FantiniCosmi

INSTRUCTIONS FOR USE

CH140GSM2

WEEKLY PROGRAMMABLE THERMOSTAT WITH BUILT-IN GSM

Thank you for purchasing a **FANTINI COSMI S.p.A.** product.

Please read this instruction manual carefully and always keep it at hand should you need to consult it for any reason.

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 S.p.A. website: **pdf.fantinicosmi.it**

OPERATION

CH140GSM2 is a weekly programmable thermostat with built-in GSM, which is also remote-controlled via SMS or via the "Intelliclima+" APP.

Equipped with a temperature sensor, with two output relays on board, it simultaneously manages heating and air conditioning units.

However, relay 2 can be dedicated to an external unit with an ON/OFF function based on daily programming.

CONTENTS OF PACKAGE

- 1 programmable thermostat
- 2 6/32UNC American standard thread screws to secure onto 503 flush mounting box (approximately Ø 3.5mm)
- 1 quick guide

DESCRIPTION OF DISPLAY KEYS
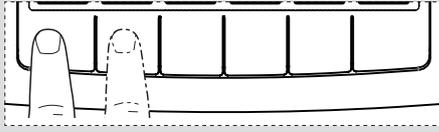
Pressing any key for the first time lights up the display.
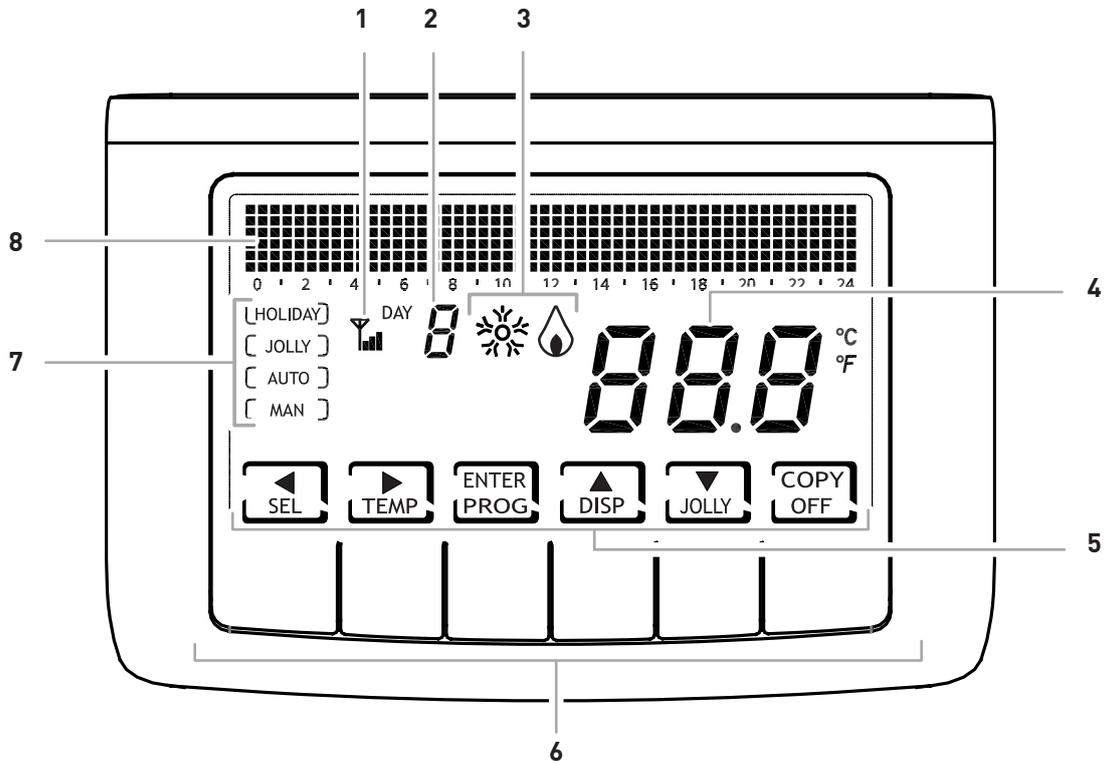
1	GSM antenna
2	Day of the week
3	Activation status: air conditioning or heating
4	Room temperature (Celsius / Fahrenheit)
5	Multi-function key icons
6	Multi-function keys
7	Operating mode
8	Bar graph to display messages and daily programming

The function of the multi-function keys varies depending on the situation and is described by the symbol that appears on the display next to the key.

TECHNICAL FEATURES

Temperature regulation scale	2 - 40 °C, 0.1°C increment
Measurement scale/room T display	- 50 ÷ + 50 °C
Power supply	230V 50 Hz
Maximum absorbed power	10W
Output type	2 relays with dry changeover contact (COM/NO/NC) 3 screw clamps (closed + open)
Input type	■ 1 auxiliary probe - NTC 10K - Lmax 100m - cross-section 0.5 ÷ 1.5 mm^2 ■ 2 auxiliary inputs - dry contacts
Buffer battery	For programming data and clock/calendar
Contact range	5(3)A 250 Vac
Type of action	1 B.U. (connection micro-switch)
Software	class A
Minimum regulation differential	0.3 ÷ 5 K
Thermal gradient of reference	4 K/h
Maximum room temperature	45°C
Storage temperature	-10°C ÷ +60°C
Electric insulation	Double insulation
Degree of protection	IP30
Pollution degree	2
Pulse voltage	4000V
Assembly	on wall or on flush mounting box
Dimensions	137 x 90 x 32 mm
SIM	slot for micro SIM card
Quad Band	EGSM850/900/1800/1900 MHz
Output power	■ class 4 (2W) for 850/900 MHz ■ class 1 (1W) for 1800/1900 MHz
Sensitivity	■ 107dBm@850/900 MHz ■ 106dBm@1800/1900 MHz
Compliant with	EN 60730-1 standards and second parts, Directive R&TTE EN 301 489-1, EN 301 489-7, EN 301 511
ErP classification	ErP Class IV; 2% [Reg. EU 811/2013 - 813/2013]
Product not made in Italy	

Contents

1 - INSTALLATION

⚠ **ATTENTION!**
Installation must be done by qualified personnel in compliance with the requirements concerning installation of electrical equipment.

⚠ **ATTENTION!**
Installation operations must be done with the system's power disconnected.

The programmable thermostat CH140GSM2 must be installed on the wall or on a flush mounting box, in 3 units or round, at a height of about 1.5m from the floor, in a position to properly detect room temperature.
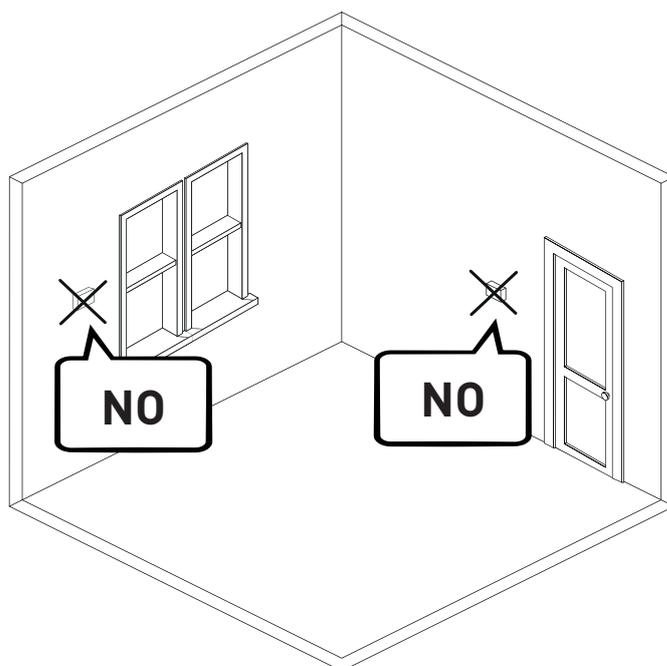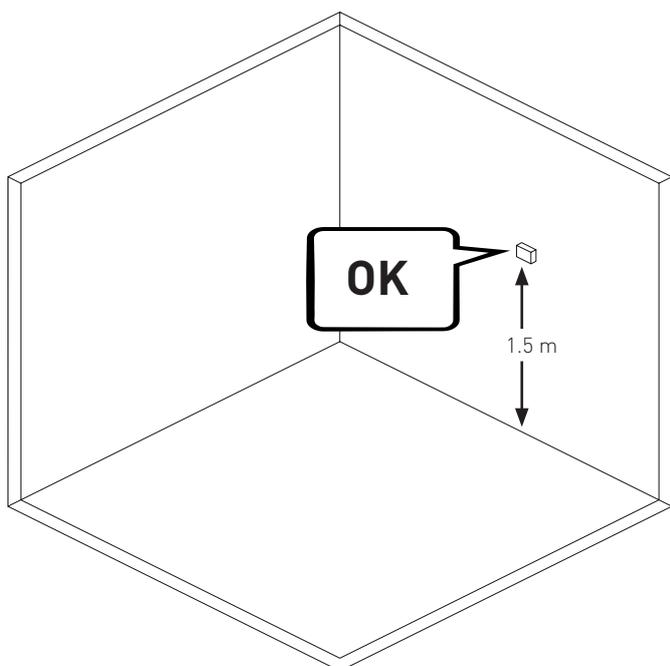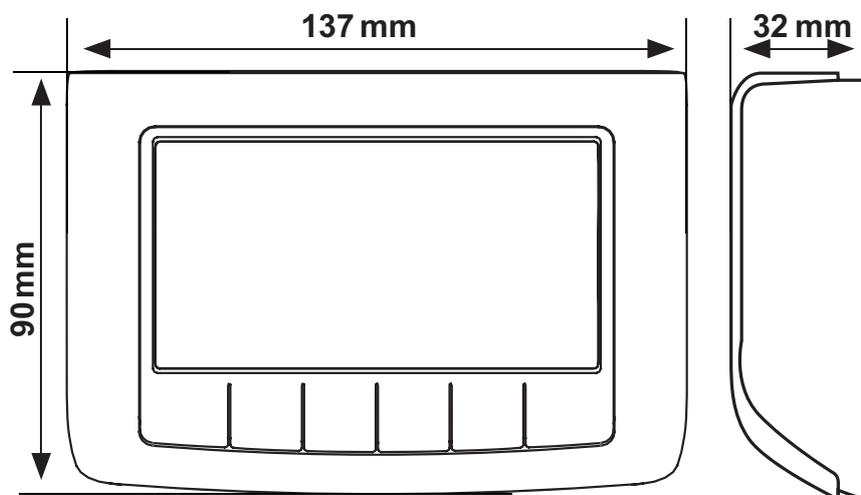
Pry the back panel off the body by applying pressure to the specific groove.

1

2
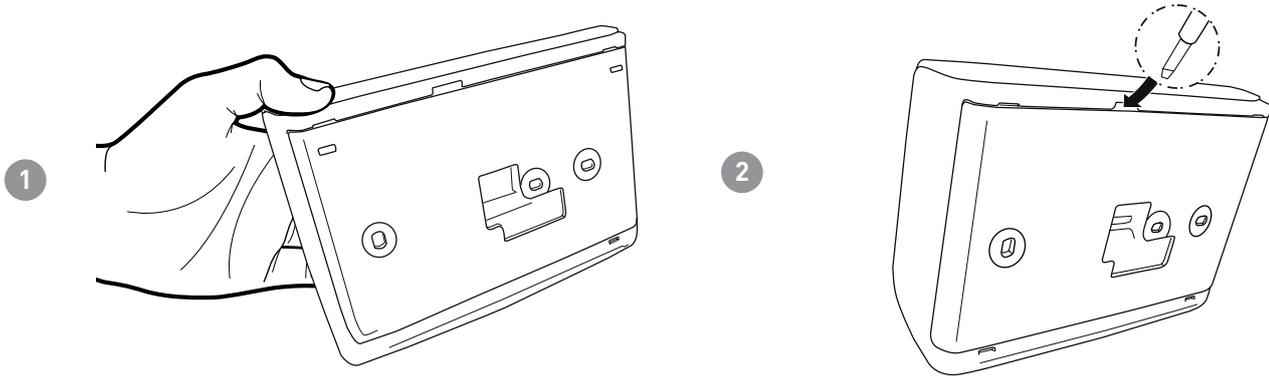
Remove the insulating protection by unscrewing the specific waterproof screw.

3

CH140GSM2

CE

230V

4

CH140GSM2

CE

230V
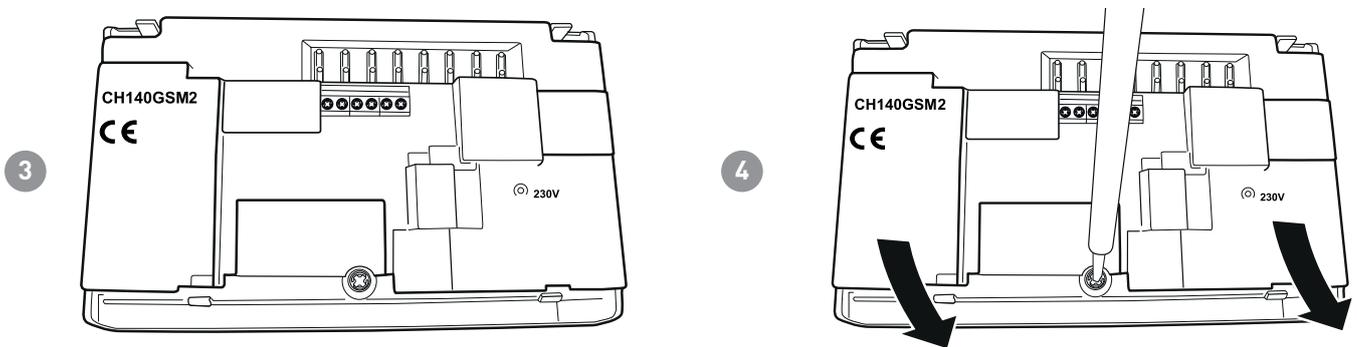
Make the electrical connections (refer to the "Electrical connections" paragraph) and secure the panel to the wall with the supplied screws.

5

6
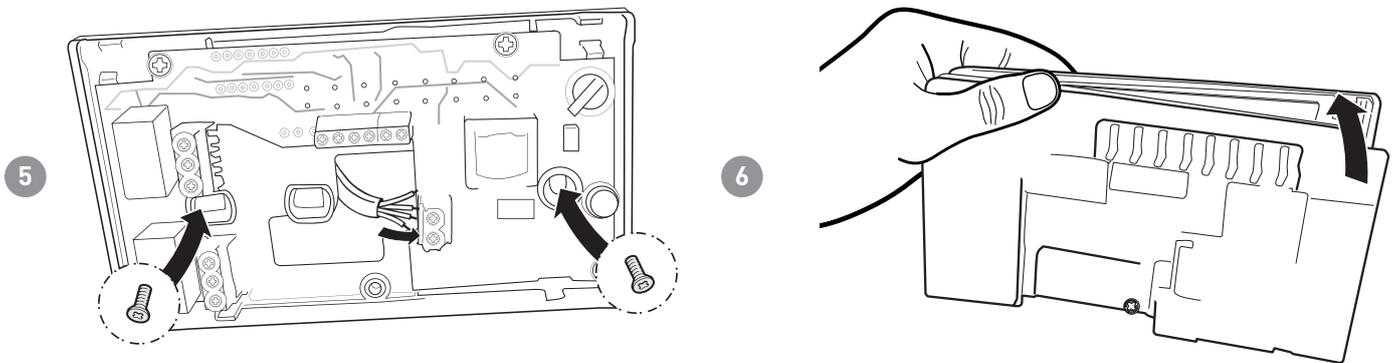
Tighten the screw shown and hook the body onto the panel on the wall.

7

CH140GSM2

CE

230V
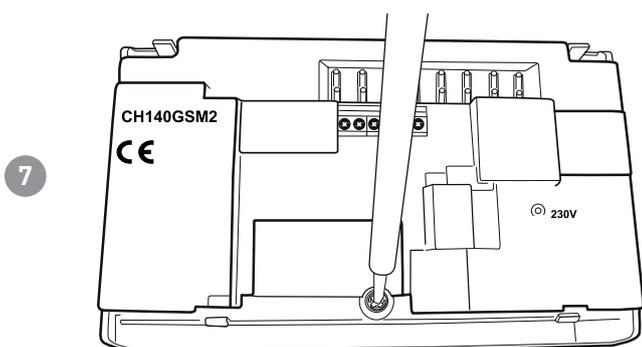
Open the SIM holder compartment located on the back part of the front panel.

8

9
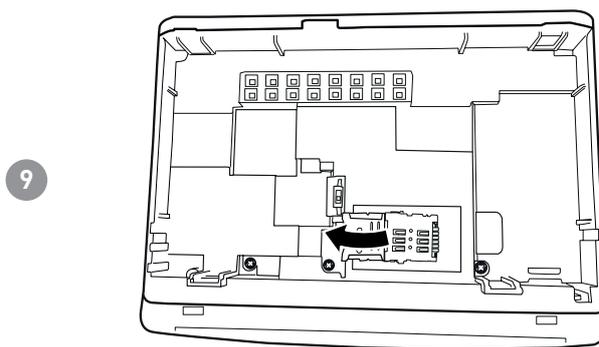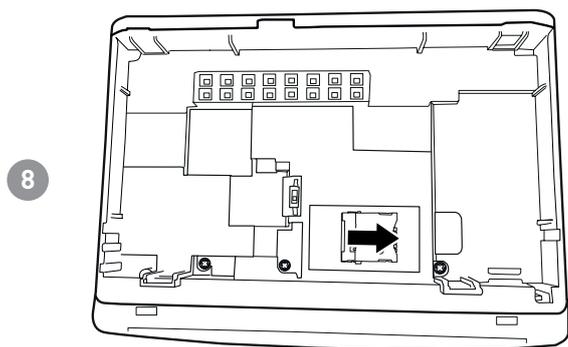
Insert a SIM card and close the compartment panel. Move the switch S1 to ON.

9

micro SIM

10

Hook the body onto the panel on the wall.

11
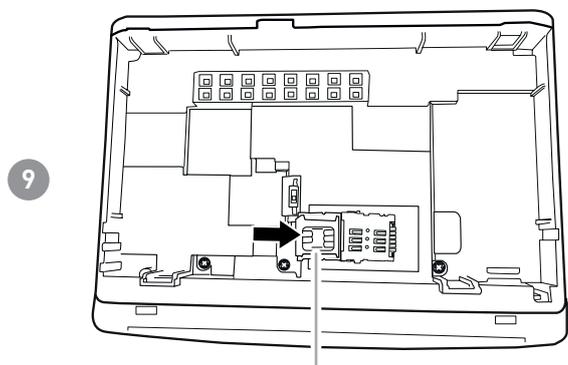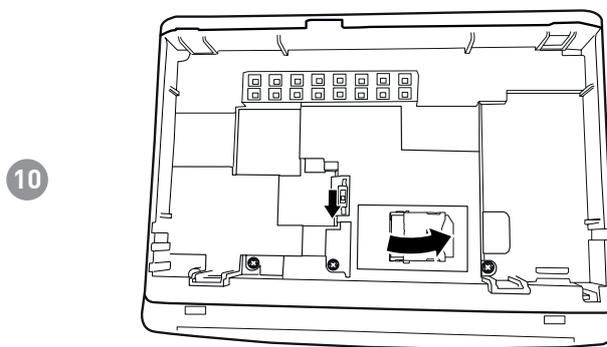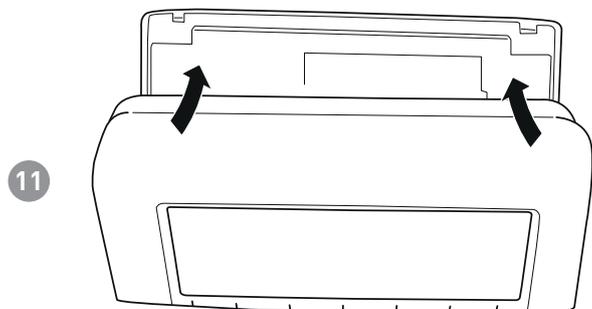
The SIM used must comply with the standard GSM 11.12 phase 2+, and have a rechargeable voice telephone with SMS contract or a subscription. Do NOT use the USIM cards of the mobile phone provider ¨3¨.
Check the SIM card on a phone before inserting it (perform an SMS sending/reception test) and deactivate the PIN code request.

1.1 - GSM OPERATION FEEDBACK

The connection to the GSM network of the programmable thermostat can be detected by the antenna symbol and three bars.

The antenna symbol flashes if the module is not registered on the GSM network (e.g. no coverage, SIM not inserted or blocked by PIN, etc.). Once registered, the antenna turns on steady and the bars appear accordingly, indicating the intensity of the signal.

The following table shows the signal values and the corresponding signals shown on the display.

SYMBOL					
"QS" VALUES	0 - 1	1 - 9	10 - 14	15 - 19	20 - 32
STATE	Not registered	Low Level	Acceptable Level	Good Level	Excellent Level

After switching the programmable thermostat on, any SIM faults are indicated within the first few seconds via the following messages appearing:

- NO SIM = check that the SIM has been inserted correctly and the SIM holder cover is closed. The message disappears after approximately 10 seconds.
- PIN ERROR = the SIM is PIN-protected: delete the PIN and reinsert the SIM into the device.
- ERRO xx = various system errors: contact the manufacturer.

Upon start-up, "NO SIM" appears for 10 seconds if the SIM is not detected. Other errors, such as "PIN ERROR" or "ERROR: ...." are displayed cyclically.

2 - ELECTRICAL CONNECTION

⚠ **ATTENTION!**
Electrical connections must be made by qualified personnel.

⚠ **ATTENTION!**
Electrical connection operations must be done with the system's power disconnected.

Electrical connections must be made referencing the following diagram.
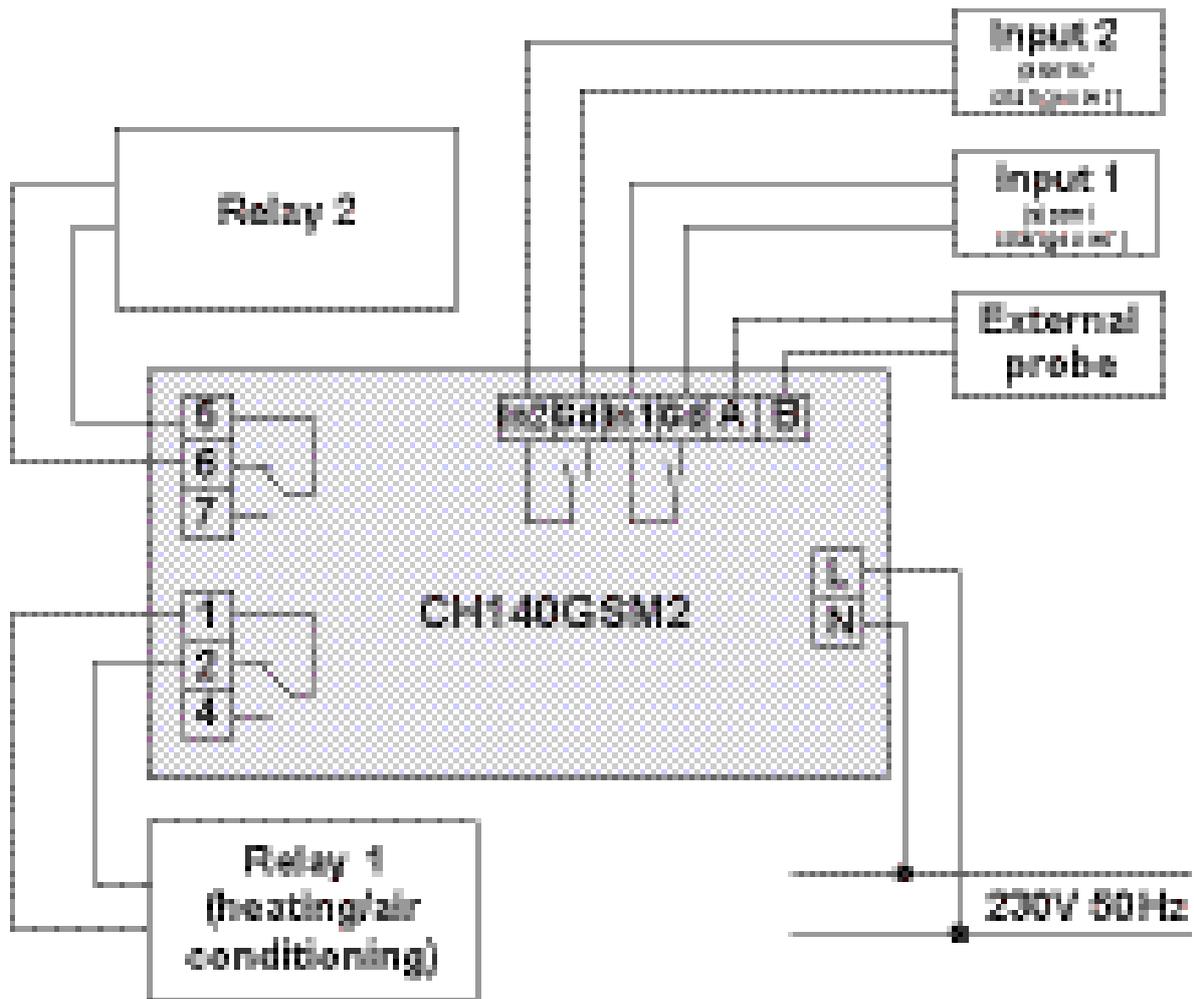
During potential blackouts, the parameters will not be lost as the settings are stored in a non-volatile memory. Even when there are long power failures, the time/date remain stored thanks to an internal buffer battery.

3 - QUICK GUIDE FOR PROGRAMMING

The first time any touch key is pressed has no effect, but only activates the functions of the buttons themselves and lights up the display.

After 30 seconds of no interaction, the display goes back to the main screen.

ENTER = allows you to CONFIRM   PROG = allows you to PROGRAM

3.1 - DATE AND TIME SETTING

1

```
12:01  01-01-18
        DAY 1
    OFF      23.0 ℃
SEL  TEMP  PROG  DISP  JOLLY  OFF
```

2

```
USER PROGR
    DATE AND TIME
    WINTER
    PROFILE
    DISP: TIME
    RELAY2: OFF!
    LOCK NO
```

(2s)

```
DATE AND TIME


◄  ►  PROG
```

3

```
DAY           9
◄  ►  ENTER  ▲  ▼
```
PRESS ►

```
MONTH        11
◄  ►  ENTER  ▲  ▼
```
PRESS ►

```
YEAR       2018
◄  ►  ENTER  ▲  ▼
```
PRESS ►

```
HOURS     12:02
◄  ►  ENTER  ▲  ▼
```
PRESS ►

```
MIN       12:02
◄  ►  ENTER  ▲  ▼
```
PRESS ENTER
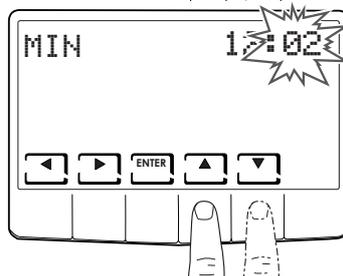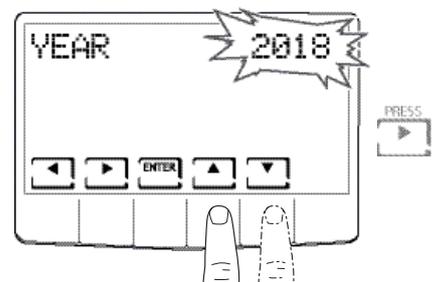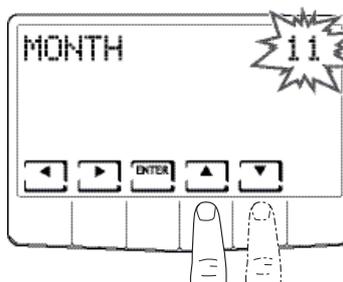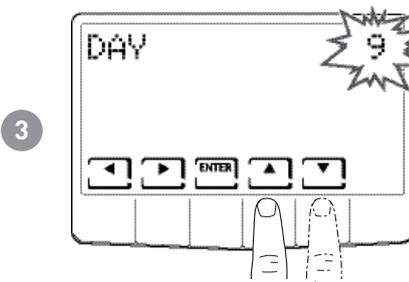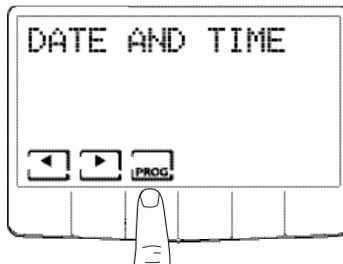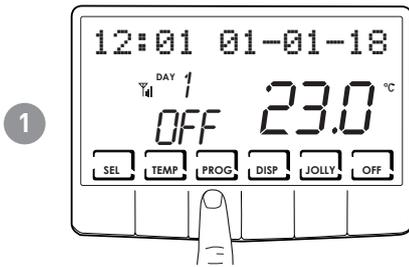
Note: pressing ◄ always allows you to go back to the previous page.

3.2 - WINTER/SUMMER SETTING

1

```
12:01  01-01-18
    DAY 1
    OFF    23.0 °C

SEL  TEMP  PROG  DISP  JOLLY  OFF
```

2

```
USER PROGR

    DATE AND TIME
    WINTER
    PROFILE
    DISP: TIME
    RELAY2: OFF!
    LOCK NO
```

⧗ 2s

```
DATE AND TIME

◄  ►  PROG
```

PRESS ►
x1

```
WINTER

    WINTER
    SUMMER

ENTER  ▲  ▼
```

PRESS ENTER
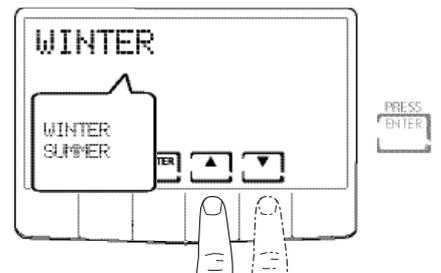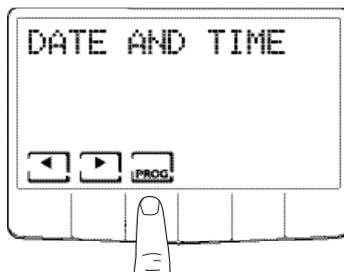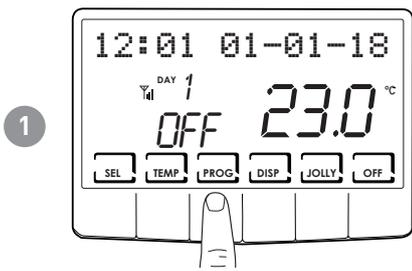
3.3 - HOURLY PROGRAMMING SETTING (PROFILE)

The profiles are set based on whether WINTER or SUMMER mode was previously selected.
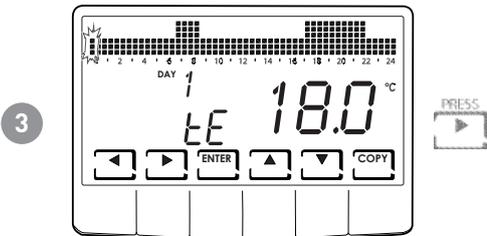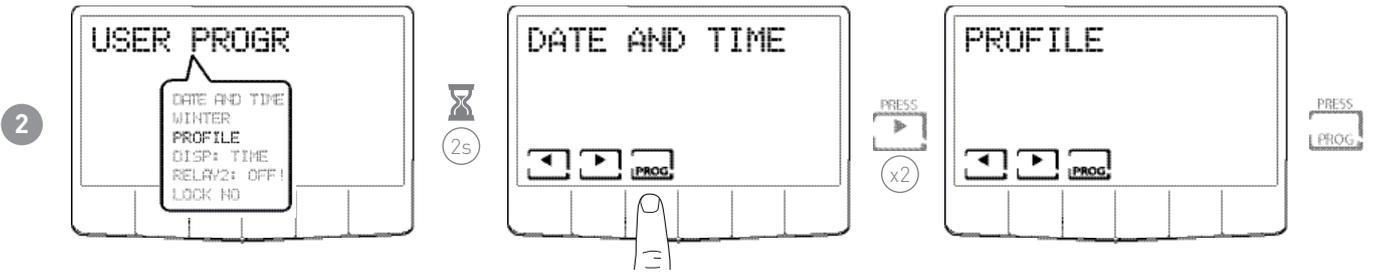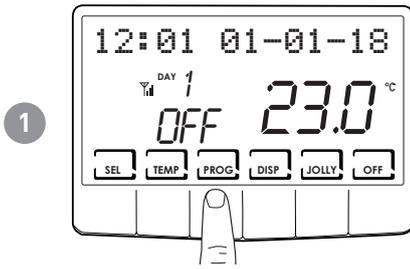
Note: pressing ◄ or ► allows you to scroll through the hours.
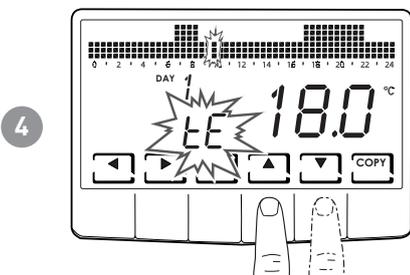
Pressing ▲ or ▼ allows you to select the profile depending on the time.

SETTABLE PROFILES:

- tC (comfort) = SUMMER, WINTER
- tE (economy) = SUMMER, WINTER
- tA (antifreeze) = only for WINTER
- OFF = only for SUMMER

In winter tE < tC; in summer tC < tE.

Note: pressing OK allows you to go to the next zone. Pressing COPY allows you to copy the temperature profile being displayed to the following day.

3.4 - SETTING THE DISPLAY
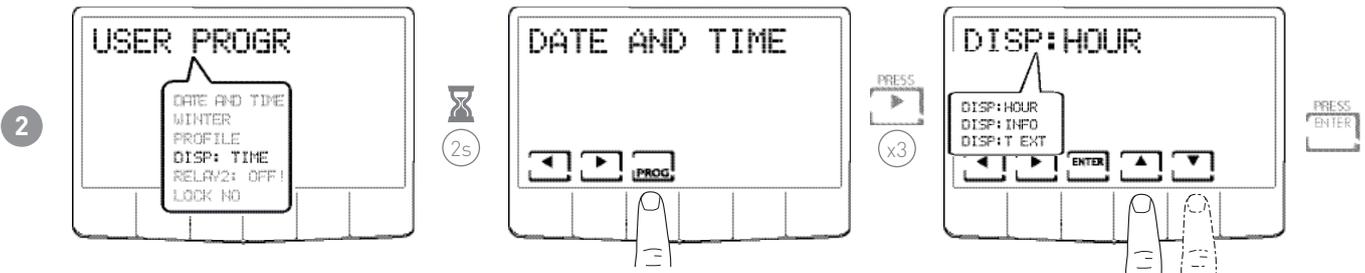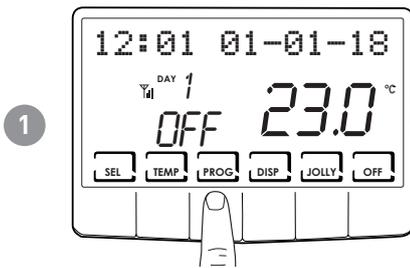
DISPLAYS:

- DISP:HOUR = displays the time on the main bar.
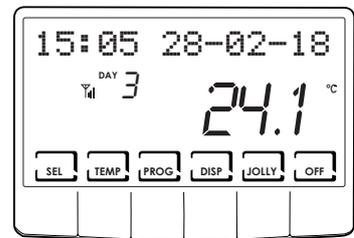
- DISP:INFO = displays information on the set operating mode.
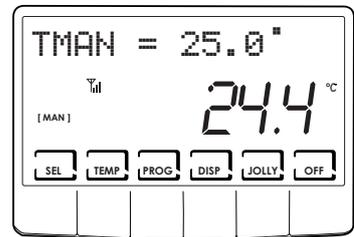
- DISP:T EXT = displays the temperature of the external probe.
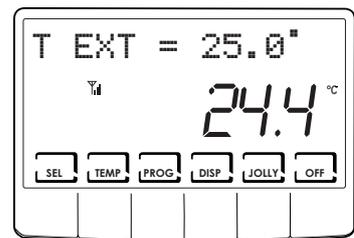
3.5 - SETTING RELAY2
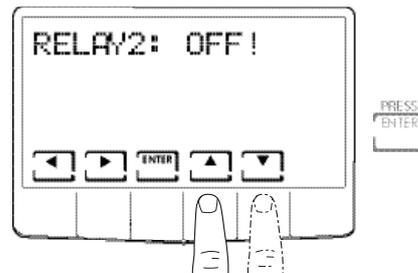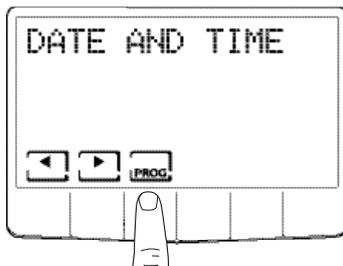
Note: when there is the symbol "!" it is not possible to modify the status of relay2 because controlled by SMS or by the PROFILE or SUM, namely not in LOC (local) mode.

3.6 - SETTING KEYBOARD LOCK WITH PASSWORD

1

```
12:01  01-01-18
  DAY 1
  OFF   23.0 ℃
 SEL  TEMP  PROG  DISP  JOLLY  OFF
```

2

```
USER PROGR

  DATE AND TIME
  WINTER
  PROFILE
  DISP: TIME
  RELAY2: OFF!
  LOCK NO
```

⏳ (2s)

```
DATE AND TIME

 ◀  ▶  PROG
```

PRESS ▶ (x5)

```
LOCK NO

 ◀  ▶  ENTER  ▲  ▼
```

PRESS ENTER
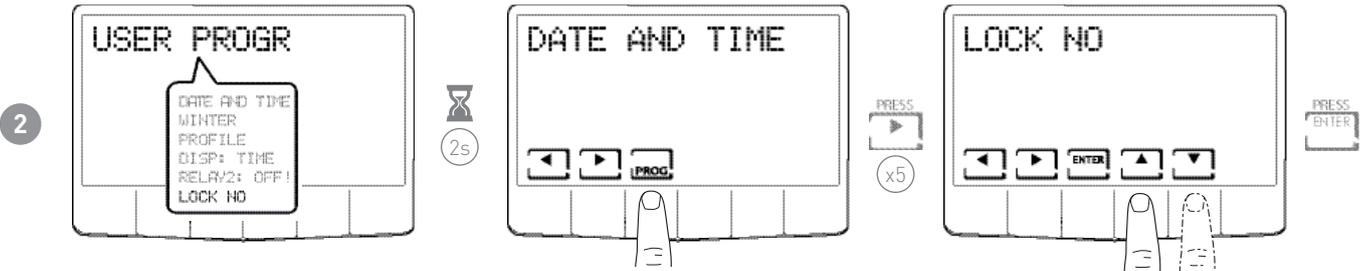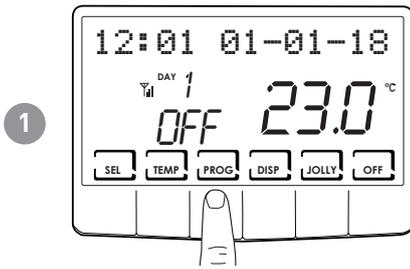
Note: selecting LOCK YES displays the OK key. Then follow the procedure described in points 3 and 4.

3

```
LOCK YES

  PROG  ▲  ▼
```

4

```
PASSWORD
     100
 ◀  ▶  ENTER  ▲  ▼
```

PRESS ▶

```
PASSWORD
     110
 ◀  ▶  ENTER  ▲  ▼
```

PRESS ▶

```
PASSWORD
     1 1 1
 ◀  ▶  ENTER  ▲  ▼
```

PRESS ▶

5

```
12:01  01-01-18
[HOLIDAY]  DAY H
       23.0 ℃
 SEL
```
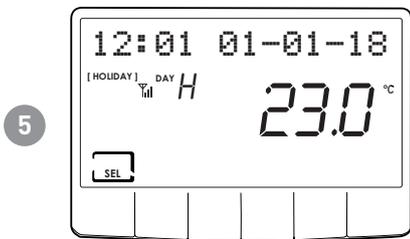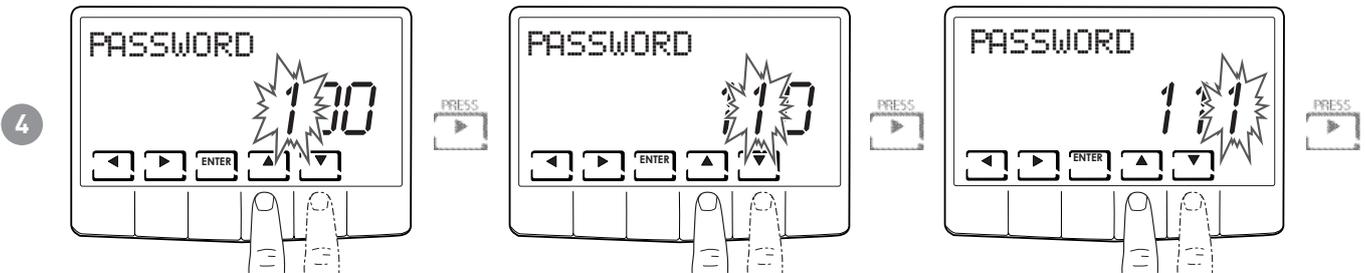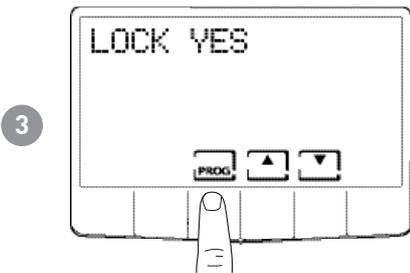
When the keyboard is locked, you can only press the SEL key.
Pressing SEL allows you to enter the set password and unlock the keyboard.

4 - OPERATION

The programmable thermostat CH140GSM2 is a device equipped with a temperature sensor, with two output relays on board, which simultaneously manages heating and air conditioning units.
The LCD display shows you how much energy the entire system consumes through an intuitive graph.

4.1 - OPERATING PROGRAMS

The CH140GSM2 programmable thermostat has different operating modes, called programs:
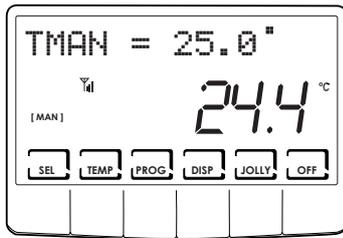
[MAN]

■   MANUAL PROGRAM

The device regulates room temperature, using a set temperature specified each time, for an unlimited amount of time, until another program is selected.
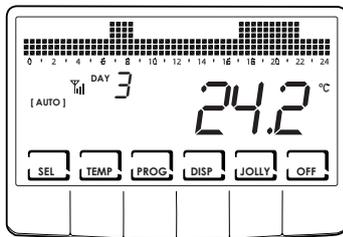
[AUTO]

■   WEEKLY PROGRAM

The device manages the set temperatures depending on the hourly programs on a weekly profile. You can set the following temperature levels: tC, tE, tA, OFF (every half hour).
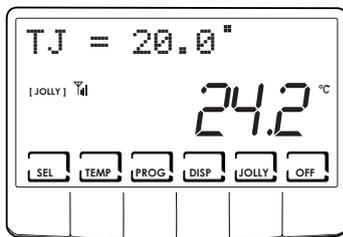
[JOLLY]

■   TEMPORARY PROGRAM

The device manages the system using a temperature that can be set over a variable amount of time (you set the hour and the day up to when you wish to keep the set temperature).
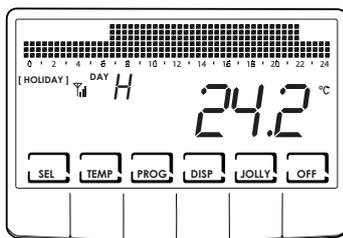
[HOLIDAY]

■   HOLIDAY PROGRAM

The device manages the system through an extra daily profile (in the event you are at home for a holiday). You can set two temperature levels: tC, tE, tA, OFF (every half hour).
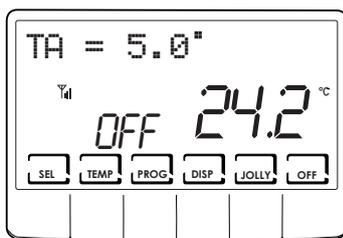
■   SYSTEM OFF or ANTIFREEZE PROGRAM

Press the OFF key to switch off the system. During WINTER mode, it maintains the antifreeze temperature.
If you press the OFF key again in SYSTEM OFF mode, it goes back to the previously set operating mode.

4.2 - SELECTING THE OPERATING PROGRAM

The programs are selected by cyclic sequence.
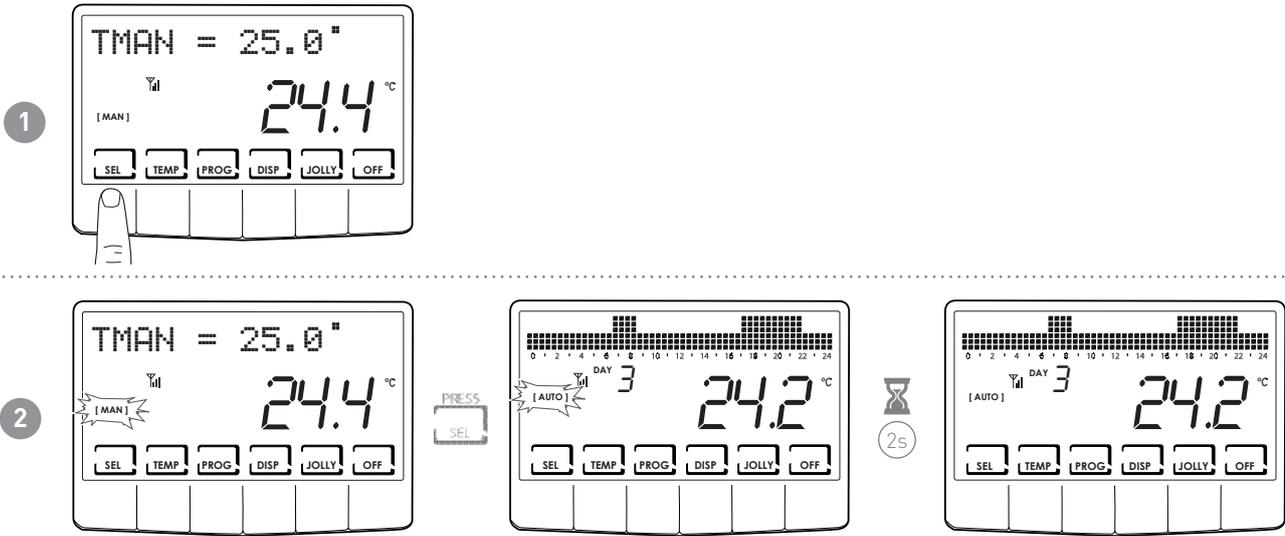
Note: you can select the program from: [MAN] - [AUTO] - [JOLLY] - [HOLIDAY]

Pressing the DISP key allows you to display certain parameters set according to the active operating program.

4.3 - "JOLLY" PROGRAM SETTING

Select JOLLY mode by following the procedure described in the "SELECTING THE OPERATING PROGRAM" paragraph or by pressing the JOLLY key.
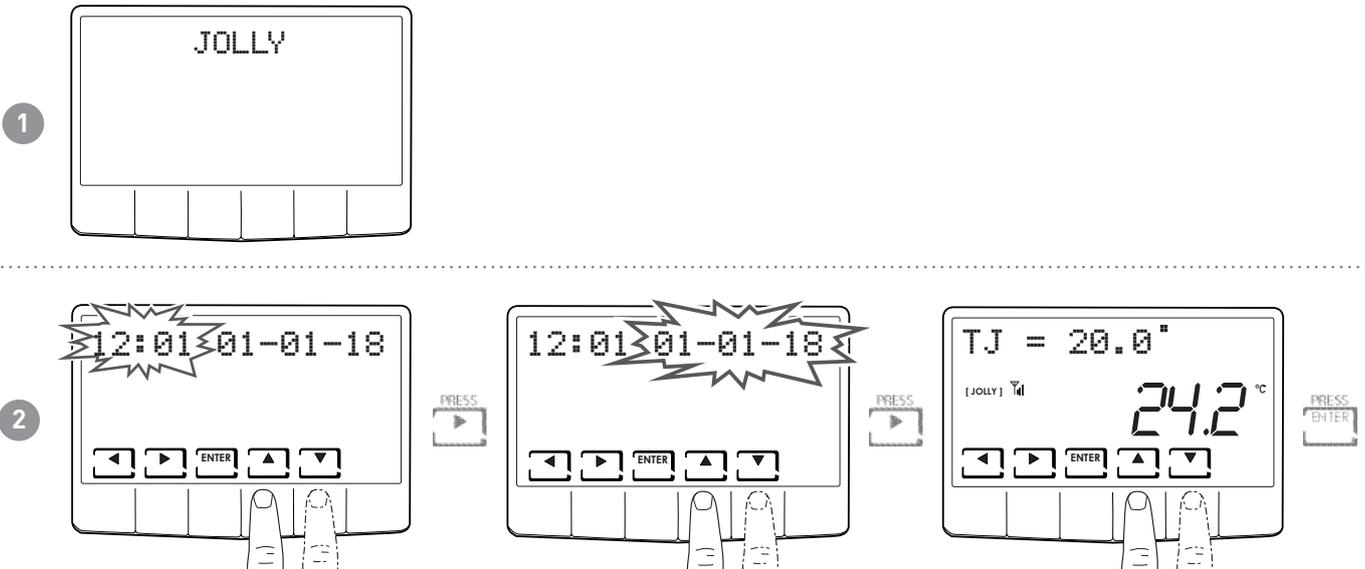
Set the date and time up to when you wish to keep the selected temperature.

At the end of JOLLY mode, the programmable thermostat goes back to the previously set operating mode.

4.4 - SETTING "AUTO" and "HOLIDAY" PROGRAM TEMPERATURE

You can set a tC and tE temperature value between 2° and 40°C.
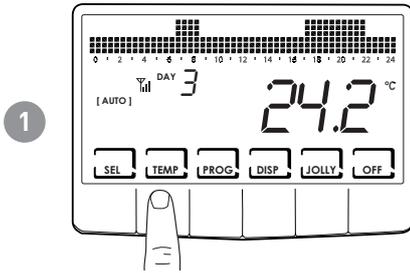
Note: in winter tE < tC; in summer tC < tE.
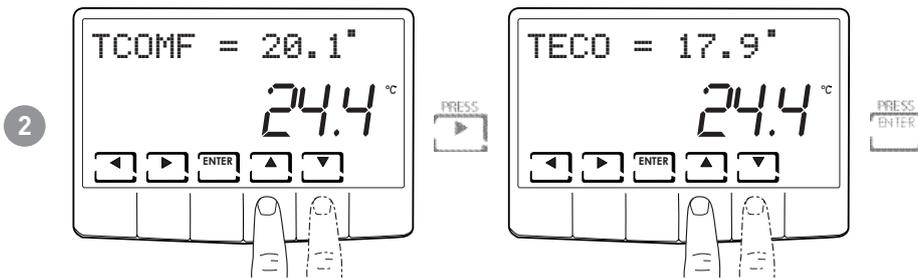
4.5 - SETTING "MANUAL" AND "JOLLY" PROGRAM TEMPERATURE

You can set a tMAN and tJ temperature value between 2° and 40°C.
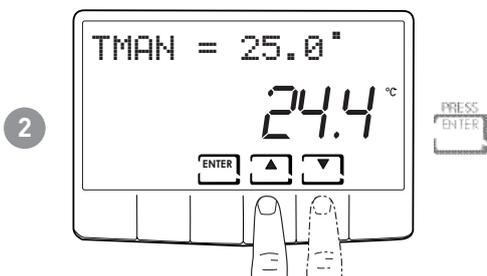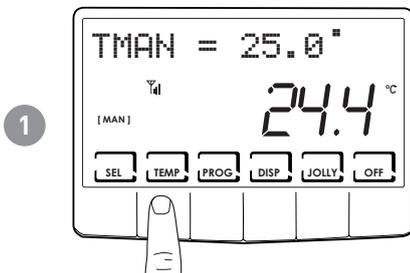
5 - PARAMETER DISPLAY

Pressing the DISP key allows you to cycle through the most important parameters.

5.1 - DATE AND TIME

5.2 - SEASON

5.3 - PROFILE

[AUTO] and [HOLIDAY]
display mode
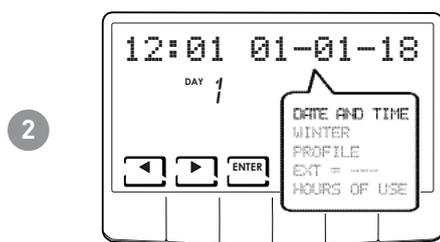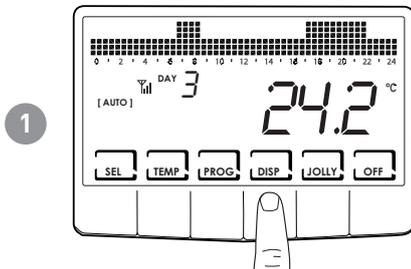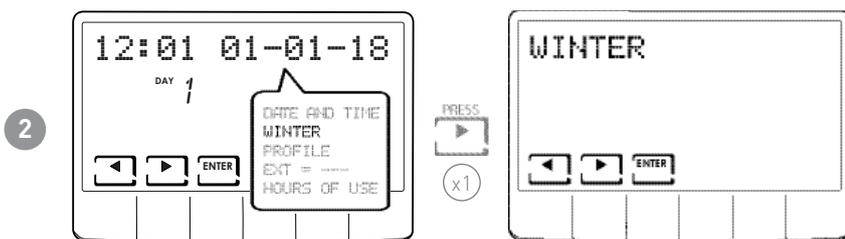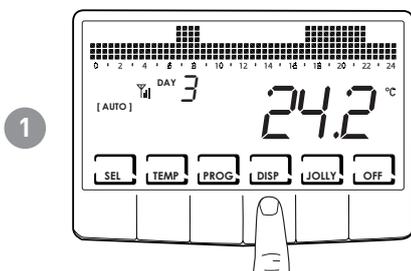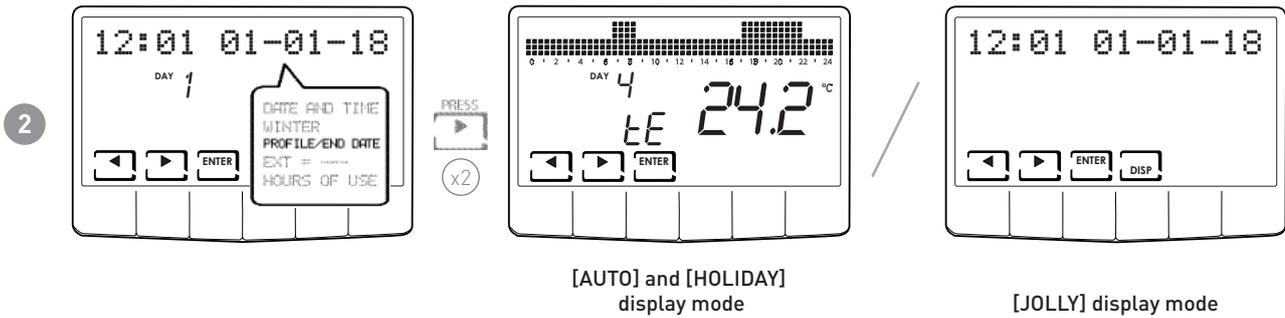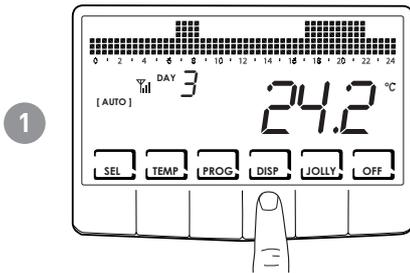
[JOLLY] display mode

Note: this section is only visible in [AUTO] and [HOLIDAY] mode; in [JOLLY], the date and time the mode ends are visible.

5.4 - EXTERNAL PROBE TEMPERATURE
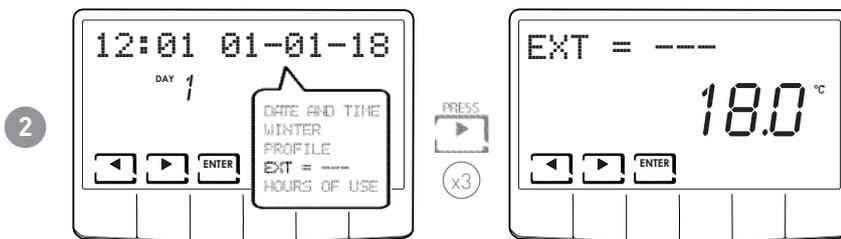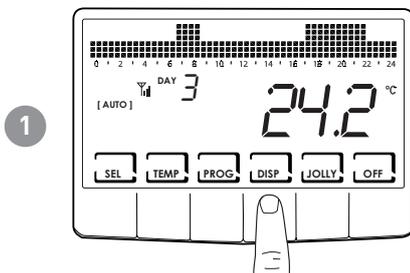
Note: if there is no external probe, "---" is displayed.

5.5 - HOURS OF USE

The programmable thermostat records the total consumption of the heating and cooling hours.
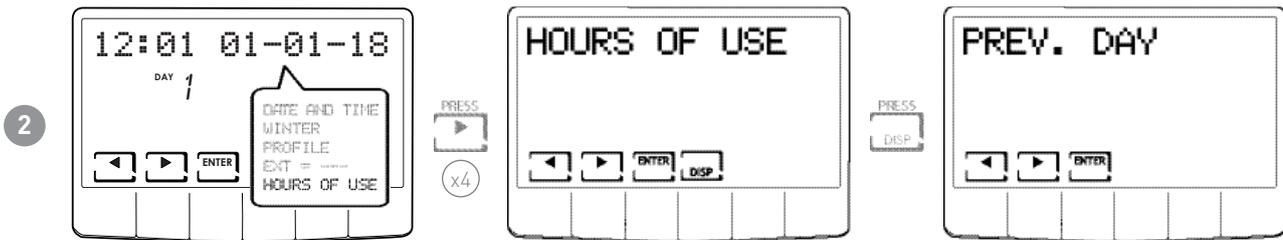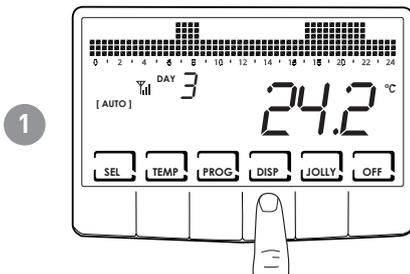
Note: you can display the user statistics for
- PREVIOUS DAY = total operating hours in the previous day
- CURRENT MONTH = total operating hours in the current month
- PREVIOUS MONTH = total operating hours in the previous month
- CURRENT YEAR = total operating hours in the current year
- TMAX = maximum room temperature measured the previous day
- TMIN = minimum room temperature measured the previous day
- RESET

Pressing DISP on the CURRENT MONTH, PREVIOUS MONTH, and CURRENT YEAR screens displays a graph with details on use (shown below).
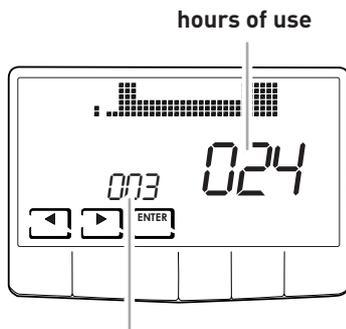
hours of use

display day or month or year

Pressing ◀ or ▶ allows you to scroll through and display the day of the month (or the month or year, depending on the page being displayed) and the hours of use.

Note: select RESET YES to reset the use statistics.

6 - ADVANCED FUNCTIONS

To access ADVANCED PROGRAMMING, hold down the PROG key for a few seconds.

6.1 - SECONDS DISPLAY STAYS ON

Allows you to adjust the display's backlight (sky blue light) with a duration that can be programmed between 5 and 30 seconds.
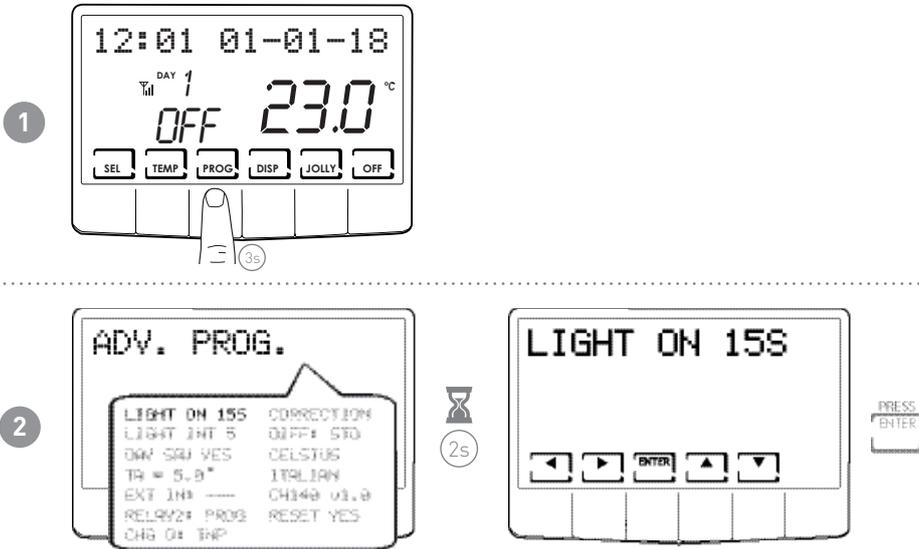
6.2 - DISPLAY LIGHTING INTENSITY

Allows you to modify the luminous intensity of the display, at 10 levels + 0 Off.
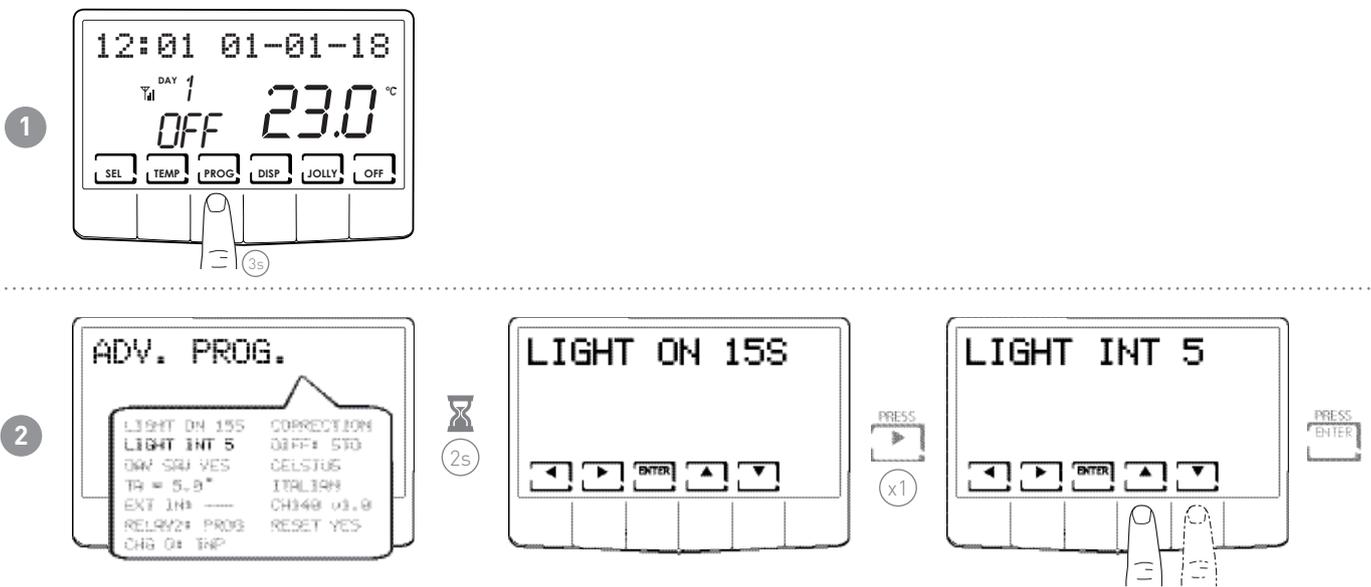
6.3 - DAYLIGHT SAVING TIME

Automatically selects daylight saving time, applicable in Europe and some other countries. This set-up automatically updates the time when it changes (March and October).
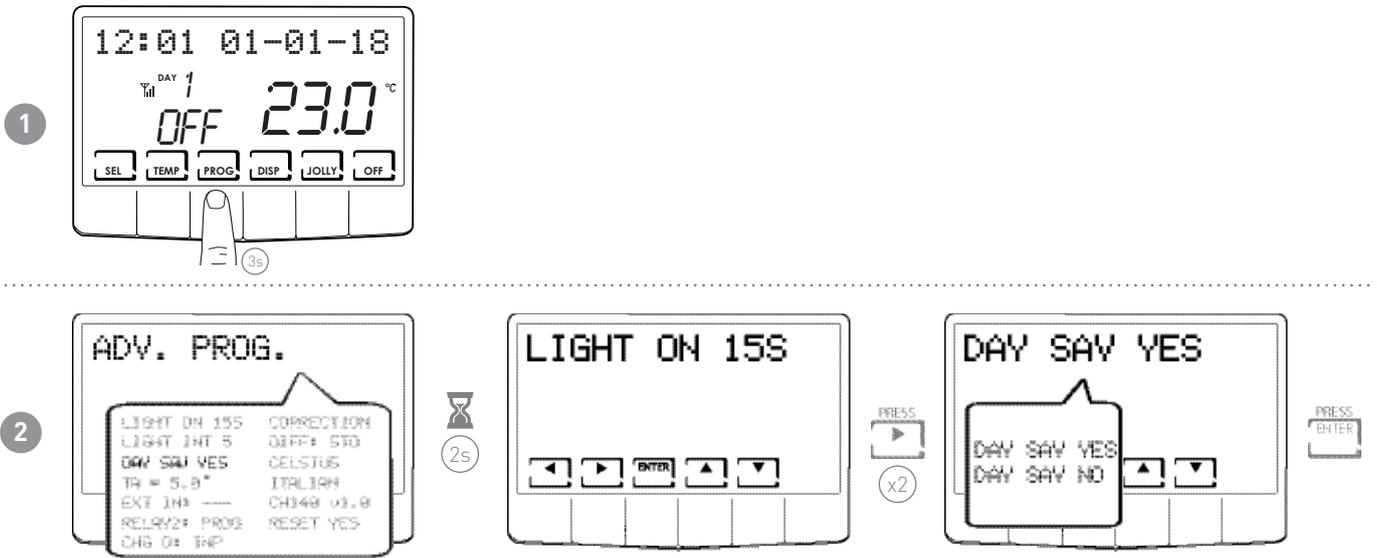
6.4 - ANTIFREEZE TEMPERATURE
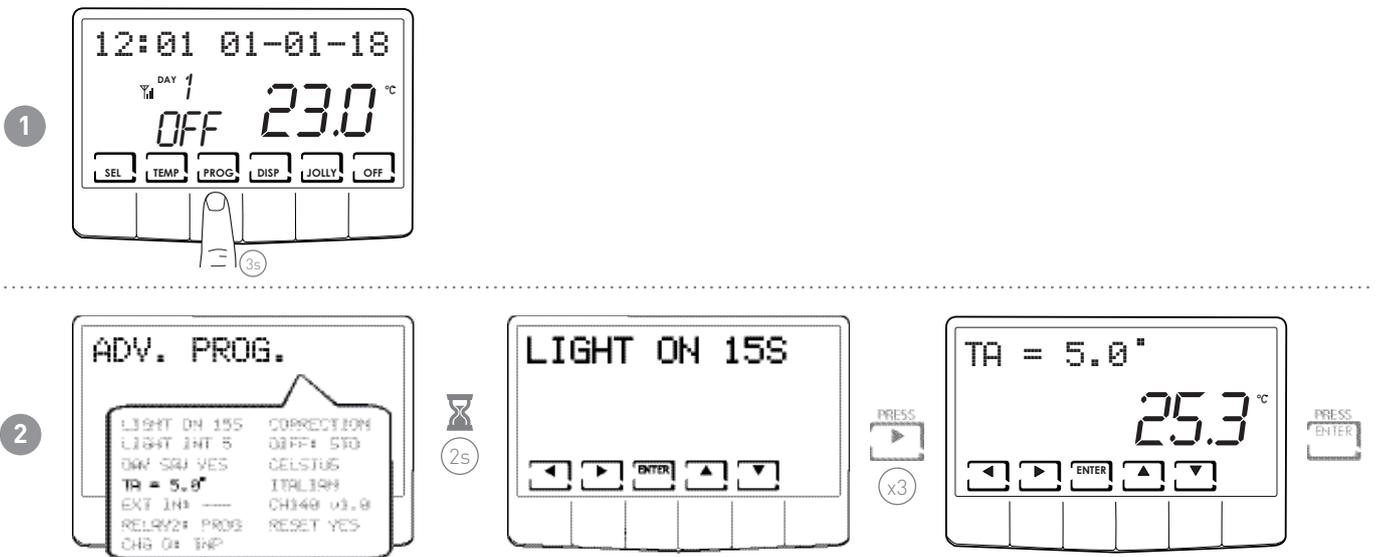
Note: the tA that can be set is between 2.0 and 7.0°C or OFF.

6.5 - EXTERNAL PROBE

This parameter allows you to set the control mode of the auxiliary input.
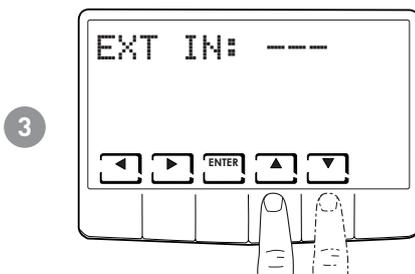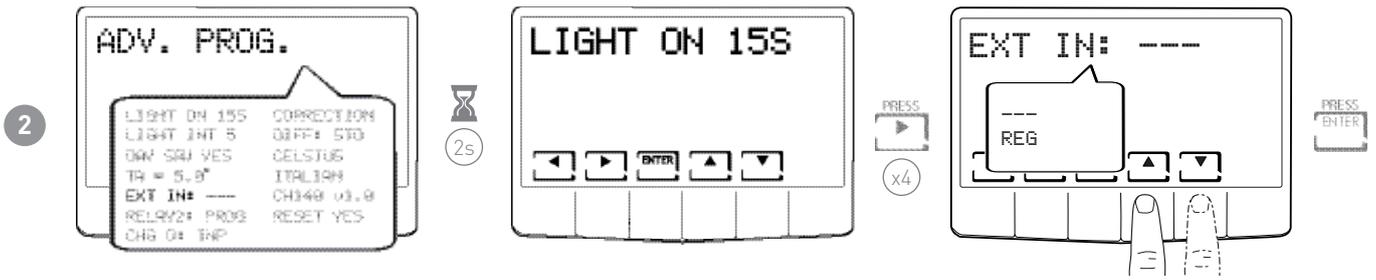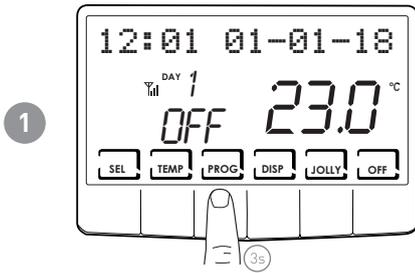
- ■ --- = action disabled
- ■ REG = regulation of room temperature with the external probe

6.6 - RELAY2

This parameter allows you to set the programmable thermostat for different types of use. The following functions are available:

■ PROG = set the on/off time profile of an external utility (e.g. irrigation, yard light, etc.);
■ SUM = if the device is set at SUMMER, relay2 allows it to manage cooling;
■ SMS = relay2 controlled via SMS or APP;
■ LOC = goes back to USER PROG and sets relay2 (ON/OFF).
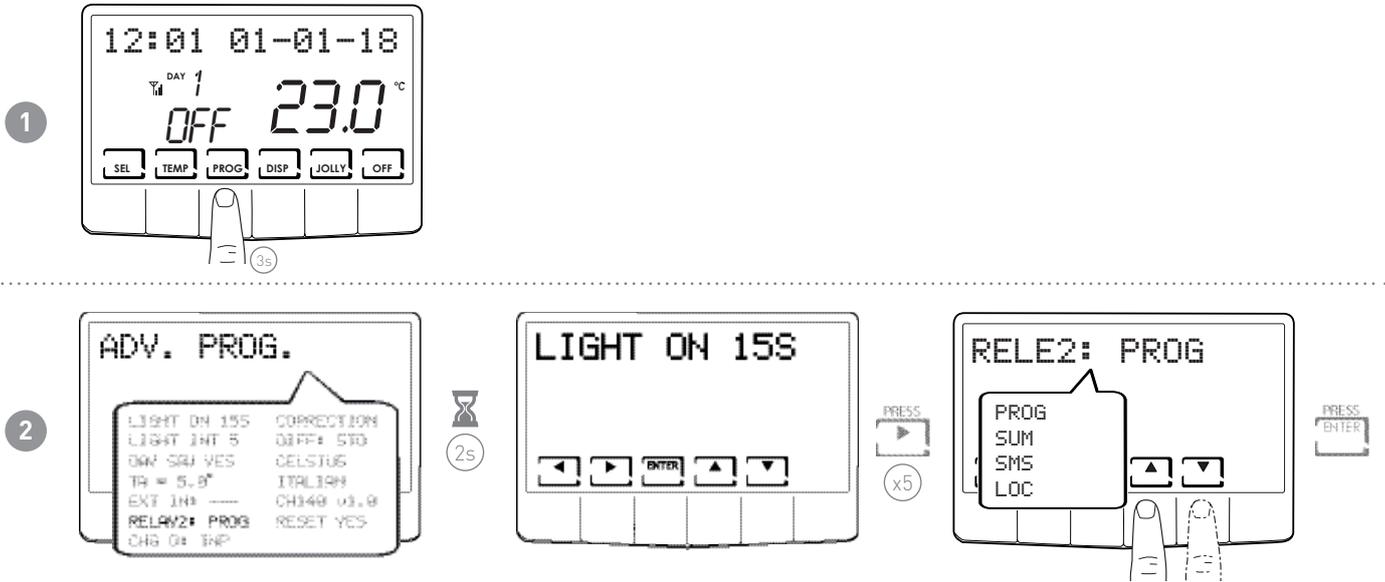
Note: when "PROG" appears on the display in place of the "ENTER" key, the "PROG" key appears.
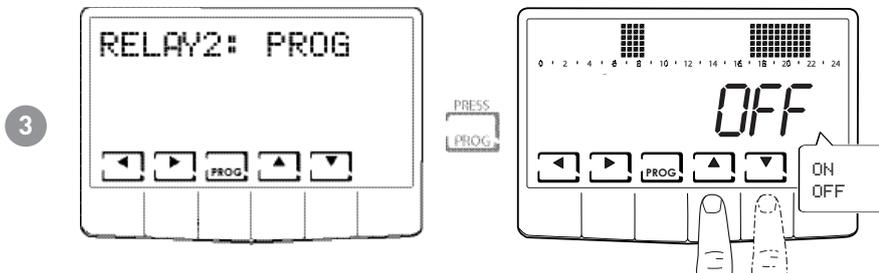
Pressing ◀ or ▶ allows you to scroll the different times.
Press the arrows ▲ or ▼ to switch relay2 on/off.

6.7 - CHANGE OVER MANAGEMENT

The change-over function (Summer/Winter change) allows you to switch the heating/air conditioning season locally (display) or remotely (digital input 1 or 2).

Note: if set from input 1 or 2, Open = Winter; Close = Summer.
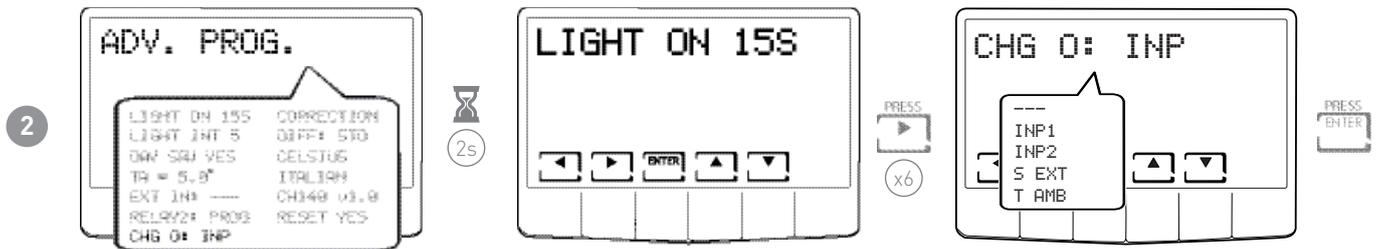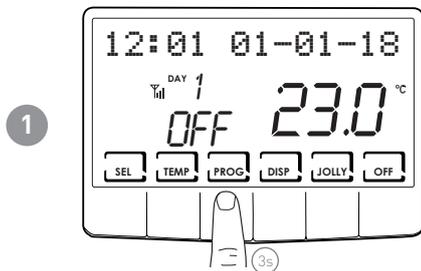
Note: when the display reads "CHG 0: S EXT" and "CHG 0: T AMB" in place of "ENTER", the "PROG" key appears allowing you to set the values.

- ■ ---- = action disabled (summer/winter changeover only from display or APP)
- ■ INP1 = change over from INPUT 1
- ■ INP2 = change over from INPUT 2
- ■ S EXT (*) = change over depending on EXTERNAL PROBE
- ■ T AMB (**) = change over depending on AMBIENT TEMPERATURE
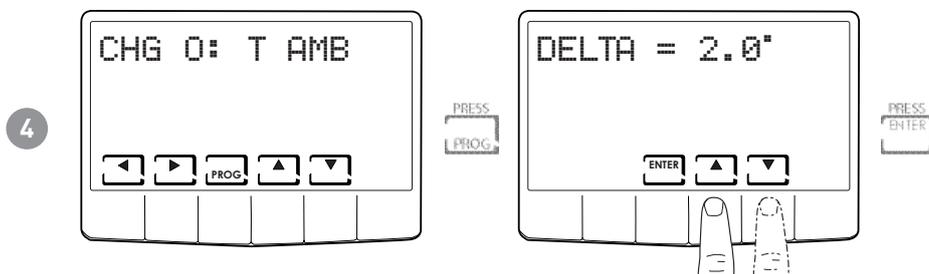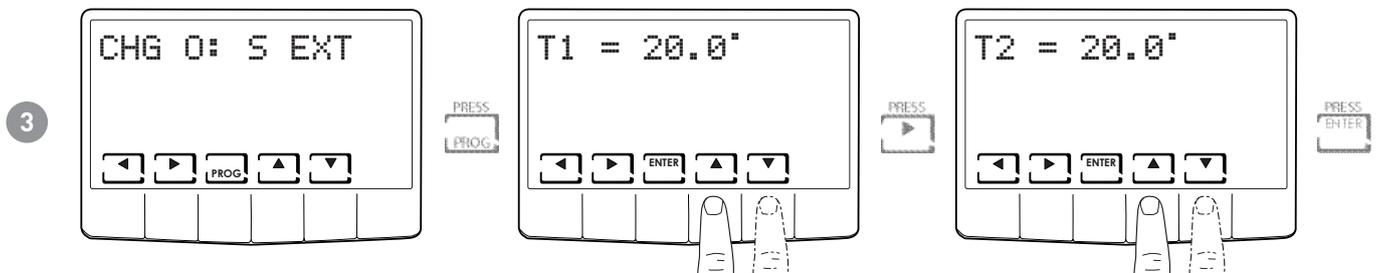
Note:

(*) Two values T1 and T2 are set, with T1 < T2; T1 (from 0 to 24°C) and T2 (from 26 to 40°C).

- ■ If temperature S EXT < T1;   Winter => Summer
- ■ If temperature S EXT > T2;   Summer => Winter

(**) The value of the DELTA dead zone is set (from 2 to 10°C)

- ■ If T AMB > TCOMF + DELTA; Winter => Summer
- ■ If T AMB < TCOMF – DELTA; Summer => Winter

6.8 - ROOM TEMPERATURE CORRECTION

This allows you to modify the read temperature, which, due to the recessed wall installation or perhaps a non-ideal height, might not indicate the true temperature perceived.
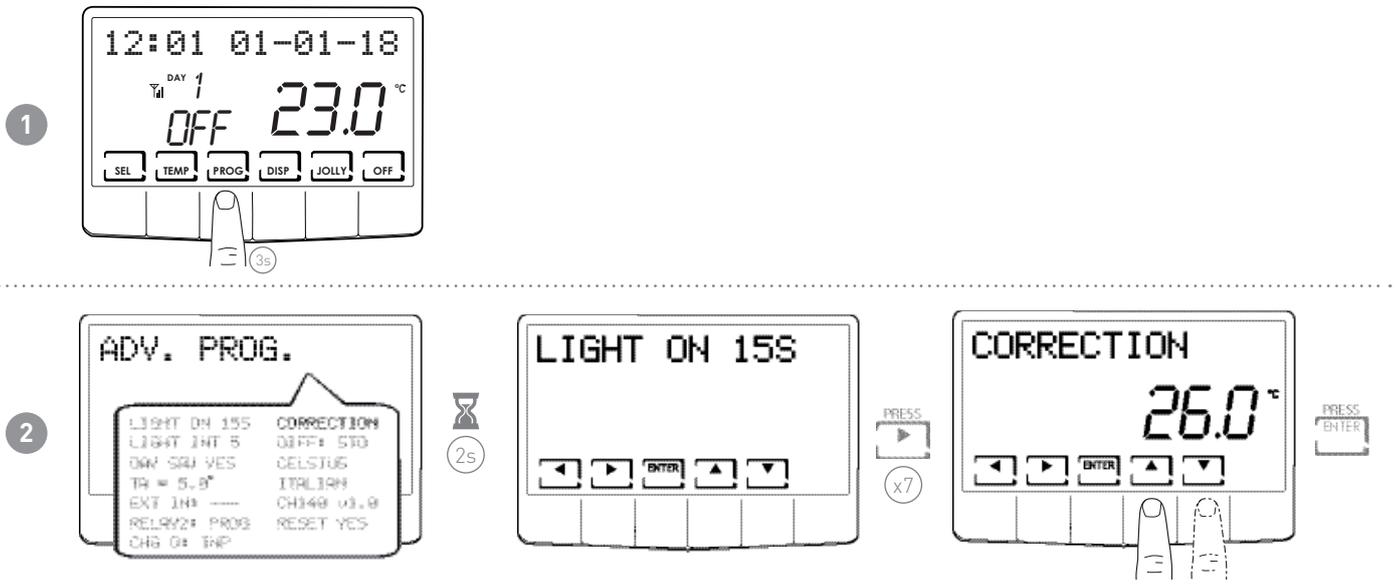
6.9 - DIFFERENTIAL MANAGEMENT
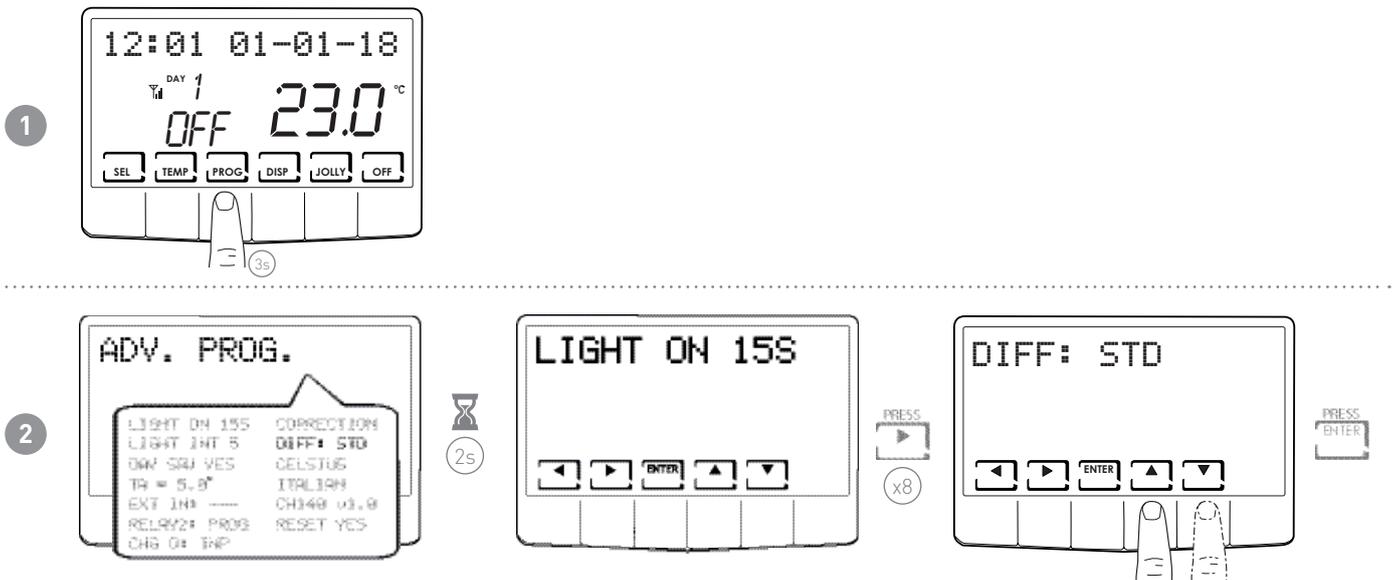
Note: the differential value that can be set is between 0.1 and 5.0, or STD.

6.10 - CELSIUS / FAHRENHEIT

This allows you to choose the temperature display scale between Celsius and Fahrenheit degrees.

Note: the default setting is Celsius.
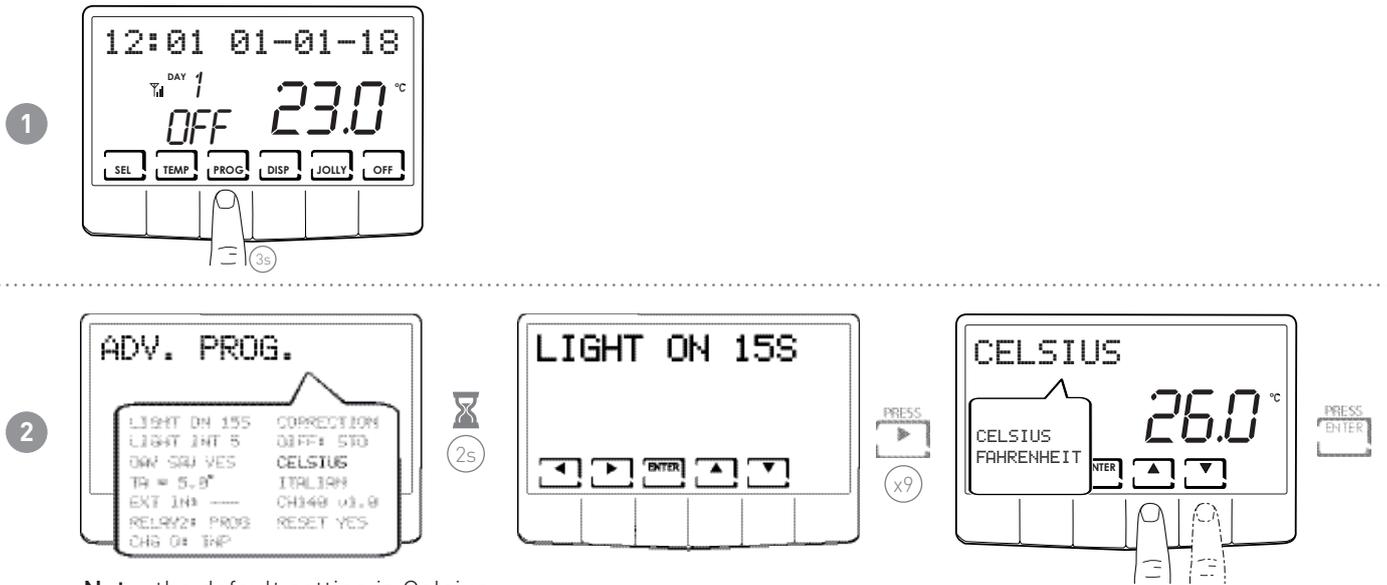
6.11 - LANGUAGE SELECTION

Allows you to change the language used during programming.

Note: the default setting is Italian.
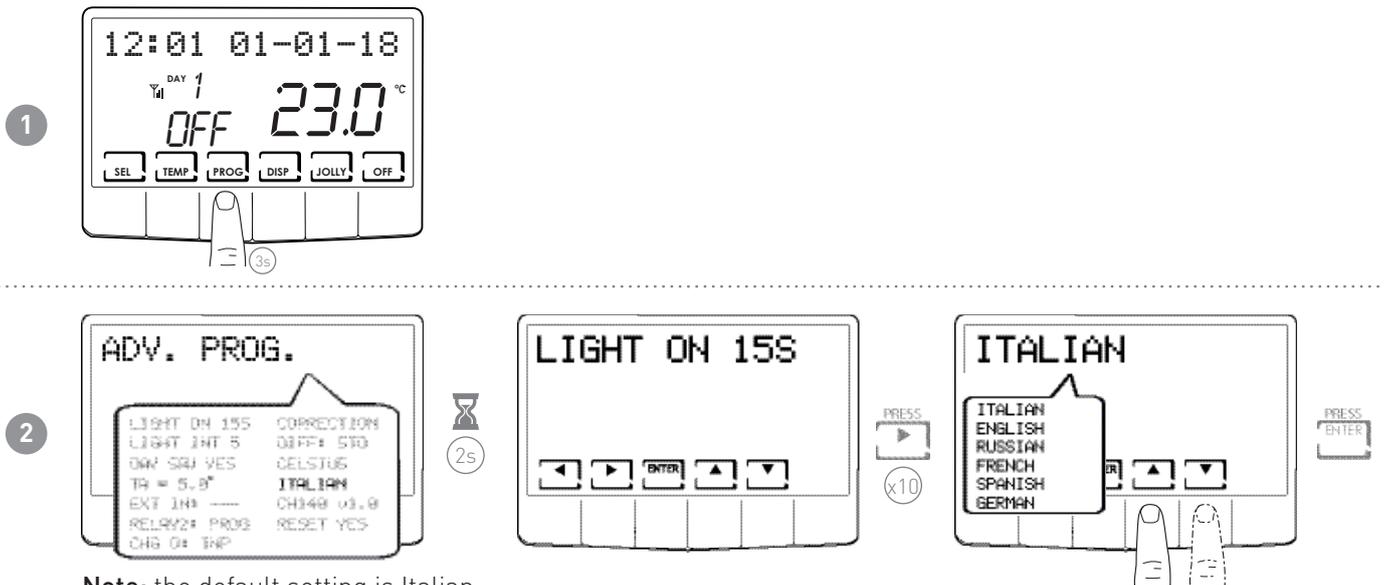
6.12 - INFORMATION

This page displays the software version of the programmable thermostat.
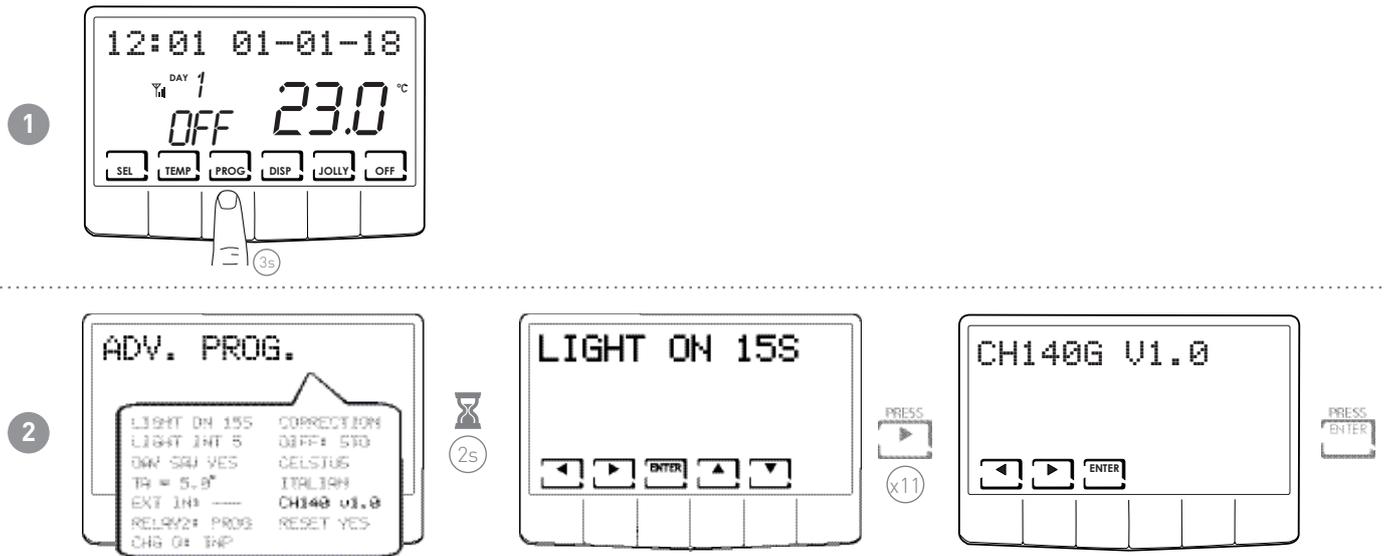
6.13 - RESETTING DEFAULT PARAMETERS

This allows you to reset all the parameters (except date and time) to the factory settings.
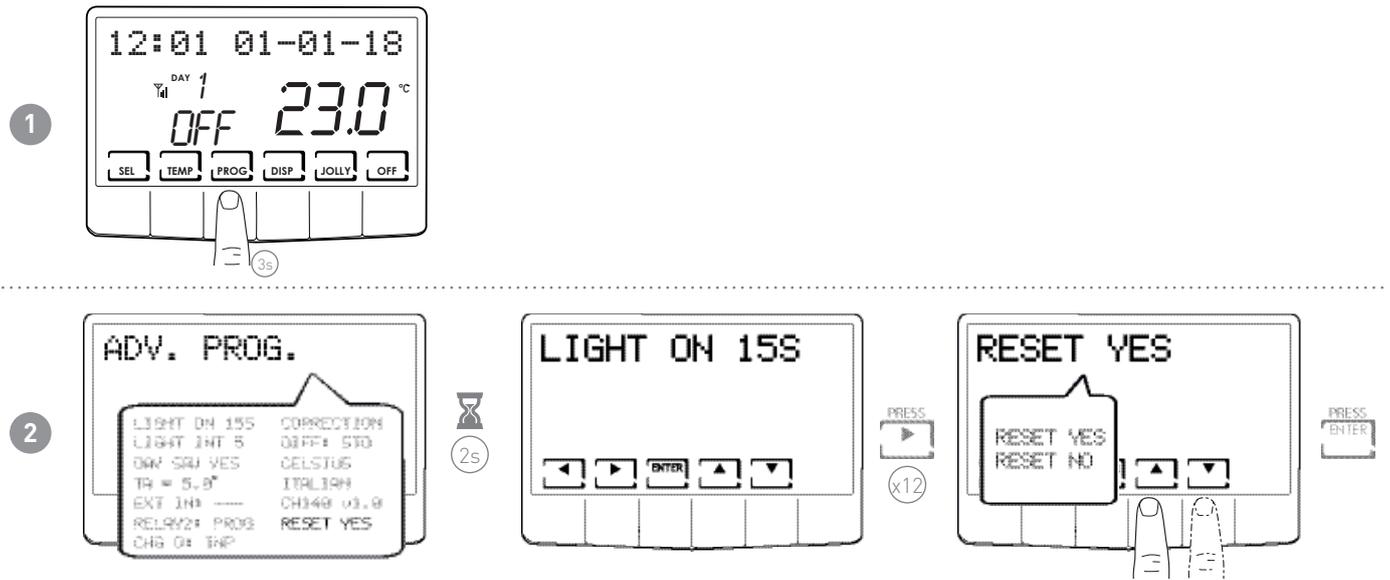
7 - REMOTE PROGRAMMING VIA SMS

GSM allows you to:
- Control the temperature of the home
- Program the temperature of the home
- Consult the system's operating statistics
- Receive notifications when room temperature drops below the set threshold
- Receive the SIM validity expiration notification
- Receive the 230V power failure notification (BLACKOUT)
- Receive the 230V power restore notification (POWER ON)
- Receive notifications regarding status variations of the two alarm contacts (for example a boiler alarm, burglar alarm, low temperature alarm, indicating boiler malfunctioning, a wastewater tank overflow alarm, and so on)
- Switch an external utility on or off at 230VAC, 500W (for example irrigation) via an internal relay.

The CH140GSM2 allows a remote user to send an SMS with the possibility of knowing only the status of the system and to command at which status to place it.

When running with remote control, the symbol of the antenna flashes briefly showing the reception and management of the relative response.

It's worth knowing that the free "IntelliCLIMA+" application is available, in the respective "APP STORES" for iOS and Android, to allow you to more conveniently manage the CH140GSM2 programmable thermostat.

The "IntelliCLIMA" application does not allow you to manage the settings and displays relative to SIM expiration notifications (EXP SIM), low temperature alarm (TLOW), 230V power failure/restore (BLACKOUT and POWER ON) notifications and information on consumption statistics.

As long as version V2.0 of the APPs is available, these features are exclusively managed via SMS.

7.1 - SMS COMMANDS TABLE

The following SMS text messages can be used to manage CH140GSM2:

#STATUS		Provides the main information on the status of CH140GSM2.
#INFO		Provides additional information on the status of CH140GSM2.
#SEAS=seas	seas = ■ 0 (winter) ■ 1 (summer)	Sets the season.
#FROST		Sets the ANTIFREEZE/OFF program.
#MAN=tman		Sets the MANual program.
#AUTO=teco,tcomf		Sets the AUTOmatic program.
#HOL=teco,tcomf		Sets the HOLIDAY program.
#JOL=tj,yy,mm,dd,hh,nn		Sets the JOLLY program.
#TEMP=teco,tcomf		Sets the ECOnomy and COMFort temperature value.
#MEMO=mm	mm = ■ 0 (disabled) ■ 1..12 (month)	Sets the expiration month of the SIM.
#TEL=num1,num2,num3		Sets the phone numbers to send the alarms to.
#TEL?		Asks for the set phone numbers.
#AL1=status,input,on,off	status = ■ 0 (disabled) ■ 1 (open) ■ 2 (closed) ■ 3 (both)	Sets the dispatch conditions for alarm1 and customises the message.
#AL2=status,input,on,off	status = ■ 0 (disabled) ■ 1 (open) ■ 2 (closed) ■ 3 (both)	Sets the dispatch conditions for alarm2 and customises the message.

#AL3=status,tlow	status = ■ 0 (disabled) ■ 1 (open)	Sets the dispatch conditions for alarm3 and customises the message.
#AL?		Requests the activation status of the alarms and the associated phone numbers.
#RELE2=status	status = ■ 0 (OFF) ■ 1 (ON)	Sets operation of Relay2.
#VISSTAT		Requests the consumption statistics.
#CLRSTAT		Resets the consumption statistics.

7.2 - GENERIC COMMANDS

Note: All the messages are managed correctly whether written in upper or lowercase.

If a message is not written properly, the response is CMD ERROR. In detail:

■ #STATUS

Provides the main information on the status of CH140GSM2 (only 1 SMS). When this command is sent, CH140GSM2 responds with a status SMS as follows (an example of actual operation in MAN is displayed):

TAMB = 28.8	Current room temperature reading
MODE = MANUAL	Program running on programmable thermostat
PLANT = OFF	Status of Relay1 (with command for heating/air conditioning)
DATE = 20/02/18	Date on programmable thermostat
TIME = 15:08	Time on programmable thermostat
SEAS = WIN	Active season
TCOMF = 20.0	Set comfort temperature
TECO = 18.0	Set economy temperature
TA = 5.0	Set antifreeze temperature
TMAN = 20.0	Set manual temperature
TJOL = 20.0	Set jolly temperature
DJOL = 00/00/00	Set jolly period end date
HJOL = 00:00	Set jolly period end time
17:15	

■ #INFO

Provides the SECONDARY information on the status of CH140GSM2 (only 1 SMS). When this command is sent, CH140GSM2 responds with a status SMS as follows (an example of actual operation in MAN is displayed):

TEXT = ---	Outdoor temperature reading
INPUT1 = OPEN	Alarm 1 Status
INPUT2 = OPEN	Alarm 2 Status
RELE2 = OFF	Status of Relay2
TLOW = 15:08	Temperature threshold set to send "low temperature" alarm
EXP SIM = 00	SIM expiration month
MODE RELE2 = LOC	Relay2 operating mode
MODE INP1 = ---	Input 1 operating mode
MODE INP2 = ---	Input 2 operating mode
MODE SE = ---	External probe operating mode
MODE CO = ---	Changeover operating mode
BLACKOUT END	Blackout presence status
17:19	

■ **#SEAS**

Command to set the season:

◊ #SEAS = 0 (winter)

◊ #SEAS = 1 (summer)

■ **#FROST**

Sets the antifreeze program, namely switches the system OFF. The response corresponds to the STATUS with **MODE=OFF**

Note: the CH140GSM2 display reads OFF.

■ **#MAN=tman**

Command to set the MANUAL status and the corresponding T.MAN temperature. The value is written in DU.d format, namely TensUnits.decimal (e.g. **#MAN=22.0**). The Tens can be omitted (e.g. 9.0).

The response message corresponds to the STATUS with **MODE=MAN** and **TMAN=22.0**

■ **#AUTO=teco,tcomf**

Command to set AUTOMATIC mode and the corresponding T.ECO and T.COMF temperatures. The value is written in DU.d format, namely TensUnits.decimal (e.g. **#AUTO=16.3,22.0**). The Tens can be omitted (e.g. 9.0).

The response message corresponds to the STATUS with **MODE=AUTO**, **TECO=16.3** and **TCOMF=22.0**

Note: in winter T.ECO < T.COMF; in summer T.ECO > T.COMF

■ **#HOL=teco,tcomf**

Command to set HOLIDAY mode and the corresponding T.ECO and T.COMF temperatures. The value is written in DU.d format, namely TensUnits.decimal (e.g. **#HOL=16.3,22.0**). The Tens can be omitted (e.g. 9.0).

The response message corresponds to the STATUS with **MODE=HOLIDAY**, **TECO=16.3** and **TCOMF=22.0**

Note: in winter T.ECO < T.COMF; in summer T.ECO > T.COMF

■ **#JOL=tj,yy,mm,gg,hh,nn**

Command to simultaneously set the JOLLY status, T.JOLLY temperature and JOLLY end date and time. The temperature value is written in DU.d format, namely TensUnits.decimal; the date is written in yy,mm,dd format, namely Year, Month, Day; the time is written in hh,nn format, namely hour, minutes (e.g. **#JOL=16.3,18,05,04,09,30**).

The response message corresponds to the STATUS with **MODE=JOLLY**, **TJ=16.3**, **DATE=04/05/18** and **TIME=09:30**

■ **#TEMP=teco,tcomf**

Command to only set the T.ECO and T.COMF temperatures. The value is written in DU.d format, namely TensUnits. decimal (e.g. **#TEMP=16.3,22.0**). The Tens can be omitted (e.g. 9.0).

The response corresponds to the STATUS with **TECO=16.3** and **TCOMF=22.0**

■ **#MEMO=MM**

Sets the SIM expiration month (EXP SIM), within the range 0-12, where 0=not set). The values are written in the DU format, namely TensUnits (e.g. **#MEMO=12** for the month of December). The Tens, if equal to zero, can be omitted (e.g. **#MEMO=5** for the month of May).

The response message corresponds to INFO and has the new value of **EXP SIM**.

Note: regardless of the residual credit on the SIM, the mobile phone providers demand a recharge every 11-12 months from the date of activation or from the date of the last recharge; otherwise the SIM card will be considered expired and deactivated.

It is recommended to set the expiration month of the SIM card in the thermostat and the phone number 3 (where the notification is sent). In this case, at noon of the first day of the set expiration month, the programmable thermostat will send an SMS to the phone number 3 reading ¨EXP SIM¨ reminding the user to recharge the SIM so that it does not expire.

7.3 - COMMANDS FOR ALARMS AND NOTIFICATIONS

■ **#TEL=num1, num2, num3**

Sets the three phone numbers to send the alarm messages to.

In particular, numbers 1 and 2 are associated to the alarms of inputs INP1 and INP2. Whereas number 3 is associated to the low temperature alarm (TLOW), SIM expiration and 230V power failure/restore messages.

Note: To insert phone numbers with international prefixes, use the extended syntax ″00nn″ instead of the abbreviated ″+nn″ (e.g.: ″0041″ instead of ″+41″). It is recommended to set your phone number to which the notification messages are sent automatically by the programmable thermostat at num3 (temperature alarm notification, programmable thermostat SIM expiration notification, 230V power failure/restore notifications).

■ **#TEL?**

To know the stored phone numbers.

■ **#AL1=status,input,on,off**

Sets the dispatch conditions for alarm1 and customises the message.
  ◊ ″status″ = 0 (alarm disabled); 1 (send alarm when contacts open); 2 (send alarm when contacts close); 3 (send alarm went contacts both open and close);
  ◊ ″input″: description of the alarm (for example ENTRANCE DOOR, anyhow no longer than 20 characters);
  ◊ ″on,off″: the two conditions(for example the text ″,OPEN,CLOSED″, anyhow no longer than 10 characters each).

■ **#AL2=status,input,on,off**

Sets the dispatch conditions for alarm2 and customises the message.
  ◊ ″status″ = 0 (alarm disabled); 1 (send alarm when contacts open); 2 (send alarm when contacts close); 3 (send alarm went contacts both open and close);
  ◊ ″input″: description of the alarm (for example ENTRANCE DOOR, anyhow no longer than 20 characters);
  ◊ ″on,off″: the two conditions(for example the text ″,OPEN,CLOSED″, anyhow no longer than 10 characters each).

■ **#AL3=status,tlow**

Sets the dispatch conditions for alarm3 and the temperature value to trigger the low temperature alarm.
  ◊ ″status″ = 0 (alarm disabled); 1 (alarm enabled);
  ◊ ″tlow″: value written in DU.d format, namely TensUnits.decimal (e.g. #AL3=1,22.0) The Tens can be omitted (e.g. 9.0).

Note: The alarm temperature (T LOW) can be from 2° to 40°C; when the programmable thermostat detects that room temperature drops 0.6°C below the set TLOW value, a notification SMS is sent to the preset phone number num3.

■ **#AL?**

To know the activation status of the alarms and the associated phone numbers.

7.4 - COMMANDS FOR AUXILIARY RELAY (RELAY 2)

■ **#RELE2=status**

Sets operation of relay2.
  ◊ ″Status″ = 0 (OFF namely opens contacts 5 and 6 and closes 5 and 7); = 1 (ON namely closes contacts 5 and 6 and opens 5 and 7).

7.5 - 230V POWER FAILURES/RESTORE NOTIFICATION MESSAGES

A reserve charge allows the programmable thermostat to operate for a few tens of seconds in case of a blackout, in order to manage the power failure notification sending a message to number 3 set in TEL. When power is restored, after a few tens of minutes, the programmable thermostat sends the power restoration message to the set number.

The syntax of the messages is:

- **BLACKOUT** indicates that 230V power is missing
- **POWER ON** indicates that 230V power is restored

If the programmable thermostat fails to send the power failure message, a single message will be sent when power is restored containing the information on the date and time of the BLACKOUT together with the POWER ON notification.

> If there is a blackout, when the "BLACKOUT" message is sent, the programmable thermostat switches both relays off in order to put the system in safe condition.
> When power is restored, the relays are prevented from switching on for the first ten minutes needed to recharge the "super-capacitor".

Note: it is recommended to set your phone number at num3 so that the programmable thermostat can automatically send the notification messages, namely the power failure/restore, SIM expiration and temperature alarm notifications.

7.6 - CONSULTATION COMMANDS/RESETTING STATISTICS

- **#VISSTAT**

Command for only requesting statistical consumption data.
The response will be limited only to statistical data, as in the example:

- ◊ **T MIN:** minimum temperature recorded the previous day
- ◊ **T MAX:** maximum temperature recorded the previous day
- ◊ **ON YEST:** operating hours the previous day
- ◊ **ON CURRMONTH:** operating hours in the current month
- ◊ **DET**
- ◊ **CURRMONTH:** detail of operating hours in the current month divided into days
- ◊ **ON PREVMONT:** operating hours of the previous month
- ◊ **DET**
- ◊ **PREVMONTH:** detail of operating hours in the previous month divided into days
- ◊ **ON YEAR:** operating hours in the calendar year
- ◊ **DET**
- ◊ **YEAR:** detail of operating hours in the calender year divided into months

- **#CLRSTAT**

Command to delete the consumption statistics

8 - REMOTE PROGRAMMING VIA APP

The GSM signal in the programmable thermostat allows the device to be remote-controlled via the **Intelliclima+** APP, available free of charge on Google Play Store and Apple App Store.

8.1 - INSTALLATION PROCEDURE

Intelliclima+

Available on the App Store

ANDROID APP ON Google play
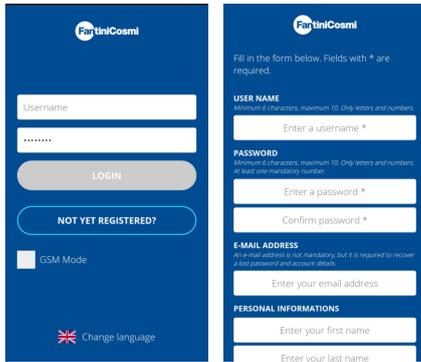
1
Install the APP and when first activated, create an account by entering the user name and password.
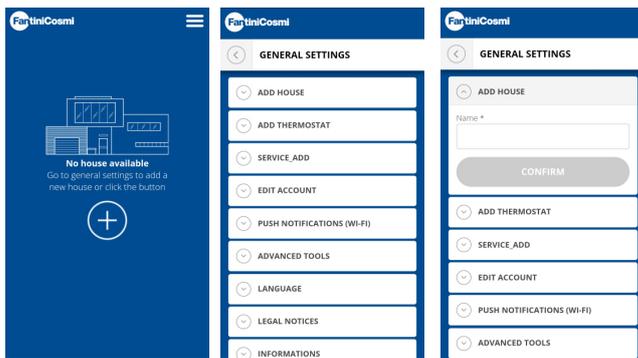
2
Create a new home by pressing ⊕; enter the name and press CONFIRM.
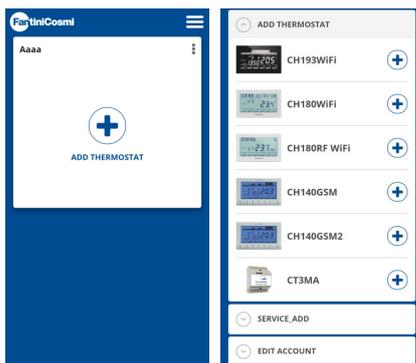
3
Add the programmable thermostat by pressing ⊕ and select CH140GSM2.

4
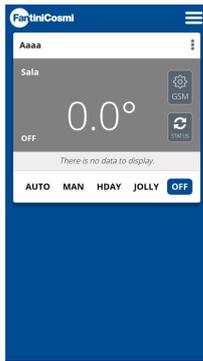
At the end of the procedure, the new programmable thermostat is displayed inside the home.

5

Press [STATUS] to receive refreshed data.

Note: the programmable thermostat does not automatically refresh the data displayed on the app, but the user must always press [STATUS].

9 - 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 13 August 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.

10 - GENERAL WARRANTY CONDITIONS

The conventional warranty lasts 24 months, starting from the date the equipment is installed. The warranty covers all parts of the equipment, with the exception of those subjected to normal wear.

NOTES

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