GENERAL LIFE

SMART DIGITAL ROOM THERMOSTAT

HT500 SET

Smart/Wireless Room Thermostat

Temperature adjustment via room thermostat
Control with Mobile App
Digital LCD display with backlight
Outside temperature indicator
Battery indicator
Daily and Weekly Program
6 Different Modes Options

Product Code	**HT500 SET**
Data sheet V. No	**v.1.0**

USAGE OF ROOM THERMOSTAT

HT500 SET used as a smart or wireless room thermostat. The HT500 SET room thermostats are used in heating systems to keep the room temperature constant at the set temperature.

- Large LCD Backlight Display
- Temperature adjustment via room thermostat
- Control with Mobile App
- Outside temperature indicator
- Control your house temperature with location mode
- Daily and Weekly Program
- Different Modes Options (Home Mode-Sleep Mode-Outside Mode-Program Mode-Location Mode-Manual)
- Past Operating and Heat Data reports

USAGE AREAS

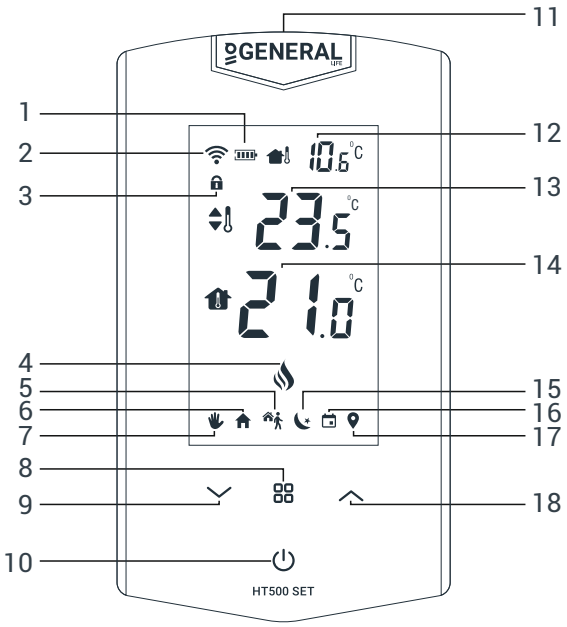
Houses
Apartments
Residences
Schools
Offices

The device can be used on combi boilers and on all on/off heating systems operating at 220V AC 7A current and voltage values.

MECHANICAL DESIGN

The device consists of 3 part:

- Plastic body
- Battery cover
- Holder



1.		Progressive Battery Indicator (Indicates that the battery is low or depleted.)
2.		Internet Connection Indicator
3.		Key Lock

4.		Boiler is Working
5.		Outside Mode
6.		Home Mode
7.		Manual Mode
8.		Mode Button
9.		Temperature Set Button (Reduce)
10.		ON/OFF
11.		Battery Section
12.		Outdoor Temperature
13.		Setted Temperature
14.		Room Temperature
15.		Sleep Mode
15.		Program Mode
17.		Location Mode
18.		Temperature Set Button (Increase)

“ ”,“ ” **Temperature Set Buttons:** Increasing or reducing the temperature while manual mode is active.
“ ” **Mode button:** Unlock keylock by pressing 2 seconds. Change the modes.
“ ” **ON/OFF:** Turn off the boiler and thermostat by pressing 4 seconds.

HT500 SET Reset And Sync:

Sync while setup: “ ” Sync signal is sent to receiver if “ ” button is pressed for 4 seconds.

Sync while using the device: First the device is set to off-mode by pressing “ ” button. Then sync signal is sent to receiver if “ ” button is pressed for 4 seconds

Wi-Fi Reset while setup: Device is reset by pressing “ ” button for 4 seconds. Thus new setup can start.

Wi-Fi Reset while using the device: First the device is set to off-mode by pressing “ ” button. Device is reset by pressing “ ” button for 4 seconds. Thus new setup can start.

OPERATING PRINCIPLES

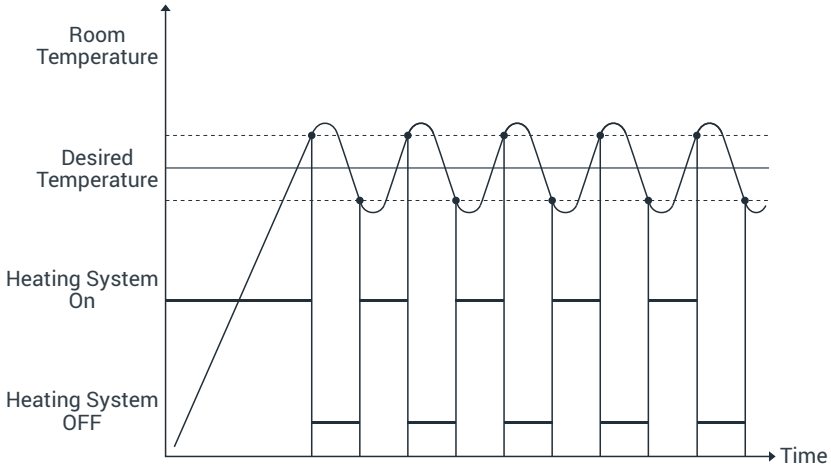
HT500 SET room thermostat specifications:

- LCD with backlight
- Two-position control (ON / OFF)
- Temperature sensor (NTC)

The thermostat measures the room temperature with its temperature sensor.The desired temperature value is set both via the mobile application and with the "﹀" and "﹀" buttons of the room thermostat. When the room temperature rises above the set temperature value, the room thermostat sends a shutdown command to the modem. Modem Turns off the relay by receiving the command.

Digital display; room temperature, set temperature, battery life, active working mode (manual mode, home mode, outside mode, sleep mode, program mode, location mode), outdoor temperature, internet connection, key lock and heating symbol are displayed. The heating symbol gives information about the operation status of the boiler. The product measures 0.1oC temperature accuracy. However, there is an operating sensitivity of 0.5°C to prevent the heating unit from starting and stopping too frequently.

The device manages the heating systems by the on-off operation algorithm. This working algorithm is shown in the following graph.



FUNCTIONS

Temperature Control

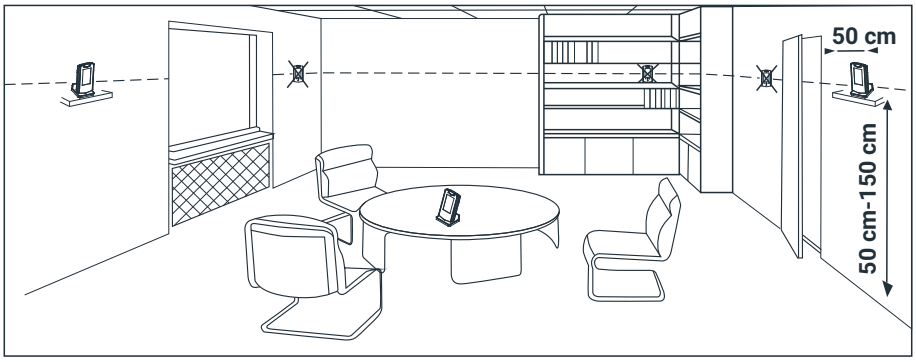
The room thermostat controls the room temperature according to the set value. The on / off temperature difference of the device is 0.5°C.

ORDERING

When ordering, specify both the product type and the product code, for example the HT500 SET smart room thermostat.

SMART ROOM THERMOSTAT PLACEMENT

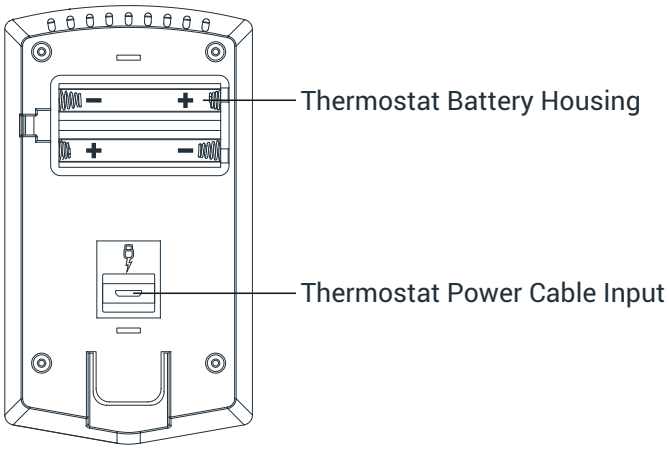
Place your HT500 SET Smart Room Thermostat in a room where you most use it as your living area. For example: living room. Be attentive to placement in the area of wireless internet modem zone at home by reason of the signal is sent via internet connection to room thermostat. Avoid installing the HT500 SET where there is a lot of air circulation such as door entry or window edges. Also, do not place in places near heat units (central heating system, fireplace, etc.) and places that receive direct sunlight. We recommend that the room thermostat be placed at an altitude of 50 cm to 150 cm from the floor. You can try a few places to find the most suitable place.



Local electrical regulations must be observed during installation.
Installation of room thermostat must be done by authorized personnel.
The parts included in the room thermostat are made of ABS, PC materials.
In systems with room thermostats, if there are thermostatic radiator valves, keep them in the open position.

BATTERY CHANGE

Remove the battery housing from the back side of thermostat. Install 2 alkaline batteries to battery housing. Please be sure the directions of batteries. Assemble battery housing back. Change the both batteries together.

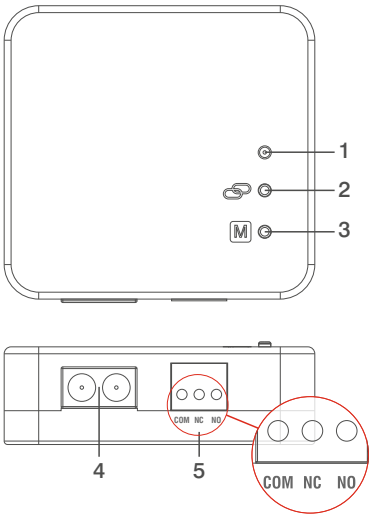


WARNING!
Please throw away dead batteries to trashes special only for batteries.

MAINTENANCE

The device is maintenance-free.

MODEM



1-Modem Led Light
2-Sync Button:
Syncs modem and room thermostat.
3-Manual Usage Button:
Deactivates receiver and allows you to use boiler manually.
4-Modem Power Cable Input
5-Boiler Connection Cable Input

MODEM LED LIGHT COLOR EXPLANATIONS

Green	Receiver synced with thermostat and Works properly.
Green Flashing	Pressed to receiver sync button and waiting for thermostat sync signal.
Red	Receiver has energy but no thermostat synced.
Red Flashing	Boiler shut down because of, no signal from thermostat more than 22 minutes.
Orange	On Manual Mode.

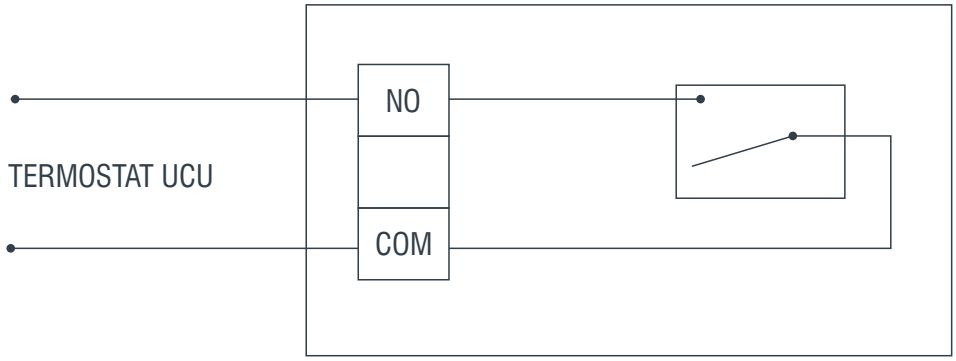
MODEM PLACEMENT

The important thing to note for receiver placement is that avoiding physical contact with boiler and protecting against materials such as liquid, dust etc. You can place your receiver in boiler's cabinet without physical contact with boiler or mount receiver to Wall.

MODEM SETUP

- Primarily, shut down electrical current which your boiler is connected (fuse, power outlet etc.)
- Connect one of the boiler connection cable to HT500 SET receiver as shown in the Connection Scheme.
- Connect other boiler connection cable end to boiler's room thermostat input as shown in the boiler's user manual.
- Connect Receiver Power Cable first to receiver then plug into. If there is no plug near your boiler, you can connect cable to your boiler's connection fuse.
- After finishing connections, turn on electrical current first, then turn on your boiler.
- You may see orange light blinks on the receiver by pressing for 2 seconds to manual usage button of receiver. After being sure that your boiler is working, press same button for 2 seconds again and see orange light disappeared.
- Setup your Room Thermostat to sync receiver with room thermostat.

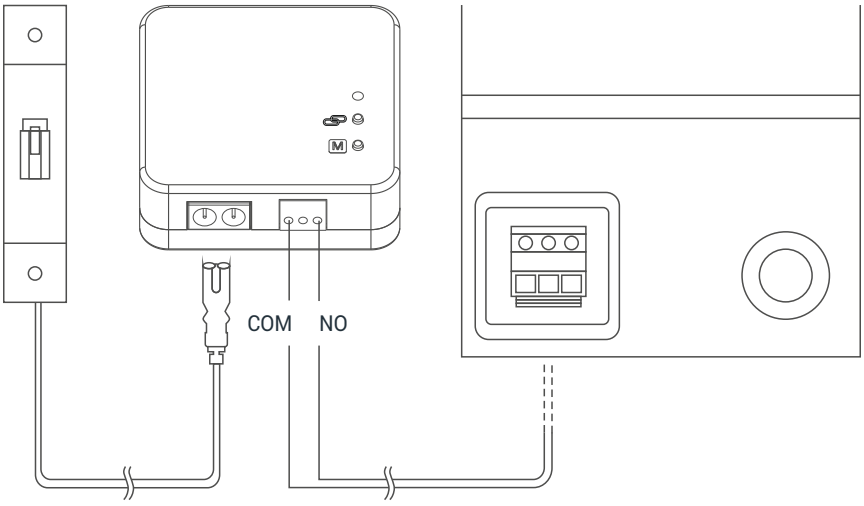
CONNECTION DIAGRAM



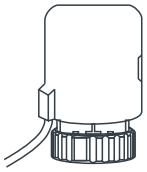
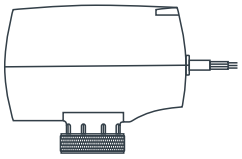
WARNING!

Only persons who have got Professional Competence should make operations electric wiring or boiler setup.

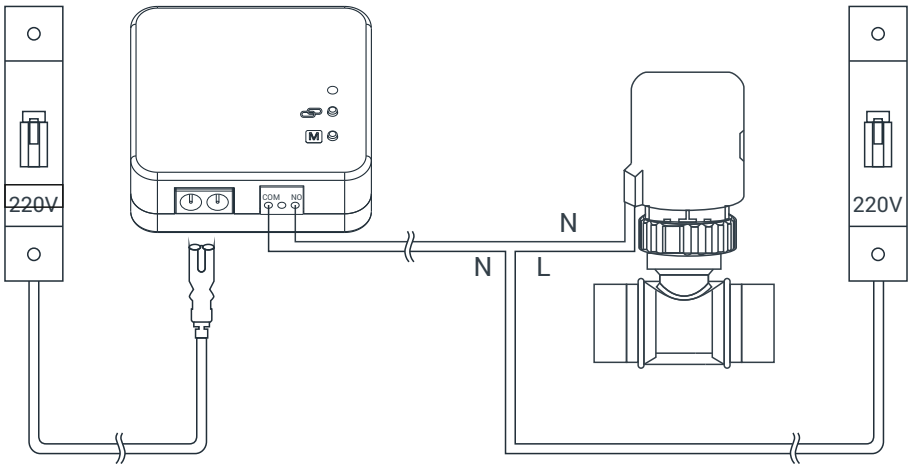
APPLICATION EXAMPLE



SYSTEM COMBINATION

	Actuator	Type of Actuator	Operating Voltage	Positioning Type	Positioning Time
	ST21	Thermal	AC 230 V	2 Position	180 sn.
	SEA21.10	Motorlu	AC 230 V	2 Position	< 20 sn.

APPLICATION EXAMPLE



SMART ROOM THERMOSTAT SETUP

1- Power on the device by using an adapter you received with HT500 SET. “1” number will be seen on display. It means, HT500 SET is ready for smart setup.

Note: Setup can't start without adapter connection.

2- Scan QR Code below via your smartphone. You can install HT500 SET mobile application from Apple Store or Google Play to your smartphone with that code. (You may need QR Code Reader App regarding to your phone's model and brand)

3- Complete your membership by entering into the mobile application which you downloaded.

4- You will receive a confirmation mail after you complete signing up.

5- If you confirm the incoming mail, the application will automatically have directed to setup page.

6- Perform the instructions on the Setup page in order and complete setup.

MOBILE APP – MODES

With HT500 SET’ s Home-Sleep-Outside-Program-Location and Manual mods, you can warm up as you want and you can save money.

Home Mode will fix temperature on set value. Recommended to use when you are at home. Suggested temperature value is 23°C.

Sleep Mode provides you comfy sleep with set temperature you desire. You can use this mode between 11 pm to 7 am which is common sleeping hours. Suggested temperature value is 18°C.

Outside Mode is suggested to use when you are outside of your house for short or long time.

Program Mode allows you to program weekly as 30 minute time periods which will automatically change temperature in your home with your program.

Location Mode reduces the temperature of your home when you move away from home, or increases the temperature of your home when you approach your home.

Manual Mode allows you to set the degree to which you can determine the warmth of your home.

TECHNICAL DATA

Room Thermostat

Power Supply	
Feeding Voltage (Usage with Adapter)	5V (DC)
Feeding Voltage (Usage with Battery)	3V DC (2 x AAA alkalin pil)
Maksimum Load Current (Usage with Adapter)	500 mA
Maksimum Load Current (Usage with Battery)	80 mA

Operational Data	
Temperature Measurement Sensitivity	0.1°C
Temperature Setting Range	0.1°C – 1.0°C
Operating Sensitivity	0.5°C

Environmental Conditions	
Wi-Fi Connection Frequency	Wi-Fi 802.11 b/g/n @ 2.4GHz
Communication Distance	100m (open area)
Operating Temperature	(0°C) – (+45°C)
Storage Temperature	(-10°C) – (+50°C)
Transport Temperature	(-10°C) – (+50°C)

Standards	
Radio and Telecommunications Terminal Equipment Regulation	2014/53/EU (R&TTE/RED EN 301 489-1 V2.1.1:2017, EN 300 220-1 V3.1.1:2017, EN 301 489-3 V2.1.1:2017, EN 300 220-2 V3.1.1:2017, EN 62479: 2010, EN 60730-2-9:2010, EN 60730-1:2011)
Electromagnetic Compatibility Regulation	2014/30/EU (EMC EN 61000-6-3: 2007 + A1: 2011, EN 61000-6-1: 2007
Low Voltage Directive	2014/35/EU (LVD EN 60730-2-9:2010, EN 60730-1:2011)

General Data	
Weight (including package)	592 gr.
Color	White / Black
Material	ABS, PC

Modem

Power Supply	
Operation Current	220V AC
Relay NO Switching Current	7A (220V AC)

Environmental Conditions	
Operating Temperature	(0°C) – (+45°C)
Storage Temperature	(-10°C) – (+50°C)
Transport Temperature	(-10°C) – (+50°C)

General Data	
Color	White
Material	ABS

WARNING!

Please do not connect the modem with another product's supply line.
Risk of fire and injury due to short circuit!
Please comply with local regulations when determining power cable diameters.
Please supply the power line from a fuse.

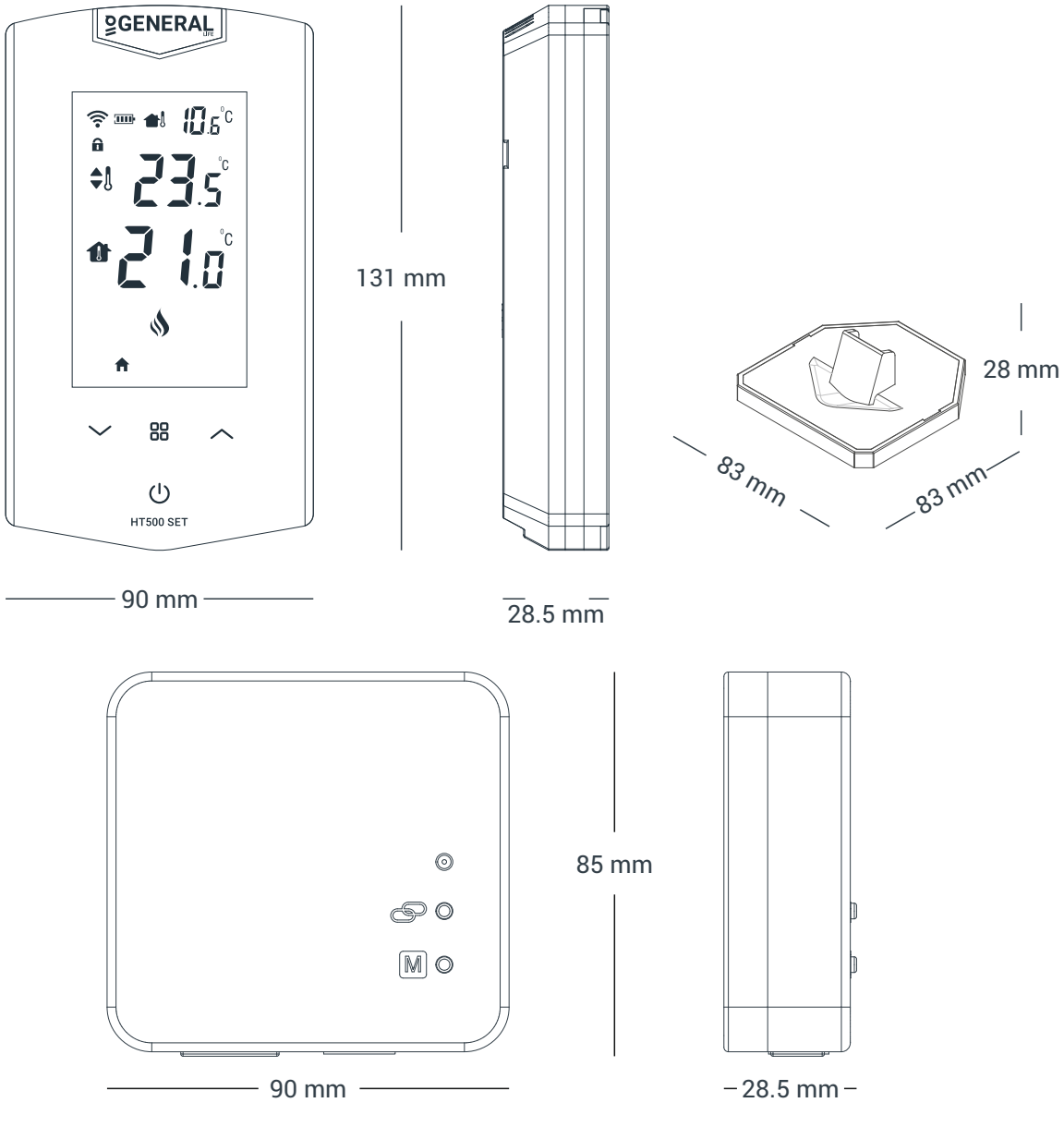
WARNING!

The product is subject to the European Directive 2012/19 / EU as it is included in the electronic product category.
It cannot be considered as domestic waste.
You can leave the product in electronic waste collection areas.
Follow all local and applicable laws and regulations.

WARNING!

There is no internal fuse inside the product.
External fuses must be used on all supply lines.

DIMENSIONS



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