



WQ610RF THERMOSTAT - FULL USER MANUAL

TABLE OF CONTENTS

1. Introduction	4
1.1 Product Compliance	4
1.2 Safety Informations	4
2. Product Overview	5
2.1 Example of boilers compatible with the OpenTherm OT+ 4.0 protocol	6
2.2 Package content	7
2.3 Proper thermostat location	7
3. WQ610RX receiver	8
3.1 Receiver's switches description	8
3.2 LED indications in the receiver	9
3.3 Wall mounting of the receiver	10
3.4 Connection description	11
I A - Boiler connection	11
I B - Pump / Valve connection	11
4. Before you start (first power up)	12
4.1 LCD icon description	12
4.2 Button description	12
4.3 Li-on battery charging	13
4.4 First power up sequence and configuration	14
5. Operating	15
5.1 Setpoint temperature change (manual mode)	15
5.2 Schedule mode - programming schedule	16
5.3 Temporary override mode	17
5.4 OFF mode	17
5.5 Language	18
5.6 Advanced settings	19
5.6.1 DST (Daylight Saving Time) setting	19
5.6.2 Display temperature accuracy	20
5.6.3 PIN Code	20
5.6.4 Service alert	21
5.6.5 Optimum Start	22
5.6.6 Optimum Stop	22
5.6.7 Thermostat temperature calibration	23
5.6.8 Minimum setpoint temperature	23
5.6.9 Maximum setpoint temperature	23
5.6.10 Frost protection temperature	24
5.6.11 Control algorithm	24
5.7 Holiday mode	25
5.8 Time/Date	26
5.9 BOOST hours - hourly temperature override	27
5.10 Operating mode	28
6. WQ610RF thermostat pairing with the receiver	29
7. Test the pairing process	30
8. Factory Reset	31
9. Error codes	32
10. Cleaning and Maintenance	33
11. Technical Informations	33
12. Warranty	34

1. Introduction

1.1 Product Compliance

This product complies with the essential requirements and other relevant provisions of Directives 2014/53/EU and 2011/65/EU. The full text of the EU Declaration of Conformity is available at the following internet address: www.saluslegal.com.

1.2 Safety Informations

- Before starting installation work and before using the product, read the entire manual.
- The information contained in the instructions is essential for proper functioning.
- To avoid accidents resulting in personal injury and material damage, please follow all safety precautions, specified in this manual.
- The device should not be used by people with limited mental, sensory or mental abilities, without experience, of insufficient knowledge as well as children.
- Do not use an unassembled device (eg without a cover).
- The device may only be opened by a qualified person.
- Keep electrical devices out of the reach of children and ensure that they do not play with it. Children should not be left unattended. If necessary, disconnect the control system for the entire room.
- Do not leave the packaging, cabinet, or any loose parts of the device unattended, as they pose a risk to children.

WARNING!

- Installation must be carried out by a qualified person with appropriate electrical qualifications in accordance with standards and regulations in force in the given country and in the EU.
- Never try to connect the device other than as described in the manual.
- Before assembly, repair or maintenance as well as during any connection works it is absolutely necessary disconnect the mains supply and make sure that the terminals and electric wires are not live.
- The device may not be exposed to extreme temperatures, strong vibrations or subjected to mechanical shock.
- The device should not be used in unfavorable environmental conditions or in rooms where there is a concentration of flammable gases, fumes or dust.

WARNING!

- There may be additional protection requirements for the entire installation that the installer is responsible for maintaining.



Care for the natural environment is of paramount importance to us. The awareness that we manufacture electronic devices obliges us to dispose of used electronic components and devices safely. Therefore the company has received a registration number issued by the Chief Inspector for Environmental Protection. The crossed out symbol the trash can on the product means that the product must not be disposed of with ordinary waste containers. Sorting waste for recycling helps to protect the environment. It is the user's responsibility to surrender used equipment to a designated collection point for recycling waste from electrical and electronic equipment.

2. Product Overview

The WQ610RF room thermostat simply switches the heating system on and off as necessary. It works by sensing the air temperature, switching on the heating when the air temperature falls below the thermostat setting, and switching it off once this set temperature has been reached.

Turning a room thermostat to a higher setting will not make the room heat up any faster. How quickly the room heats up depends on the design of the heating system, for example, the size of boiler and radiators. Neither does the setting affect how quickly the room cools down. Turning a room thermostat to a lower setting will result in the room being controlled at a lower temperature, and saves energy.

The heating system will not work if a time switch or programmer has switched it off.

The way to set and use your room thermostat is to find the lowest temperature setting that you are comfortable with, and then leave it alone to do its job. The best way to do this is to set the room thermostat to a low temperature – say 18°C – and then turn it up by one degree each day until you are comfortable with the temperature.

You won't have to adjust the thermostat further. Any adjustment above this setting will waste energy and cost you more money.

If your heating system is a boiler with radiators, there will usually be only one room thermostat to control the whole house. But you can have different temperatures in individual rooms by installing thermostatic radiator valves (TRVs) on individual radiators. If you don't have TRVs, you should choose a temperature that is reasonable for the whole house. If you do have TRVs, you can choose a slightly higher setting to make sure that even the coldest room is comfortable, then prevent any overheating in other rooms by adjusting the TRVs.

Room thermostats need a free flow of air to sense the temperature, so they must not be covered by curtains or blocked by furniture. Nearby electric fires, televisions, wall or table lamps may prevent the thermostat from working properly.

Thermostat is compatible with OpenTherm OT+ 4.0 version.

The OpenTherm protocol is an open standard communication protocol used in central heating systems for two-way communication between a central heating boiler and a room thermostat. Thanks to the communication protocol, the boiler power is modulated, which can significantly increase the energy efficiency of the heating system while maintaining the set temperature in the room. OpenTherm modulation, compared to standard communication (ON / OFF), occurs by setting the desired temperature of water from the boiler (boiler power), and not by its cyclical switching on and off.



PLEASE NOTE!

Make sure your gas combi boiler is compatible with OT + 4.0 communication protocol.
The list of compatible boilers is on the next page.

Product advantages:

- the set is factory paired and prepared for operation
- limiting the maximum boiler temperature by OT+ 4.0 protocol
- option to select hysteresis or built-in ITLC algorithm
- works according to time schedules
- has a PIN-protected service mode
- maximum/minimum temperature limit
- can temporarily change the temperature (overwriting until the next program change)

2.1 Example of boilers compatible with the OpenTherm OT+ 4.0 protocol

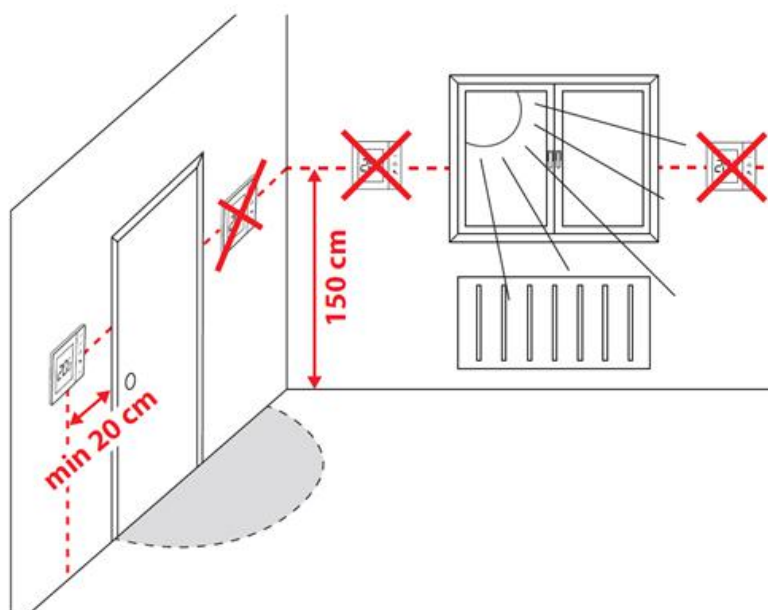
COMPANY	MODEL	COMPANY	MODEL
Alpha Heating	E-Tec S E-tec Plus E-tec Evoke Intec GS	Vokera	Linea HE Mynute A Mynute HE Unica HE
Atag	iC iC Economiser iS	Viessmann	Vitodens 100W Typ WB1A (Connection: X3.3 and X3.4) Vitodens 100W Typ WB1B (Connection: X21.1 and X21.2) Vitodens 100W Typ WB1C (Connection: X21.1 and X21.2) Vitodens 200-W WB2B 26+ 35 kW (via Expansion Module OT and OT-A8 + _Terminal -10 and +10 are on the extension of the A8 boiler) Vitodens 200-W WB2C, B2HA,B2JA, B2LA (via icm Expander OpenTherm)
Baxi	100 Combi 200 Combi 400 Combi 600 Combi	Vaillant (via Vaillant VR33 module)	Ecotec Pro Ecotec Plus Ecotec Exclusive Ecofit Pure
Daikin	D2CND 24Kw D2CND 28kw D2CND 35kw	Worcester Bosch (via Nefit EMS-OT OpenTherm converter)	EMS capable boilers Greenstar i Greenstar i Junior (Made in July 2013) Greenstar Si Compact Greenstar CDi Compact Greenstar CDi Classic (Made after 16.01.2007 with CF12.10 software version and newer) Greenstar Highflow CDi Greenstar 12i System – 24i System (On condition that an optional integrated diverter valve manufactured after February 2011 is installed) Greenstar 27i System – 30i System (Provided the optional Integrated Changeover Valve is installed Greenstar CDi Classic System (provided the optional Integrated Changeover Valve manufactured after 02/16/2007 with software version CF12.10 and above is installed))
Ferrol	i25 Condensing Combination Boiler i29 Condensing Combination Boiler		
Ideal	Independent + Combi Independent Combi Independent System Logic Combi+ Combi C Logic Combi C24, C30, C35 (via a separate bundle set) Logic Code Combi (via a separate bundle set) I-mini C24, c30 (via a separate bundle set) Vogue Combi C26,C32, C40 Logic + System Logic + Heat		
Intergas	Intergas Rapid Intergas Rapid Plus Combi Compact, Compact Range ECO RF Xtreme Xclusive		
Main	Eco Compact Combi 25-30		
Navien	Navien NCB		
Ravenheat	Avanta, Quinta Ace Quinta Pro Gas 110 Eco		
Vokera	Evolve C Evolve S Linea One (przez OpenTherm Kit Part_1221179) Vision Combi (requires a control interface 294501430) Compact A (requires a control interface 29450143) Verve (only heating mode) Mynute I (only heating mode) Vision System (only heating mode) Unica I Vibe Vision C		

2.2 Package content

- 1) WQ610RF
- 2) WQ610RX receiver
- 2) Short instruction
- 3) Mounting screws



2.3 Proper thermostat location



Please note:

The ideal position to thermostat mounting is about 1,5m under floor level far from heating or cooling sources. Thermostat can't be exposed to sunlight or any extreme conditions like for example draft.

Because of fire and explosion risk there is not allowed to use thermostat in atmosphere of explosive gases and flammable liquids (eg coal dust). In case if any of listed dangers occur you have to use additional protection measures – anti-dust and explosive gases (tight cover) or prevent their formation. Furthermore, thermostat can't be used in condensation of water vapor conditions and be exposed to water action.

3. WQ610RX receiver

The thermostat communicates wirelessly with the WQ610RX receiver. The receiver should be supplied with 230VAC, the maximum load of the receiver is 16A. Avoid installing the device in places directly exposed to water, moisture and air condensation. The WQ610RX receiver can operate in two different modes - AUTO (automatic) and MANUAL (manual). To select a specific mode, use the switches on the front of the receiver.



3.1 Receiver's switches description



TOP SWITCH	
1.	ON - Manual mode - receiver ON
2.	OFF - Manual mode - receiver OFF
BOTTOM SWITCH	
3.	AUTO - Receiver works in AUTO mode (according to the thermostat's command)
4.	MANUAL - Receiver works in manual mode (according to the top switch)

 **REMEMBER!:**

For the receiver to work with the thermostat, set the switches to the ON / AUTO position.

3.2 LED indications in the receiver

The status of the WQ610RX receiver is indicated by two LEDs. These are LEDs with the following colors:

- 1 - red (upper one),
- 2 - green (lower one).



A detailed explanation of the meaning of the LEDs can be found in the table below:

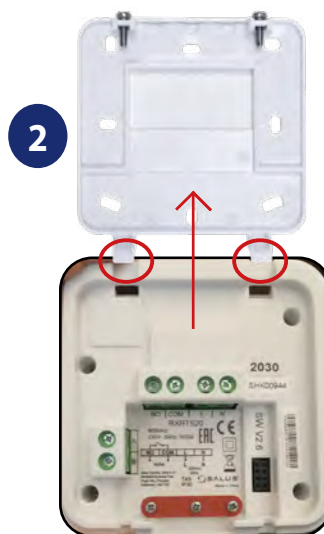
	Wyjaśnienie
The red LED lights up	<p>The receiver is connected to the 230V power supply and is paired with the thermostat.</p> <p>The receiver can be thermostat-enabled if it is in automatic mode when the lower switch is in the AUTO position.</p> <p>The receiver can be started manually when the lower switch is in the MANUAL position.</p>
The red LED flashes	<p>The receiver is in the pairing mode and is looking for a signal from the thermostat (then you must activate the "PAIRING" option in the thermostat)</p> <p>(or)</p> <p>The receiver was paired but lost communication with the thermostat due to out of range or low battery in the thermostat. The receiver starts flashing after one hour of time when it does not receive a signal from the thermostat.</p>
The red diode is off	<p>The receiver is disconnected from the 230V power supply or the upper switch is in the OFF position.</p>
The green diode lights up	<p>In automatic mode, the receiver received a heating signal from the thermostat.</p> <p>The receiver was started in manual mode (upper ON switch, lower MANUAL switch)</p>
The green diode is off	<p>The receiver does not send a heating signal.</p>

3.3 Wall mounting of the receiver

Wall mounting the receiver: drill two $\varnothing 6$ mm holes in the wall. Insert the plugs and, by putting the plate to the wall (included in the set), put the two screws through the holes and then screw them in. Connect the necessary cables to the receiver. Next, hang the receiver on the board using the handles designed in the receiver, marked in the picture below.



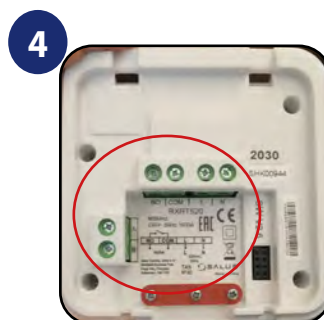
Loosen the screws with a screwdriver just enough to tilt the back housing.



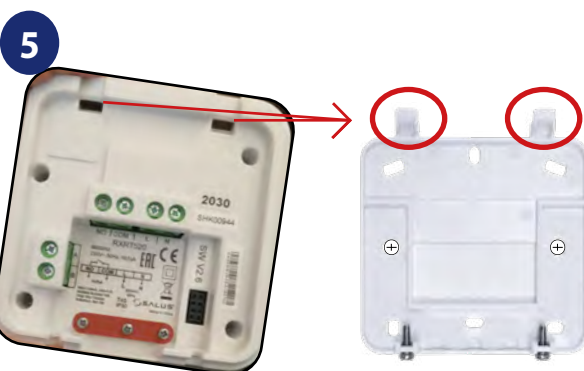
Tilt the receiver cover upwards (according to the position of the „hinge“).



Attach the back housing to the wall (keeping the correct positioning of the plastic „hinges“) using the marked holes (see the picture above).



Then, correctly connect the wires with the receiver (see „connection diagrams“ on page 9).



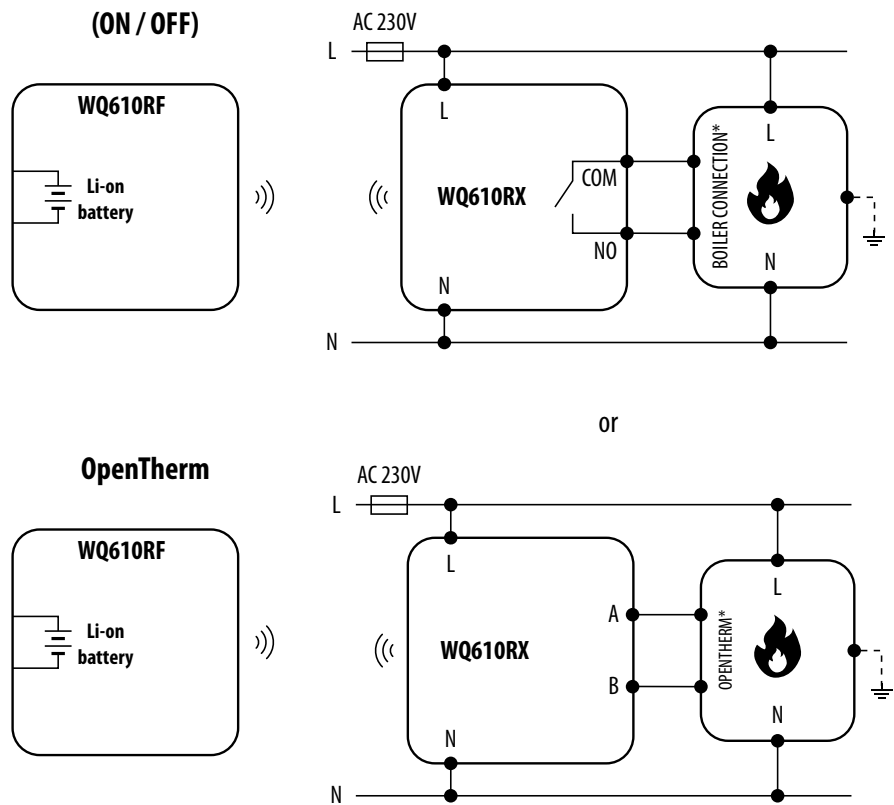
Put the receiver from above on the back housing attached to the wall, according to the position of the plastic „hinges“.



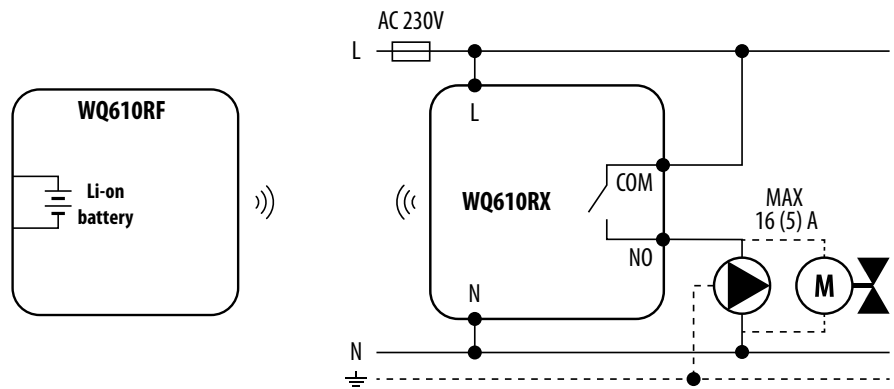
Tighten the screws from the bottom of the back housing to the receiver so that it is snug.

3.4 Connection description

I A - Boiler connection



I B - Pump / Valve connection



Legend:



Boiler - Boiler connection*
- Boiler's contacts for ON/OFF thermostat (according to the boiler's instructions)



Pump



Valve

Symbols explanation:

L, N - power supply 230V

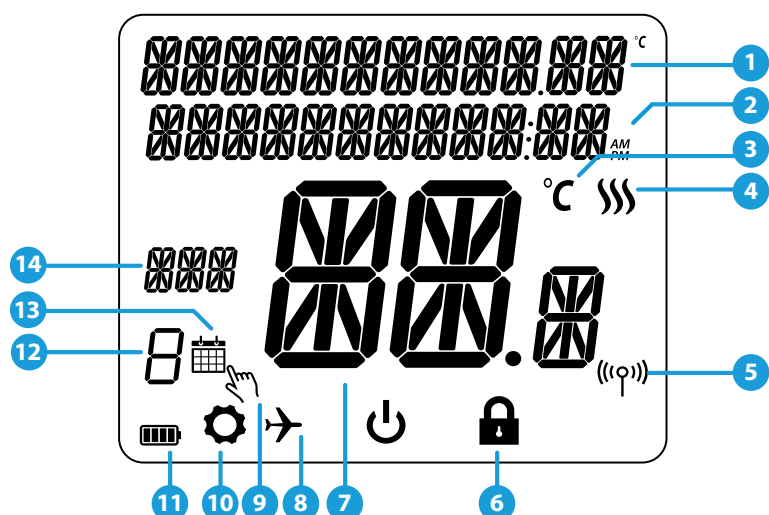
NO, COM, NC - voltage-free output

A, B - OpenTherm Communication Wire

- fuse

4. Before you start (first power up)

4.1 LCD icon description



- | | |
|---|------------------------------------|
| 1. Menu/Settings description | 8. Holiday mode indicator |
| 2. Clock 24hr/AM/PM | 9. Temporary override mode |
| 3. Temperature unit | 10. Settings icon |
| 4. Heating indicator (icon is animating when there is heating demand) | 11. Battery indicator |
| 5. RF Connection indicator | 12. Schedule program number |
| 6. Advanced settings lock indication | 13. Schedule mode icon |
| 7. Current /Setpoint Temperature | 14. Day indicator/ SET information |

4.2 Button description



- | | |
|---|--|
| 1. MENU - enter the menu options, press and hold for 3 seconds to return to main screen without saving changes. | 3. UP - increase the temperature and move through the menus. |
| 2. DOWN - decrease the temperature and move through the menus. | 4. TICK - confirm changes and enter menus. Press and hold for 3 seconds to exit User Menu and save changes. Press and hold to cancel BOOST feature or temporary override (while in main screen). |

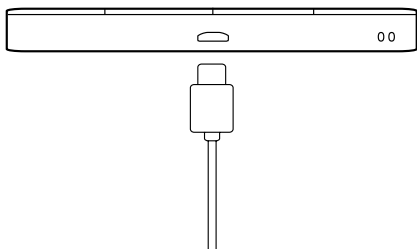


PLEASE NOTE! The LCD screen can be activated by using any button.

4.3 Li-on battery charging

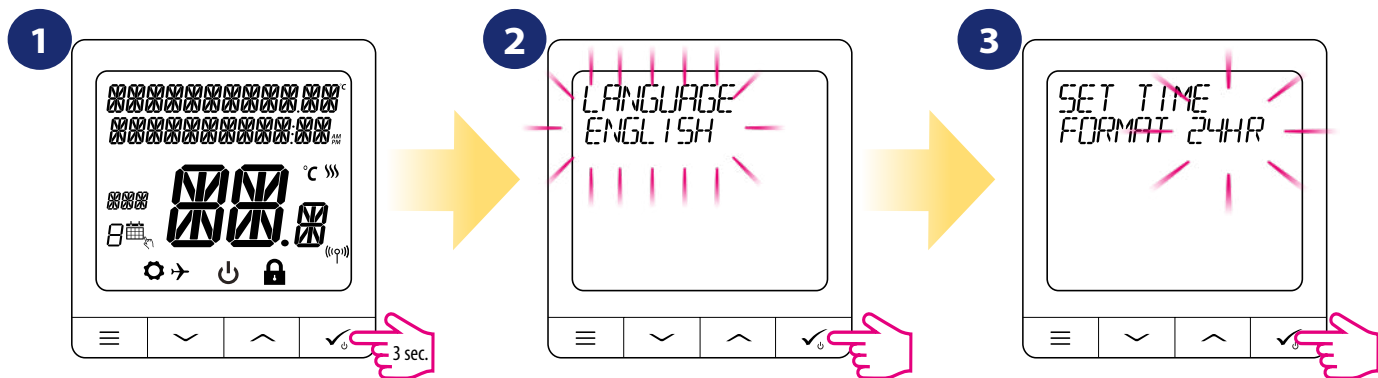
New WQ610RF thermostat is partially charged, however, we recommend you to fully charge the battery before use.

Connect charger to micro-USB port which is at the bottom of WQ610RF to charge the device.



Charging to full battery level may take up to 24h maximum.

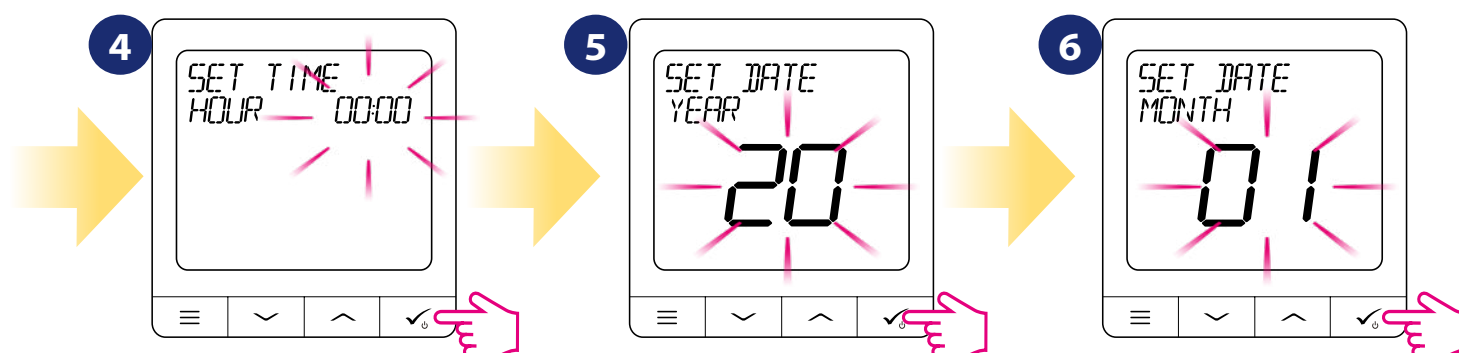
4.4 First power up sequence and configuration



Hold ✓ button for 3 seconds to power up the thermostat.

Using ▼ or ▲, choose your language and then press ✓.

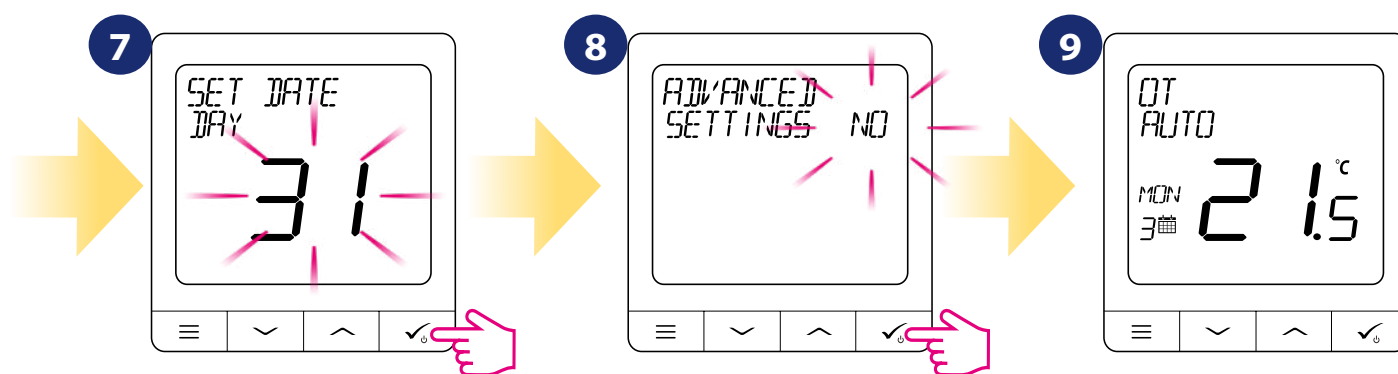
Using ▼ or ▲, choose the time format and then press ✓.



Using ▼ or ▲, set the hour and then press ✓.

Using ▼ or ▲, set the year and then press ✓.

Using ▼ or ▲, set the month and then press ✓.



Using ▼ or ▲, set the day and then press ✓.

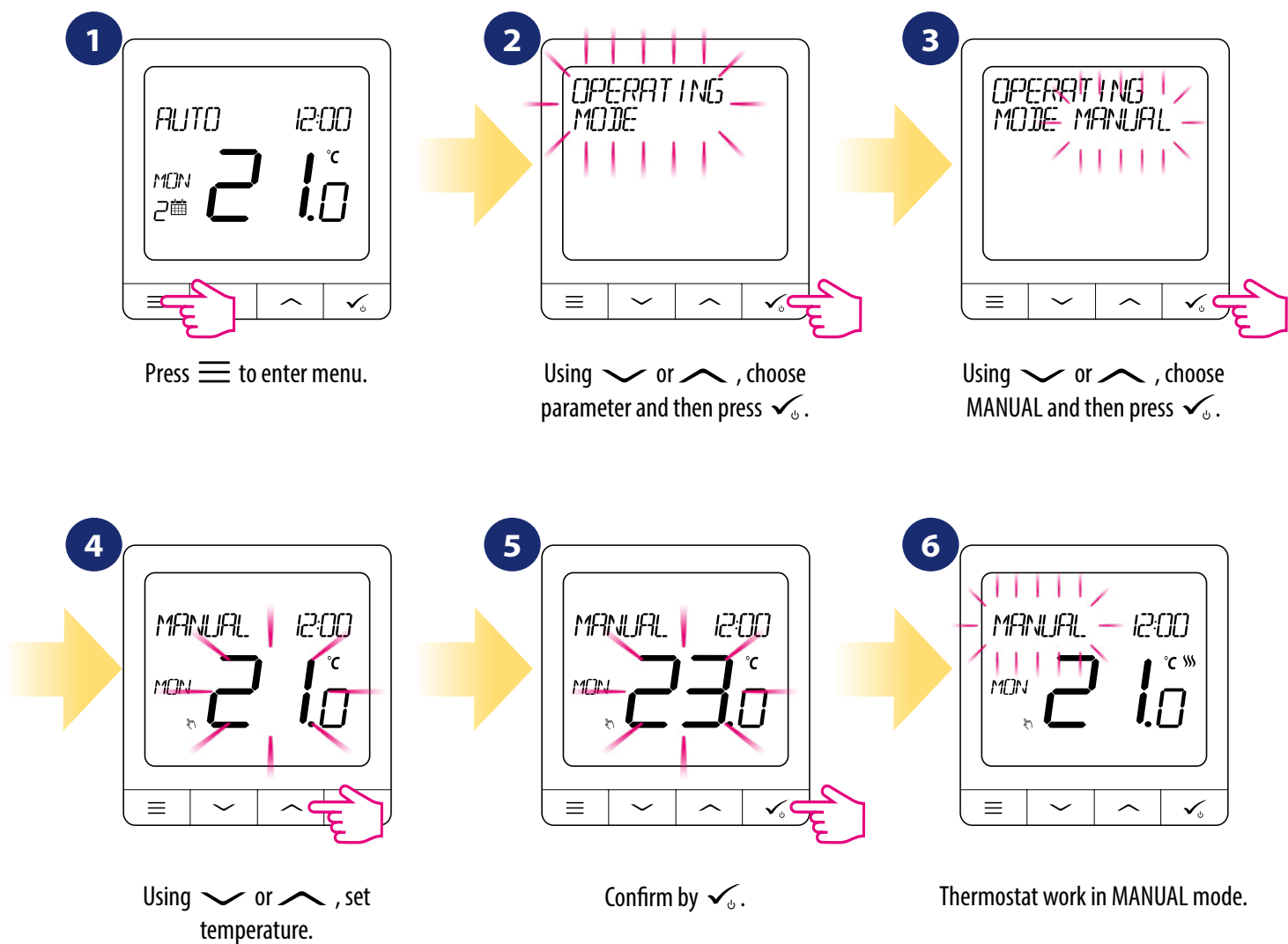
Using ▼ or ▲, choose if you want to set advanced settings (you can always edit them later) then press ✓.

Thermostat is displaying main screen.

5. Operating

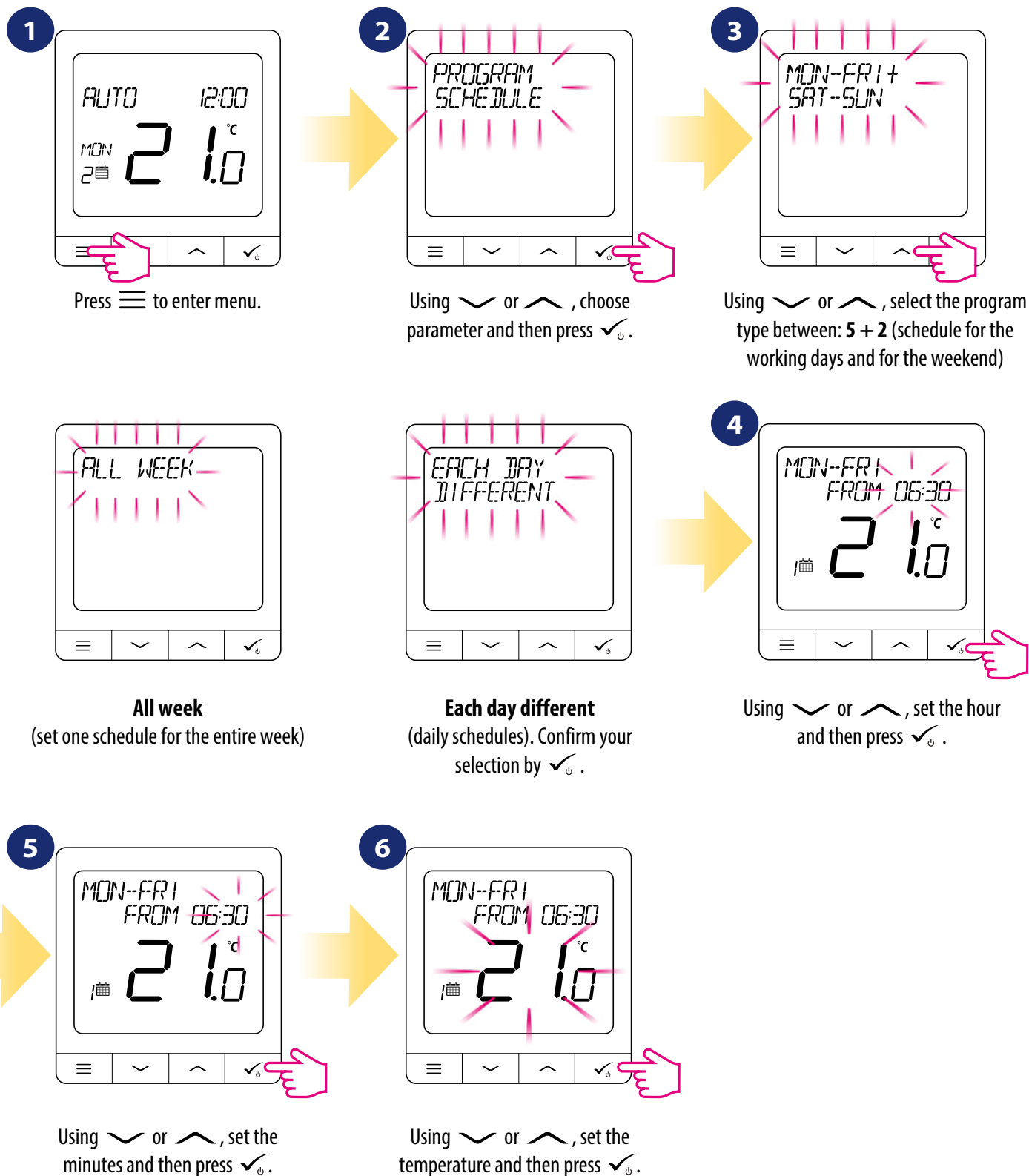
5.1 Setpoint temperature change (manual mode)

In manual mode, the thermostat maintains a constant temperature set by the user. A hand icon is displayed when manual mode is active.



5.2 Schedule mode - programming schedule

In this mode, user can set the schedules for thermostat (temperature setpoints for specific periods of time). Programmed schedules should use all time periods.



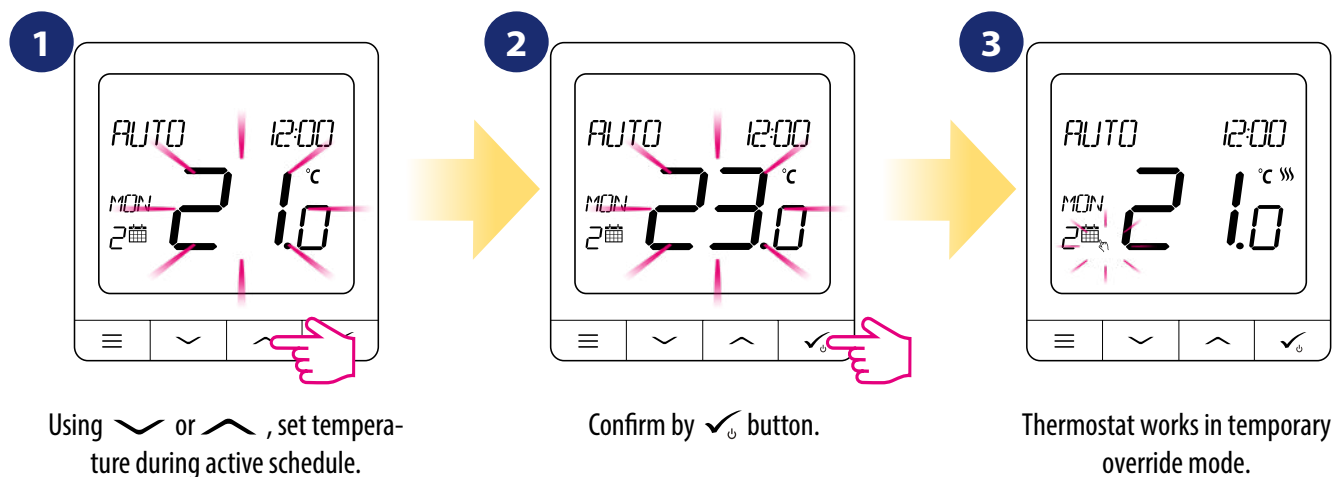
PLEASE NOTE! Thermostat should be set in AUTO mode to work according to the programmed schedule. Please refer to chapter 5.9.



Repeat the process for all time periods.

5.3 Temporary override mode

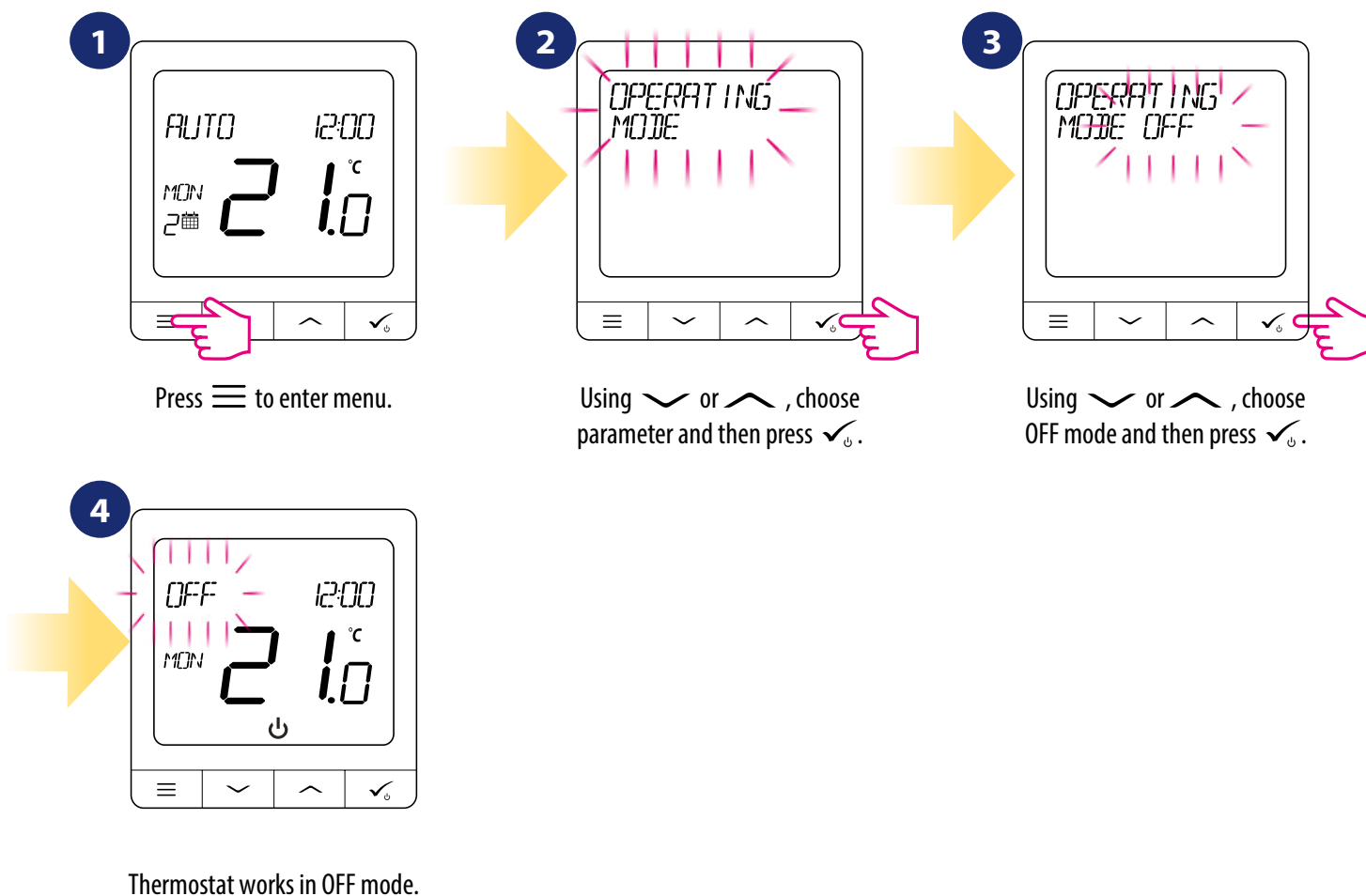
When thermostat is running schedule mode we can temporarily override it by setting new setpoint temperature.



PLEASE NOTE: To cancel temporary override mode and go back to the schedule hold \equiv button for 3 seconds. The calendar icon indicates that thermostat went back to schedule mode.

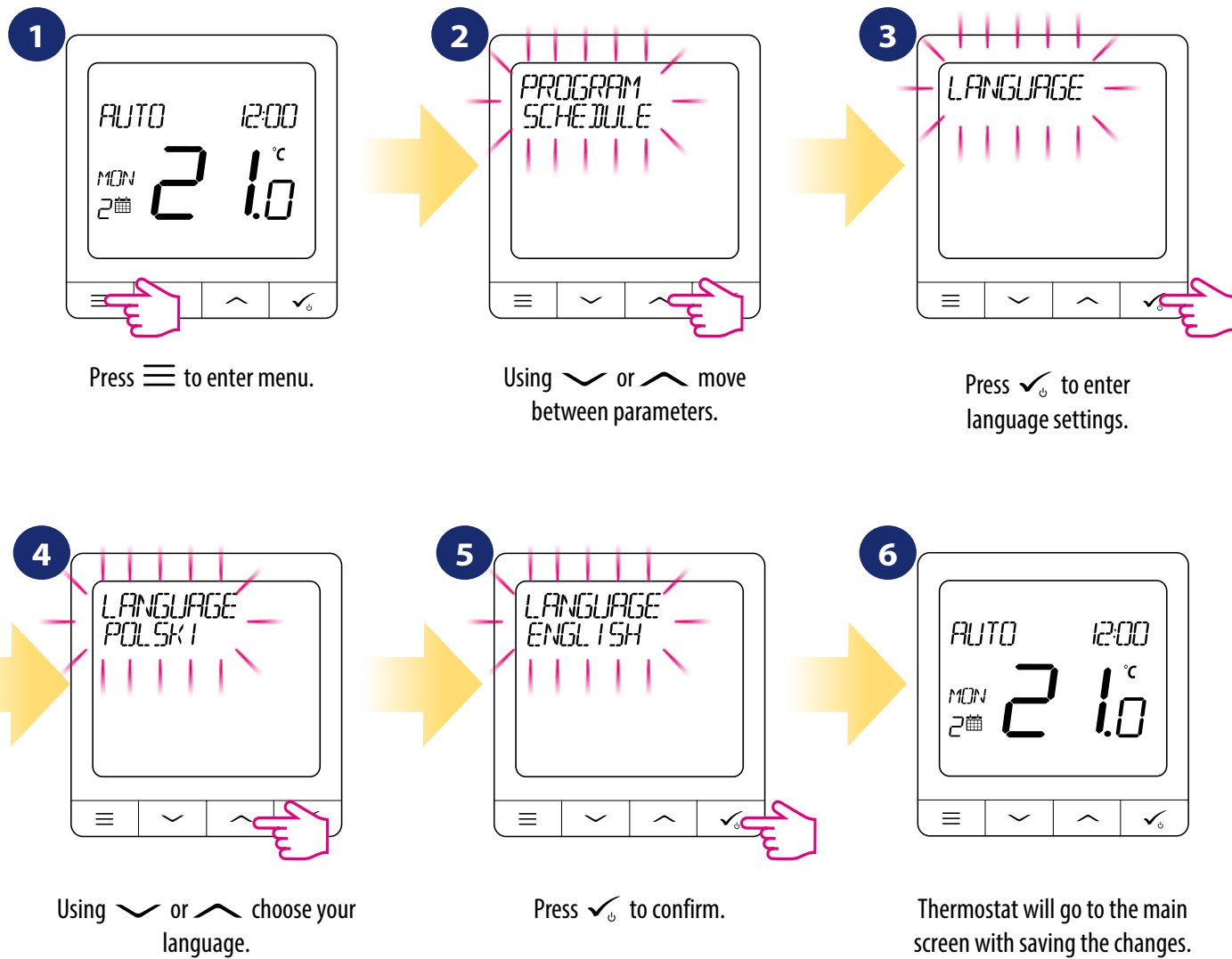
5.4 OFF mode

In this mode thermostat is turning off and maintain frost protection temperature (please refer to 4.6.10 chapter).



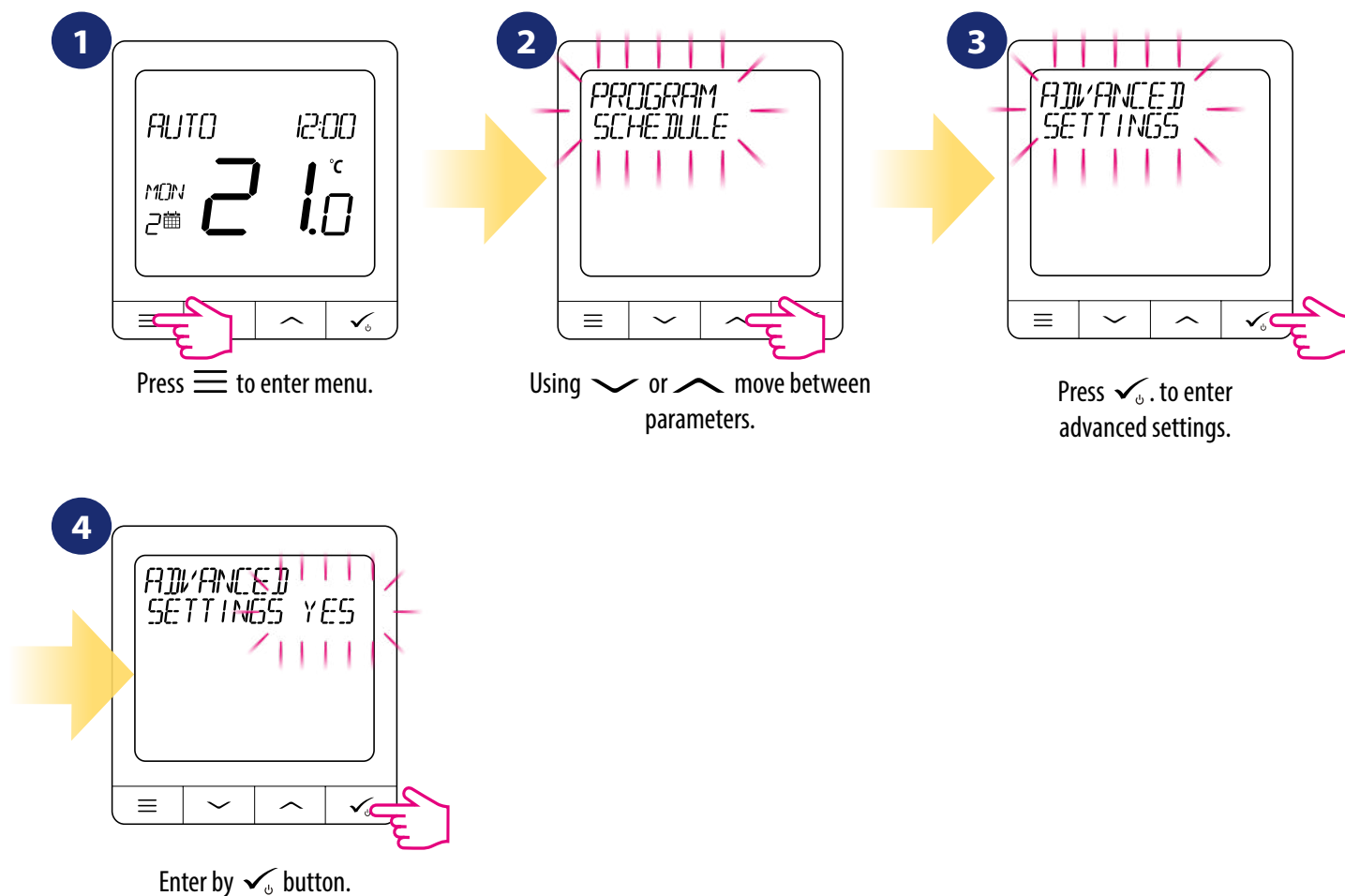
5.5 Language

To choose language follow steps below:



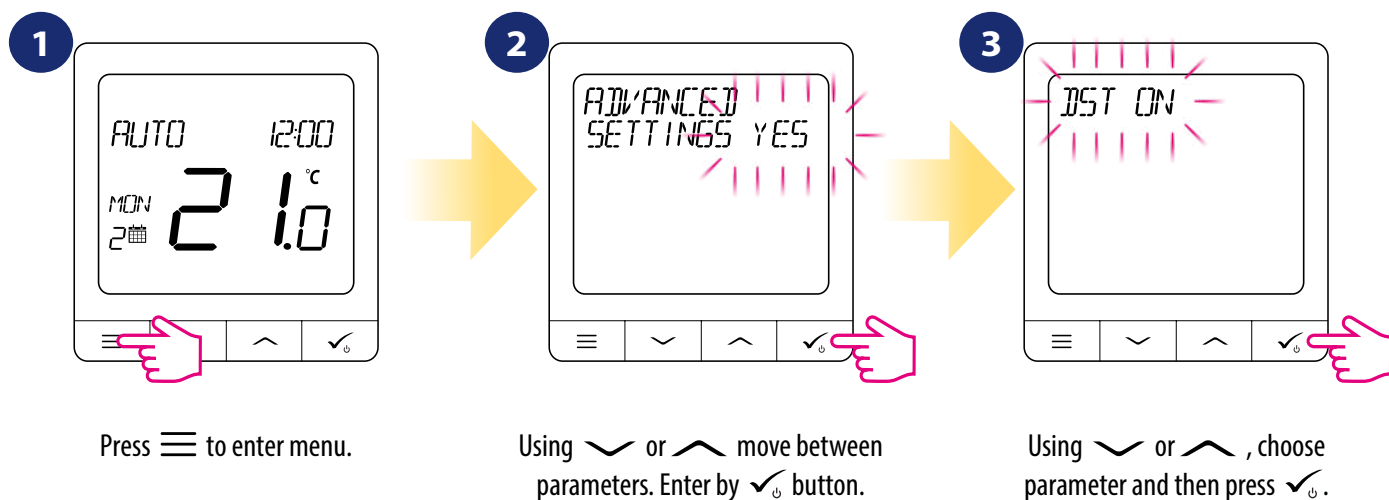
5.6 Advanced settings

In advanced settings user can set eg. temperature calibration, DST or PIN code etc. Remember that these are installer settings!



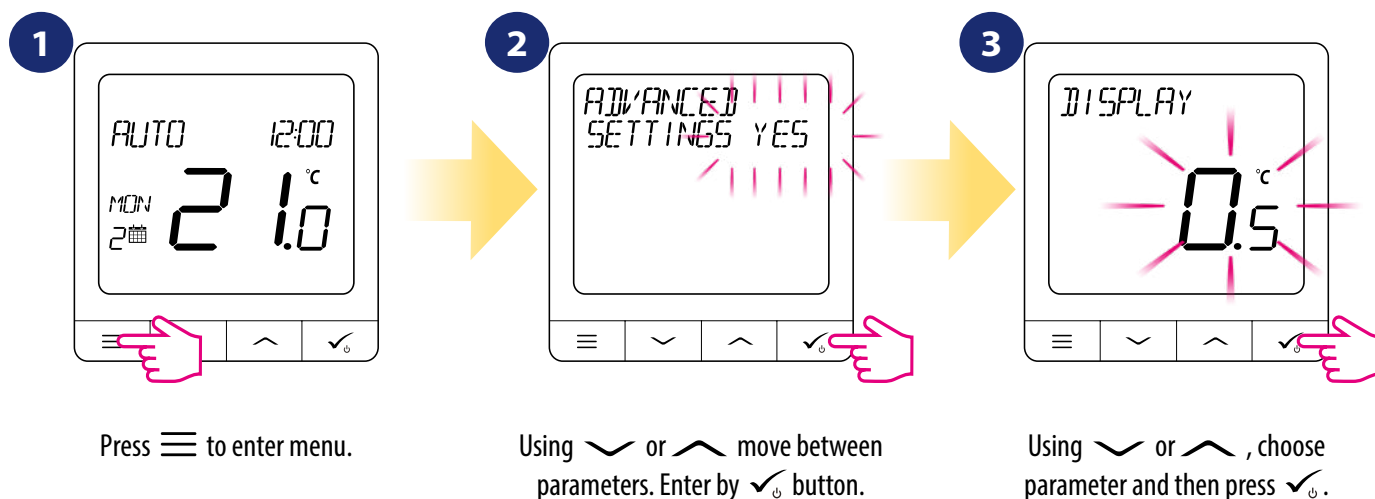
5.6.1 DST (Daylight Saving Time) setting

When DST function is ON then thermostat will automatically change time in summer time period.



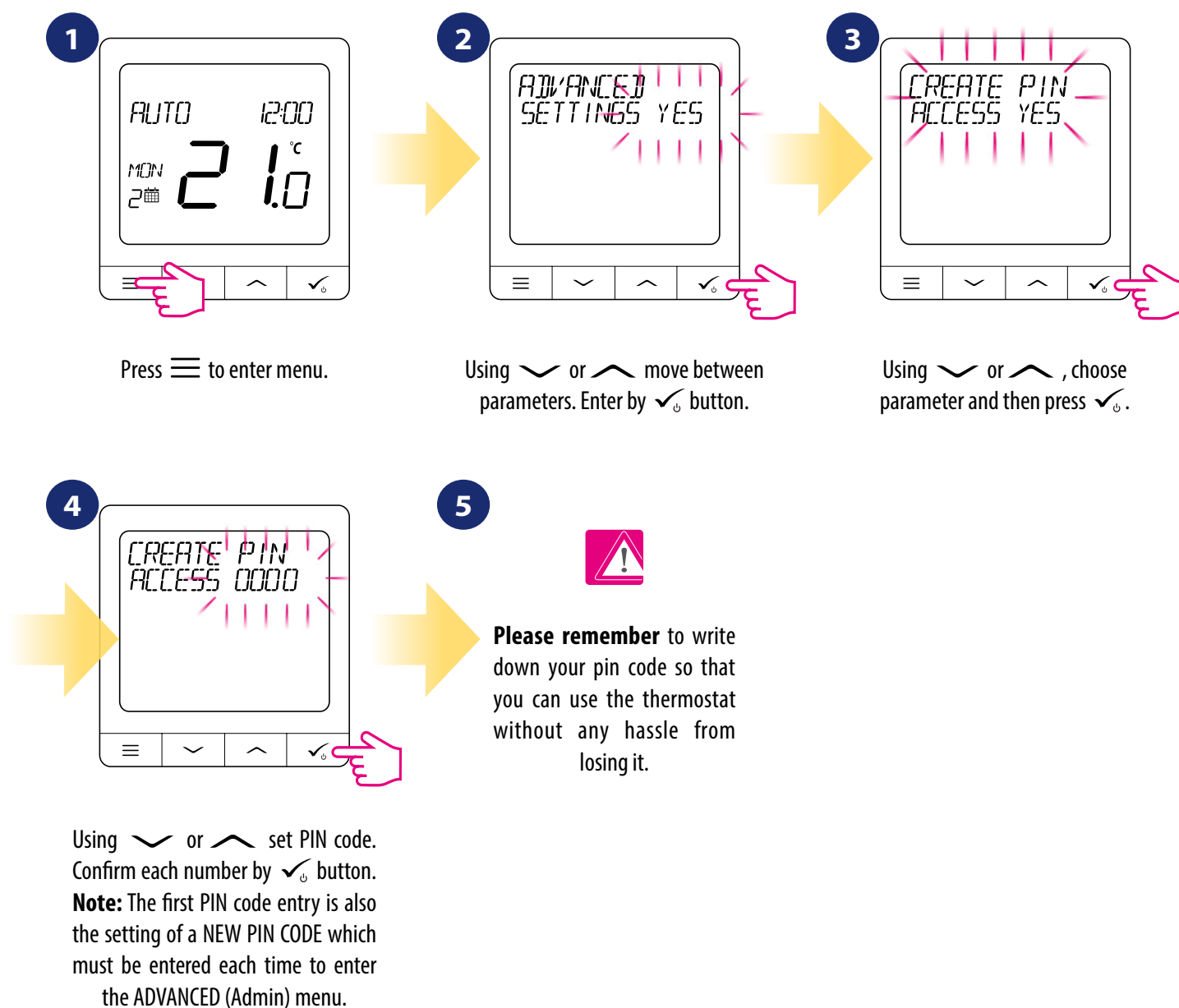
5.6.2 Display temperature accuracy

Adjust the measured thermostat temperature display scale for about 0,5 °C or 0,1 °C. Please follow steps below:



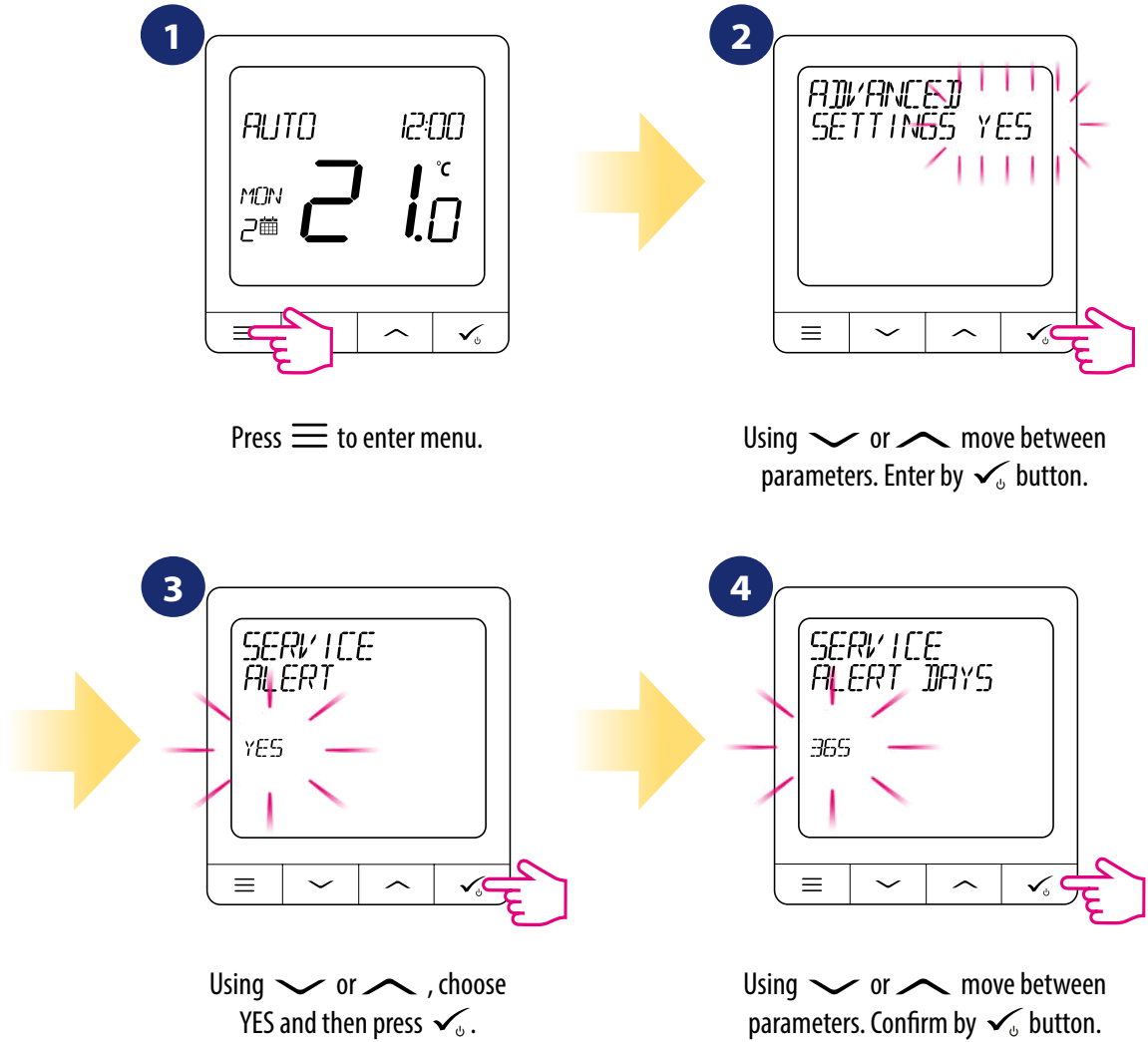
5.6.3 PIN Code

Set PIN code to lock possibility to control the thermostat until you enter the code.



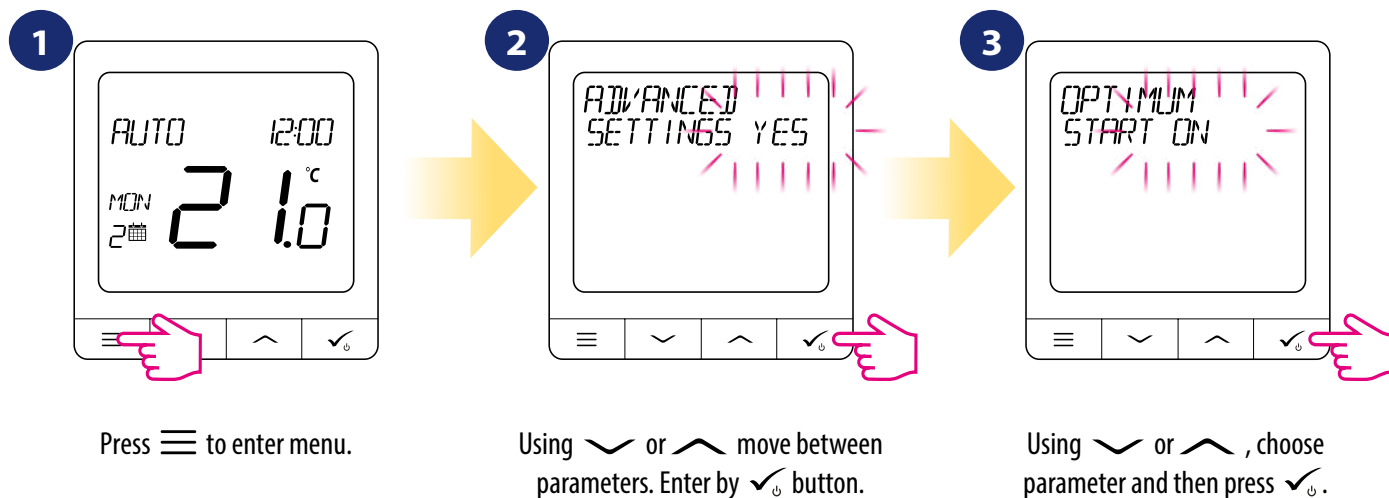
5.6.4 Service alert

Set a service reminder on the thermostat that will warn the tenant when the boiler is due its annual service.



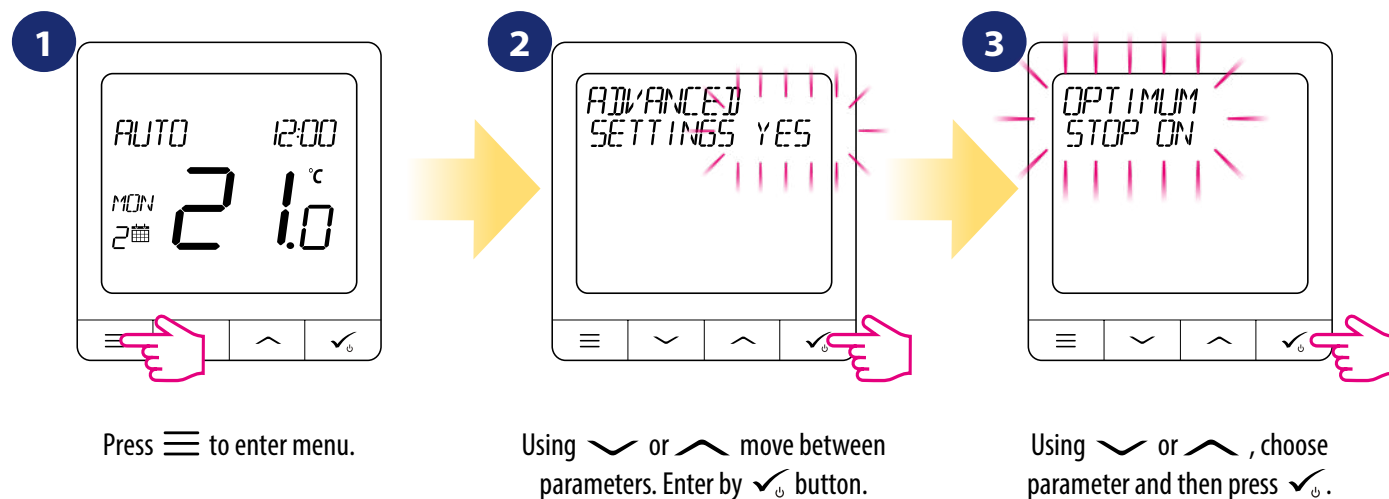
5.6.5 Optimum Start

The optimization function is an energy-saving algorithm used for efficient control of the heating device, ensuring better thermal comfort at certain times of the day. When the OPTIMUM START function is active, the thermostat sends a heating signal to the heat source beforehand so that the preset temperature in the room is reached at the time specified in the schedule.



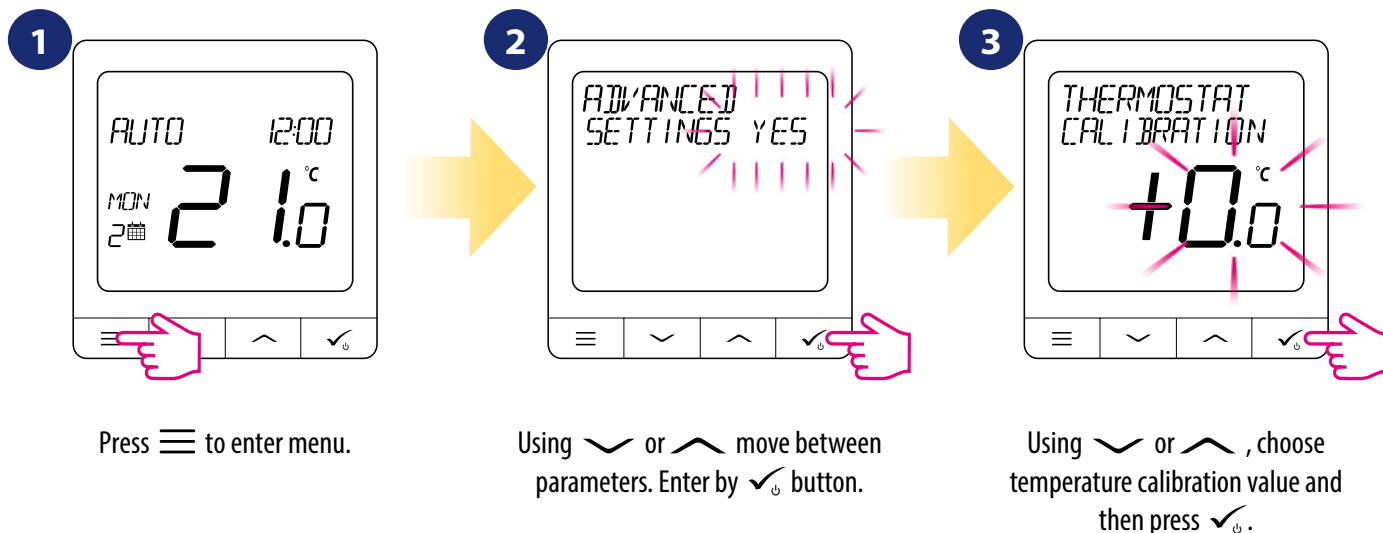
5.6.6 Optimum Stop

When the OPTIMUM STOP function is active, the thermostat, taking into account the inertia of the system, switches off the heat source earlier, keeping the temperature set in the schedule.



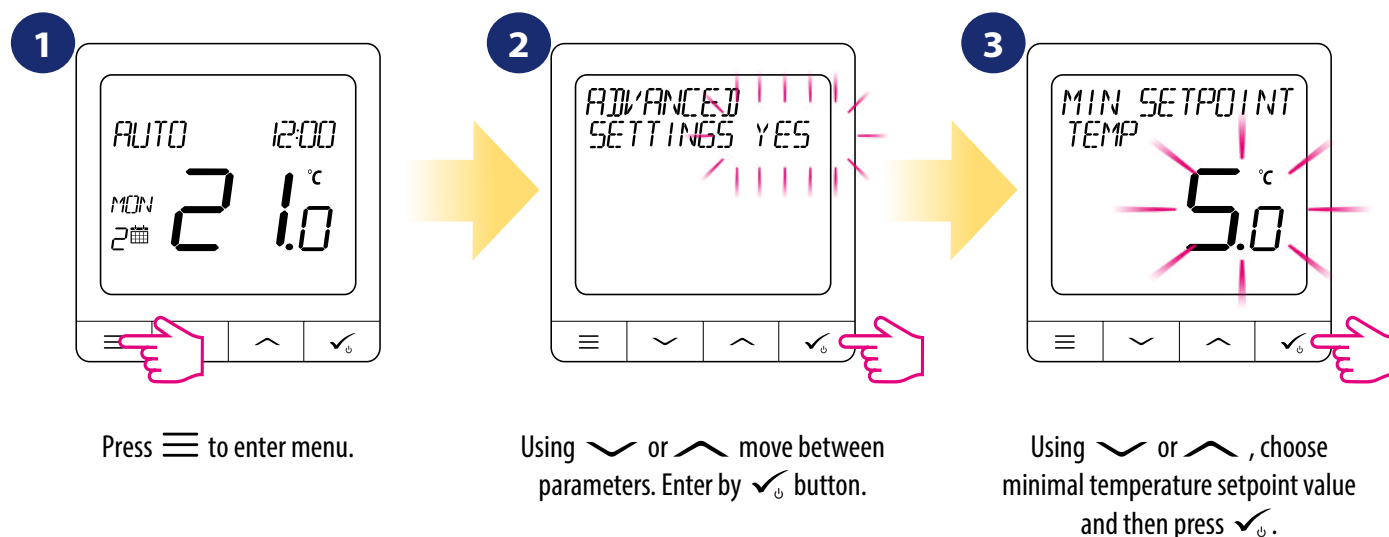
5.6.7 Thermostat temperature calibration

Thermostat calibration is a function which allows user to recalibrate internal thermostat's temperature sensor by a given number of degrees (in the range from -3,5 °C to 3,5 °C). To calibrate thermostat's temperature sensor please follow steps below:



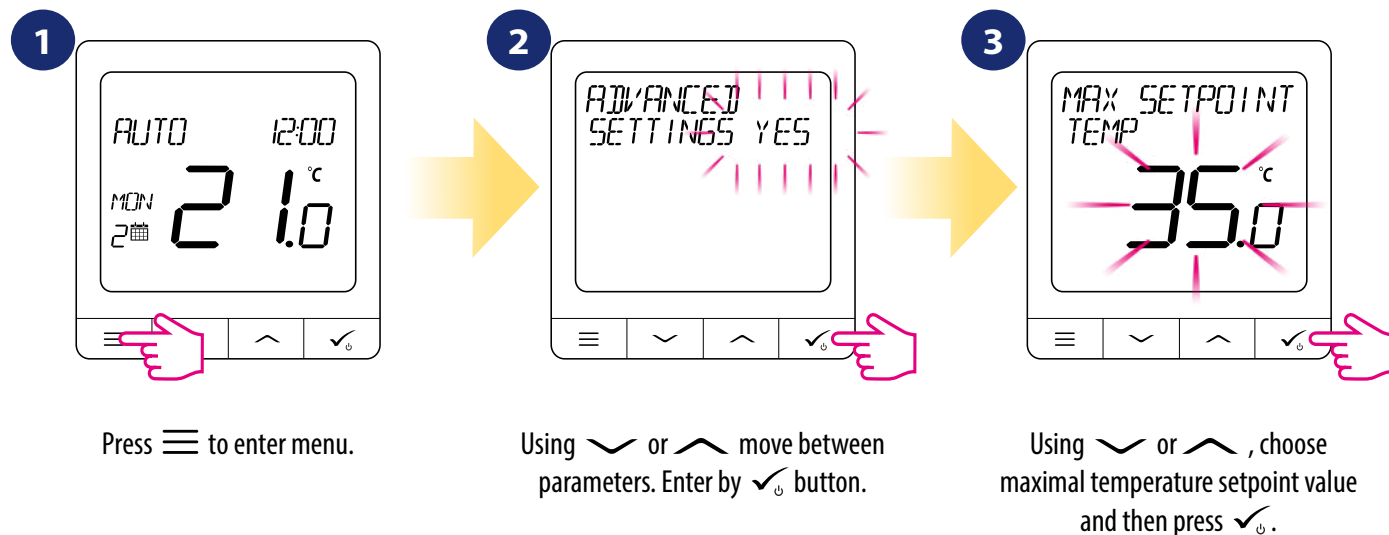
5.6.8 Minimum setpoint temperature

This parameter allows to limit temperature setpoint range by setting minimum setpoint for heating mode. Default temperature setting range: 5°C - 35°C



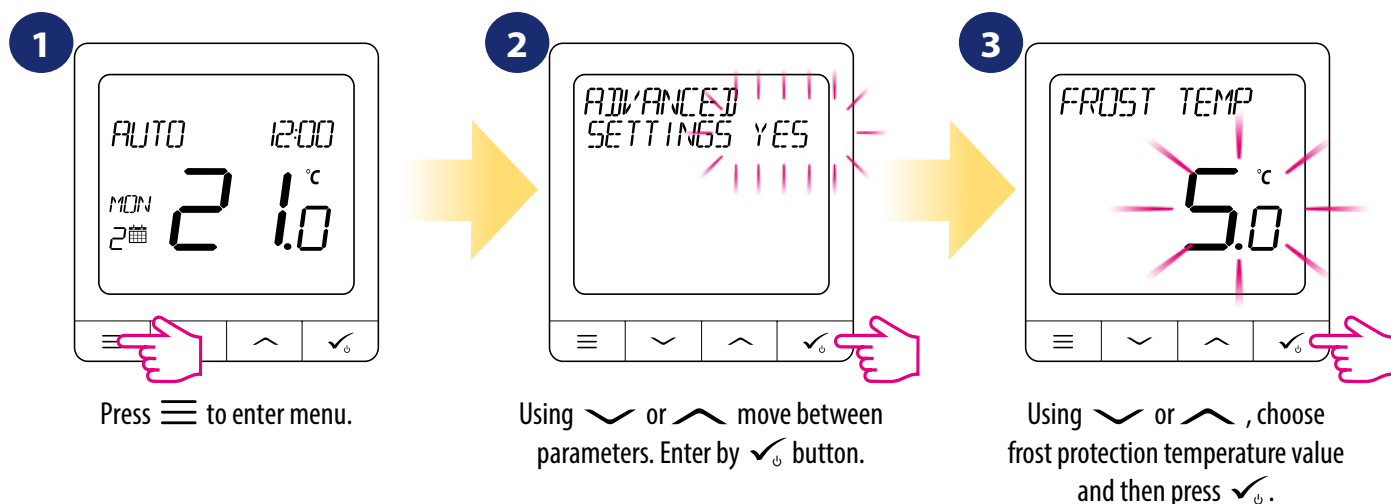
5.6.9 Maximum setpoint temperature

This parameter allows to limit temperature setpoint range by setting maximum setpoint for heating mode. Default temperature setting range: 5,5°C - 35,0°C



5.6.10 Frost protection temperature

Set temperature for frost protection mode.

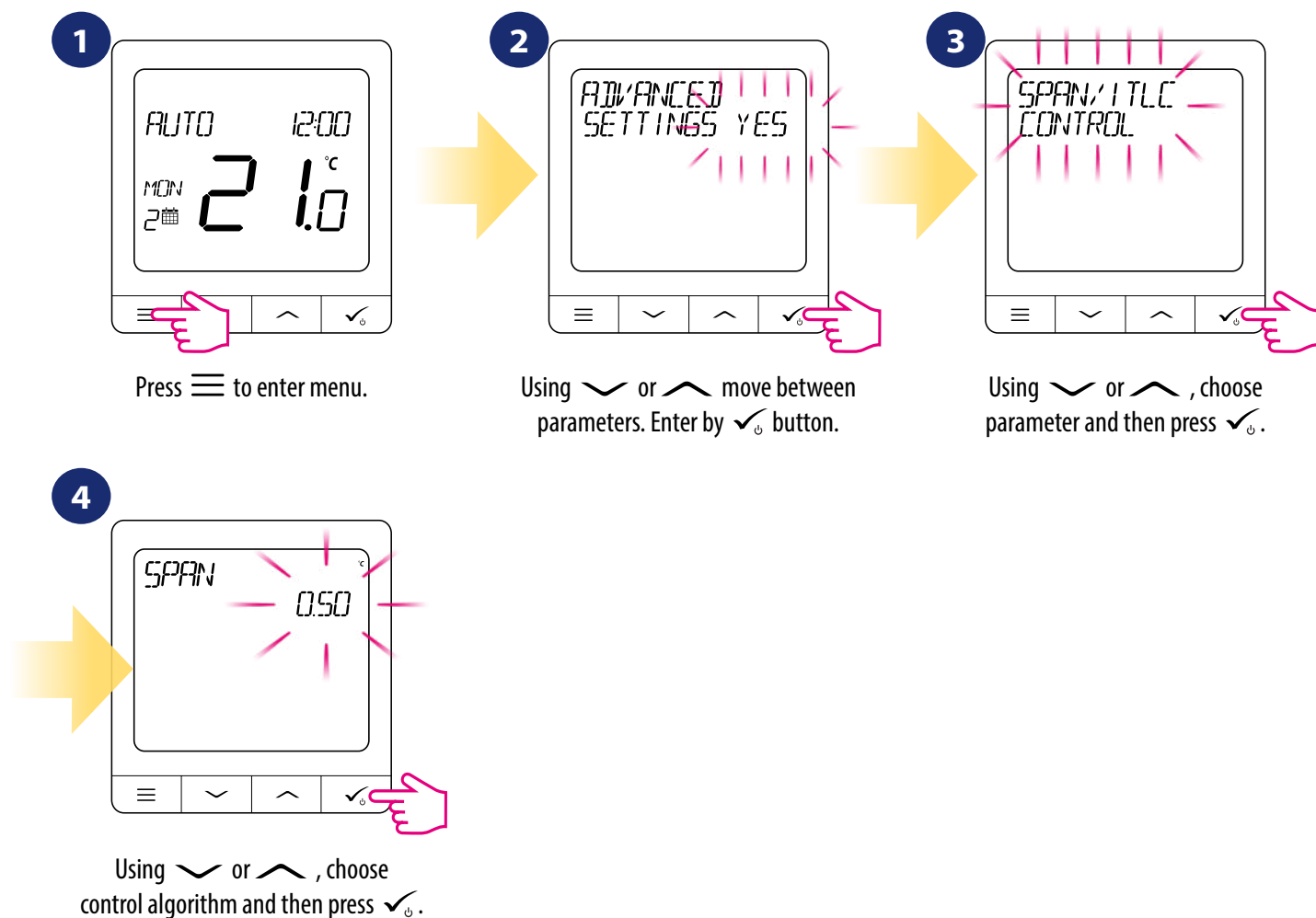


5.6.11 Control algorithm

Set control algorithm: ITLC for radiators, SPAN (hysteresis) 0,5°C or SPAN (hysteresis) 0,25°C.

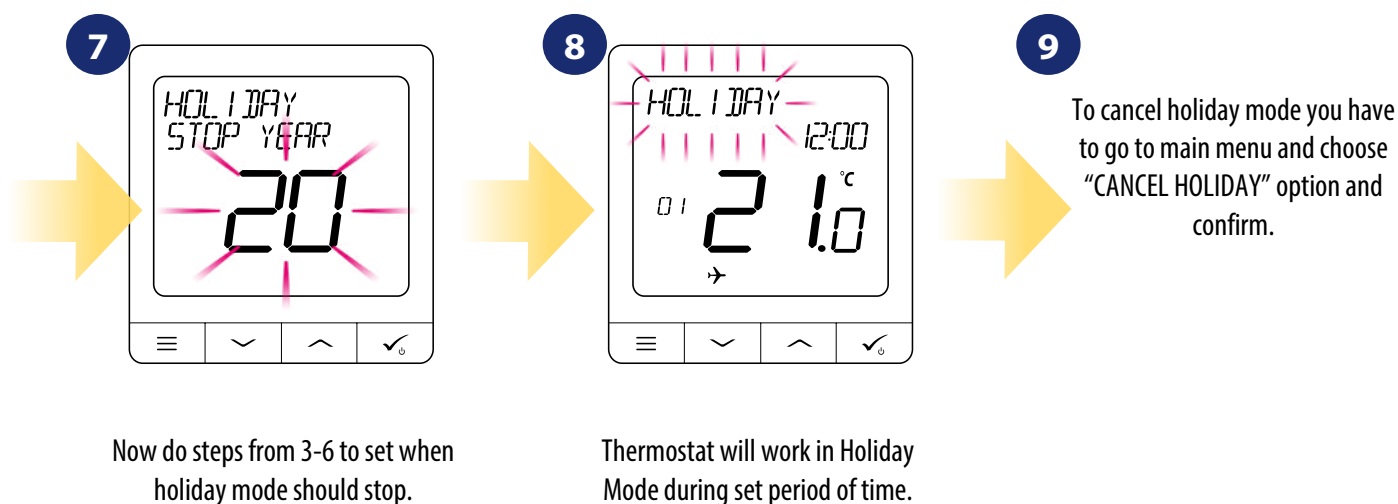
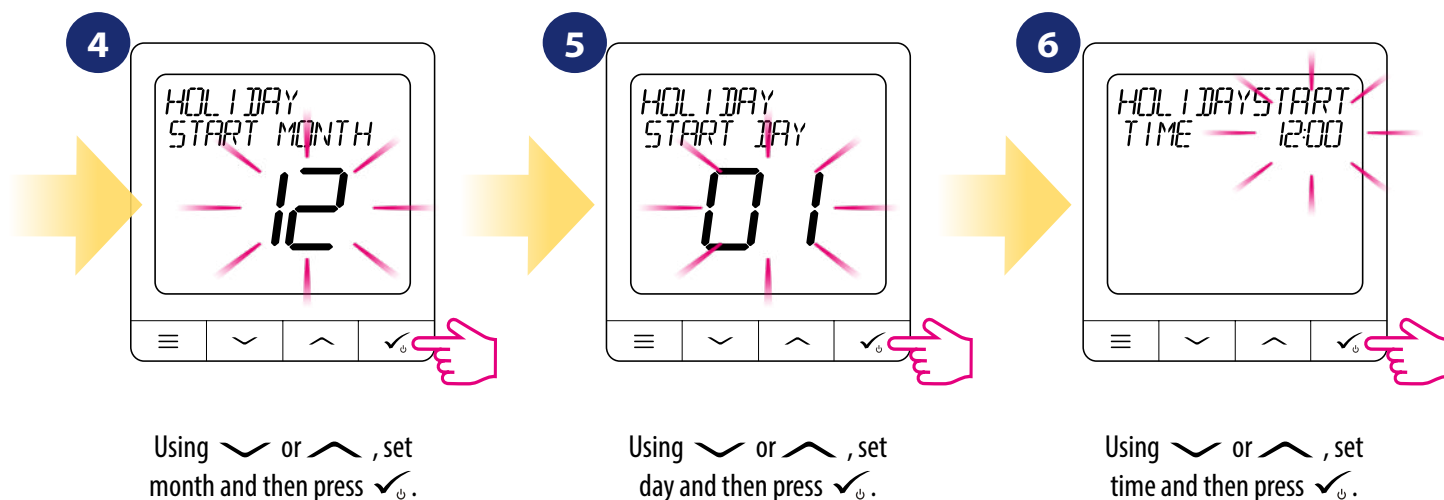
ITLC is a self-learning, time-proportional control algorithm. The regulation of the ITLC type ensures economical operation system due to more precise temperature maintenance during the controlling process. In addition to an accurate and stable room temperature, the advantage of this system is the minimization of energy consumption and significant savings.

Hysteresis is the temperature difference between which the thermostat works, keeping the set temperature. For example, if you set the temperature to 20°C and if the hysteresis is $\pm 0.5^\circ\text{C}$, the heating will be turned on when the room temperature drops to 19.5°C and turned off when the temperature reaches 20.5°C.



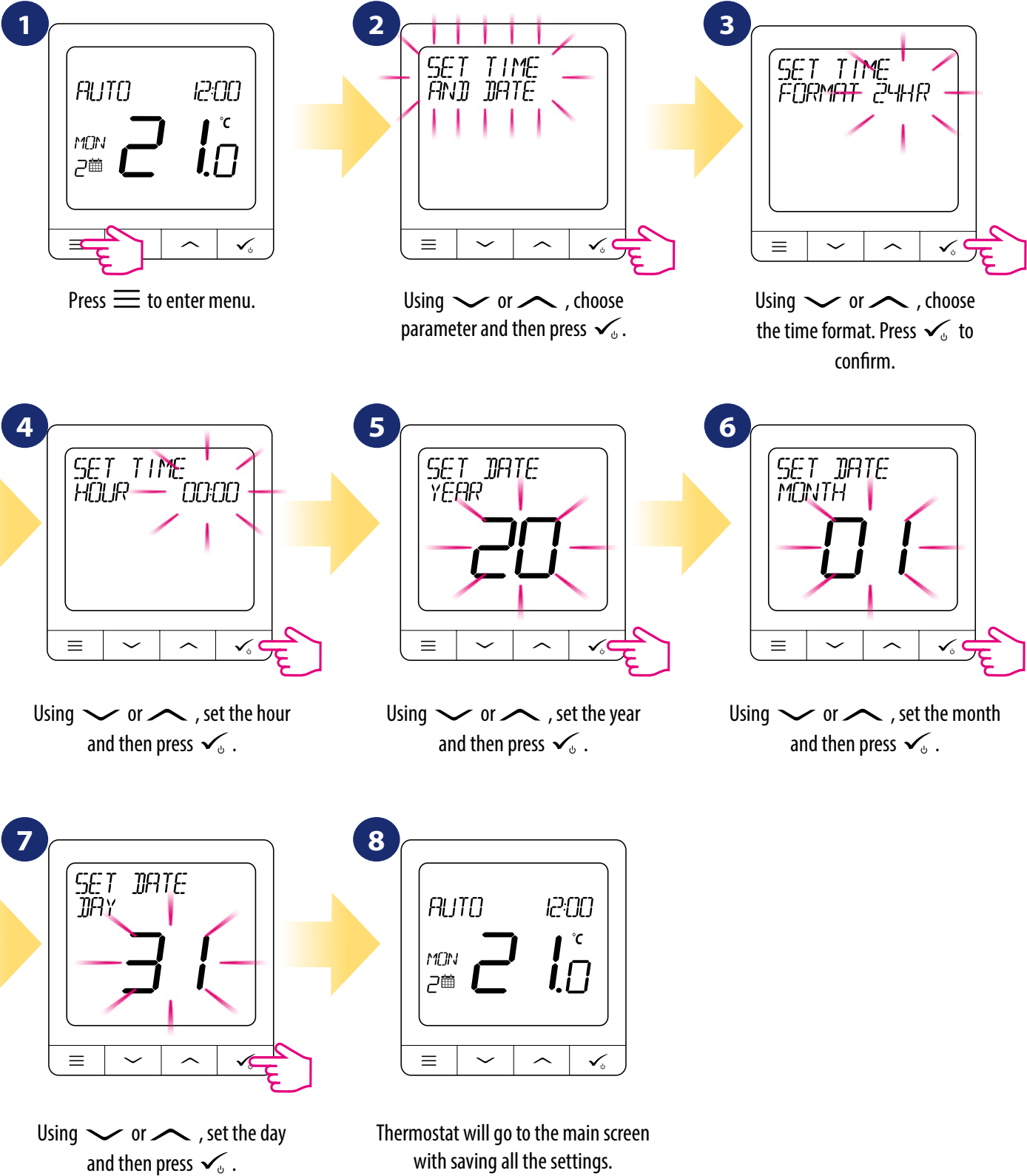
5.7 Holiday mode

Holiday mode is a special program temperature setpoint which thermostat will maintain for specified days. During holiday mode thermostat is maintaining frost protection setpoint temperature. How to set **HOLIDAY MODE**:



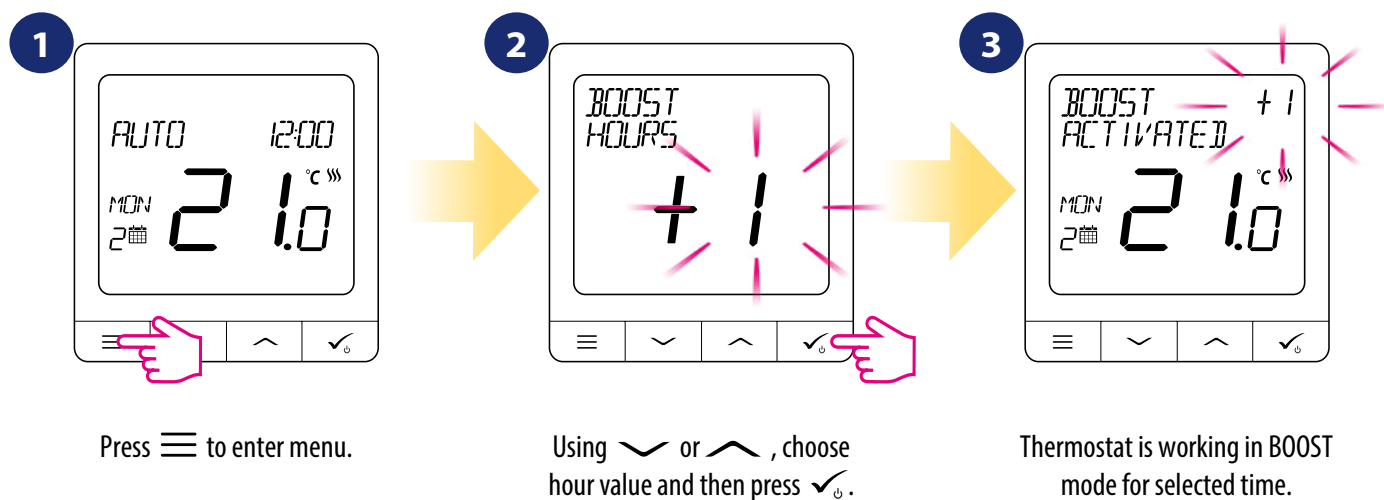
5.8 Time/Date

To set time/date follow steps below:

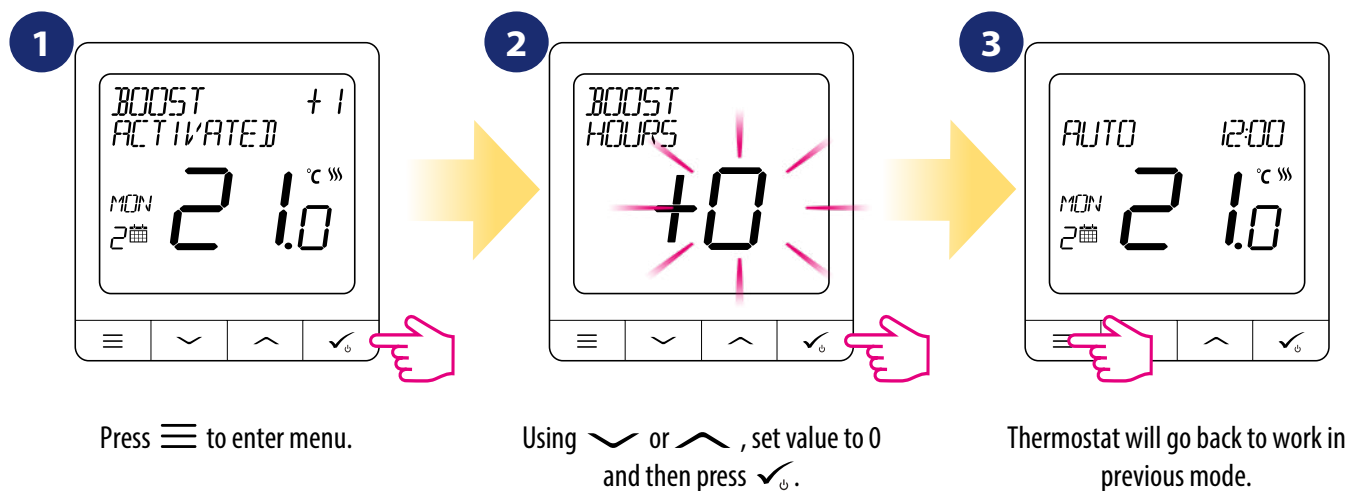


5.9 BOOST hours - hourly temperature override

The function is available only in AUTO and OFF modes. Used to change the temperature to the desired value for a specified number of hours (up to 9 hours). After the elapsed time, the thermostat returns to the previous operating mode.

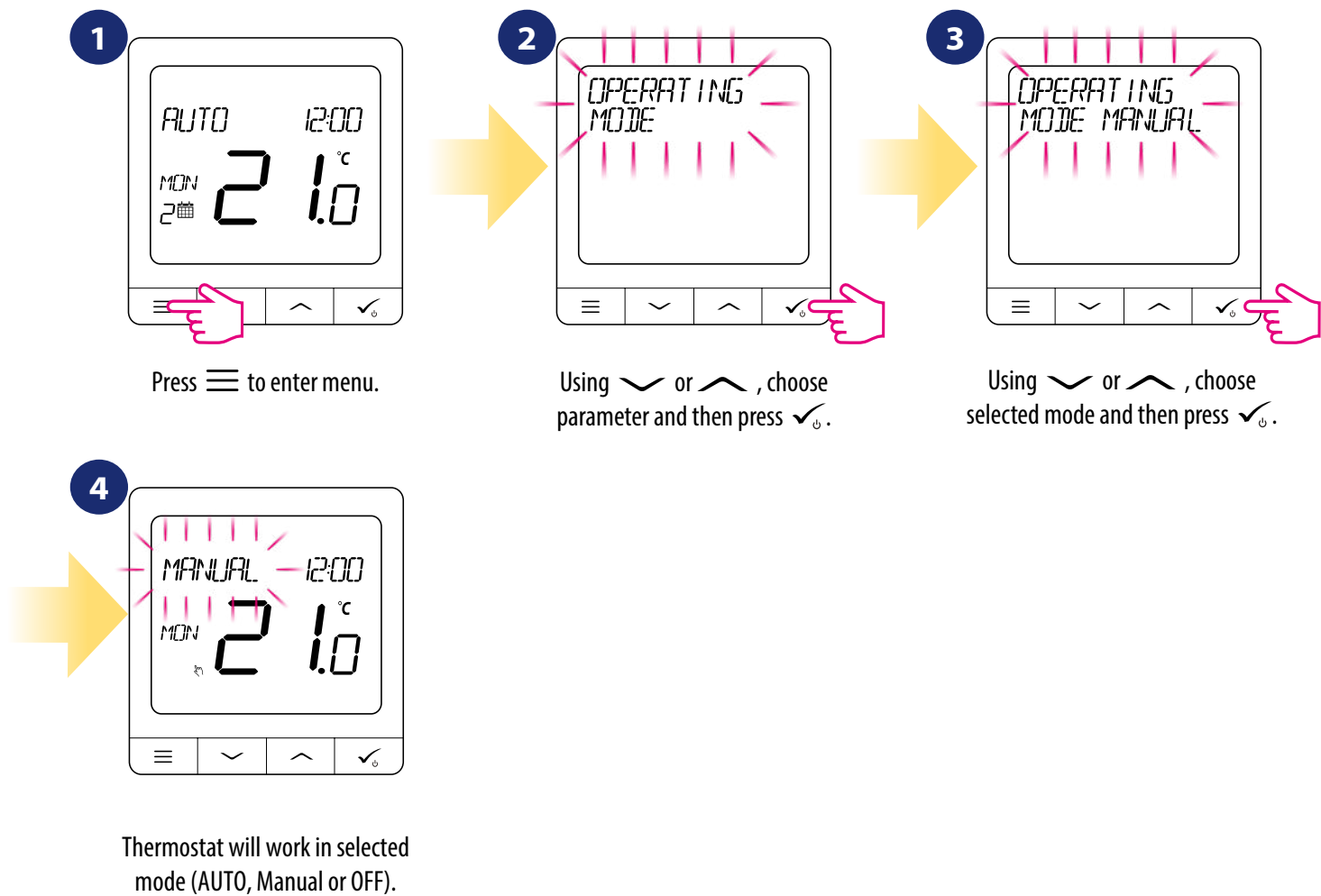


How to stop BOOST mode:



5.10 Operating mode

Select operating mode for thermostat: Manual mode, AUTO mode or OFF.



6. WQ610RF thermostat pairing with the receiver

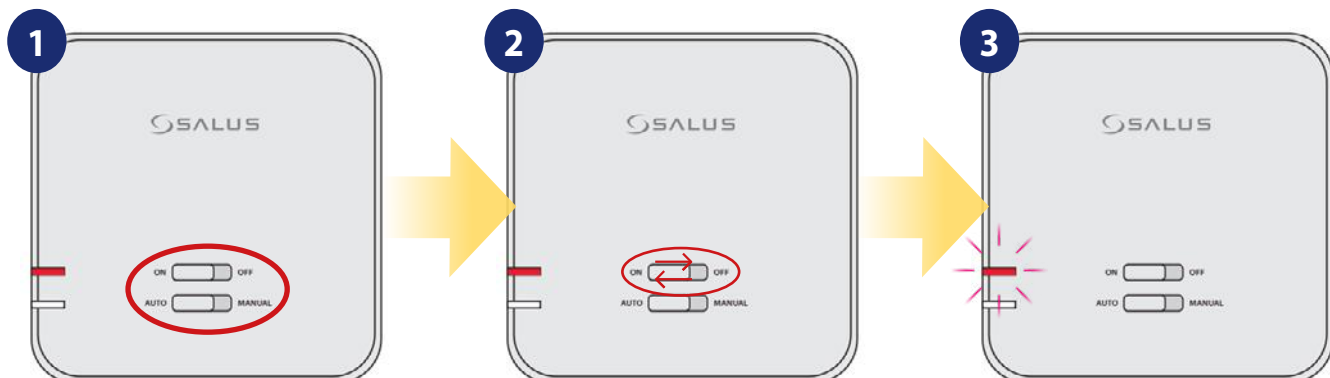
The word PAIRING in the user settings means the function of synchronizing the transmitter with the receiver again, if it has been removed.



WARNING!

IN THE SET WQ610RF THE THERMOSTAT IS FACTORY PAIRED WITH THE RECEIVER!

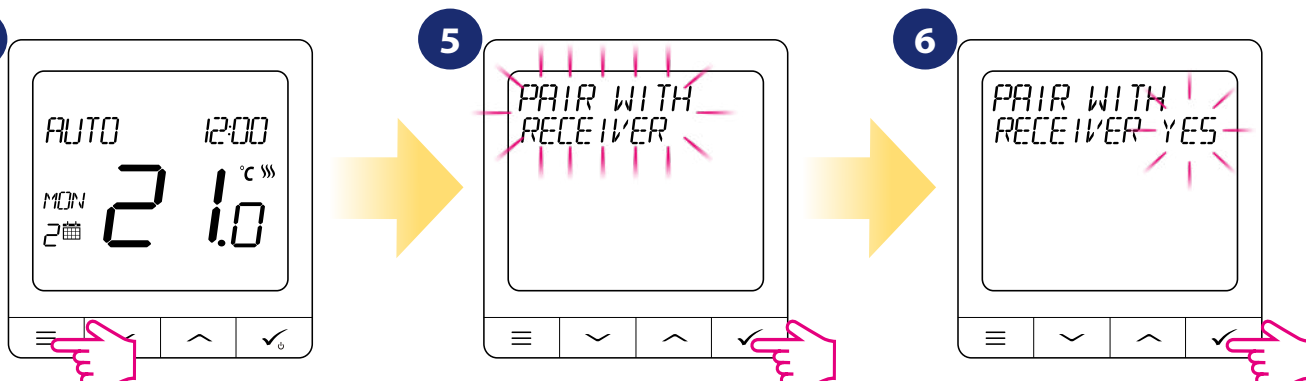
In order to pair the devices correctly, you must first prepare the receiver for synchronization!



If you want to re-pair the devices with each other, make sure that the receiver is disconnected from the power supply and the switches on it are in the AUTO and ON positions. Then connect the receiver to the power supply and wait for the red diode to glow continuously.

Move the top switch to the OFF position with a quick motion and back to the ON position.

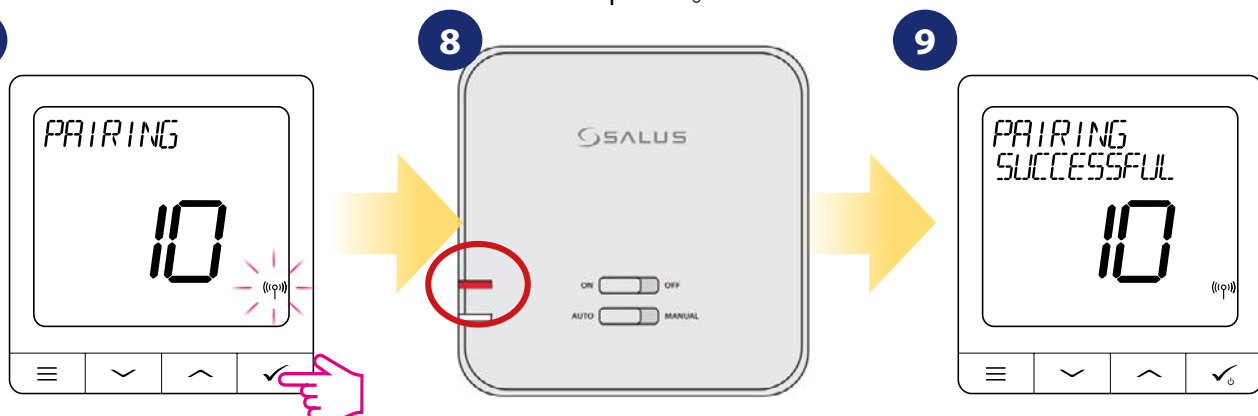
The red LED will start blinking, which will confirm that the receiver has entered the pairing mode.



Press to enter menu.

Using or , choose „PAIR WITH RECEIVER” option and then press .

Confirm „YES” by button.



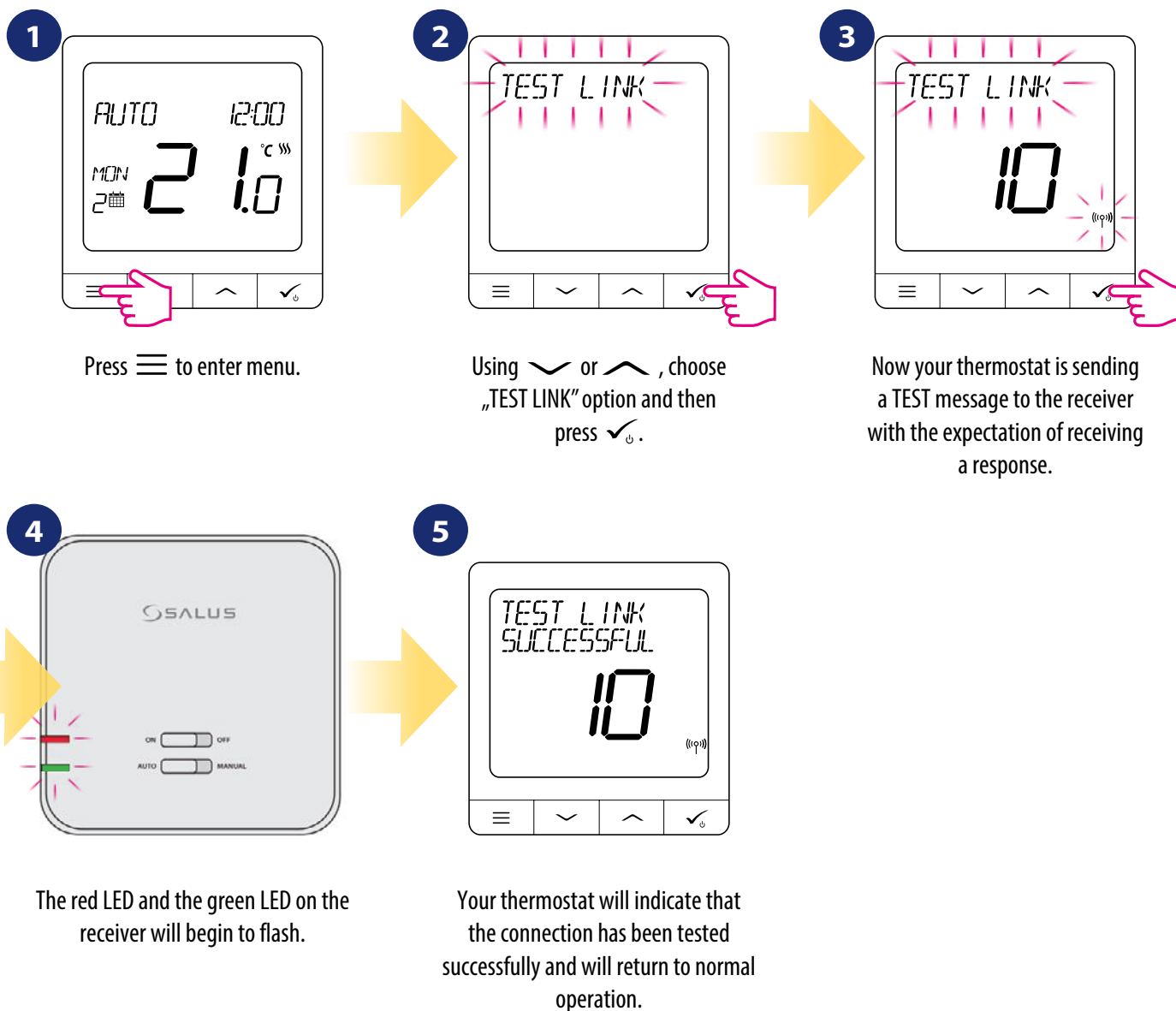
The pairing process takes up to 10 minutes.

When the red diode on the receiver lights up continuously, the devices have been paired on a new frequency.

Upon connecting to the receiver, the thermostat will display the message “PAIRING SUCCESSFUL” and return to normal operation afterwards. After all, thermostat will go back to the main screen.

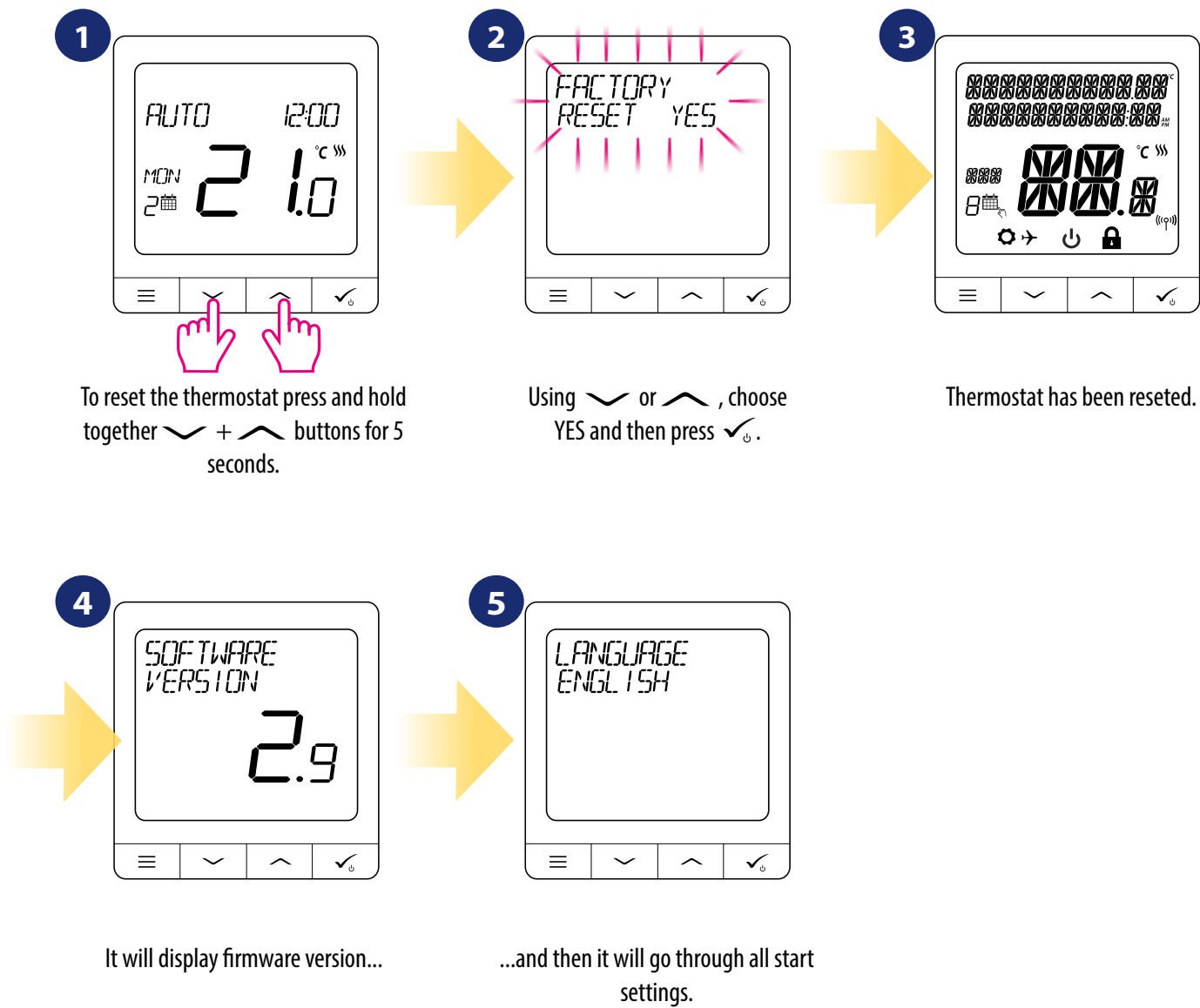
7. Test the pairing process

It is important to place the receiver and transmitter in places where nothing interferes with the radio signal. The range of communication between the transmitter and the receiver in an open area is up to 60m. The radio transmission is influenced by many factors that can shorten the working distance, such as thick walls, drywall covered with aluminum foil, metal objects such as cabinets, general radio interference, etc. However, the range is sufficient for most domestic use. It is recommended to test the radio transmission between devices before mounting the regulator on the wall. The test can be performed by changing the set temperature, i.e. by activating or deactivating the heating.



8. Factory Reset

To RESET WQ610RF thermostat to it's factory default settings please follow steps below:

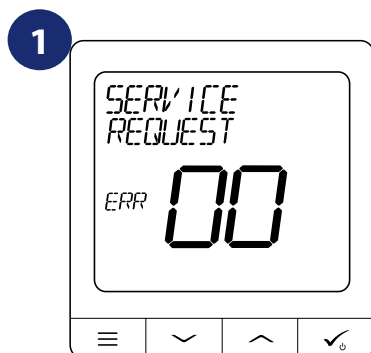


9. Error codes

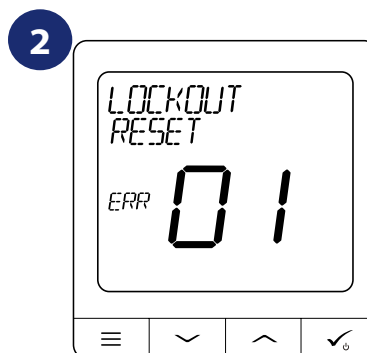


Thermostat will display errors only when it's connected to the boiler by OPENTHERM terminals (A / B). Please refer then to boiler manual. Each boiler can have different error codes.

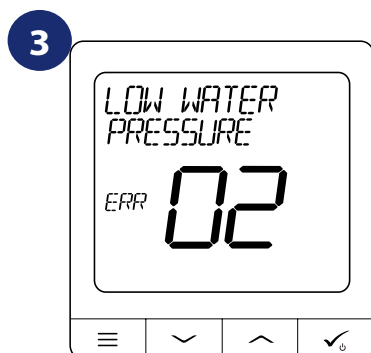
ERRORS EXAMPLES:



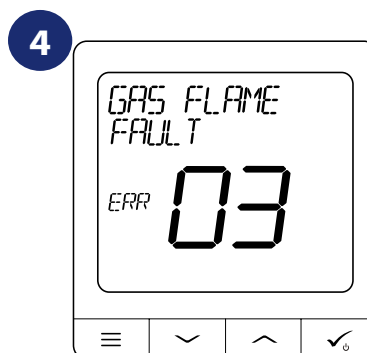
SERVICE REQUEST ERROR



LOCKOUT RESET ERROR



LOW WATER PRESSURE ERROR



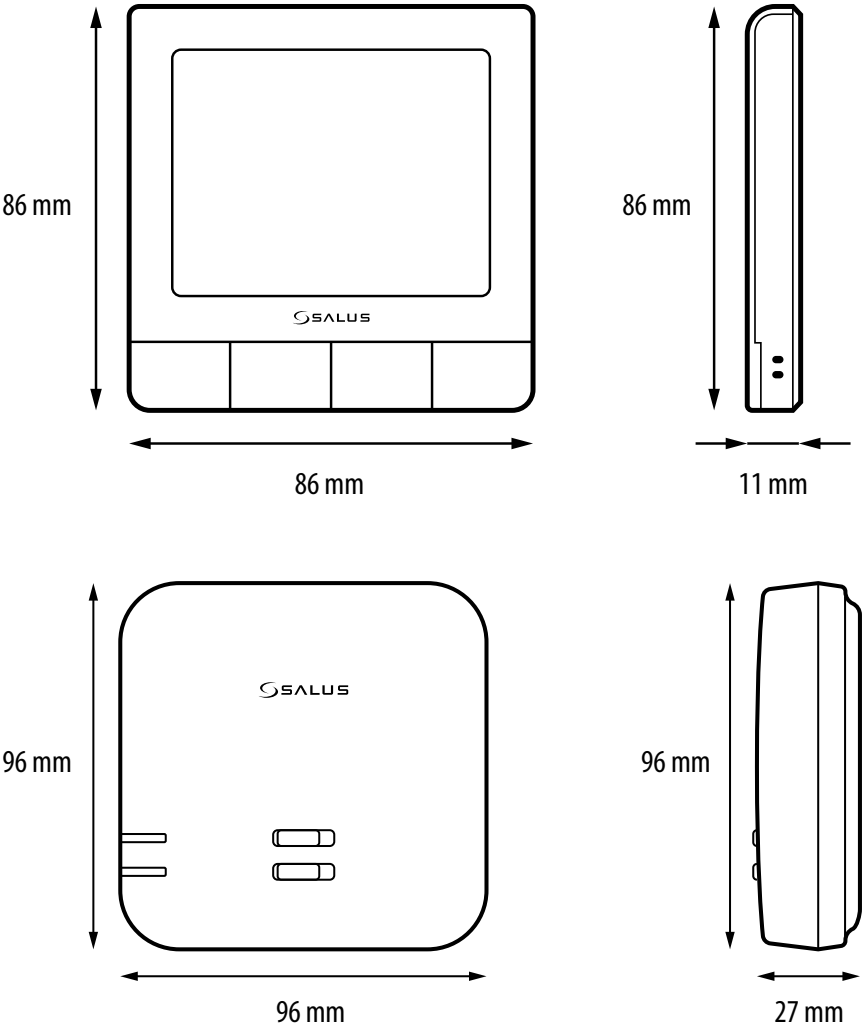
GAS FLAME FAULT ERROR

10. Cleaning and Maintenance

The **WQ610RF thermostat** requires no special maintenance. Periodically, the outer casing can be wiped clean using a dry cloth (please DO NOT use solvents, polishes, detergents or abrasive cleaners, as these can damage the thermostat). There are no user serviceable parts within the unit; any servicing or repairs could only be carried out by **Salus Controls** or their appointed agents.

11. Technical Informations

Power supply	230V AC 50Hz
Receiver rating max	16(5)A
Output signal	OpenTherm or COM/NO relay
Temperature range	5 - 35°C
Display temperature accuracy	0.1°C or 0.5°C
Control algorithm	ITLC or $\pm 0.25^{\circ}\text{C}$ or $\pm 0.5^{\circ}\text{C}$
Communication	Wireless, 2.4 Ghz radio frequency
Dimension [mm]	Thermostat: 86 x 86 x 11 Receiver: 96 x 96 x 27



12. Warranty

SALUS CONTROLS warrants this product to be free from any defects in material or workmanship and to perform as specified for a period of five years from the date of installation. SALUS CONTROLS reserves the sole responsibility for breach of this warranty by repairing or replacing the defective product. This product includes software that matches the distributor's identification at the time of sale. The manufacturer / distributor provides a guarantee covering all functions and specifics of the product in accordance with this marking. The distributor's warranty does not cover the correct operation of the functions and features available as a result of a product software update.

The full warranty conditions are available at www.salus-controls.eu

Customer Name:	
Customer Address:	
.....	Post Code:
Tel No:	Email:

Company Name:	
Tel No:	Email:
Installation Date:	
Installer Name:	
Installer Signature:	

PRODUCER:

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IMPORTER:

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Ver. 6

Issued: 07 VI 2021

Soft version: 2.9

