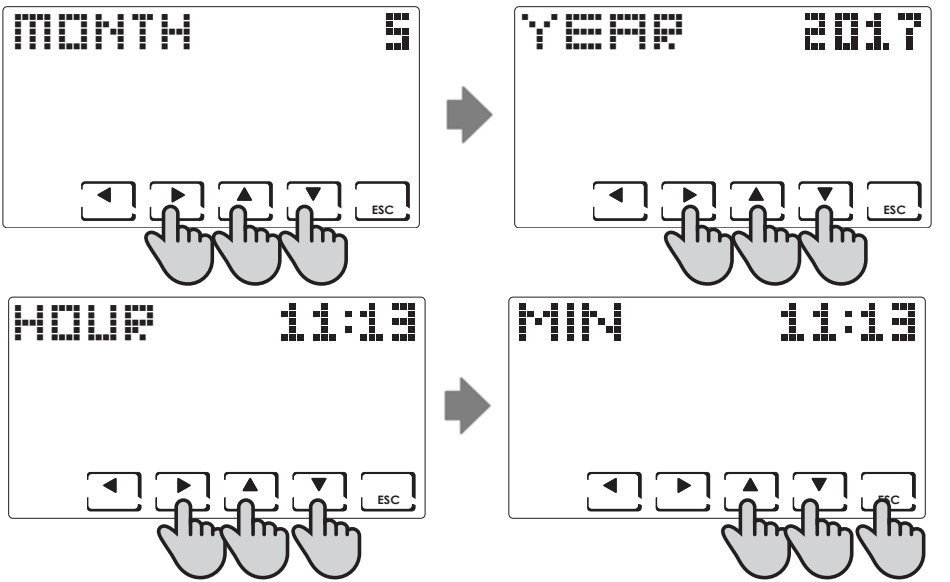
LANGUAGE (Default = Italian)
It is used to select one of the following languages: Italian, English, Russian, French, Spanish, German. Press **PROG** for at least 3 seconds to access the PROG.ADV. advanced programming menu. Use the ◄► keys to select the item corresponding to the language set, use the ▲▼ keys to select the new language and confirm with **ESC**.



DATE AND TIME SETTING

Press **PROG** briefly to access the PROG.USER user programming menu. Use the ◄► keys to select the year, month, day, hour, minutes; set the correct value with the ▲▼ keys and press the **ESC** key to confirm and exit.



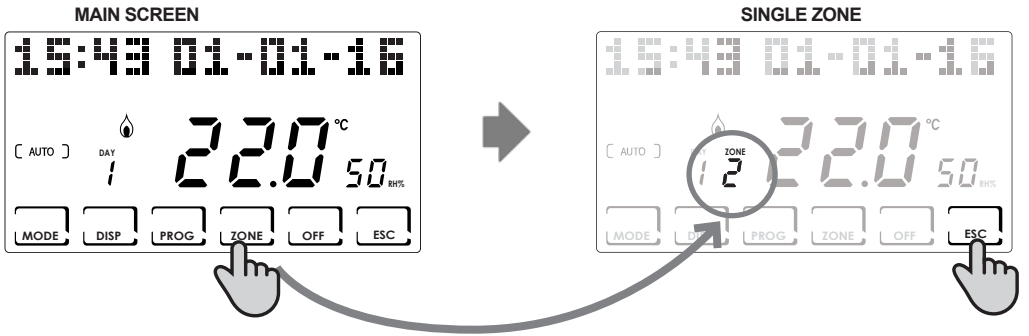

MONTH 5
ESC
YEAR 2017
ESC
HOUR 11:13
ESC
MIN 11:13
ESC

GENERAL OR SINGLE ZONE OPERATION

On the CH180RF you can activate and display the main operating modes for the whole system or for a single zone.

To select a zone, exit the STAND-BY mode and press **ZONE** until the selected zone number is displayed. To assign a name to the zone, see page 45.

To exit the zone, press **ESC** or after 30 seconds the CH180RF returns to the main screen.



NOTE:

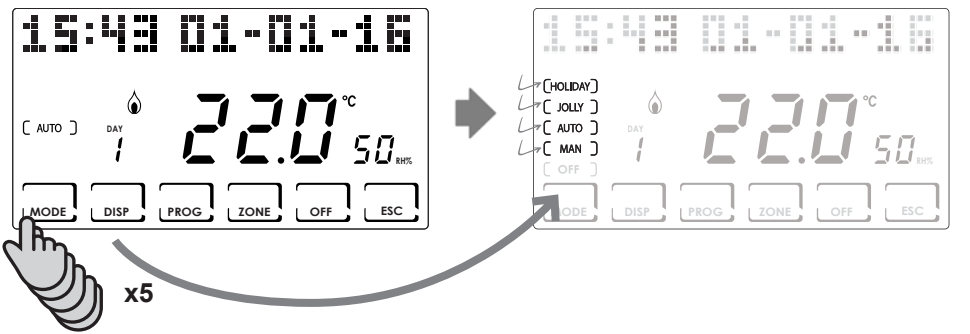
- If the LOCAL SET message appears in a zone, it means that the set-point for the finished time has been changed from the CH120RF of the indicated zone (see TEMPORARY MODIFICATION in the CH120RF manual).
- If there WAIT appears in a zone it means that after the creation of the network no data relating to the selected zone has arrived.
- Any function set by the MAIN SCREEN acts on the entire multi-zone system; while any function set in a SINGLE ZONE only affects the concerned area.

SETTING THE OPERATING MODE

By pressing **MODE**, you can select, in cyclic sequence, the different operating modes:

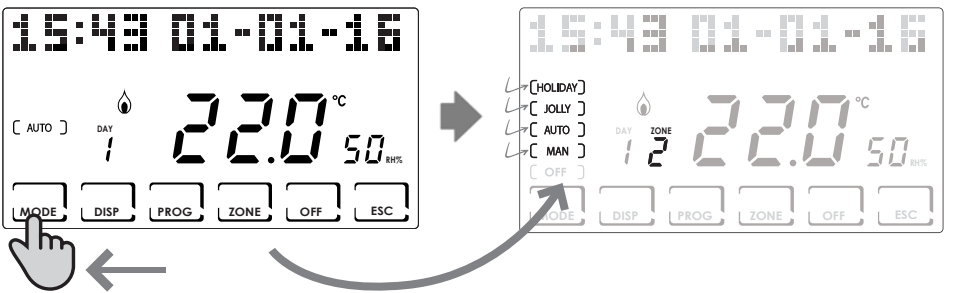
AUTO -> MAN -> HOLIDAY -> JOLLY.

If **MODE** is pressed from the main screen, all zones will be in the mode selected



Press **ZONE** and then press **MODE** to set the operating mode for every single associated zone.

The name of the operating mode is displayed in square brackets (e.g. [AUTO]).



AUTOMATIC MODE [AUTO]

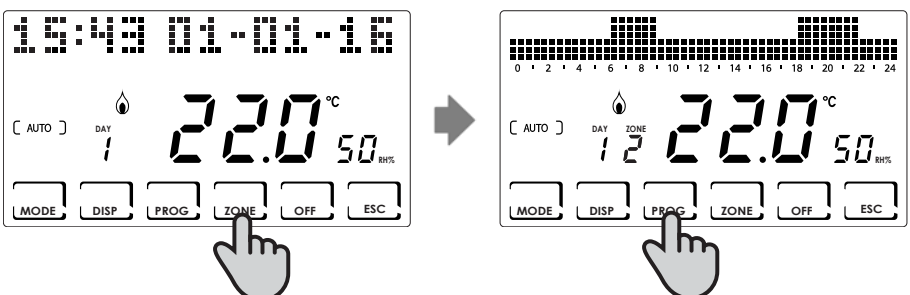
For each day of the week, one of the programmable temperatures TCOMF (comfort), TECO (saving) and TA (OFF) can be associated to each half hour.

Weekly profile customisation

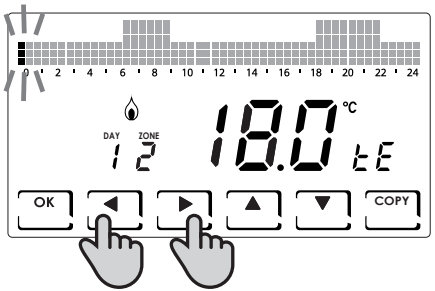
A different weekly temperature profile can be set for each zone.

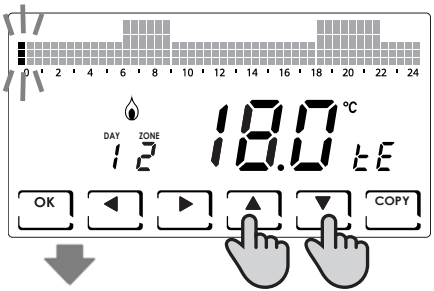
From AUTO mode, select the zone you want to edit with **ZONE**; then press **PROG**.

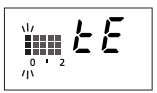
The profile of the first day of the week will be displayed.

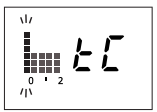


Use the ◄► keys to scroll through the time histogram and use the ▲▼ keys to set the temperature TCOMF tC, TECO tE, OFF tA



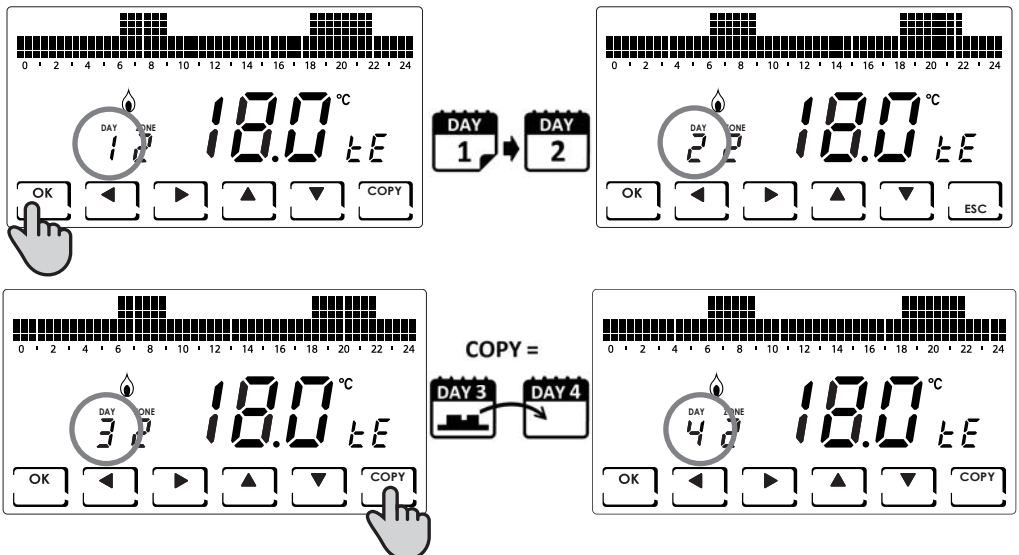




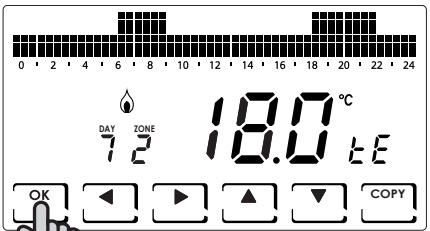


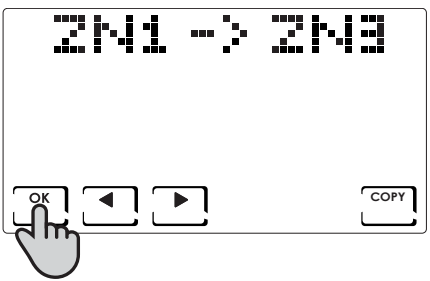
WINTER = antifreeze temperature (TA)
SUMMER = system off (OFF)

Press **OK** to go to the next day (DAY 1 => 2 => 3 => 4 => 5 => 6 => 7).
Press **COPY** to copy the temperature profile of the displayed day to the next day.



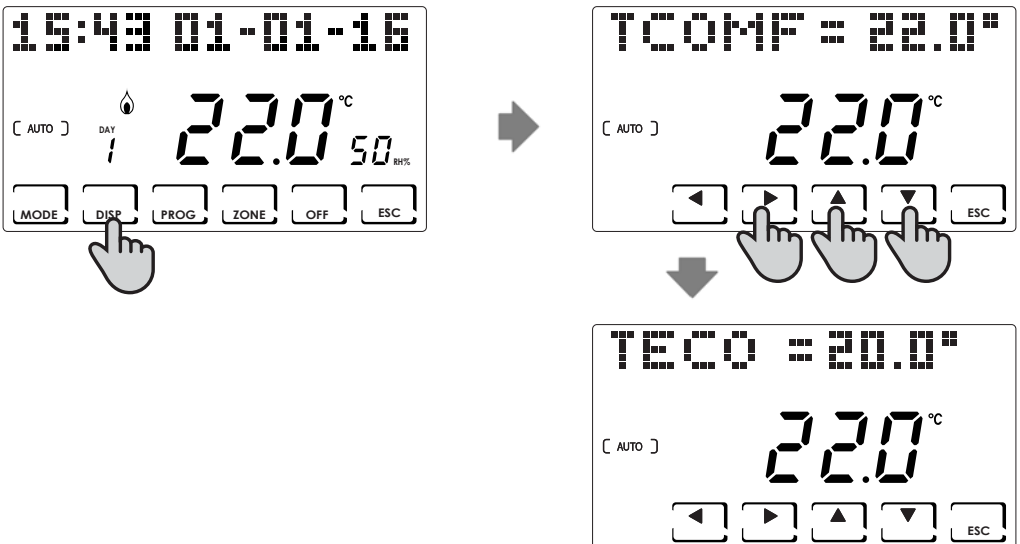
When you reach day **7** you can exit programming by pressing **ESC.** While by pressing **OK**, you can copy the newly set profile to the other zones (if added).





Temperature customisation (TCOM, TECO)

After selecting the AUTO mode, press **DISP** to set the desired temperature.

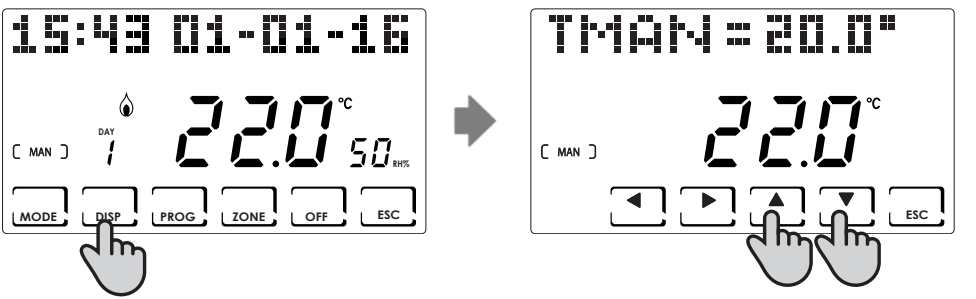


MANUAL MODE [MAN]

In this mode, the programmable thermostat maintains the fixed set temperature TMAN, which can be changed with the ▲▼ keys, until another operating mode is selected.

Temperature customisation (TMAN)

After selecting the MAN mode, press **DISP** to set the desired temperature.

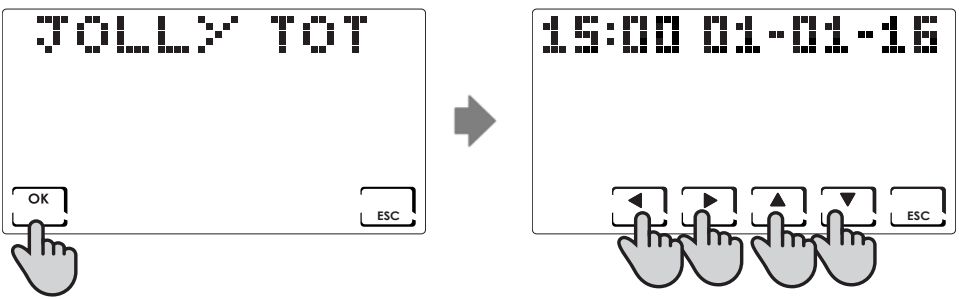


TEMPORARY MODE [JOLLY]

It maintains the set temperature up to the time and date selected. When the set time and date is reached, the programmable thermostat returns to the previously active program.

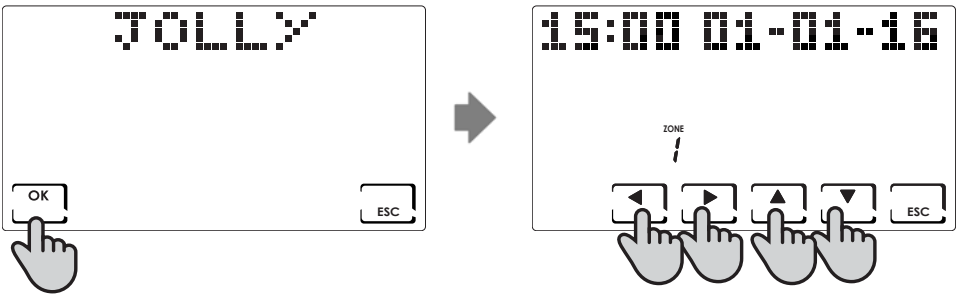
General JOLLY

From the main screen, press **MODE** until JOLLY appears. The JOLLY TOT screen is displayed.
Press **OK** and using the ◄► and ▲▼ arrows, set the time (with 30 min. resolution) and the day until which you want to maintain the set temperature.



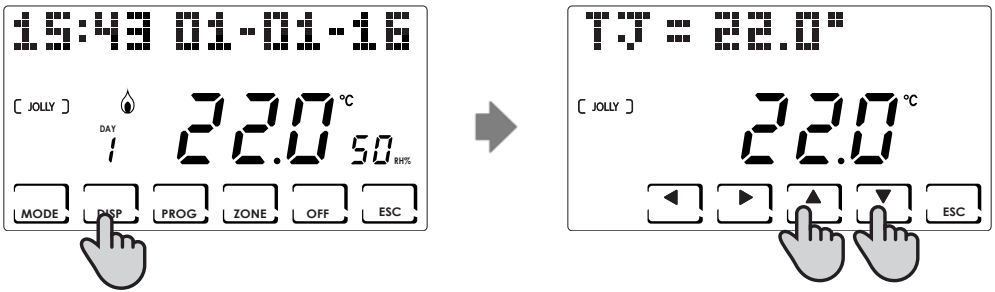
Zone JOLLY

Press **ZONE** to select the desired zone and then press **MODE** until JOLLY appears. The JOLLY screen is displayed. Press **OK** and using the ◄► and ▲▼ arrows, set the time (with 30 min. resolution) and the day until which you want to maintain the set temperature.



Editing the set parameters

After selecting the JOLLY mode, press **DISP**, set the desired temperature, or update the set parameters.

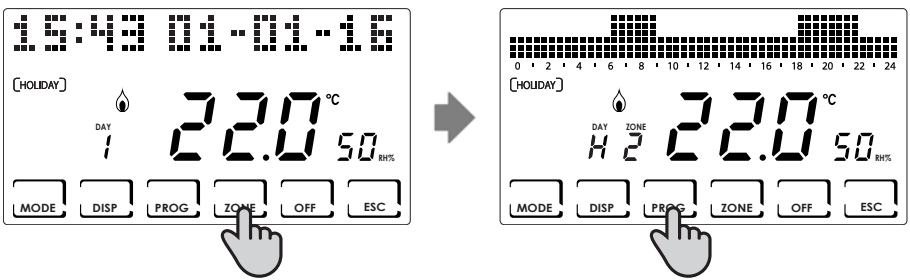


DAILY MODE [HOLIDAY]

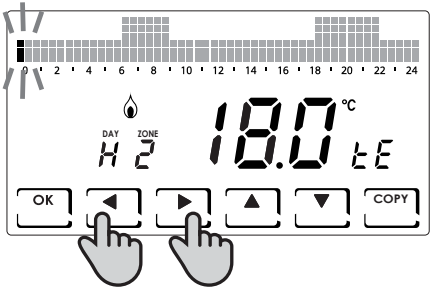
This mode is used for daily programming, regardless of the days of the week set previously. As in the AUTO program, a time profile can be configured by associating one of the programmable temperatures TCOMF (comfort), TECO (saving) and TA (OFF) to each half hour.

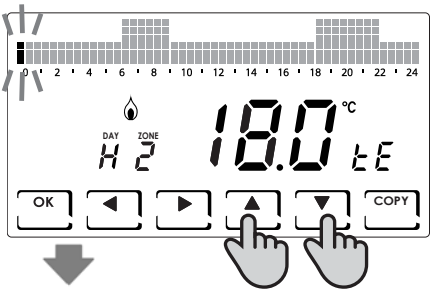
HOLIDAY profile customisation

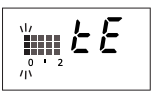
From HOLIDAY mode, select the zone you want to edit with **ZONE**; then press **PROG**. The HOLIDAY profile to be edited will be displayed.

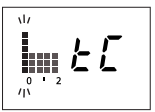


Use the ◄► keys to scroll through the time histogram and use the ▲▼ keys to set the temperature:
TCOMF tC or TECO tE, OFF tA.



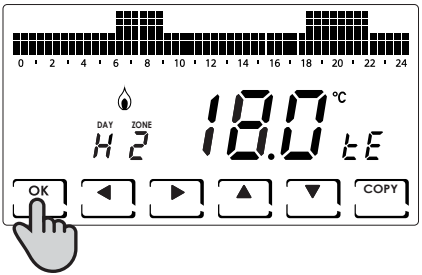


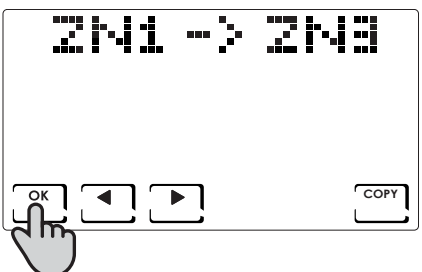


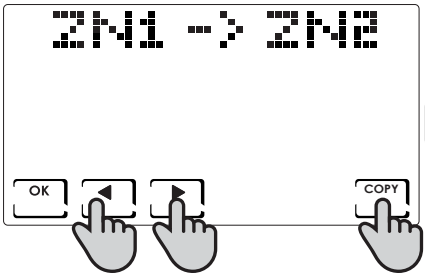


WINTER = antifreeze temperature (TA)
SUMMER = system off (OFF)

You can exit programming by pressing **ESC.** While by pressing **OK**, you can copy the newly set profile to the other zones.

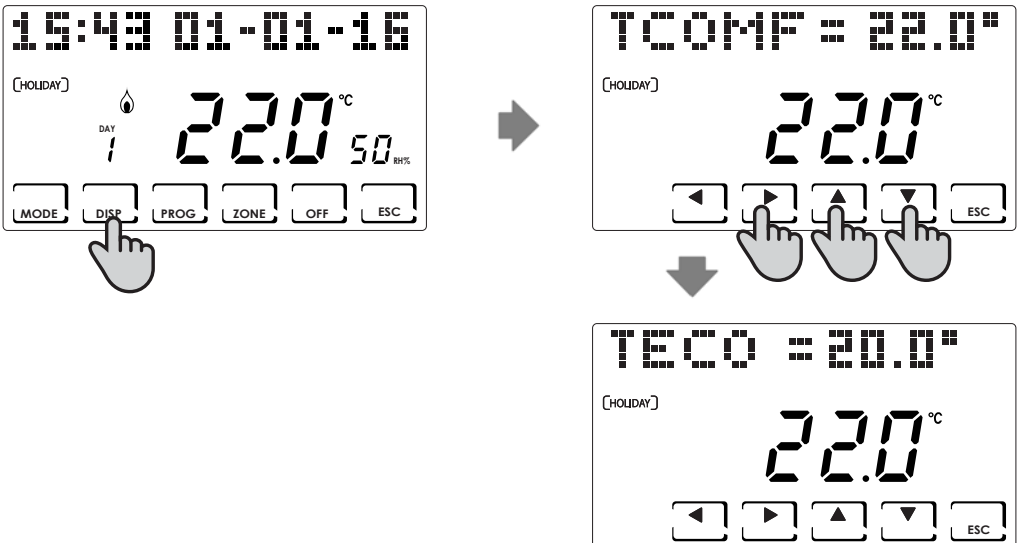






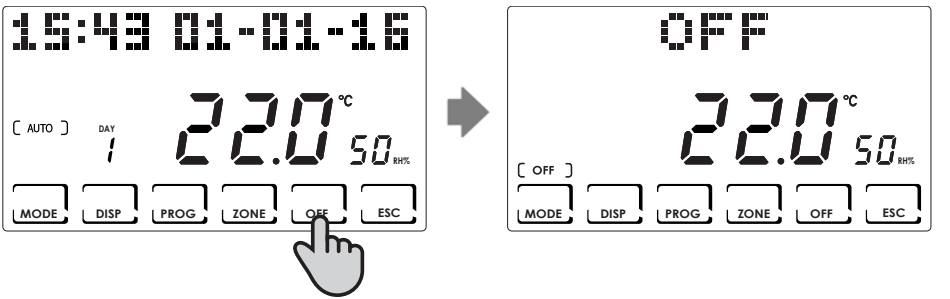
Temperature customisation (TCOM, TECO)

After selecting the HOLIDAY mode, press **DISP** to set the desired temperature.



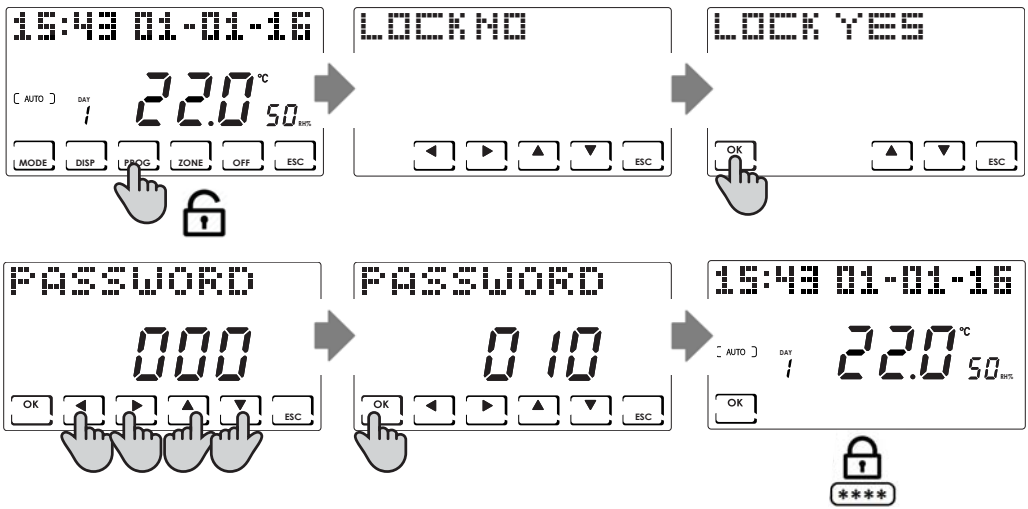
SHUTDOWN [OFF]

It is activated by pressing **OFF**. With OFF, the selected system or zone is switched off. During WINTER mode, it maintains the set antifreeze temperature TA (default is 5°C). Alternatively, TA can be changed in the PROG.ADV. menu (see page 43).

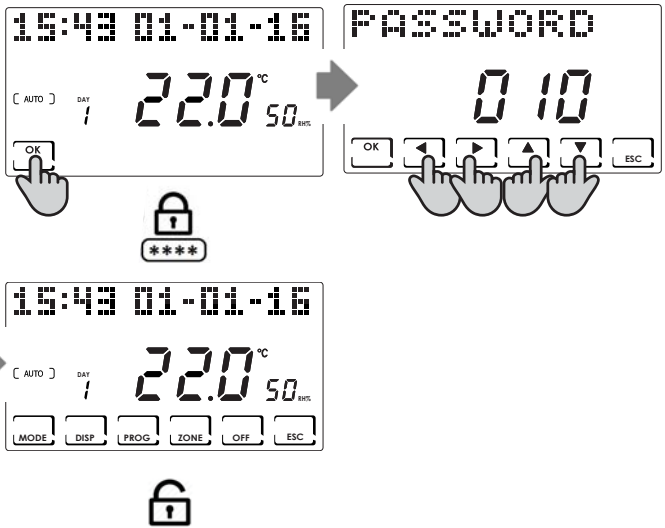


KEY LOCK AND UNLOCK WITH PASSWORD

It enables you to lock the CH180RF keyboard, and any CH120RF inserted in the network, with a 3-digit numeric code. It only works once and then must be re-enabled.
To activate the function, briefly press the **PROG** key and access the PROG.USER user programming menu.
Use the ◄► keys to scroll to LOCK no and use the ▲▼ keys to select SI (YES) and press **OK**.
Use the ◄► ▲▼ keys to set the lock number and press **OK** to confirm.



To unlock the display enter the code using the ◄►▲▼ keys and press **OK**



NOTE: with the **KEY LOCK WITH PASSWORD** function, the CH120RF keys connected to the MASTER CH180RF are also locked.

USE STATISTICS

For statistical purposes, the programmable thermostat records the total consumption of the heating and cooling hours.
To display, select **DISP** and use the ◄► keys to reach the UTILIZATION menu and press **OK**.
The following are the statistics available and can be displayed with the ◄► keys:

Previous day: total operating hours on the previous day.

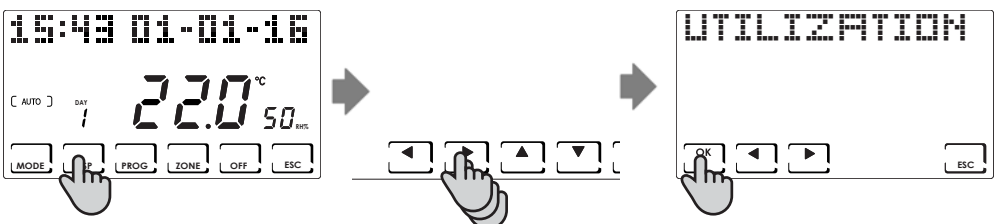
Previous month: total operating hours in the previous month, (pressing **OK** displays the full month chart, using the ◄► keys you can view the consumption of a specific day).

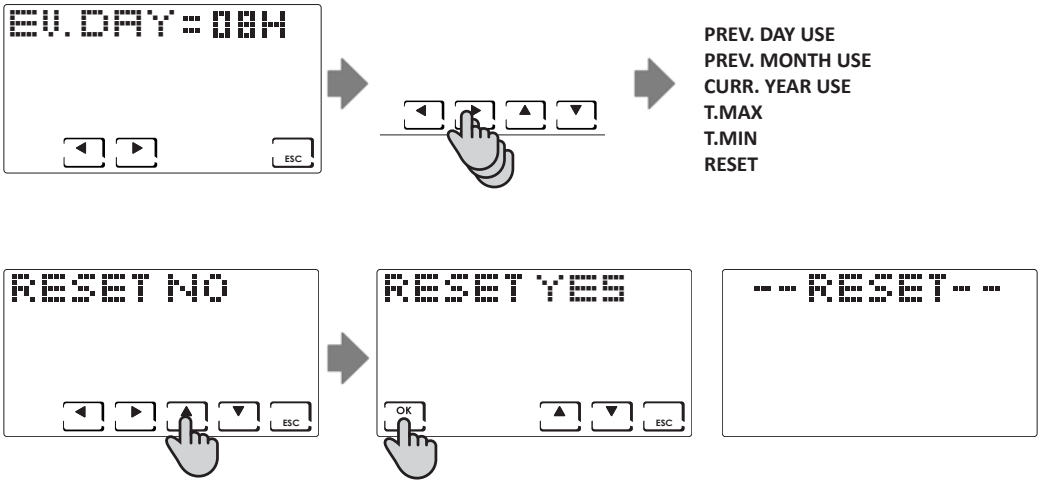
Current year: total operating hours in the previous year, (pressing **OK** displays the full year chart, using the ◄► keys you can view the consumption of a specific month).

Tmax: maximum room temperature measured from the last reset.

Tmin: minimum room temperature measured from the last reset.

Reset: consumption data reset

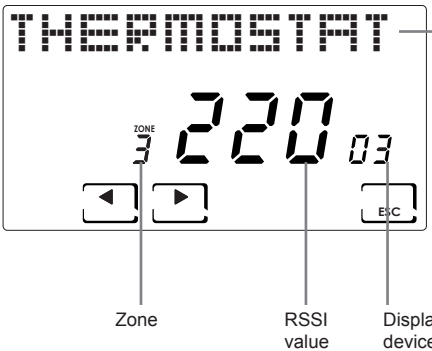



EV.DAY=08H
ESC
PREV. DAY USE
PREV. MONTH USE
CURR. YEAR USE
T.MAX
T.MIN
RESET
RESET NO
ESC
RESET YES
OK
ESC
--RESET--

SIGNAL QUALITY

The message RSSI appears on the device.

It indicates the quality of the signal received from devices connected directly to the CH180RF.



Type of associated device:

THERMOSTAT = CH120RF

ACT-01 = O60RF, CH175 and identification num. in the zone

NO DEVICE = no device

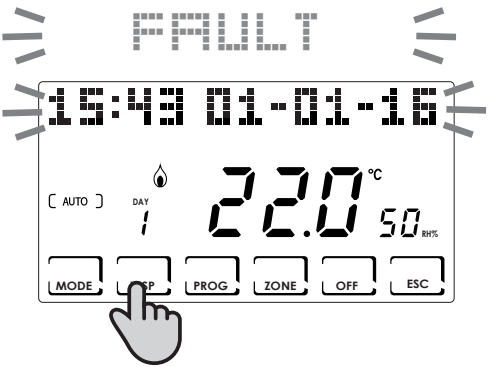
NOTE: satisfactory RSSI value **> 50**

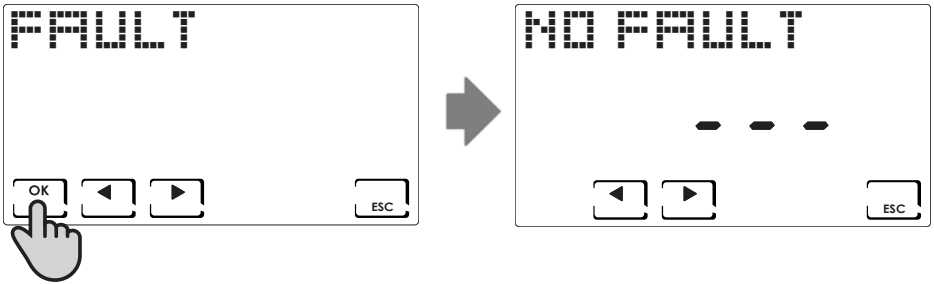
FAULTS

The presence of one or several faults of the various devices that make up the multi-zone system is indicated with the message FAULT flashing on the display.

To display the fault code, press **DISP**. Using the ◄► keys select the FAULT menu and press **OK**. Use the ◄► keys to scroll through the list of faults and identify, in the table below, the problem and the action to be taken.

The fault is cancelled automatically when the problem has been solved.

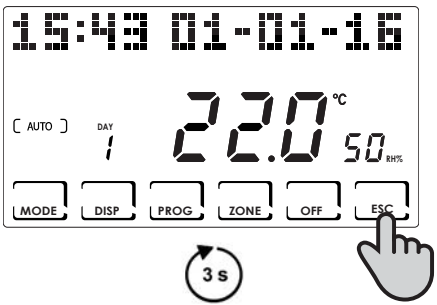




ERROR	DEVICE	FAULT	ACTION
020	O60RF	Incorrect assembly	Make sure that the head is mounted properly on the valve, if the problem persists contact technical support
010/ 021 / 030	O60RF	Mechanical / electronic error	Contact technical support
022	O60RF	Temperature reading error	Contact technical support
040	O60RF	Flat battery	Replace the batteries
001	CH120RF	Flat battery	Replace the batteries
006	CH120RF	No radio communication	Replace the batteries if the problem persists contact technical support
050	O60RF	No radio communication	Replace the batteries if the problem persists contact technical support
050	CH175	No radio communication	Check the mains power supply, if the problem persists contact technical support

LOCK FOR SCREEN CLEANING

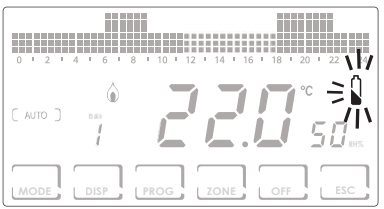
Press **ESC** for 5 seconds. The message “LOCKED” will appear on the display for 30 seconds.



BATTERY REPLACEMENT

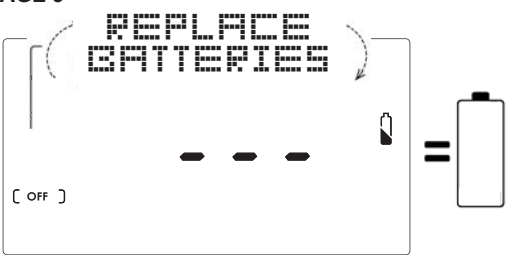
When the batteries are flat, the display shows the flashing symbol

STAGE 1

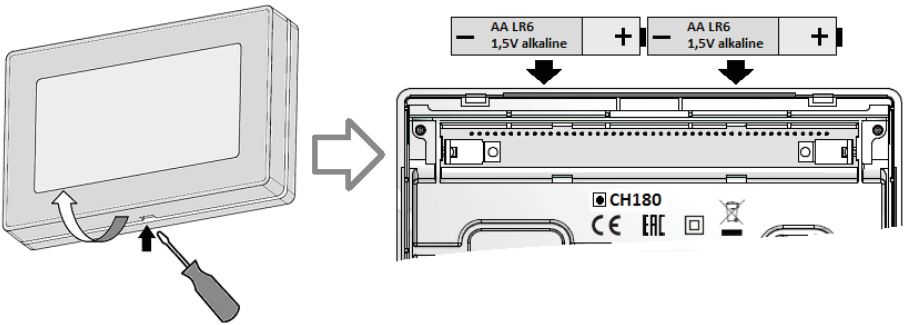


STAGE 2

STAGE 3



The entire system turns OFF



NOTE:

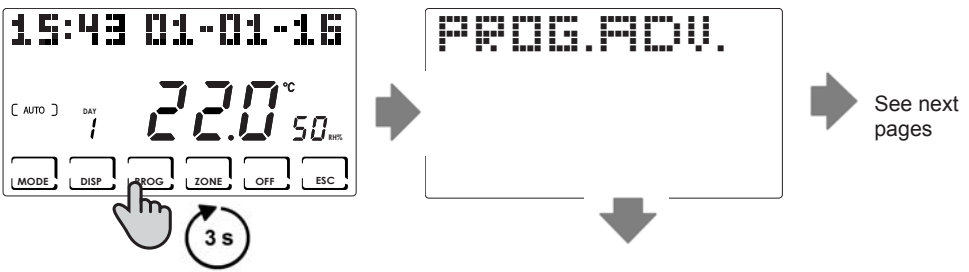
- to prevent losing the programming time settings it is recommended to replace the batteries during STAGE 1 or 2, by performing the operation within 60 seconds of removing the batteries.
- If the batteries are replaced during STAGE 3, after removing them, make sure the display turns off completely before inserting new batteries.

ADVANCED PROGRAMMING (PARAMETER SETTINGS)

The configuration menu contains the parameters that define the operation of the programmable thermostat according to how the system was implemented. To access, from the MAIN SCREEN, press **PROG** for 3 seconds.

Use the ◄► keys to display the various options, the ▲▼ keys to change the settings and **ESC** to exit.

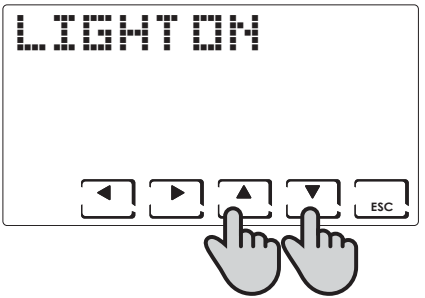
Configuration should be performed by skilled personnel or only after understanding the meaning of the functions.



Backlight

Press **PROG** for at least 3 sec. and use the ◄► keys to reach the desired page.

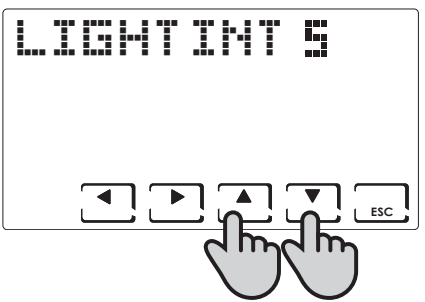
This enables the display backlight time to be adjusted from 5 to 30 seconds (Default = 5)



Display intensity

Press **PROG** for at least 3 sec. and use the ◄► keys to reach the desired page.

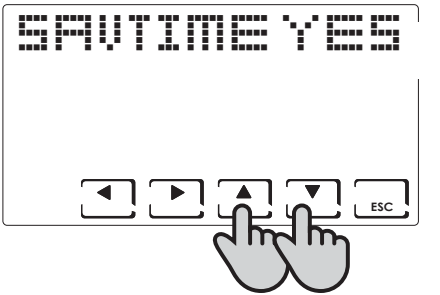
It is used to modify the luminous intensity of the display, at 10 levels, from 1 to 10 (Default = 5)



Daylight saving time (Default = Yes)

Press **PROG** for at least 3 sec. and use the ◄► keys to reach the desired page.

It selects the daylight saving time automatically.

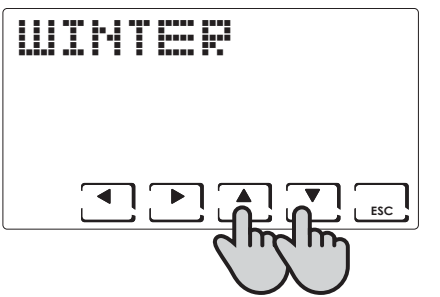


Winter/summer (Default = Winter)

Press **PROG** for at least 3 sec. and use the ◄► keys to reach the desired page.

It is used to set the operating season.

PLEASE NOTE in WINTER the dehumidification function cannot be activated.

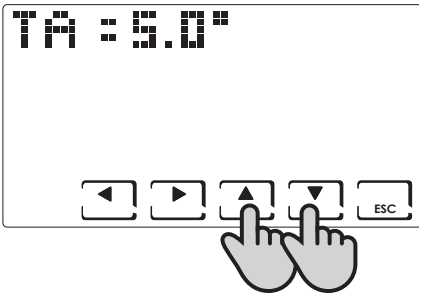


Antifreeze temperature (Default = 5°C)

Press **PROG** for at least 3 sec. and use the ◄► keys to reach the desired page.

The antifreeze temperature can be set from an OFF value (boiler always off) to a range between 2.0 and 7.0 °C.

PLEASE NOTE in SUMMER the function cannot be activated.

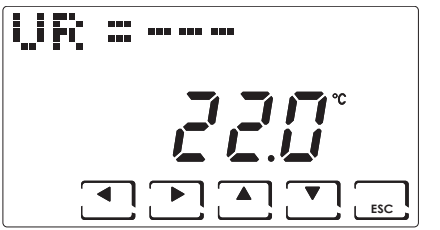


RH Relative humidity (Default = ---)

Press **PROG** for at least 3 sec. and use the ◄► keys to reach the desired page.

It enables to decide the relative humidity limit above which make a dehumidifier start, adjustable from 30% to 70%, or "**---**" non present.

PLEASE NOTE in WINTER the function cannot be activated.



Relay function (Default = OFF)

Press **PROG** for at least 3 sec. and use the ◄► keys to reach the desired page.

The programmable thermostat is equipped with a relay that can be used for different system configurations; the relay operating modes are listed below:

OFF: always off because unused;

DEU.Z.: activation of a dehumidification unit only in zone 1;

RAF.Z.: .: activation of a cooling unit only in zone 1;

RIS.Z.: .: activation of a heating unit only in zone 1;

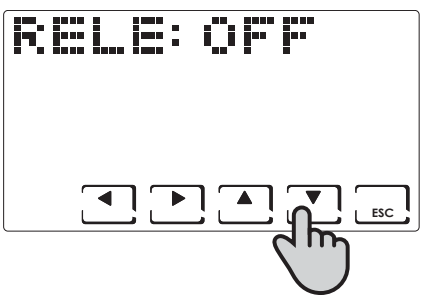
R.R.Z.: .: activation of a heating and/or cooling unit only in zone 1;

DEU.G .:.: activation of a general dehumidification unit;

RAF.G.: .: activation of a general cooling unit;

RIS.G.: .: activation of a general heating unit;

R.R.G.: .: activation of a general heating and/or cooling unit.



Zone Names

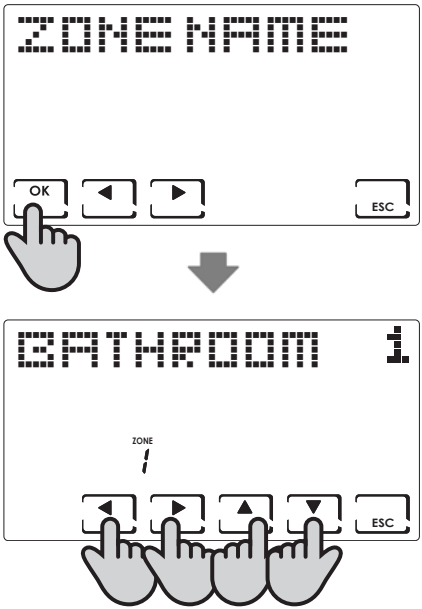
Press **PROG** for at least 3 sec. and use the ◄► keys to reach the desired page.

It is used to assign a name to each area of the system.
After pressing **OK**, use the ◄► arrows to display the zones, use the ▲▼ keys to select the zone name, and then press the ◄► arrows to assign a number to the selected name.

Example Zone 1: Bathroom 1

The names of the zones range between:

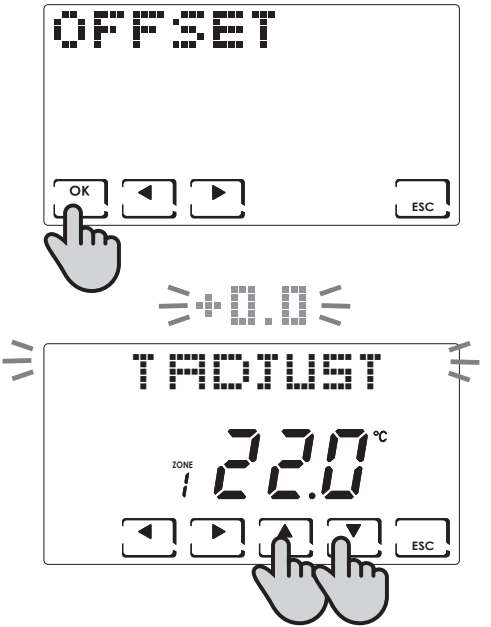
BEDROOM	LOBBY
LIVING	CELLAR
KITCHEN	GARAGE
BATHROOM	LAUDRY
ENTRANCE	
HALLWAY	
ATTIC	
TAVERN	
LUMBER	
GUEST	



OFFSET (Default = 0.0°C)

Press **PROG** for at least 3 sec. and use the ◄► keys to reach the desired page.

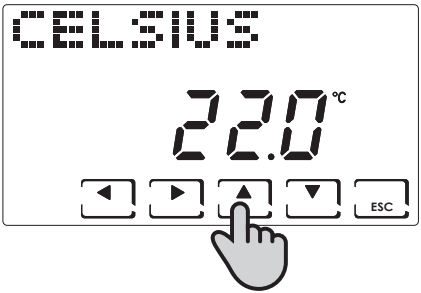
Corrects the measured temperature for the selected zone by +/- 5.0°C.
This setting can be useful when unit installation is not optimal.
Use the ◄► arrows to view the various system zones and ▲▼ to change the OFFSET value.



Unit of measure (Default = Celsius)

Press **PROG** for at least 3 sec. and use the ◄► keys to reach the desired page.

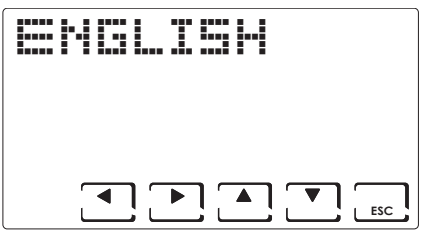
Use the ▲▼ arrows to set the unit of measure for the entire system, either degrees Celsius or degrees Fahrenheit.



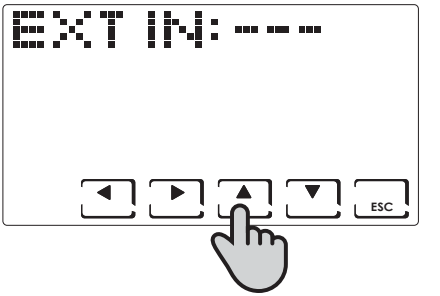
Language (Default = Italian)

Press **PROG** for at least 3 sec. and use the ◄► keys to reach the desired page.

It is used to select one of the following languages:
Italian, English, Russian, French, Spanish, German.
See page 10.



External probe (EXT IN) (Default = no function)



Press **PROG** for at least 3 sec. and use the ◄► keys to reach the desired page.
By connecting an EC18 - EC19 - EC20 temperature probe, you can use the following functions:

VIS: Display of temperature detected by the external probe.

REG: adjustment of room temperature with the external probe;

HIGH: maximum safety temperature exceeded alarm. This is a safety threshold, only active in the WINTER season and disables the system. To activate, press **OK** and set the desired maximum threshold using the ▲▼ keys;

LOW: minimum safety temperature exceeded alarm. This is a safety threshold, only active in the SUMMER season and disables the system. To activate, press **OK** and set the desired minimum threshold using the ▲▼ keys;

DEW: floor system condensate formation control in summer through control of the dew point (a floor probe is required).

NOTE: with the control active, when a zone switches the cooling system off, the symbol ☼ flashes in the concerned zone.

Connecting a voltage-free contact allows you to use the following functions:

ALR C: display of alarm message in presence of closed contact;

ALR O: display of alarm message in presence of open contact;

CHG O: switchover to SUMMER mode with closed contact and WINTER mode with open contact.

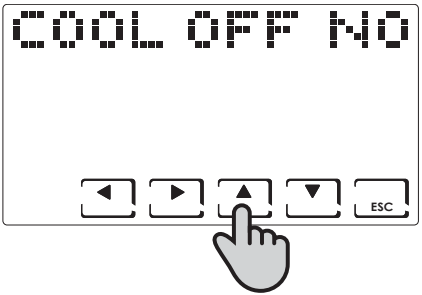
Cool OFF

Press **PROG** for at least 3 sec. and use the ◄► keys to reach the desired page.

Floor system condensate formation control in summer without having a floor probe.

Control of cooling system shutdown at the same time as dehumidifier activation (it is necessary to set a RH% threshold and the DEW function must be disabled).

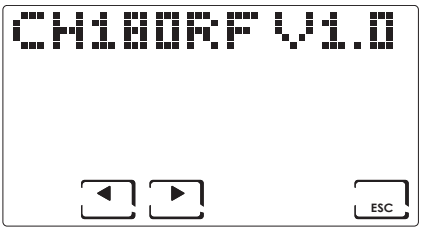
NOTE: with the control active, when a zone switches the cooling system off, the symbol ✳ flashes in the concerned zone.



FW VERSION

Press **PROG** for at least 3 sec. and use the ◄► keys to reach the desired page.

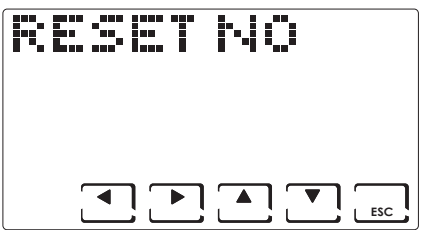
Displays the software version of the CH180RF programmable thermostat.



Reset - configuration reset

Press **PROG** for at least 3 sec. and use the ◄► keys to reach the desired page.

After selecting RESET, press **SI** (YES) with the ▲▼ arrows and confirm with **OK,** to reset the programmable thermostat with the factory settings and all parameters except the date and time.



Technical features

- Temperature adjustment scale 2÷40 °C, increase 0.1°C
- Measurement scale/room T display: -50 ÷ +50 °C
- Thermal differential for regulation 0.3 ÷ 5.0 K
- Relative humidity adjustment scale: 30 ÷ 70%, increase 1%
- Measurement scale/room relative humidity display: 0 ÷ 100%
- Power supply: 2AA 1.5V alkaline batteries
- Transmission and reception frequency 868 MHz
- Maximum radio frequency power transmitted < 10 mW
- Relay contact range: 5(3)A / 250Vac – potential free contacts
- Type of action: 1BU (micro disconnection)
- Software: class A
- Thermal gradient of reference: 4K/h
- Maximum room temperature: 45 °C
- Electric insulation: ⧈ double insulation
- Protection rating: IP40
- Pollution rating: 2
- Pulse voltage: 4000V
- Compliant with standards: EN 60730-1 and second parts
- Compliant with Directive 2014/53/EU (RED)
- ErP classifi cation (EU Reg. 811/2013 - 813/2013):
  - Class IV; 2%;
  - Class VIII; 5% when used with O60RF actuators to create three or more heating zones.

Waste disposal

The symbol of the crossed-out wheeled bin indicates that the products must be collected and disposed of separately from household waste. The batteries and integrated accumulators may be disposed of together with the product. They will be separated at the recycling facilities. A black bar indicates that the product was placed on the market after August 13th, 2005. Participating in the separate collection of products and batteries contributes to the correct disposal of these materials and therefore avoids possible negative consequences for the environment and human health. For more detailed information on the collection and recycling programmes available in your country, contact the local authorities or the sales point where you purchased the product.

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