

# INNGENSO

## **Thermostat** Manual

IT 101 | ENG

**...step by step**





The IT 101 thermostat is designed to control heating systems. Unlike standard home thermostats, the IT 101 has two separate and wirelessly connected units (thermostat + receiver).

The receiver is a switching device used to connect heating systems, and a thermostat is a portable control unit for handling and setting the temperature. The units communicate with each other using a radio signal. The advantage of the system is the variability and easier availability of temperature control.

### **Important notes**

- Read the user manual not only for the thermostat, but also the heating system.
- Turn off the power supply before installing the thermostat.
- We recommend installation by a qualified installer.
- The electrical circuit should be secured with a fuse that does not exceed 20 A.
- Be aware of the required standards for installation.

# Specifications

## Thermostat

Power supply	3 V DC, 2 AA batteries
Mounting	Wall or portable
Schedule	7 days
Manual control	Full
Frost protection	Yes
Sensitivity	0.5 °C
Hysteresis setting	0.2 °C – 5 °C
Temperature setting	5 °C – 35 °C
Temperature measurement	5 °C – 40 °C
Temperature sensor calibration	-5 °C – 5 °C
Dimensions	86x86x29 mm



## Receiver

Power supply	230 V AC
Switching power	2000 W
Output/Input	NO, NC, COM, L, N
Frequency	433 MHz
Dimensions	86x86x29 mm



## **Safety**

### **Risks due to poor handling**

Due to poor handling, you can harm yourself and cause material damage.


- Read the accompanying instructions carefully, especially the chapter on safety and important notes.

### **Danger of malfunctioning**

- Ensure that the air in the room can circulate freely around the thermostat and that the thermostat is not covered by furniture, curtains and other objects.
- Make sure that all heater valves in the room where the thermostat is installed are fully open.
- Only operate the heating system if it is in technically perfect condition.

### **Damage due to loss of wireless communication**

Low voltage in the batteries that power the thermostat may result in interruption of wireless communication. In the event of a loss of wireless communication between the receiver (heating system switching unit) and the thermostat (room control unit):

- If the receiver is on and the thermostat is off, after 10 minutes orange light signal on the receiver starts to blink.
- If the thermostat is on and the receiver is off, after one minute the symbol  on thermostat's display starts to blink.

In both cases the heating turns off. The communication might be lost due to old batteries in the thermostat or because the thermostat is too far away from the receiver. Keep in mind the connection status (light signal) of the receiver and the thermostat.

## **Freezing damage due to too low room temperature**

If the room temperature is set too low in some rooms, the heating system can be damaged due to freezing.

- Ensure that during the frost period the heating system remains in operation and that all rooms during your absence are sufficiently heated.
- The thermostat has an integrated frost protection, which is activated at 7 °C. Frost protection activates the heating and protects the system from freezing.

## **Proper use of the device**

Improper use can result in health and life hazards to the plant operator or third parties.

This product is not intended for use by persons (including children) with limited physical, sensory or intellectual abilities or persons without experience and/or knowledge, unless they are under the supervision of a person in charge of their safety or have been instructed by that person to use the product. Children must be supervised to ensure that they do not play with the product.

This thermostat can be used to control a heating system with a boiler.

## **Intended use includes:**

- Following the enclosed instructions for use, installation and maintenance of the device, as well as all other system components.
- Compliance with all inspection and maintenance requirements stated in the instructions.

Use that is different from the one described in this manual or use that goes beyond the scope of the use described here will be considered as non-intended.

It is not intended for any direct commercial or industrial use.

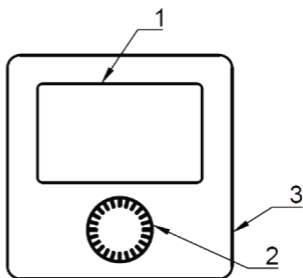
## Overview of command elements

### Room thermostat

1 – Display

2 – Rotary push button (increase/  
decrease value or confirm selection)

3 – Side button: backlight,  
thermostat on/off button, step back



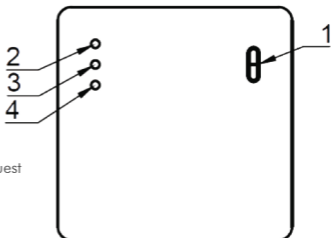
### Receiver

1 – Receiver ON/OFF Switch

2 – Green light signal  
(Receiver turned ON)

3 – Red light signal (Heating request  
ON)

4 – Orange light signal

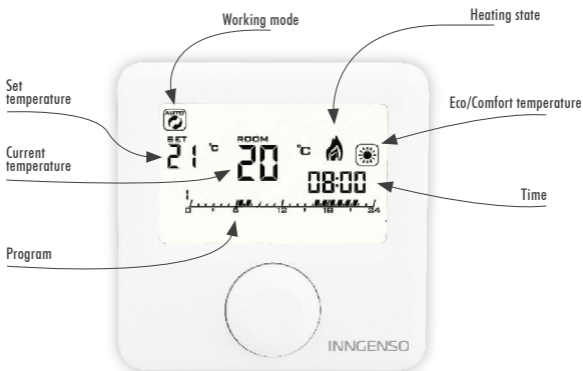


- Blinks slowly in case there is no communication between the thermostat and the receiver
- Blinks two times in case the receiver receives a message from the thermostat
- Off in any other case

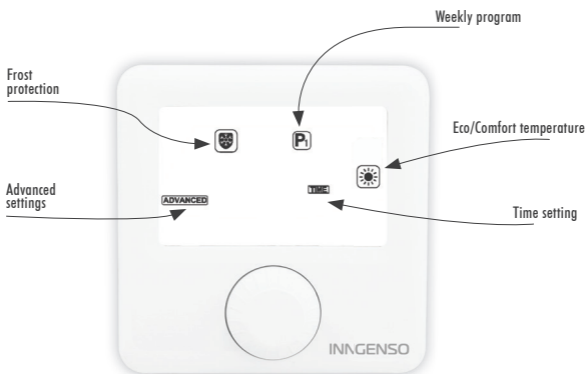


## Display description

### Description of the basic display



### Description of the settings display



## **Thermostat ON/OFF**

When the thermostat is off, it extends the battery life.

1. Long press the turn ON/OFF button (on the right) (3-4 seconds).
2. The thermostat is successfully turned ON or OFF.


Please note that by turning the thermostat off, only the display is turned off. The heating system itself is still being controlled and monitored.

## **Opening the settings display**

1. Hold down the rotary push button for 3 - 5 seconds until the settings display opens.
2. Release the rotary push button.

## Setting the working mode


### Program mode

1. Press and hold the rotary push button for one second.
2. The upper left end of the screen shows the symbol .
3. PROGRAM MODE successfully activated.



*Program mode is active*

## Manual mode

1. Press and hold the rotary push button for one second.
2. The upper left end of the screen shows the symbol .
3. MANUAL MODE successfully activated.



*Manual mode is active*

## Setting the time

1. Open the settings display.
2. Rotate the rotary push button, select the time symbol, and briefly press the rotary push button to enter the clock setting.
3. Rotate the rotary push button, set the current MINUTE, and briefly press the rotary push button.
4. Rotate the rotary push button, set the current HOUR, and briefly press the rotary push button.
5. Rotate the rotary push button, set the current DAY and briefly press the rotary push button.  
The days Monday to Sunday are represented by the numbers 1 to 7, respectively.
6. Briefly press the side button to go a step back to exit the settings display.




*Overview of the screen for  
time setting*

## Set temperature setting

Set temperature can only be set in manual mode.

1. Rotate the rotary push button to set the desired temperature.
2. Rotating clockwise increases the set temperature.
3. Rotating counterclockwise decreases the set temperature.


## Setting the economic temperature

1. Open the settings display.
2. Rotate the rotary push button, select the symbol  and press the rotary push button to enter the economic temperature setting.
3. Rotate the rotary push button and set the desired temperature.
4. Press the rotary push button to save the setting.



Overview of the screen for setting the economic temperature

## Setting the comfort temperature

1. Open the settings display.
2. Rotate the rotary push button, select the symbol  and press the rotary push button to enter the comfort temperature setting.
3. Rotate the rotary push button and set the desired temperature.
4. Press the rotary push button to save the setting.



*Overview of the screen for setting the comfort temperature*

## Setting the weekly program

Program can be set for each day in a week separately. During one day for every half an hour economic temperature is being set. Comfort temperature is set by default in other half-hour intervals.

1. Open the settings display.
2. Rotate the rotary push button, select program symbol **PI** and press the rotary push button to enter the program setting.
3. Rotate the rotary push button, select the **DAY** for which you want to set the program and press the rotary push button. The days Monday to Sunday are represented by the numbers 1 to 7, respectively.
4. Rotate the rotary push button, select the **ECONOMIC** or **COMFORT** temperature for the first half of an hour and press the rotary push button.
5. Rotate the rotary push button, select the **ECONOMIC** or **COMFORT** temperature for the second half of an hour and press the rotary push button.
6. Repeat steps 4 and 5 for each hour in a day.
7. Repeat all steps for each day of a week.





**NOTE:** When using the device for the first time or after the factory reset, the setting for any day would be the same for the whole week.





Overview of screens for setting the weekly program

## Frost protection

1. Open the settings display.
2. Rotate the rotary push button and select the frost protection symbol .
3. Hold down the rotary push button for 5 - 7 seconds.
4. Release the rotary push button when only the symbol  is displayed on the screen.
5. Frost protection is successfully activated.



*Overview of the screen for setting the frost protection*

## Advanced settings

Advanced settings menu consists of three functions: Factory reset, Hysteresis and Temperature sensor calibration. To enter the advanced settings, follow the next steps:

1. Open the settings display.
2. Rotate the rotary push button and select the advanced settings.
3. Hold down the rotary push button for 5 - 6 seconds.
4. Release the rotary push button when HI is written on the screen.
5. Press the rotary push button to change between **HI**, **FR** and **TE**.
6. Briefly press the side button to exit the advanced settings display.



*Overview of the screen for advanced settings*

## Setting the hysteresis

Hysteresis is the value for which the current temperature must be lower than the set temperature in order to switch the heating on.

1. Open the advanced settings display.
2. Select the symbol HI.
3. Rotate the rotary push button and set the desired value between 0.2 °C and 5 °C.
4. Press the rotary push button.
5. Hysteresis is successfully set.
6. Briefly press the side button to exit the advanced settings display.



*Overview of the screen for setting the hysteresis*

## Factory reset

Factory reset sets all values to their initial state.

1. Open the advanced settings display.
2. Select the symbol **FR**.
3. Hold down the rotary push button
4. Release the rotary push button when all the symbols are displayed.
5. Wait for the thermostat to restart.
6. Briefly press the side button to exit the advanced settings display.



*Overview of the screen for  
the factory reset*

## Temperature sensor calibration

Temperature sensor calibration adjusts the temperature measured on the thermostat with the device in the room that already has its temperature sensor.

1. Open the advanced settings display.
2. Select the symbol **TE**.
3. Rotate the rotary push button and set the desired value between 0.2 °C and 5 °C.
4. Press the rotary push button.
5. The temperature sensor is successfully calibrated.
6. Briefly press the side button to exit the advanced settings display.



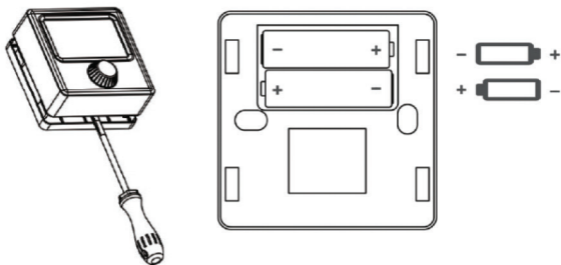
*Overview of the screen for the temperature sensor calibration*

## Battery replacement

If the battery symbol appears on the screen, change the batteries:

1. Remove the thermostat from the thermostat mount.
2. Replace the batteries with two Alkaline AA 1.5V batteries.
3. Place the thermostat on the thermostat mount.
4. Set TIME by following the manual: SETTING TIME.

The thermostat is ready to continue operating. All set programs and advanced options have been preserved.



## **Interference detection and correction**

Conditions: The room thermostat display is off

- Make sure the thermostat is on.
- Check that the room thermostat batteries are properly inserted into the battery compartment.
- Check the correct polarity of the batteries.
- Make sure the batteries are not empty.

Conditions: The thermostat cannot establish communication with the receiver

- Turn the receiver's main switch off and on again.
- Change the set temperature in order to turn the heating on or off.
- Turn the thermostat off and on again.

Conditions: The receiver activated the heating request, but the heating system did not activate

- Check that all other conditions for activating the heating are fulfilled.
- Check that the receiver is properly attached to the bracket.
- Make sure the receiver is properly connected to the heating system.



## Handling and maintenance

The device is designed to operate reliably for many years with appropriate handling. Here are some tips to handle it properly:

1. Before using the product, read the manual carefully.
2. Do not expose the product to the direct sunlight, extreme cold and humidity, and sudden changes in temperature. This lowers the measurement accuracy.
3. Do not place the product in a place subject to vibration or shocks - it may cause damage.
4. Do not expose the product to excessive pressure, shocks, dust, high temperature or humidity - this can cause degradation of product functionality, reduced energy endurance, batteries damage and deformation of plastic parts.
5. Do not expose the product to rain or moisture, dripping or splashing water.
6. Do not place any open flames on the device, such as a lit candle, etc.
7. Do not place the device in places where there is insufficient air-flow.
8. Do not place any objects in the vents of the unit.
9. Do not touch the internal power openings of the device - they may be damaged and thus automatically void the warranty. Only a qualified person should operate the device.
10. Use a slightly damp cloth to clean it. Do not use thinners or cleaners - they could scratch the plastic parts and damage the power lines.
11. Do not immerse the product in water or other liquids.
12. In case of damage or malfunction of the device, do not make any repairs yourself. Have your device repaired at the shop where you bought it.
13. This product is not intended for use by persons (including children) with limited physical, sensory or intellectual abilities or persons without experience and/or knowledge, unless they are under the supervision of a person in charge of their safety or

have been instructed by that person to use the product. Children should be supervised to ensure that they do not play with the device.

Do not dispose the device or batteries at the end of their lifetime as unsorted municipal waste; use waste collection centers. By properly disposing the waste, you will avoid a negative impact on human health and the environment. Recycling contributes to the protection of natural resources. More information about recycling this product will be provided by the municipality, your household waste disposal organization, or the point of sale where you purchased the product.

NOTE: The contents of this manual are subject to change without notice - due to limited printing, the displayed symbols may be slightly different from the on-screen display - the contents of this manual may not be copied without prior consent.

INNENTECH GmbH declares that IT 101 (thermostat + receiver) meets the essential requirements and other relevant provisions of Directive 2014/53/EU. The device can be used freely in the EU.



# INNGENSO

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