

“*THESIS PLUS*”

Electronic control for towel radiators

THESIS Plus is an electronic thermostat for the control electric towel radiators.

By means of an external sensor it is capable of keeping the room temperature at the desired value.

THESIS Plus has a simple yet modern design, suitable for every type of furnishing and every model of electric towel radiator.

THESIS Plus is easy to install and it is available in several colors.

THESIS Plus is a certified product.



THESIS Plus is compliant with the following standards:

-Eco-design Directive for Energy-using Products, 2005/32/EC (<0,5W).

-EN 60335-1:2012

-EN 60335-2-30:2011

-EN 60335-2-43:2008

-EN 61000-3-2:2004 - EN 61000-3-3:1995

-EN 55014-2:1998 -EN 55014-1:2008

-EN 50366:2003



Functions

Four operational modes:

"Comfort", "Boost", "Stand-by", "Timer"

- **"Comfort" mode:**

The thermostat keeps the room temperature at the value set by the user (through the knob). In this modality the device can be remotely controlled through the "Fil-Pilote" system.

- **"Boost" mode:**

In "Boost" mode the heating element is activated for a period of 2 hours. During this time interval, the electrical resistance warms the room independently of the configured "Comfort" temperature. The temperature is however automatically adjusted in order not to exceed 32°C. At the end of the 2 hours period, the device returns to previous operational mode.

- **"Stand-by" mode:**

The electric resistance is not powered and all lights are turned off.

- **"Timer" mode:**

This operating mode cyclically repeats every 12 or 24 hours the "Boost" mode.



Silver



White

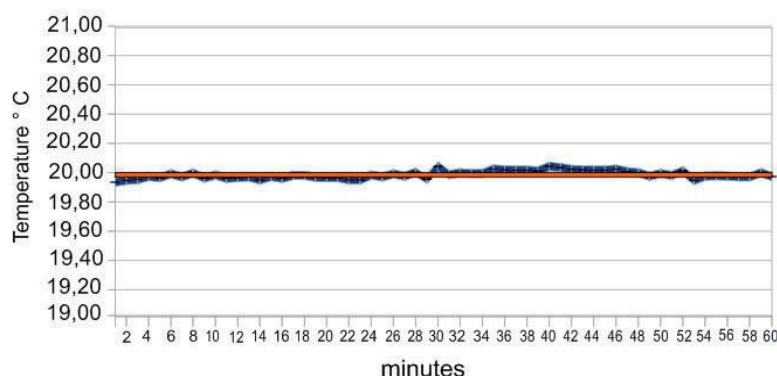
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Technical specifications

Supply voltage	230VAC - 50Hz	Electrical characteristics
Maximal power	2000W - 230VAC	
Selectable temperature range	7°C ÷ 32°C	Performance
Operational temperature	-10°C ÷ +40°C	
IP degree	IP44	Safety
Insulation class	Class I, Class II	
Certification mark	CE	
Environment	WEEE, RoHS	
Size	113x73x39mm (plastic case)	
Product	Electronic control for electric towel radiators	
Control type	Electronic control	
Type of applications	Towel radiators	
Temperature setting	Analog through rotating knob	
Fil-Pilote control	“Fil-Pilote” standard with 6 commands	
Signaling Led / operational modes	-Red/Blue backlit button "On/Stand-by". -Amber/green/red Led. -Operational modes: Comfort, Stand-by, Boost 2h, Timer.	
Connector of the heating element	6,3x0.8mm Faston: Neutral, Live, Earth (Class I)	
Temperature sensor	10KOhm a 25°C, Type NTC	
Compliant standards	EN55014-1, EN55014-2, EN61000-3-2, EN61000-3-3, EN60335-1, EN60335-2-30, EN60335-2-43, EN50336.	
Warranty	2 years	
Plastic box / knobs / buttons	ABS-V0 Silver, ABS-V0 White RAL9003	
Power cable	H05VVF <HAR> L=900mm; 3x1mmq - Class I; 2x1mmq - Class II; 3x1mmq - Class II + Fil-Pilote	
Available electric plugs	IT-UK-Shucko-CH (Cable length =1200mm)	
Available colors	White	White cable RAL 9003
	Silver	Silver cable RAL 7001

Adjustment example of the thesis Plus with a set temperature of 20 ° C and a cold wall of -5 ° C



DM= maximum drift = 0.06
 AM= Tmax – Tmin = 0.12
 CA= 0.075

$$CA = \frac{\frac{DM}{2} + AM}{2}$$

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WARNING

RISK OF ELECTRIC SHOCK!
Disconnect power supply before proceeding with installation.

Preserve with care the present instruction sheet and read carefully before using the device.

- The present device has been designed for exclusive use on a towel radiator.
- The thermostat is designed for heating the liquid contained inside a towel radiator in combination with a heating element. Any other use is forbidden.
- Before using, carefully ensure that the line voltage is the same as that specified for the device (see technical specifications).
- Only use heating elements compatible with the type of used towel radiator.
- Disconnect power supply before cleaning or performing maintenance of the product.
- In case of damage of the power supply cable shut down the device and do not tamper with it. The damaged power supply cables can be replaced exclusively by the manufacturer or by an authorized service center. Failure to comply with the above rules could lead to compromised system safety and void the warranty.
- Store and transport the heating element exclusively in the protecting packaging.
- Replacement of the heating element can be done exclusively by the product manufacturer.

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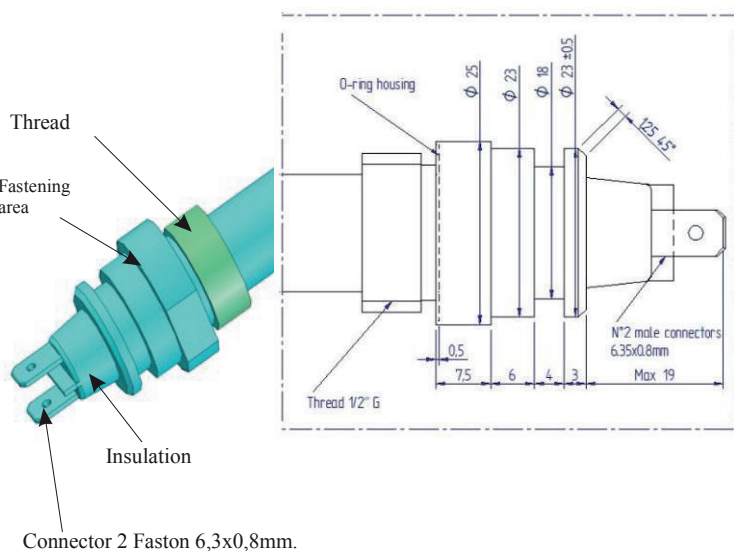
Installation instructions



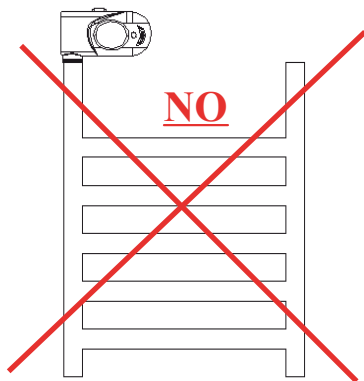
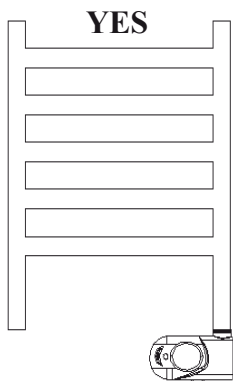
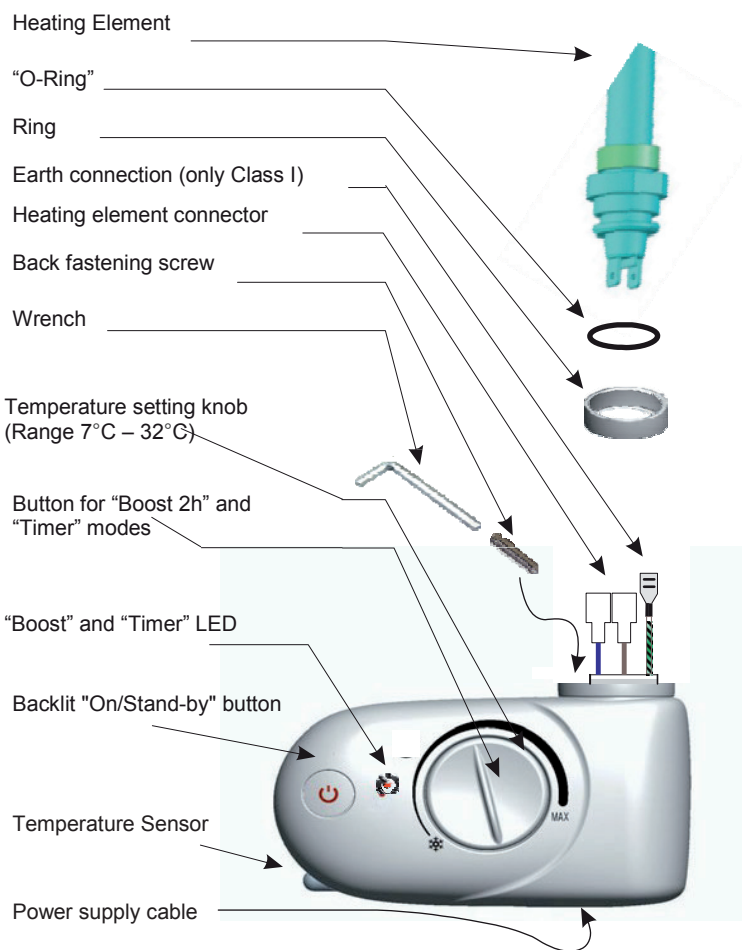
WARNING:

Disconnect the power supply before proceeding with installation. The installation has to be performed only by authorized personnel.

"Thesis plus" is an electronically controlled thermostat compatible with the heating element types showed in the picture below.



IMPORTANT: Pay attention to the maximal length of the 19mm connector (see picture on the left). Longer connectors could damage the device.



CLEANING

- Disconnect the device from the electrical power supply before cleaning or performing maintenance operations.
- Use only gentle cleaning agents and no abrasive cleaning tools.

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- **Disconnect power supply before installation.**
- **Only qualified personnel can connect the electronic device to the heating element.**
- **Make sure that the power of the electric resistance does not exceed the maximum power allowed by the electronic control device.**

1. Make sure that the towel radiator does not have leakage or air lock.
2. The device shall not be positioned directly in front of an electric plug.
3. Prevent water jets from hitting the equipment.
4. Connect the temperature controller only to a suitable heating element.
5. Ensure that the mains voltage is the same as indicated in the technical specifications.
6. Make sure that the type of electric resistance is compatible with the model of towel radiator being used (check the product specifications provided by the manufacturer). The usage of a heating element with higher power:
 - Does not increase the actual power of the towel radiator;
 - Might shorten life of the heating element;
 - Could damage the equipment.
7. Make sure that the power of the electric resistance does not exceed the maximum power of the towel radiator (check the label on the heating element).
8. When installed in a room with bathtub or shower, respect the “Protection Zones” according to IP44 insulation class (in UK according to IEE cabling directives). Furthermore, make sure to respect all local safety directives.
9. The device has to be protected by a 30mA circuit breaker (RCD).
10. Power the device with the recommended voltage (see technical specifications).
11. If a device is directly connected to a fixed electric installation, install an isolating switch compliant with local directives for power supply disconnection.
12. Place the "O-Ring" before the fastening area.
13. After ensuring that the "O-Ring" is correctly positioned, screw the electric resistance in the relevant threaded hole of the towel radiator, properly secure it and insert the cover ring.
14. Extract the connecting cables from the device. The two Faston connectors and the Class I ground connector.
15. Insert the 2 Faston into the relevant connectors of the heating element.
16. Connect the female Faston connector to Earth (only Class I).
17. Insert the lower part of the heating element into the ready connected thermostat.
18. Align the device to the towel radiator. Warning! Do not rotate the device more than 30 degrees on both directions.
19. Push the device against the base of the heating element to compress the “O-Ring”, properly fix the related fastener so that the device remains well secured and does not rotate around the heating element.
20. Connect the power supply cable.



DISPOSAL

This product may not be treated as ordinary household waste. It has to be disposed in proper waste collection sites. In case of replacement it shall be returned to the distributor.

Such an end-of-life treatment of the product will preserve the environment and will reduce consumption of natural resources.

This symbol applied to the present product indicates the obligation to bring it to a proper waste collection site, in order to let it be disposed according to 2002/96 / CE (RAEE - WEEE) directives.

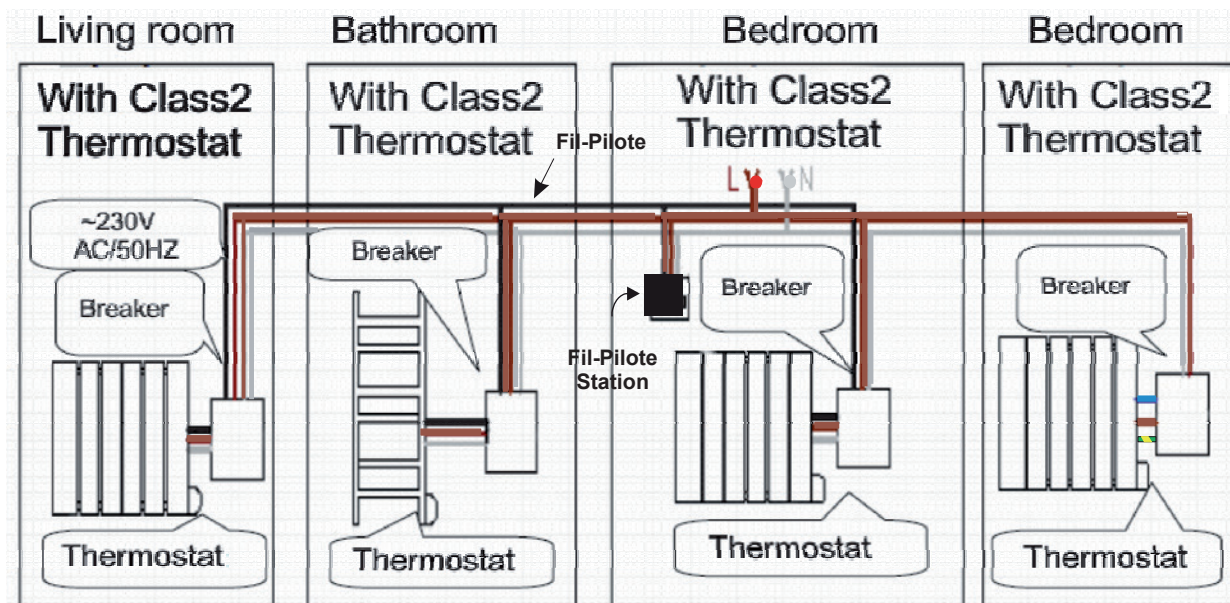
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Connection to Fil-Pilote system

(Only for product versions equipped with "Fil-Pilote")

Example



1. A control unit supporting the "Fil-Pilote" system can remotely control a Thesis Plus device with "Fil-Pilote" functionality (Class II). The brown wire is the Live wire (L), the gray wire is the Neutral wire (N) and the black wire is used for receiving the Fil-Pilote signal.

Do not connect the black wire to the ground.

2. A Thesis Plus device without "Fil-Pilote" functionality (Class I) cannot be remotely controlled. The brown wire is the Live wire (L), the blue wire is the Neutral wire (N) and the yellow/green wire has to be connected to Earth.

Fil-Pilote

The "Fil-Pilote" system handles 6 different types of signal.

1. **Standby:** Shut down the heating element but the device remains enabled.
2. **Comfort:** Maintains the "Comfort" temperature set by the user.
3. **ECO:** Maintains the temperature 3,5°C below the "Comfort" temperature.
4. **Anti-freeze:** Avoids that the temperature falls below 7°C.
5. **Eco-1:** Maintains the temperature 1°C below the "Comfort" temperature.
6. **Eco-2:** Maintains the temperature 2°C below the "Comfort" temperature.

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User Manual

Water protection:

The IP44 protection level is guaranteed by a special design of the connection parts.

Small dimensions:

Reduced device volume and thickness.

Cable locking system:

According to the IEC directives and fulfilling the IP44 requirements, this mechanism extends life of the power cable.

Internal buzzer:

For acoustic warnings according to EN60335-1 directive.

External sensor:

Guarantees a stable room temperature and a prompt reaction in case of strong temperature variation.

Plastic cover: The connecting part to the heating element is kept hidden by this special layout, so that the device fits perfectly to the towel radiator.

Blue / red backlit button: The backlight indicates the status of the system.

Red / green / amber Boost Led: A small light indication informs the user when “Boost” and “Timer” modes are active.

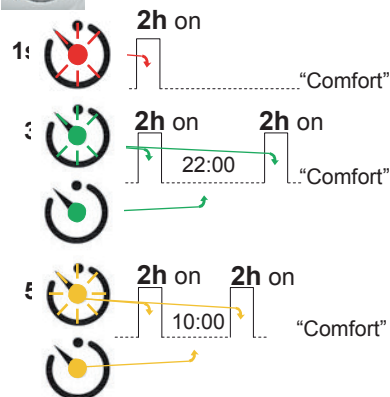
Thermostat knob with button: For easily setting the desired “Comfort” temperature and for activating the “Boost” and “Timer” modes.



Quick Guide



Press the knob to activate the timer



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- **“On/Stand-by” button:** Pressing the “On/Stand-by” button it is possible to switch between “Stand-by” mode and “Comfort” mode.

NOTE: When the device goes into “Stand-by” mode it beeps twice for 0.5s.
When the device is activated it beeps once for 1s.



“Stand-by” mode.



“Comfort” mode: Heating element is ON (red light).



“Comfort” mode: Heating element is OFF (blue light).



- **Knob rotation:**

The rotation of the knob sets the desired room temperature. A clockwise rotation increases the set temperature value (max 32°C). An anticlockwise rotation decreases the set temperature value (min 7°C).



- **Knob button:**

- **“Boost” mode (2h).** Press once the knob button in order to activate this operating mode (the heating element will be activated at maximum power for 2h). To deactivate this operating mode, press again the button.



“Boost” mode: “Boost” for 2h (blinking red light).

- **“Timer-24h” mode:** Press the knob for 3 seconds to activate this function. The control system activates the heating element for 2 hours regardless of the set temperature value (the maximal reachable temperature is 32°C), after that it returns into “Comfort” mode and after 22 hours the “Boost” mode is started again for 2 hours. This sequence will repeat endlessly. During the first cycle the duration of the “Comfort” mode is of 21 hours.



“Timer-24h” mode: - “Boost” for 2h (blinking green light).
- “Comfort” for 22h (permanent green light).



- **“Timer-12h” mode:** Press the knob for 5 seconds to activate this function.

The control system activates the heating element for 2 hours regardless of the set temperature value (the maximal reachable temperature is 32°C), after that it returns into “Comfort” mode and after 10 hours the “Boost” mode is started again for 2 hours. This sequence will repeat endlessly. During the first cycle the duration of the “Comfort” mode is of 9 hours.



“Timer-12h” mode: - “Boost” for 2h (blinking amber light).
- “Comfort” for 10h (permanent amber light).



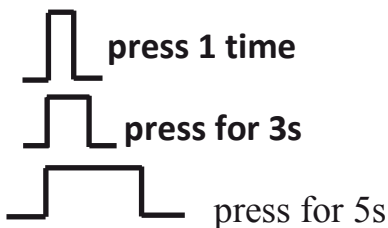
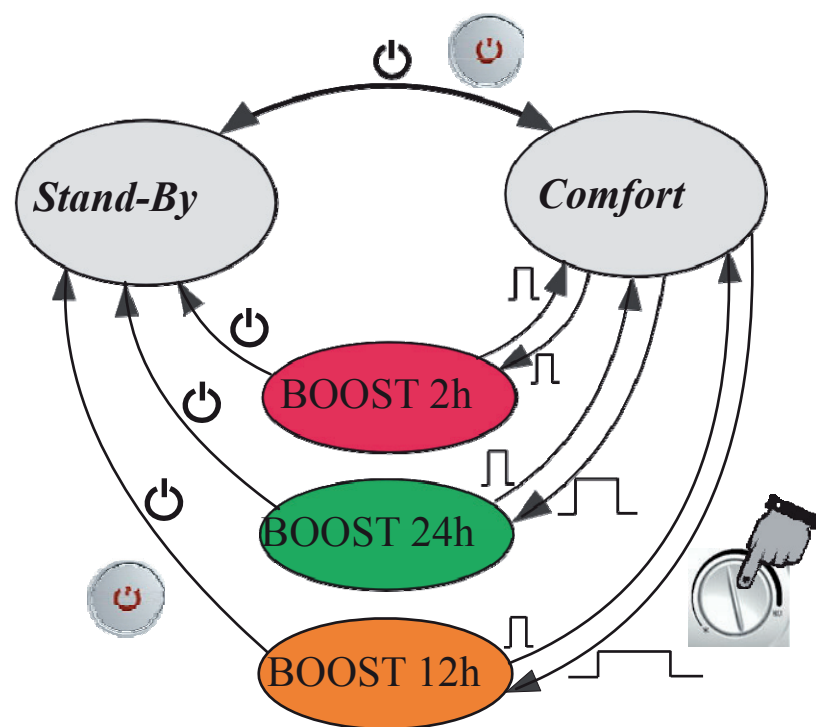
Operating mode deactivation: To exit any time from the operating modes “Boost”, “Timer-12h”, “Timer-24h”, press the knob button or the “On/Stand-by” button.

NOTE. The maximal reachable temperature in “Boost” mode is of 32°C.

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Functional diagram



* The duration of the first "Comfort" cycle is of 21h.

** The duration of the first "Comfort" cycle is of 9h.

Control Led

Backlit on/off button

STATUS	MEANING
Red led ON	Heating element turned on.
Blue led ON	Room temperature reached, heating element turned off.
Switched off	"Stand-by" mode active.
Blinking Red/Blue	Error message. The heating element is turned off. Contact assistance.

‘Boost’ Led

Blinking red	"Boost" mode active. The heating element remains active for 2h. For safety reasons, the maximum temperature is of 32°C.
Blinking green	"Boost" mode active (Timer 24). The heating element remains active for 2h. For safety reasons, the maximum temperature is of 32°C.
Permanent green	Back to "Comfort" mode for 22h. *
Blinking amber	"Boost" mode active (Timer 12). The heating element remains active for 2h. For safety reasons, the maximum temperature is of 32°C.
Permanent amber	Back to "Comfort" mode for 10h. **

Repairs carried out by unauthorized personnel invalidate warranty.

The manufacturer reserves the right to make any changes to the product described in this manual, at any time, and without prior warning.