

# BeSMART

A SMARTER THERMOSTAT



BeSMART Thermostat

Thermostat Manual

EN

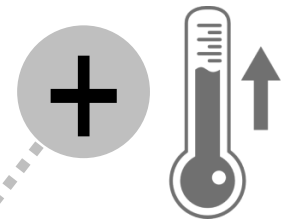
## Basic information

- Desired room temperature (up to 3 set)

- Room temperature

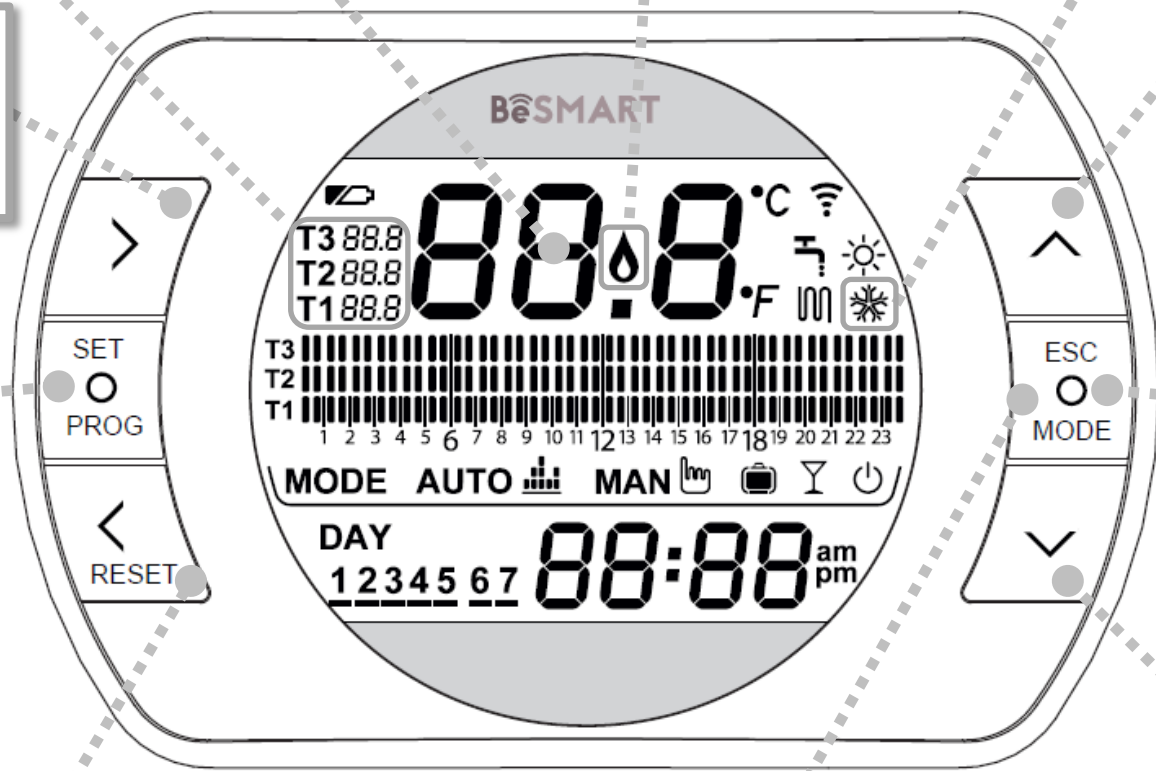
- Heating request (if ON/OFF connected)
- Flame presence (if OT-Bus connected)

- Cooling mode enable



- Forward scrolling of the menu
- in AUTO mode, advanced function activated

- SET-PROG = programming menu

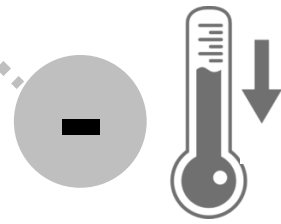


- ESC = exit
- MODE = select the following working mode:

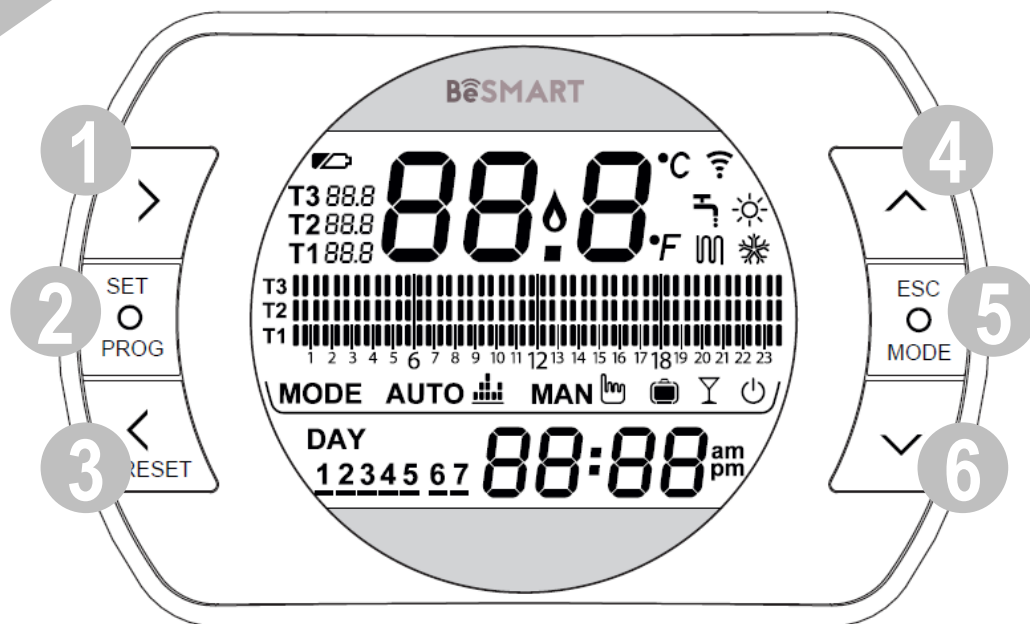
<b>AUTO</b>	AUTO
<b>MAN</b>	MANUAL
	HOLIDAY
	PARTY
	SUMMER (if OT-Bus available)
	OFF

- Back scrolling of the menu
- In AUTO mode, function ONE HOUR BOOSTER activation
- In case of alarm (AXX on main display) press for 1 second and reset the alarm on the display

- If RIE on the display, press 3 secs ESC-MODE to activate the semi-automatic boiler filling



# Direct functions



## Function RF pairing

Press for 5 seconds the ESC-MODE button (5), the thermostat will then enter RF coupling mode and this function is needed to couple the thermostat with an RF receiver (Wi-Fi Box or boiler receiver). Also the boiler receiver or the Wi-Fi Box must be moved to the same mode to complete the coupling operation (see following page). Once completed, the two line display will disappear and the alphanumeric code of the coupling will be shown

## Function RESET

When an alarm code is displayed (only available if OT-Bus connection available between Wi-Fi Box and the boiler and if the OT-Bus protocol is allowed to this), it is possible to make a reset of the alarm pressing once the RESET button (3)

## Function semi-automatic filling of the system (only for boilers incorporating this function)

On the thermostat display is shown "rIE" flashing when the system needs to be filled. It is possible to activate the automatic filling by pressing the ESC-MODE button for 5 secs. At the end of the automatic filling cycle, the display will resume to a normal visualization.

## Desired room temperature

The thermostat can accept the setting of 3 different temperature level:

T3 = Comfort (day temperature) – in mode AUTO, PARTY and MAN

T2 = Economy (night temperature) – in mode AUTO and HOLIDAY

T1 = frost protection – in mode AUTO and OFF

The 3 temperatures can be changed when active; by moving the buttons UP (4) and DOWN (6) if the thermostat is set on the mode related to this temperature level or from the PROGRAMING MENU – T1-T2-T3

## Working modes

Pressing the ESC-MODE (4) button, it is possible to select the following working mode:

**AUTO** = thermostat working in heating/cooling at temperatures level T3-T2-T1 according the selected hours.

**MANUAL** = thermostat working in heating/cooling at temperatures level T3 (Comfort) only, without any restriction on hours.

**HOLIDAY** = thermostat working in heating/cooling at temperatures level T2 (Economy) only for the number of days set, without any restriction on hours.

**PARTY** = thermostat working in heating/cooling at temperatures level T3 (Comfort) only, up to the midnight of that day, without any restriction on hours.

**OFF** = thermostat OFF (when ON/OFF connection) or boiler totally OFF (stand by) (when OT-Bus connection).

**DOMESTIC HOT WATER (DHW – SUMMER)** = boiler in summer mode – domestic hot water only (only available when OT-Bus connection and if the protocol allow this).

## Function ADVANCED

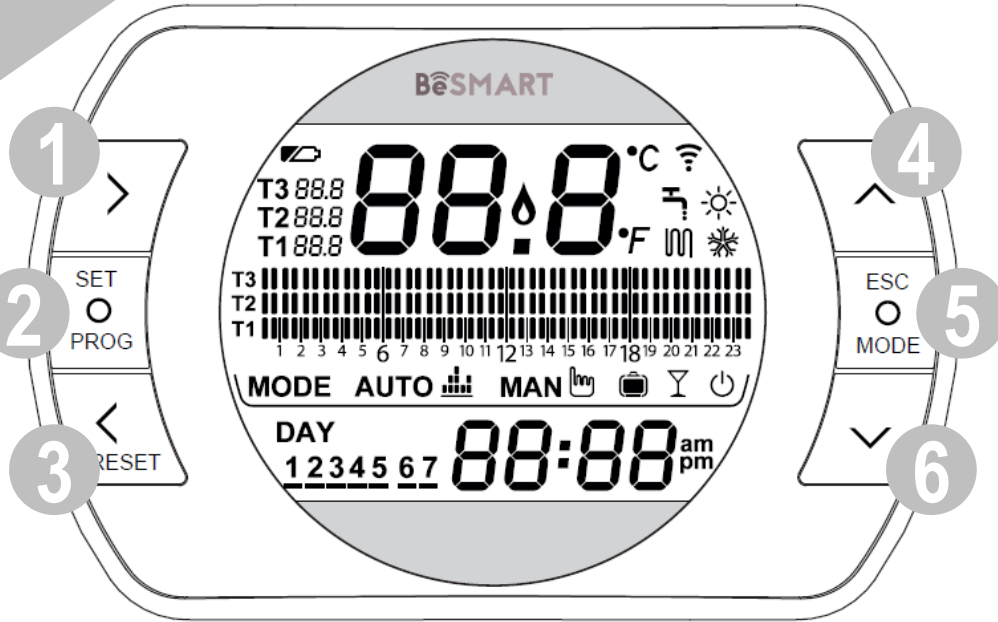
Only in AUTO mode, by pressing the FORWARD button (1) the ADVANCED function is enabled or disabled (if enabled the MAN icon is also shown on display). The function is used to advance to the next scheduled heating program event (ON or OFF) with related set temperature, possible up to midnight on that day. This temporary function is helpful when arriving home early or leaving home before the next scheduled (OFF) event.

## Function ONE HOUR BOOSTER

Only in AUTO mode, by pressing the BACK button (3) the ONE HOUR BOOSTER function is enabled or disabled (if enabled the MAN icon is also shown on display). This function switches ON the heating at T3 (Comfort) for 1 hour. If current time is already in T3 (Comfort), this function adds 1 hour to the current programmed time.

# 3

## Functions/Icons/Alarms



### Function pairing in RF of others devices of BeSMART system.

It is possible to pair up to 8 devices (thermostats or boiler receiver) to the Wi-Fi Box. To enable the RF pairing function, press and hold for 5 secs the transparent LED button on the Wi-Fi Box or the boiler receiver, until you have simultaneous and rapid flashing (0,5 secs) of the green and red LEDs. Once pairing is complete, the LED's automatically return to their normal state.

### Reset of the self configuration (OT) function

The thermostat is factory set to work in ON/OFF.

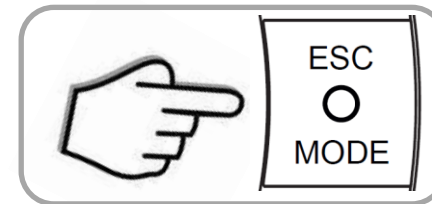
In case of OT-Bus connection available (wired or wireless) the thermostat automatically detect the BUS communication. The device automatically move to OT-Bus working mode (boiler remote control).

To reset to the original factory set configuration in ON/OFF, it is necessary to remove and replace the batteries.

Low batteries		Batteries must be replaced. Functionality will be impaired if batteries become depleted.
Flame		Signal of real flame presence on the boiler if OT-Bus connection or just heating request if ON/OFF connection.
RF communication		Radio frequency (RF) communication ON with the Wi-Fi Box or boiler receiver.
Heating		Heating mode enabled.
Domestic hot water (DHW)		Domestic hot water mode enabled (only if OT-Bus connection available with the boiler).
Cooling enable		Cooling mode enabled. (inversion of the relay working mode)

Alarms	Main alarms and description
rIE	Semi-automatic system filling function
Err	Thermostat temperature sensor damaged (non-repairable)
E82	Radio frequency communication missing
E83	OT-Bus communication missing
E84	Hardware damaged – not repairable
A01-A10	Ignition failure
A02-A20	High limit thermostat intervention
A03-A30	Alarm final flues thermostat and/or limit thermostat and/or air pressure switch and/or premix fan
A04-A40	Low system pressure
A06-A60	Alarm DHW NTC sensor
A07-A70	Alarm NTC heating and/or NTC flow sensor and/or higher delta T between flow and return
A08	Alarm NTC return sensor and/or higher delta T between flow and return
A09-A91	Alarm flues NTC sensor or heat exchanger need cleaning
A77	Low limit thermostat intervention
A99	Too high reset from remote location

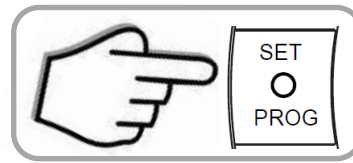
## Working mode



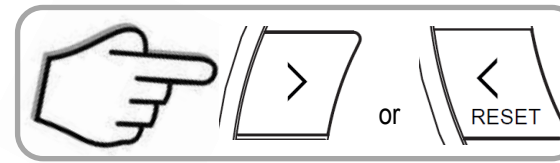
MODE	Heating	Icon	Description
AUTO		<b>AUTO</b>	<p>The thermostat will follow the heating program that's been set or selected via the PROGRAMMING MENU – HEATING PATTERN and the selected temperatures on the PROGRAMMING MANU –T1-T2-T3 (the values can also be selected individually with the UP (4) and DOWN (6) buttons when the thermostat is following the relevant set temperature).</p> <p>The heating/cooling request is enabled or disabled according to the current room temperatures, the desired room temperature and the programmed timing. There are 3 selectable temperature levels and the minimum selectable programming (ON/OFF) periods, are 30-minute segments.</p>
MANUAL		<b>MAN</b>	<p>The thermostat is in manual mode and reacts according to the room temperature and desired room temperature, not according the programmed heating ON/OFF times. The heating/cooling request is activated according to the current room temperature and the set desired room temperature T3 (Comfort).</p>
HOLIDAY			<p>The thermostat is working in manual mode according to the room temperature and desired room temperature, and not according to the programmed heating timing. The heating/cooling request is activated according to the current room temperature and the desired room temperature T2 (Economy). This working mode is active for a number of days selected on the main display page with the FORWARD (1) button, up to midnight of the last day selected. After the set days have expired, the thermostat mode of operation automatically returns to AUTO.</p>
PARTY			<p>The thermostat is working in manual mode according to the room temperature and desired room temperature, not according the programmed heating timing. The heating/cooling request is activated according the current room temperature and the desired room temperature T3 (Comfort). This working mode is active up until midnight of the day. Thereafter the thermostat mode of operation automatically returns to AUTO.</p>
DHW			<p>The thermostat is working in domestic hot water mode only (available only with OT-Bus connection between the Wi-Fi Box and the boiler and if the OT-Bus protocol allows this). Tap icon flashes when the boiler is delivering domestic hot water.</p>
OFF			<p>Thermostat working mode is OFF (no heating/cooling request). If there is OT-Bus connection between the Wi-Fi Box and the boiler (and if all the thermostats connected are OFF), the boiler is completely OFF mode (no heating/cooling, no domestic hot water, only boiler frost protection active).</p>

# 5

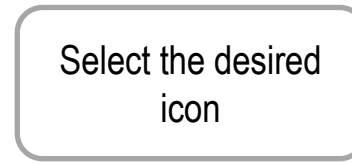
## Programming menu



A



B



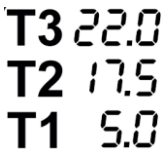




C

Icon	Description	Lower menu
	Set the <b>HOURS</b> and <b>DAY</b> . Press again the SET-PROG (2) to enter on lower menu and proceed to set. Hours and day are automatically set if Wi-Fi Box connected to an internet network. From APP it is possible to synchronize the hours and the day of the thermostat with your Tablet or Smartphone time.	Select with the buttons FORWARD (1) or BACK (3) the desired value (hours, minutes or days) and with the UP(4) and DOWN (6) buttons select the values. Press the SET-PROG (2) button to enter and return to the programming menu, press ESC-MODE (5) to escape from the programming menu or wait 5 seconds to auto exit.
<b>dHW</b>	Set the temperature of <b>DOMESTIC HOT WATER</b> (when OT-Bus connection available between Wi-Fi Box and the boiler). Press again the SET-PROG (2) to enter on lower menu and proceed to set.	Select with UP (4) and DOWN (6) buttons the desired temperature value. Press the SET-PROG (2) button to enter and return to the programming menu, press ESC-MODE (5) to enter and esc from the programming menu or wait 5 seconds to auto exit.
<b>InFO</b>	Reading <b>SENSORS/BOILER SETTINGS</b> (when OT-Bus connection available between Wi-Fi Box and the boiler and if the OT-Bus allow it). Press again the SET-PROG (2) to enter on lower menu and proceed to read the values available.	They are shown in sequence the followings info (if value not available "- -" is shown): <b>tSet</b> = set-point flow temperature calculated by the thermostat. <b>tFLO</b> = reading of the boiler flow sensor temperature. <b>trEt</b> = reading of the boiler return sensor temperature. <b>tdH</b> = reading of the boiler DHW sensor temperature. <b>tFLU</b> = reading of the boiler flues sensor temperature. <b>tESt</b> = reading of the boiler outdoor sensor temperature (fitted to the boiler or communicated by the web). <b>MOdU</b> = instantaneous percentage of modulation of boiler fan. <b>FLOr</b> = instantaneous domestic hot water flow rate. <b>HOUr</b> = hours worked in high condensation mode. <b>PrES</b> = central heating system pressure. <b>tFL2</b> = reading of the heating flow sensor on second circuit



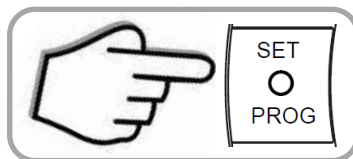
## 6

# Programming menu (cont.)

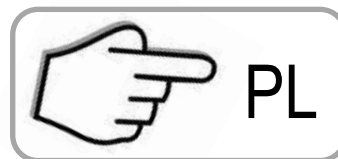
Icon	Description	Lower menu
	<p>Set the desired room temperatures level <b>T1-T2-T3</b>. . Press again the SET-PROG (2) to enter on lower menu and proceed to set. The 3 values can be changed individually with UP (4) and DOWN (6) buttons when the respective 'T' value is active on the thermostat</p>	<p>Select with the buttons FORWARD (1) or BACK (3) the desired value (T1, T2 or T3) and with the UP(4) and DOWN (6) buttons select the values. Press the SET-PROG (2) button to enter and return to the programming menu, press ESC-MODE (5) to enter and esc from the programming menu or wait 5 seconds to auto exit.</p>
	<p>Set the <b>PROGRAMMING HEATING/COOLING PROGRAMMING TIME</b>. Press again the SET-PROG (2) to enter on lower menu and proceed to set. With FORWARD (1) and BACK (3) buttons select the period (mon-fri, sat-sun, single day). Press again the SET-PROG (2) to enter on lower menu and proceed to set.</p>	<p>Select with the buttons FORWARD (1) or BACK (3) the segment of hours that need to be modified and with the ESC-MODE (4) select the desired temperature value level (T1, T2, T3). Press the UP (4) button to copy the previous setting on the following hours fascia (use the DOWN (6) button to go back). Press SET-PROG (2) to enter and esc from the programming menu or wait 30 seconds to auto exit.</p>
	<p>Set the <b>HEATING</b> or <b>COOLING</b> mode. Press again the SET-PROG (2) to enter on lower menu and proceed to set.</p> <p>Attention! If the OT-Bus connection establish between the Wi-Fi Box and the boiler, in case of COOLING mode, the cooling request is managed only via ON/OFF (heating is disable vs the boiler).</p>	<p>Select with the UP (4) or DOWN (6) the desired value: IN = winter = heating mode SU = summer = cooling mode</p> <p>Press the SET-PROG (2) button to enter and return to the programming menu, press ESC-MODE (5) to enter and esc from the programming menu or wait 5 seconds to auto exit.</p>
	<p>Technical menu (available only to service personnel). Press again the SET-PROG (2) to enter on lower menu and proceed to set.</p>	<p>Set the password (password for technical menu = 18) using the UP (4) and DOWN (6) buttons and press SET-PROG (2) to enter.</p>
	<p>Press SET-PROG to exit from the programming menu.</p>	

## 7

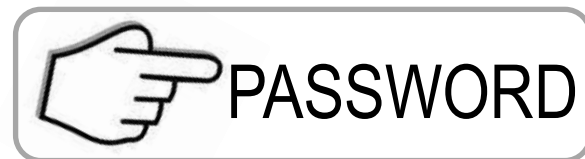
# Technical menu and expert settings



A



B



C

Parameter / Icon	Description
<b>01 t0</b>	Set the minimum limit temperature (frost protection for ON/OFF and DHW/SUMMER mode).
<b>08 HH/LL CH</b>	Set max and minimum set point in heating. Available only when OT-Bus connection
<b>10 CLI</b>	Set the climatic curve for thermoregulation. Available only when OT-Bus connection
<b>11 InFL</b>	Set the influence of the room sensor on thermoregulation calculation. Available only when OT-Bus connection.
<b>13 CALI</b>	Calibration of the room sensor
<b>14 FACT</b>	Factory values RESET (general RESET)
<b>16 SOFt</b>	Software version of the thermostat
<b>17 dEGr</b>	Set degree in Celsius or Fahrenheit

Parameter / Icon	Description
<b>19 H On/OFF</b>	Set hysteresis On and OFF
<b>21 ALL</b>	Alarms history. Available only when OT-Bus connection.
<b>22 tSP</b>	Boiler parameters setting (TSP). Available only when OT-Bus connection
<b>23 LEGI</b>	Legionella function activation. Available only when OT-Bus connection
<b>24 CLOC</b>	Domestic hot water clock activation. Available only when OT-Bus connection
<b>26 tSFt</b>	Night swift flow temperature reduction. Available only when OT-Bus connection
<b>27 SEnS</b>	Temperature sensor disability (for pure climatic curve activation when in OT)
<b>28 FCLO</b>	Set clock display 24hr or 12 hr (am, pm).
<b>29 CHOt</b>	Disable the OT CH request when OT-bus connection

More info and support at:

[www.besmart-home.com](http://www.besmart-home.com)



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