

“*THESIS DUAL*”

Electronic control for towel radiators

THESIS Dual is a digital thermostat for towel radiators. It includes two sensors for detecting water temperature and room temperature and by means of a microprocessor it controls a heating element for keeping a constant value of the preset temperature.

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

THESIS Dual is easy to install and it is available in different colors.

THESIS Dual is a certified product.



THESIS Dual 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 55014-1:2008

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

-EN 55014-2:1998

-EN 50366:2003



The device can be operated in two modes:

1) *Towel radiator thermostat:*

This mode allows maintaining the temperature of the towel radiator to a user-defined value independently from the room temperature (control based on the internal sensor)

2) *Room thermostat:*

This mode allows maintaining the room temperature to a user-defined value.

Both operational modes offer the following 5 sub-functions: *Comfort, Night, Antifreeze, Fil-Pilote (remote control), Timer-2h.*

White



Silver



Technical Characteristics

Product	Digital electronic thermostat for towel radiators
Applications	Towel radiators
Insulation class	Class I, Class II
IP level	IP44
Fil-Pilote	Available for Class II models
Temperature setting	Digital (buttons [+] and [-])
Indication lights	<ul style="list-style-type: none"> - Backlit On/Off button. - Led indicating the selected functional mode. - Led display.
Operational modes	-Comfort, Night, Antifreeze, Stand-by, Fil-Pilote, Timer-2h.
Selectable temperature range of the towel radiator in Comfort mode	30°C - 70°C
Selectable temperature range of the room in Comfort mode	10°C - 32°C
Operating temperature	-10°C - +40°C
Maximal power	2000W
Supply voltage	230Vac 50Hz
Size	113 x 73 x 40mm (H x W x D)
Connections	Faston connector 4.8x0.5mm for the Earth connection, 4 poles connector for the heating element with temperature sensor (Live, Neutral, internal sensor, external sensor).
Internal and external sensor	10KΩ a 25°C, NTC type
Warranty	2 years
Compliant standards	EN 60335-2-43, EN 55014-1, EN 61000-3-2, EN 61000-3-3, EN 55014-2, EN 50366 EN 60335-1, EN 60335-2-30.
Certification mark	CE
Environmental directives	WEEE, RoHS
Electromagnetic compatibility	89/336/EEC

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 towel radiator being used.
- 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.

CONNECTIONS TO ELECTRIC MAINS

The available versions are the following:

- 1 Schuko plug (Class I or Class II) for direct connection.
- 3-wires for Class I models: Live (brown); Neutral (blue); Earth (green-yellow).
- 2-wires for Class II models: Live (brown), Neutral (blue).
- 3-wires for Class II models with "Fil-Pilote": Live (brown), Neutral (grey), "Fil-Pilote" (black).

Installation guide

For use by installer only

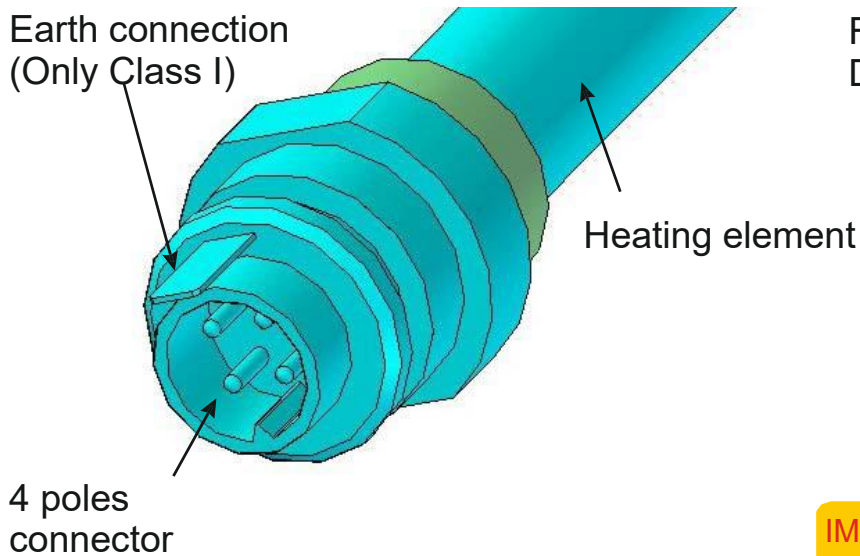


WARNING:

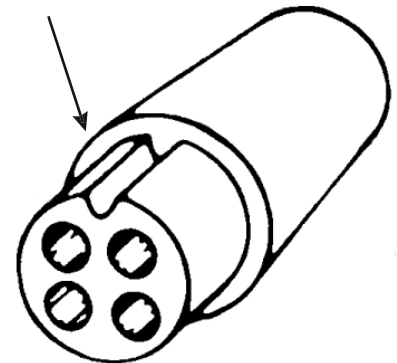
Disconnect the power supply before proceeding with installation.
The installation has to be performed only by authorized personnel.

Make sure that the power of the electric resistance does not exceed the maximum power of the towel radiator

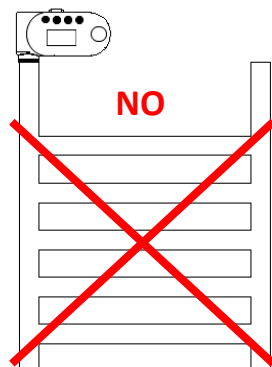
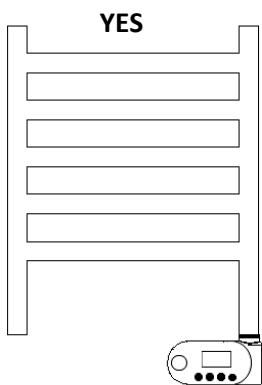
"Thesis dual" is compatible with the type of heating elements shown in the following picture



Female 4 poles connector to "Thesis Dual"



IMPORTANT: Do not try to use or adapt a different type of connector order to prevent damages to the heating system.



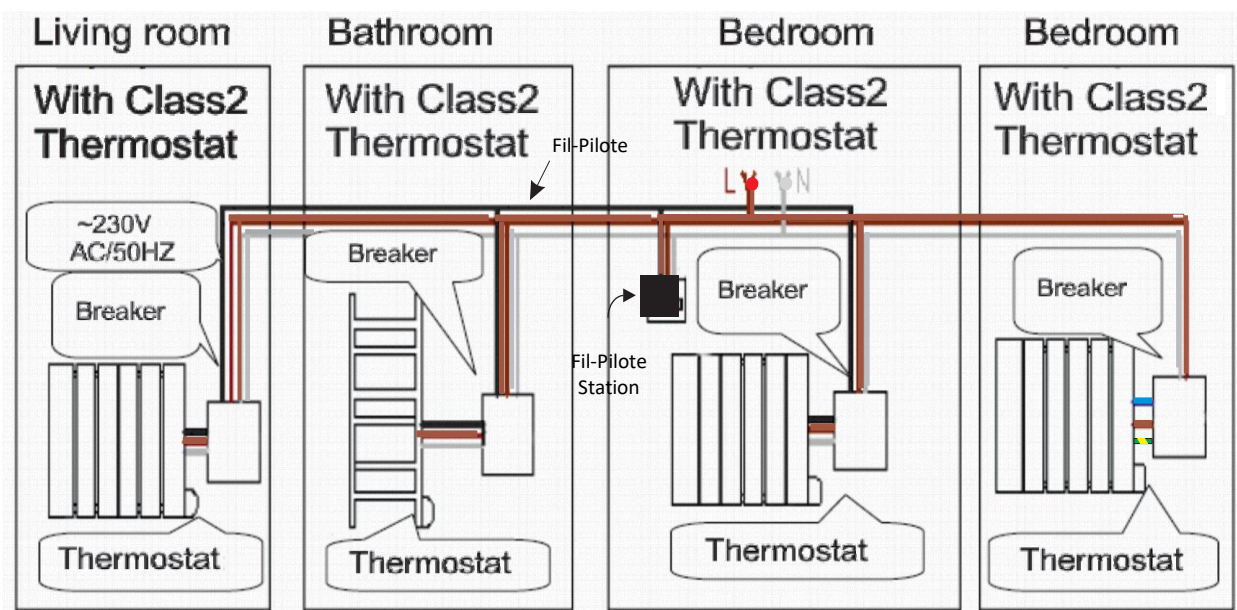
- **Disconnect power supply before installation.**
- **Only qualified personnel can connect the electronic device to the heating element.**
- **Make sure that the power of the electric resistance does not exceed the maximum power allowed by the electronic control device.**

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 four poles connector and the ground connector (only Class I).
15. Connect the four poles connector to 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.

Connection to Fil-Pilote system

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

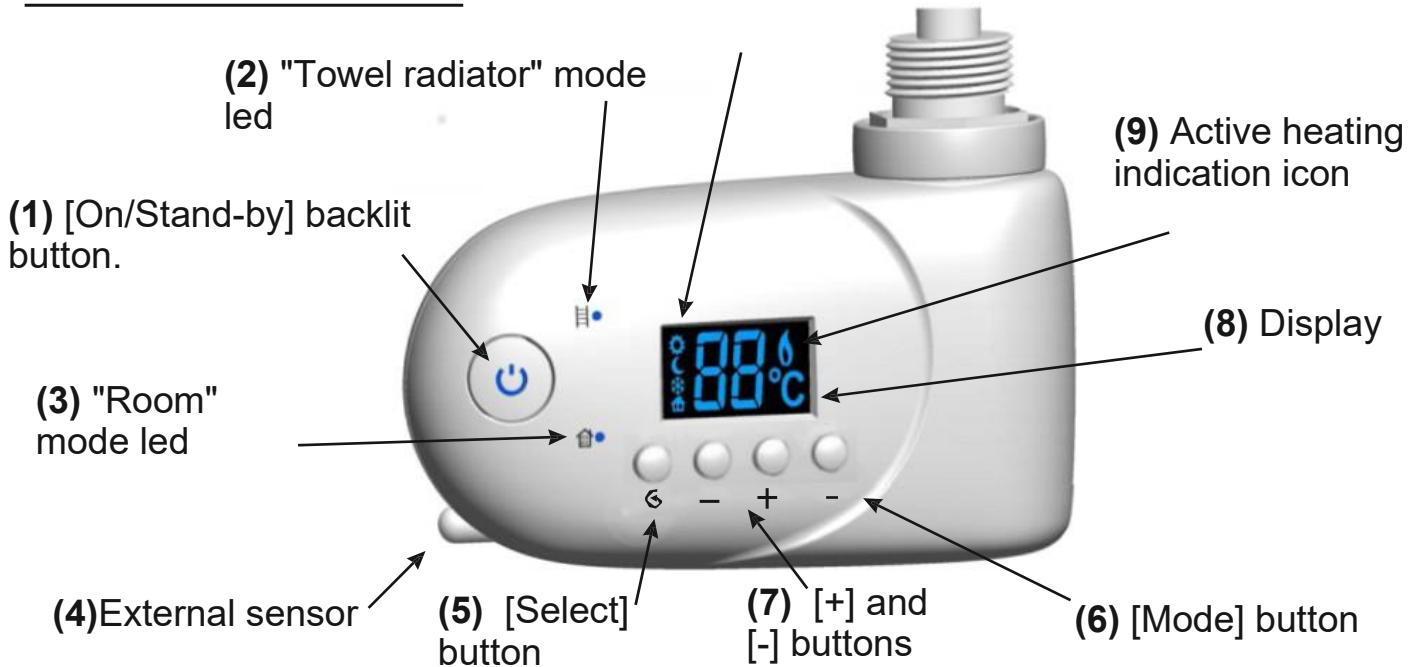
Example



1. A control unit supporting the "Fil-Pilote" system can remotely control a Thesis Dual 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 Dual 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.

User Manual

(10) Icons of the sub-functions



OPERATION

The [On/Stand-by] button (1) is used to turn on the device or to enter the "Stand-by" mode. A red light (1) indicates that the device is turned on; a blue light (1) indicates that the device is in "Stand-by" 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.

SELECTION OF THE TWO MAIN OPERATING MODES

It is possible to operate the device as "Towel radiator thermostat" (regulation based on internal fluid temperature) or as "Room thermostat" (regulation based on room temperature).

The selection between these two operative modes is done through the [Select] (5) button.

When the "Room thermostat" mode is active the led indicator (3) is turned on.

When the "Towel radiator thermostat" mode is active the led indicator (2) is turned on.

"TOWEL RADIATOR THERMOSTAT" MODE

In this operative mode the user can set the temperature of the internal liquid of the towel radiator independently from the room temperature. The device controls the selected temperature through the internal sensor. This operative mode is particularly suitable for warm seasons, when the room temperature is normally comfortable but there is still the need to use the towel radiator for drying some towels.

The selectable temperature range in "Comfort" mode (which is represented by a "sun" icon) is 30°C to 70°C, the temperature can be set through the [+] and [-] (7) buttons (with intervals of 1°C).

The active heating indication icon (9) is active on the display when the heating element is being powered.

When the selected temperature is reached the heating element is switched off and the active heating indication icon (9) is turned off.

“ROOM THERMOSTAT” MODE

In this operative mode the user can set the desired room temperature through the [+] and [-] buttons in a range between 10°C and 32°C. For this purpose, the external sensor (4) is used for measuring the room temperature.

In this operative mode, the display shows the selected “Comfort” temperature.

If the selected temperature is higher than the room temperature, the active heating indication icon (9) is shown on the display and the heating element is being powered until the room temperature reaches the selected temperature value. When the room temperature reaches the desired value, the heating element is switched off and active heating indication icon (9) is turned off on the display.

SUB-FUNCTIONS

The following 5 sub-functions can be selected from any main operational mode through the [Mode] button.

Comfort	Night	Antifreeze	Fil-Pilote	Timer-2h
				2h

Comfort Icon “sun” (10); it is the default function (described above)

Night Icon “moon” (10); it is similar to the "Comfort" function, but the temperature range is between +9°C and 31°C in “Room thermostat” mode and between 29°C and 69°C in “Towel radiator mode”.

Antifreeze Icon “snow flake” (10); the temperature remains fixed to 7°C in both main modes (“Towel radiator thermostat”, “Room thermostat”).

Fil-Pilote Icon “house” (10); this function (if present) allows the remote control of the device through the "Fil-Pilote" control unit (see the following page). The "Fil-Pilote" feature is not available in all models.

Timer-2h Icon "2h" (10); in this mode the heating element is powered for 2 hours, independently from the room temperature or the internal liquid temperature. However, for safety reasons it is prevented that the room temperature exceeds 32°C and that the internal liquid temperature exceeds 70°C. At the end of the 2h period the device returns into the operative mode previously selected. It is possible to exit the “Timer-2h” function at any time by pressing the [Mode] button.

NOTE: The “Night” temperature is always below the “Comfort” temperature. The “Comfort” temperature can be set in a range between the currently set “Night” temperature + 1°C and the maximal allowed "Comfort" temperature value (see technical specifications).

FIL-PILOTE

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

The "Fil-Pilote" sub-function allows managing the device by a central control system that sets the operating mode for all the connected devices.

- In "Room thermostat" operative mode:

1. **Standby:** power off the heating element, the device remains active.
2. **Comfort:** maintains the "Comfort" temperature set by the user.
3. **ECO:** maintains the room temperature 3,5°C below the "Comfort" temperature.
4. **Anti-freeze:** maintains the room temperature at 7°C.
5. **Eco-1:** maintains the room temperature 1°C below the "Comfort" temperature.
6. **Eco-2:** maintains the room temperature 2°C below the "Comfort" temperature.

- In "Towel Radiator thermostat" operative mode:

1. **Standby:** power off the heating element, the device remains active.
2. **Comfort:** maintains the "Comfort" temperature set by the user.
3. **ECO:** maintains the room temperature 10°C below the "Comfort" temperature.
4. **Anti-freeze:** maintains the room temperature at 7°C.
5. **Eco-1:** maintains the room temperature 4°C below the "Comfort" temperature.
6. **Eco-2:** maintains the room temperature 7°C below the "Comfort" temperature.

STAND-BY

In "Stand-by" mode the heating element is powered off.

KEY LOCK

Press together the [Select] (5) and [Mode] (6) buttons for 5 seconds to lock all the buttons (except the [On/Stand-by] button). When key lock is activated, a "LO" indication is displayed on the screen. To unlock the buttons, repeat the same procedure.

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.



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