



INSTALLATION AND USER MANUAL Smartpanel



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1. PRESENTATION

Firstly we would like to thank you for purchasing this product. Your business is much appreciated and we trust that this equipment will provide many years of use and deliver full satisfaction. Before proceeding to the installation, you should read all the instructions and recommendations detailed in this instruction manual, since the manufacturer will not be responsible for any breakdown or damage caused by misuse. Once your electric radiator is installed, keep this manual in a safe place so that it can be consulted at any time.

2. RECYCLING



Warnings for the correct disposal of the product as established by the European Directive 2012/19 / EU. At the end of its useful life, the product should not be disposed of together with urban waste. It can be delivered to specific recycling centres or to distributors that can facilitate this service. Removing a household appliance separately means avoiding possible negative consequences for the environment and health resulting from improper disposal and recycling of the materials and components, thus obtaining significant savings in energy and resources. To underline the obligation to collaborate with a selective collection, the product shows the marking that this product includes warning signs to confirm the non-use of traditional disposal methods.

For more information, contact your local authority or the store where you purchased this device.

3. IMPORTANT SAFETY NOTES

The installation of the heating device must be chosen correctly and must be carried out according to the rules and in accordance with the installation guides included in the manual.

The equipment should be kept away from any flammable objects and children should not be left near the appliance without being supervised. Children under 3 years of age should be kept out of the reach of the appliance unless they are continuously supervised.

Children from 3 years old to 8 years of age should only switch the appliance on / off as long as it has been placed and installed in its normal operating position.

They must also be supervised or have received instructions regarding the use of the appliance in a safe and secure manner and understand the risks of a heating device.

Children from 3 years old to 8 years old should not plug, operate, clean or perform maintenance operations.

This device can be used by children aged 8 years and above including people with reduced physical, sensory or mental abilities or lack of experience and knowledge providing they have been given appropriate supervision or training regarding the use of the device in a safe manner and understand the dangers involved. Children should be supervised to ensure they do not play with the device.

Cleaning and maintenance to be performed by the user, should not be performed by children without supervision.

Caution: some parts of this product can get very hot and cause burns. Particular attention must be paid when children and vulnerable people are present.

The equipment must under no circumstances be covered by clothing, or any other object, nor placed under a cabinet or any other obstacle that prevents the circulation of hot air.

WARNING:

To avoid overheating, DO NOT COVER the heating appliance.



The heating appliance must not be placed immediately below a socket outlet.

If your radiator is a dry type, it can be connected only to a supply with system impedance no more than 0,24 Ω . In case necessary, please consult your supply authority for system impedance information.

Avoid the use of extension cords as these can cause overheating and cause a fire risk. However, in case of using an extension cord, the cable must be the minimum size 14 AWG and with a power no less than 2500w.

The connecting cables of the heater itself must not come into contact with the surface of the appliance, and in the event that they can come into contact with each other, they must be protected with an insulating cover having an adequate temperature level.

The equipment must not be installed in places where there is a risk of splashing water, such as bathtubs, washbasins, etc.

The equipment must be installed so that the switches, thermostat, outlet cannot be touched directly or indirectly by a person in the bathtub or shower (respect the distances of prohibition according to RBT).

In case the power supply cable is damaged, it can only be replaced by the Technical Assistance Service, in order to avoid risks.

Always respect the safety measures when fixing the device on the wall.

The electrical installation must have a switch with a fuse and magnetic protection. Likewise, a differential protection against ground faults is advisable. The voltage and frequency values of the electricity network must be the same as those indicated on the nameplate.

It is possible that the radiator may produce slight noises at the beginning of its operation which is normal due to the expansion and contraction of aluminium. With a few times of operation, the noise should disappear.

4. INSTALLATION

BEFORE INSTALLATION

Once unpacked, the packaging must be removed in a responsible manner since all the elements have been designed for recycling.

If once unpacked you detect damage to the appliance, you should consult the supplier before proceeding with the installation and electrical connection within 24 hours of receipt.

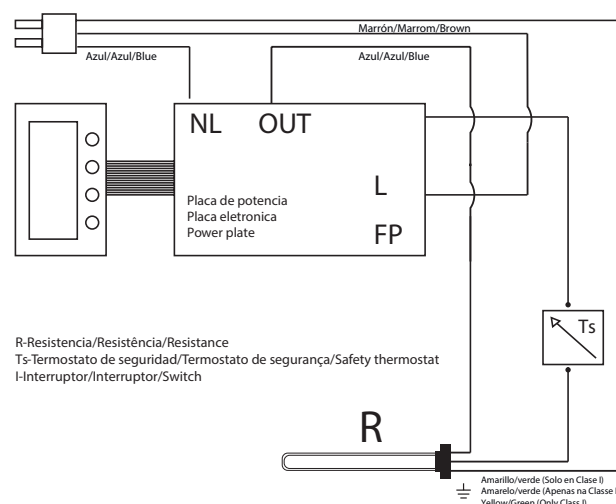
VERY IMPORTANT!

- Read the installation manual before assembling the equipment.
- Read the user manual to operate the equipment.
- Observe the warnings carefully.
- Install the equipment in a place where the air can fully circulate.
- It is advisable to be assembled by an individual with DIY skills or qualified electrician.



ELECTRIC CONNECTION

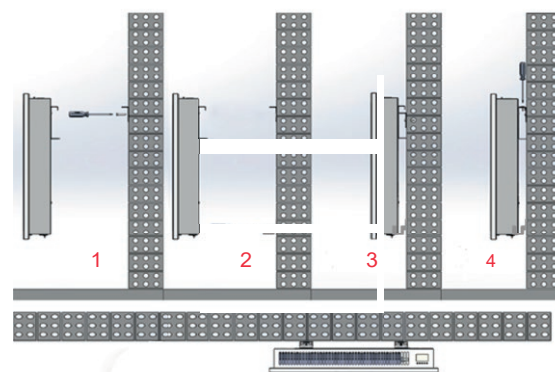
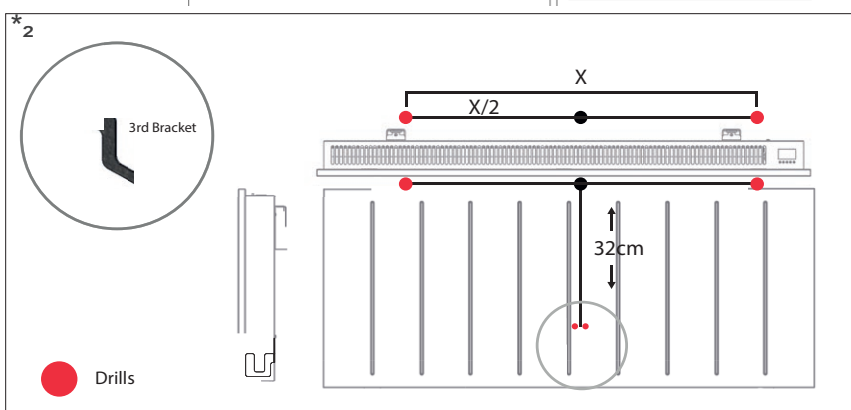
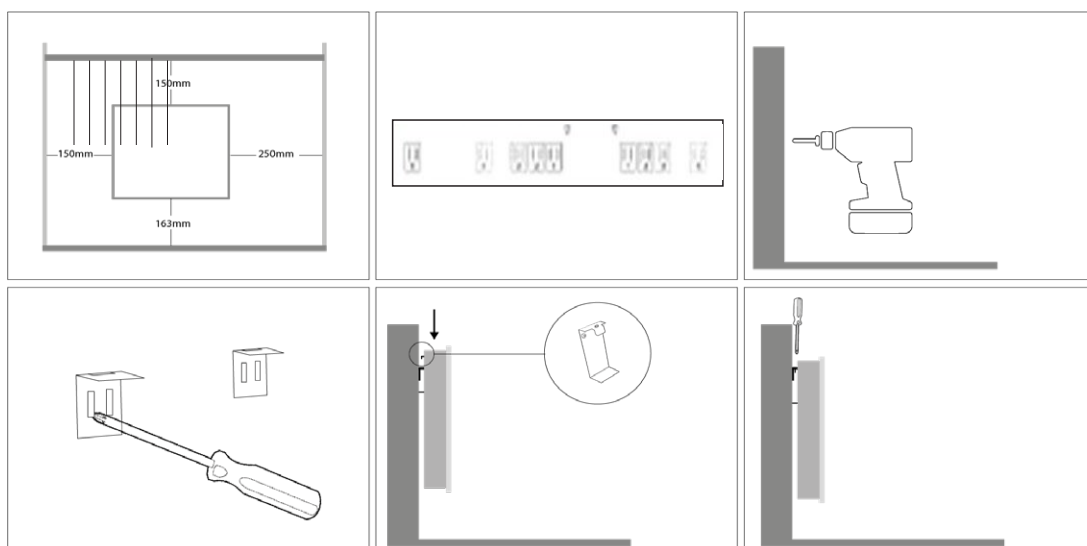
- If you decide to remove the 3 pin plug from the power cord then you must follow the instructions below regarding the electrical installation and the connection must be made by a qualified installer.
- If the electrical connection is spurred to a mains electric supply then it must be installed in accordance with the installation regulations in force in the country in which it is to be fitted.
- For safety reasons, verify that there is no voltage in the network prior to connecting the device to the mains.
- Before connecting the appliance to the mains it must be ensured that the supply voltage is within the indicated on the nameplate 230V.
- The device must be connected to the protective conductor of the fixed installation.
- Any incident arising from the breach of these instructions will invalidate the guarantee.
- For the electric connection please take close note of the electrical diagram with special attention to the colours of the cables.
- If the power cord is damaged, it must be replaced by the manufacturer, its after-sales service or by a similar qualified personal so that the user is not in danger.



Please follow the illustrated steps below to hang and install your **SMART PANEL** radiator:

1. Take the radiator out of its packaging and choose where to hang it. Please note the minimum distances required around the heater ^{*1}.
2. The template for placing the radiator on the wall is included inside the box. You must make the template holes to drill and cover the holes.
3. If the template is printed on the box, place the box against the wall and mark where the supports should be placed. If the template is included inside, take it as a guide according to the size of your radiator and respect the minimum distances.
4. Mark out the holes for the third bracket, by taking measurements as shown in diagram ^{*2}. The holes for the bottom bracket need to be 32cm down from your top holes and located centrally.
5. Drill and attach the plugs then screw all 3 wall brackets into place. Screws are provided but it is your responsibility to check these screws are suitable for your wall, you may need to source alternative screws.
6. Screw the Smartpanel brackets into the back of the Smartpanel using the pre-drilled holes and the small screws provided.
7. Hang the Smartpanel on the wall by resting it into the bottom bracket and slotting the top smartpanel brackets into the wall brackets and then screw them together.

^{*1}



5. TECHNICAL CHARACTERISTICS

Ajuste Temp. Rango	7/32°C
Potencia Max.	2000W con triac
Voltaje	230VAC 50Hz

EEPROM MEMORY:

This thermostat saves your data (set point values, user program and settings) automatically when:

- The user validates the configuration.
- The product's backlight turns off.


It also saves, estimated values of your energy consumption:

- Every 4 hours;
- When the user enters consumption mode.

In case of power failure:

- User programs and settings (if saved correctly) will remain "indefinitely".
- The time settings are guaranteed 2h providing the product has been running for at least 20 minutes before the electricity supply is disconnected.









6. PROGRAMMABLE DIGITAL THERMOSTAT

This radiator is equipped with various functions and operating modes that the user can select using the "MODE"  button.

OPERATING MODES

Comfort, Economy, Anti-Frost, Holidays, Timer, Turbo, Eco and Off (Stand-by).

These are their related icons:

							
COMFORT	ECONOMY	ANTI FROST	HOLIDAYS	TIMER	TURBO	ECONOMY SET AT 17 °C	OFF /STAND BY

*Comfort Mode: The thermostat keeps the room temperature at the value established by the user.


☾ Economy Mode: The thermostat keeps the room temperature below the configured Comfort value.

❄ Anti-Frost Mode: The thermostat keeps the room temperature above 7 ° C.

⌚ Holiday Mode: The radiator enters the "Anti-frost" mode for the period of time established by the user.

🕒 Timer Mode: The thermostat operates as per a daily/weekly programme defined by the user.

Countdown. The radiator enters the "Countdown" mode for the period of time established by the user.

 Turbo/boost Mode: The thermostat continuously feeds the resistance during the period that is adjustable by the user, the maximum is 2 hours. After the period of time, the device returns to the previous operating mode.








For safety reasons, the room temperature is automatically controlled in order not to exceed 32 ° C.

Radiators must always be fixed to the wall by the brackets provided before use.


ECO Economy Mode set at 17°C: The device keeps the room temperature stable at 17 ° C.


○ **Off (Stand-by) Mode:** In this mode the electric resistance is not being fed and the light at the back of the screen goes off. However, the thermostat is operating.

Other thermostat functions are:

						
OPEN WINDOW DETECTION	ASC	CHILD PROTECTION	POWER LEVEL INDICATOR	BLOCKED	CONSUMPTION METER	CONSUMPTION INDICATOR

OTHER FUNCTIONS AND ICONS


 **Open window detection:** This function allows us to detect that a window is open due to a sudden drop in room temperature. In this case, the device stops feeding the resistance for a maximum of 30 minutes or until an abrupt increase in room temperature shows that the window has been closed.

 **Adaptive temperature control (ASC):** This function anticipates radiator's operating start time regarding the programmed value (only for Timer mode).

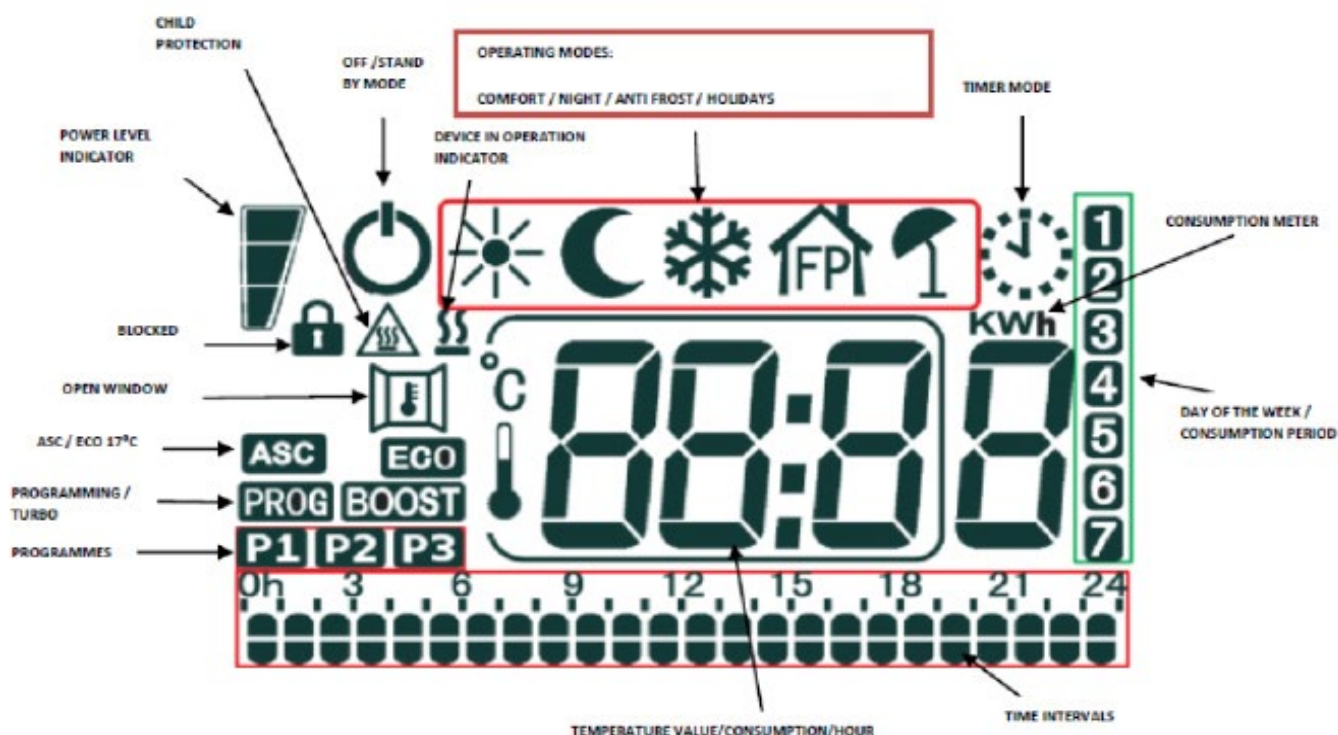
 **Safety for children:** This function reduces the radiator's surface temperature.

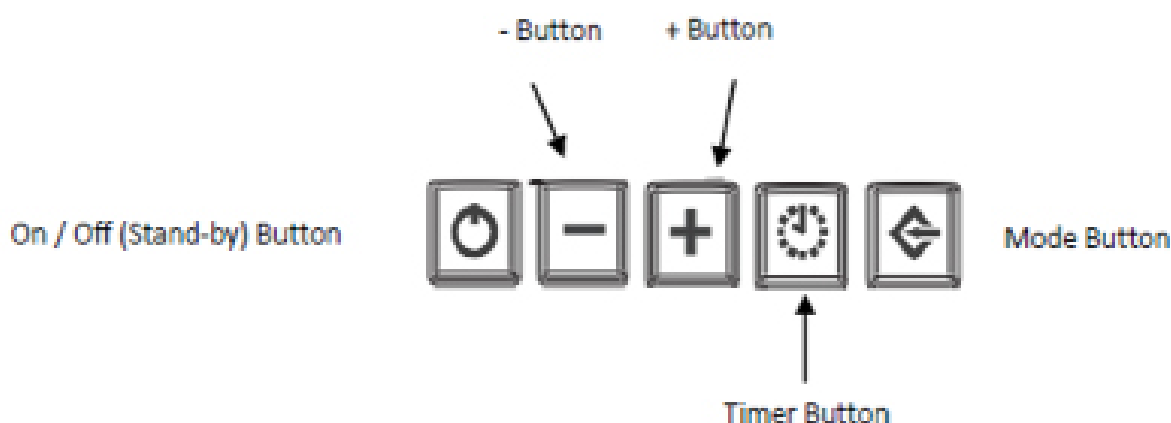
 **Power level indicator:** Instantaneous consumption visualisation.

 **Blocked:** Function to prevent accidental or improper use.

 **Consumption meter:** This function lets us know the consumption data for different periods, in kWh.

 **Consumption indicator:** To see if the device is consuming at the moment or not.





1. On / Of (Stand-by)

Press the On/Off (Stand-by) button to turn the radiator on or to set the off/stand-by mode. If the off/stand-by mode is activated, the corresponding icon will appear on the screen and there will be two 0.5 second bleeps and the time will be shown. When the device is turned on, there will be a one second bleep and the icon will disappear.

2. Main functions

*Comfort Mode: This is the radiator's standard operating mode to maintain the user's desired temperature. In order to activate it, follow these steps:

- Press the "Mode" button several times until the * icon appears on the screen.
- Select the desired temperature using the + and – buttons. The minimum value that can be programmed is equal to the value of the temperature programmed in economy mode plus 0.5°C. The maximum value is 32°C.

☾Economy Mode: Selecting this mode, the radiator maintains the room temperature at the one selected for it. In order to activate it, follow these steps:

- Press the "Mode" button several times until the ☾ icon appears on the screen.
- Select the desired temperature using the + and – buttons. The maximum value that can be programmed is equal to the value of the COMFORT temperature less 0.5°C. The minimum value is 7°C.




NOTE: The COMFORT and ECONOMY temperatures are the programme's determining values. It is not possible to select a temperature value for the ECONOMY mode superior to the COMFORT temperature, as the electronic thermostat does not allow it. When operating, it is possible to change the temperature easily by pressing the + and – buttons.

*Anti-frost Mode: Selecting this mode, the room temperature is set at 7°C. In order to activate it, press the "Mode" button several times until the * icon appears on the screen.

⬆Holiday Mode: Selecting this mode, the radiator enters the ANTI-FROST mode for the period of time established by the user. In order to activate it, follow these steps:

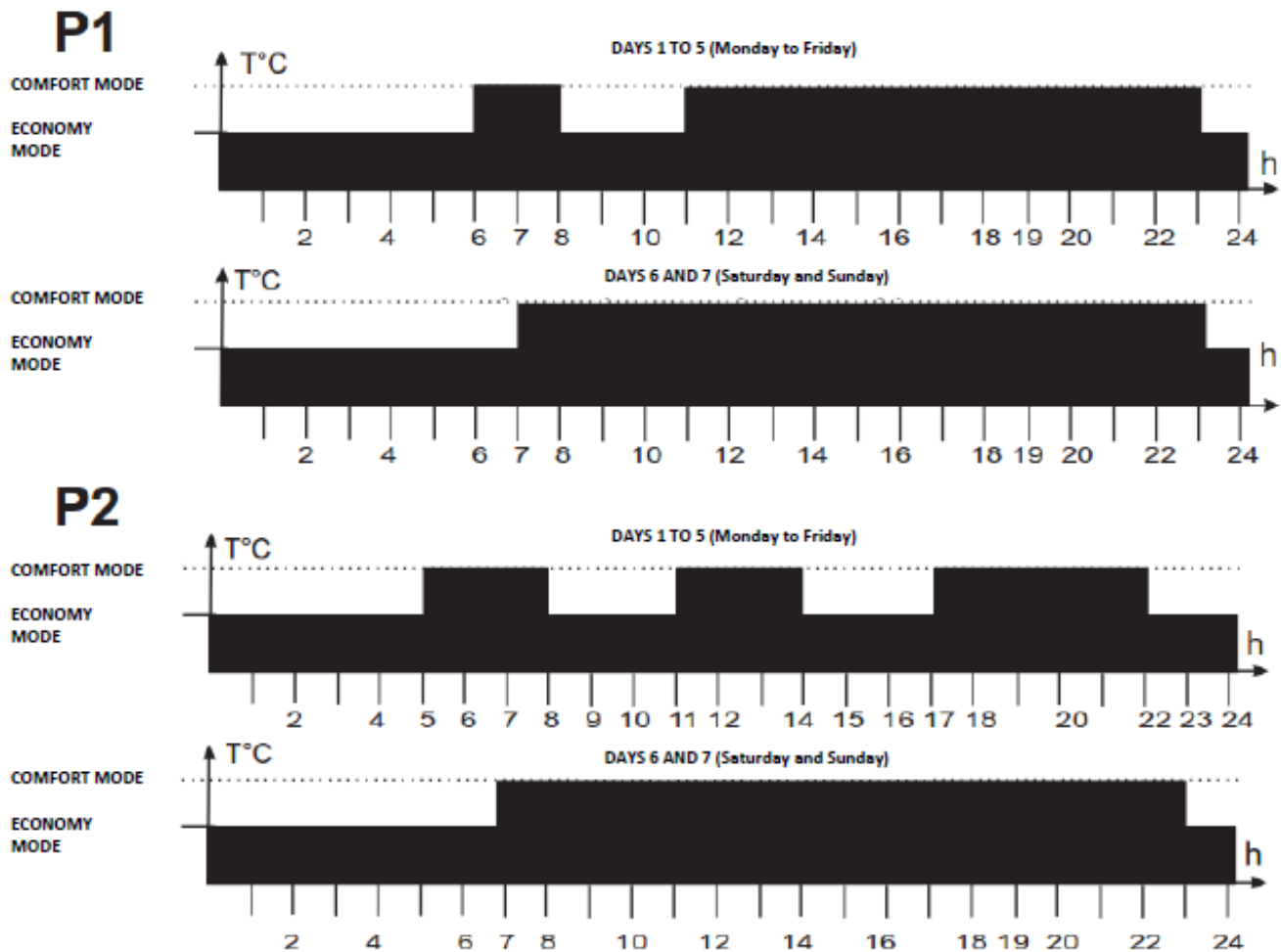
- Press the "Mode" button several times until the icon appears on the screen.
- Using the + and – buttons it is possible to select the holiday period duration, from 12 hours to 40 days, with an increase of one hour 12 to 24 and with an increase of one day from 24 hours.

⌚Timer Mode: In this mode, the room temperature is maintained at the COMFORT or ECONOMY temperature depending on the programmes established for the different time intervals during the day (P1, P2 or P3). In order to activate it, follow these steps:

- Press the “Mode”  button several times until the  icon appears on the screen.
- Press the TIMER  button to select one of the pre-established factory programmes (P1 and P2) or the programme that is configurable by the user (P3).

For configurable programming P3, please look at section “**4. Programming**” in this manual.



The pre-established P1 and P2 programmes are:




Countdown Mode: After the “Timer” mode, 1H, 2H,...,9H appears on the screen. The user when 1H appears and the clock symbol flashes, you can select with the + and – buttons the hours from 1 to 9 hours. Once the countdown time is selected, nothing else is pressed. The device will deduct the hours until it reaches zero, the screen goes OFF and the device goes into stand by.


When pressing any button the device leaves the stand-by station to re-count down or select the mode that the user wants.


BOOST Turbo/Boost Mode: This mode can be used when we need to heat the room quickly. In order to activate it, follow these steps:

- Press the “Mode”  button several times until the  icon appears on the screen.
- Pressing the + and – buttons it is possible to select the TURBO/BOOST period duration from 5 to 120 minutes. When this function is activated, the radiator operates at its maximum power, ensuring that the room temperature does not exceed 32°C. When the programmed time (indicated by the countdown on the screen) finishes, the radiator returns to the previously established mode.


E00 Economy Mode 17°C: Activating this mode the radiator operates at a preestablished, unchangeable temperature of 17°C. This function allows for lower consumption when, for example, the room or the house is empty for an indefinite period of time. To select this mode, press the “Mode”  button several times until the **E00** icon appears on the screen.



3. Other functions and icons


 Open window detection: The radiator is able to detect if a window has been opened through a sudden drop in temperature (5°C in a maximum of 30 minutes). If this happens, the device disconnects for 30 minutes so as to, later on, operate again at the previously established mode if it detects continuous increases in temperature of one degree (because, for example, the window has been closed). If this is not the case, the device will remain disconnected for an additional period of 30 minutes.

When the open window detection is activated, the corresponding symbol **** will appear intermittently on the screen (except in off/stand-by mode). When it is deactivated, the symbol disappears.



In order to activate this function, please look at section **“4. Programming”**.


 Child protection: When this function is activated, the temperature on the front part of the radiator is lowered so that it is safe when children are present. Moreover, this function means that the same radiator can be used in rooms smaller than the one it is installed in without significant changes in room temperature. When this function is activated, the power level that the radiator operates at is the one established by the user (40% - 50% - 60%). In order to activate this function, please look at section **“4. Programming”**.

 ASC (Adaptative Temperature Control): When this function is activated, the device connects before the time established in the programming (maximum 2 hours beforehand) to ensure that the room is at the programmed temperature at the established time. When this function is activated, the corresponding **** icon appears on the screen (except in off/stand-by mode). In order to activate this function, please look at section **“4. Programming”**.

 Power level indicator: This appears on the left-hand side of the screen and it depends on the programmed temperature level.

The higher the programmed temperature is, the greater the number of bars shown on the icon. This is instantaneous consumption visualisation as, the higher the programmed temperature is, the higher the energy consumption is.

 Block function: It is possible to block the radiator to prevent children from using it improperly or, for example, in a public space. In order to block/unblock the buttons, press the “Mode”  button and keep it pressed down for 3 seconds, until the icon appears (blocked) or disappears (unblocked).

 Consumption meter function: This function allows us to read the radiator's consumption expressed in kWh. In order to do so, the power of the radiator must be previously adjusted, following these steps:

- Unplug the device from the electricity supply.
- Simultaneously press buttons **+** and **-**
- Without releasing the buttons, plug the device into the electricity supply for at least 5 seconds until you can see the power adjustment function, as shown in this image:



-Use the **+** and **-** buttons to select your radiator's power in Watts.

-Confirm the selection with the **↵** button.

This operation only needs to be done the first time and then it will stay saved; it is not necessary to repeat it every time you wish to consult consumption.

Now you can read the consumption for various periods of time in the following way:

-Turn the radiator to off/stand-by mode.

-Press the **-** button for more than 3 seconds until the consumption data is shown on the screen.

-Using the **+** and **-** buttons, we can scroll the consumption menu.

-The icons will appear on the right-hand side of the screen.

Each one shows the consumed kWh during the corresponding period of time, as shown here:

1 = current day

2 = previous day

3 = current week

4 = previous week

5 = current month

6 = previous month

7 = current year

1+2 = previous year

1+3 = total

1+7 = radiator power indicator

Press the **↵** button to exit.

⏻ Consumption indicator: When the room temperature falls below the configured temperature, the radiator's thermostat feeds the resistance and the **⏻** symbol lights upon the screen, with which it is consuming energy. As soon as the room temperature reaches the selected temperature, the thermostat stops feeding the resistance and the **⏻** icon disappears from the screen, as it is no longer consuming energy.

IMPORTANT NOTE: If "ALL" appears on the screen then the temperature sensor is broken or damaged and the radiator does not work. Please contact our technical service.

4. Programming

Day and time programming:

-Turn the radiator to off/stand-by mode. The **⏻** icon will be shown.

-Press the **↵** button for more than 3 seconds until the functions can be seen.

Using the **+** button you can scroll through the following options: "ted"(hour and date), "prog"(programming) "ofst"(calibration of the temperature sensor) and "pouu" (adjustment of the radiator power).

-Select the "ted" option and confirm with the **↵** button.

-Enter the current year (15-99) using the **+** and **-** buttons.

Press the **↵** button to confirm the selection.

-Enter the current month (1-12) using the **+** and **-** buttons. Press the **↵** button to confirm the selection.

-Enter the current date (1-31) using the **+** and **-** buttons. Press the **↵** button to confirm the selection.

-Enter the day of the week (1=Monday, 2=Tuesday, 3=Wednesday, 4=Thursday, 5=Friday, 6=Saturday, 7=Sunday) using the **+** and **-** buttons. Press the **↵** button to confirm the selection.

-The current hour should then appear on the screen with the digits intermittently lighting up. The hour can be modified using the **+** and **-** buttons. Press the **↵** button to confirm the selection.

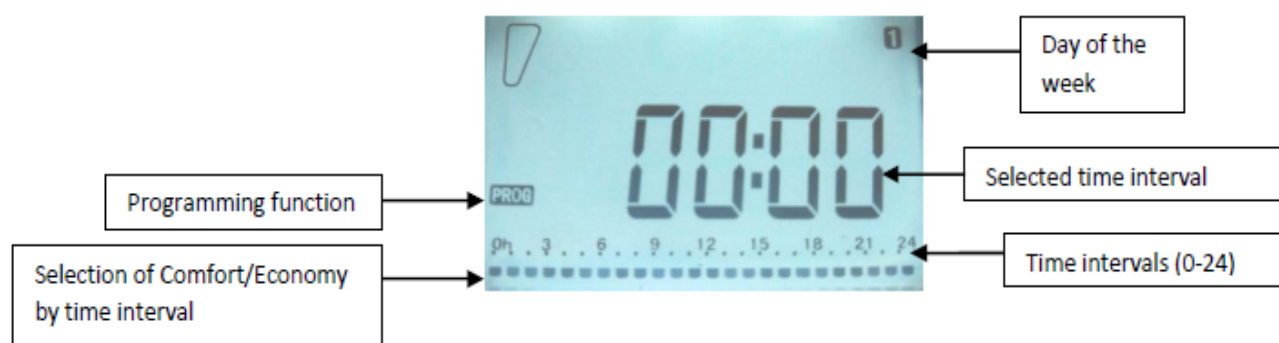
-The digits indicating the minutes light up intermittently on the screen. The minutes can be set using the **+** and **-** buttons. Press the **↵** button to confirm the selection.

Configuration of the P3 programme:

You can configure your own operating programme (P3) for each day of the week by following these steps:

- Turn the radiator to off/stand-by mode. The \odot will be shown.
- Press the \odot button for more than 3 seconds. Using the $+$ button you can see the following options: “ted” (hour and date), “prog”(programming) “ofst” (calibration of the temperature sensor) and “pouu” (adjustment of the radiator power).
- Select the “Prog” option and confirm with the \odot button.
- The programme will start on the first day of the week (1=Monday), and at 0 hours.

The day is divided into intervals of one hour each.



-Pressing the $+$ button we select the COMFORT mode in this time interval (the whole interval will be highlighted). Pressing the $-$ button we select the ECONOMY mode for this time interval (half an interval will be highlighted). And so on until completing the 24 hours of day 1=Monday. Confirm the programming with the \odot button.

-Automatically, the programming goes on to day 2=Tuesday, maintaining the programming established for Monday. If you wish to maintain it, press directly on the \odot button to confirm and go to the next day. Otherwise, you can change using the $+$ and $-$ buttons to programme as you wish.

-Follow the same steps for each day of the week until reaching day 7=Sunday.

Calibration of the temperature PROBE:



If the radiator is not installed in the optimum location to suitably detect the room temperature (for example: it is installed on a cold wall or there are draughts...) the measured room temperature may be different from the real temperature. In order to achieve maximum efficiency, it is recommendable to eliminate this temperature difference. To do so, follow these steps:

- Turn the radiator to off/stand-by mode. The \odot icon will be shown.
- Press the \odot button for more than 3 seconds. Using the $+$ button we can see the following options: “ted”(hour and date), “prog”(programming) “ofst”(calibration of the temperature sensor) and “pouu” (adjustment of the radiator power).
- Select the “ofst” option and confirm with the \odot button.
- With the $+$ and $-$ buttons establish the temperature difference between the room temperature (measured with a thermometer) and the temperature detected by the radiator. This difference can be adjusted between -5°C and $+5^{\circ}\text{C}$.
- Press the \odot button to confirm the selection.

Adjustment of the radiator power:




- Turn the radiator to off/stand-by mode. The \odot icon will be shown.
- Press the \odot button for more than 3 seconds. Using the $+$ button we can see the following options:

“ted”(hour and date), “prog”(programming) “ofst”(calibration of the temperature sensor) and “pouu” (adjustment of the radiator power).


- Select the “pouu” option and confirm with the  button.
- With the **+** and **–** buttons establish your radiator’s power in Watts.
- Press the  button to confirm the selection.

Activating other functions:




Open window detection

- Turn the radiator to off/stand-by mode. The  will be shown.
- Press the **+** button for more than three seconds, until you can see the  icon.
- Press the **+** button again to activate or deactivate the open window detection function (ON=activate; OFF=deactivate).
- Press the  button to confirm the selection and go to the next function:

ASC (Adaptive Temperature Control)

- Press the **+** button to activate or deactivate the ASC function (ON=activate; OFF=deactivate).
- Press the  button to confirm and go to the next function:

Child protection

- Press the **+** button to activate or deactivate the child protection function (ON=activate; OFF=deactivate).
- Press the  button to confirm the selection. If you have selected to deactivate it (OFF), the radiator will automatically go to off/stand-by mode. If, on the other hand, you have selected to activate it (ON), you can programme the percentage of power desired between the following values: 30% / 40% / 50% / 60%. Using the **+** button you select one or another.
- Confirm the desired percentage with the  button. In this way, all the changes made to the anterior functions will be saved and the radiator will return to its off/stand-by state .

7. WARRANTY

The company offers a technical warranty according to the current legislation of each country. For this warranty to be valid you must present the original invoice, delivery note or ticket.

Prerequisites:

- The warranty only covers manufacturing defects and/or any problem occurring from such defects. All problems arising from installing and undersized heater (not enough heat, improper installation, etc) are not covered by this guarantee.
- This heater is for domestic & light commercial use only, installation in any other environment voids this warranty.
- Electrorad UK Limited reserves the right to decide whether to repair or replace any defective part or to replace the entire heater.
- All costs arising from any damage caused by incorrect usage, transport, electrical supply are not covered by this warranty, nor is any malicious damage.
- This warranty does not provide compensation for incidental or consequential damage or injuries.

8. PROBLEM RESOLUTION

My radiator doesn't work.

- Check that the equipment is connected to the electrical network.
- Check that the socket has electricity by connecting another electrical appliance to it.

My radiator shows an error message "ALL" flashing on the screen.

The message "ALL" appears. / Sensor failure.
Contact your service representative.

My radiator seems to work properly, but the temperature in the room does not correspond to the program.

- Check the time on the clock.
- Check the comfort temperature setpoints.
- Check the setpoints of the economic temperature.
- Check that the duration of the program is not too short.
- Calibrate the probe correctly. (Go to page 13 and follow the steps)

My radiator has arrived damaged or with damaged packaging.

- Contact the seller within 24 hours of receiving your equipment and take photos of the box, inside the box, carrier label, equipment, damage, and equipment serial number.

My radiator seems to work but it does not obey the programming made or it turns off by itself.

- Check if you have the open windows function activated. (Go to page 11 and follow the steps)
- Check if you have the ASC feature turn on. (Go to page 11 and follow the steps)

9. ECO-DESIGN

Item	Unit
Type of heat output/room temperature control (select one)	
Single stage heat output and no room temperature control	no
Two or more manual stages, no room temperature control	no
With mechanic thermostat room temperature control	no
With electronic room temperature control	no
Electronic room temperature control plus day timer	no
Electronic room temperature control plus week timer	yes
Other control options (multiple selections possible)	
Room temperature control, with presence detection	no
Room temperature control, with open window detection	yes
With distance control option	no
With adaptative start control	yes
With working time limitation	yes
With black bulb sensor	no
Contact information: see back cover	

Data			Value			
			Smart Panel			
Item	Simbol	Unit	600W	1.200W	1.500W	2.000W
Heat output						
Nominal heat output	P _{nom}	kW	0,6	1,2	1,5	2
Minimum heat output (indicative)	P _{min}	kW	0	0	0	0
Maximum continuous heat output	P _{max,c}	kW	0,6	1,2	1,5	2
Auxiliary electricity consumption						
At nominal heat output	e _{l,max}	kW	0,6	1,2	1,5	2
At minimum heat output	e _{l,min}	kW	0,000369	0,000369	0,000369	0,000369



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