

## “SMART”

### *Electronic control for towel radiators*

**SMART** is an electronic thermostat for the automatic control of electric towel radiators. By means of an internal sensor, it is capable of keeping the temperature of the towel radiator to a desired value.

Ten different electric resistances are available in a range between 100W and 1000W.

**Operative modes: Comfort, Standby/Antifreeze and 2hr Boost with 12 or 24hr Auto Boost.**

**“Comfort” mode:** The thermostat keeps the internal temperature at the value set by the user.

**“Standby/Antifreeze” mode:** In this mode, the device is on standby. However, as soon as the measured temperature falls below 10°C, the control system activates the heating element, in order to prevent the internal liquid from freezing.

**“Boost” mode:** In “Boost” mode, the heating element is activated for a period of 2 hours independently of the configured temperature. The temperature is however automatically controlled in order not to exceed 65°C. At the end of the 2 hours period, the device returns to “Comfort” mode.

**“Auto Boost” mode:** The control system enters into “Boost” mode for 2 hours. After that, it returns to “Comfort” mode for 10, or 22 hours (period configurable by the user) and then it enters again into “Boost” mode for 2 hours.

This sequence is repeated endlessly.



SMART 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 60335-2-43:2005
- EN 61000-3-2:2004 - EN 61000-3-3:1995
- EN 50366:2003
- EN 55014-1:2008 - EN 55014-2:1998



Available colors: - White (RAL 9003).  
- Chrome

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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 before 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 Guide** *To be used by installer only*

- Disconnect the device from power supply before proceeding with installation.
- Protect the device with a 30mA RCD circuit breaker.

- 1) Turn the rail upside down and remove the blank from desirable side.
- 2) Insert the heating element into the threaded opening.
- 3) Securely fasten the element to the body of the towel rail with a 22mm wrench. **DO NOT TIGHTEN USING THE ELEMENT HEAD.**
- 4) The special sheath ensures a secure mounting and eventually allows a slight supplemental torsion to perfectly align the thermostat with the radiator.
- 5) Turn the rail the correct way around.
- 6) Securely fasten the rail in position on the wall.
- 7) Connect the device to mains (this should be done by a qualified electrician). The bleed on the top of the rail at this point must remain open!
- 8) Switch the element on at full heat.
- 9) Remove the expelled liquid (be careful to avoid burns!) in order to keep the thermostat dry and avoid the liquid reaching the border.
- 10) After 10 to 15 minutes, close the bleed at the top of the rail with a bleed key, or a screwdriver.



#### **TROUBLE SHOOTING**

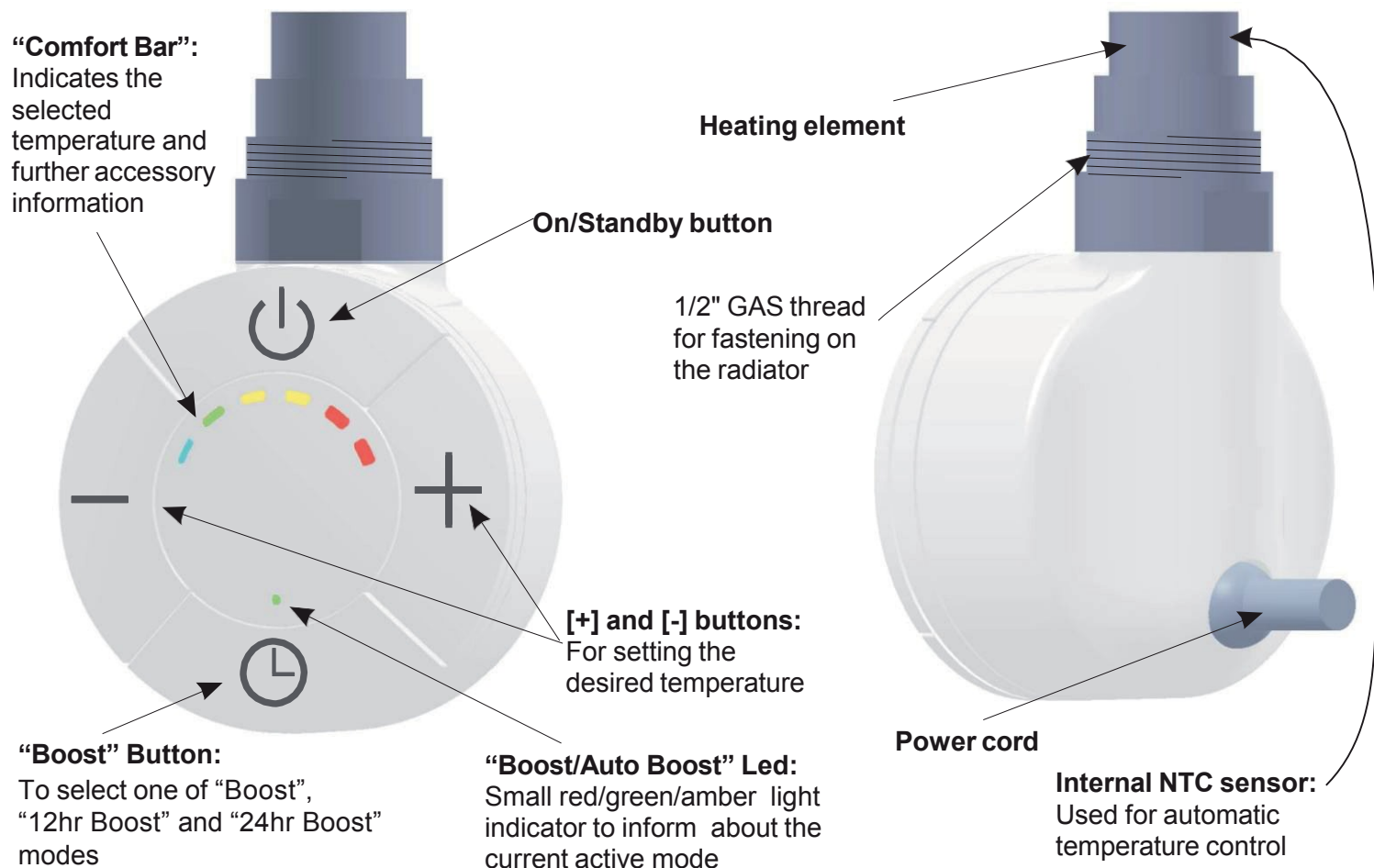
##### **The top of my radiator isn't heating properly.**

The most likely factor in this is that too much water has escaped during the commissioning of the rail. To resolve this problem, make sure your radiator has been switched off for a while and is cold. Then, using a 22mm spanner, remove the blank or bleed at the top of the radiator. If this is not possible, you might have to take the radiator off the wall and remove the element. Take a look inside to see the level of the solution. If it is below the small lugholes in the collector bar at the top of the radiator, or below the top bar, you will need to top it up with normal, soft water. If you live in a “hard water” area, it would be better to use bottled water, to prolong the life of your elements. When you have topped up the fluid level, turn the radiator back on with the bleed valve open. Leave to heat up for 10 to 15 minutes, then, with either a bleed key or small screwdriver, close the bleed valve.

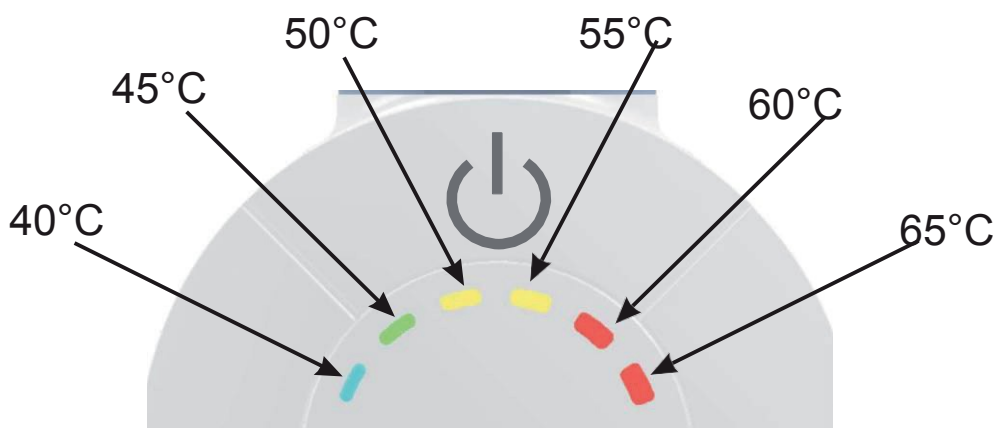
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### User Guide



### Comfort Bar



## *Electronic control for towel radiators*

**Press the [On/Standby] button to turn on the device or to enter the “Standby/Antifreeze” mode.**

NOTE: When the device is switched to "Standby/Antifreeze" mode, it beeps twice for 0.5sec.

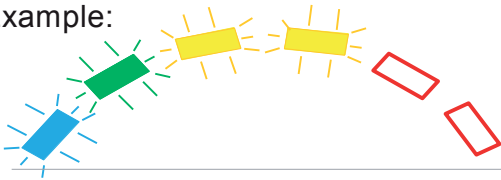
When the device is switched to “On” mode (i.e. it is turned on), it beeps for 1sec.

**“Comfort” mode:** In this mode the desired temperature of the radiator is selected. The temperature value is set through the [+] and [-] buttons to one of the following values:

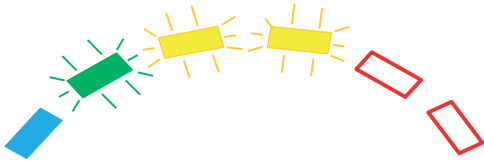
40°C, 45°C, 50°C, 55°C, 60°C, 65°C.

The rightmost lit or blinking LED in the “Comfort bar” indicates the selected temperature. A blinking LED indicates that the corresponding temperature has not yet been reached during the heating phase. When a certain temperature level is reached, the corresponding LED stops blinking and remains lit.

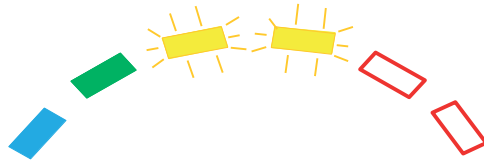
Example:



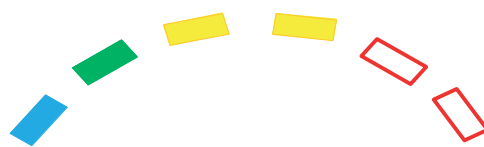
The device is firstly turned on. Pressing 4 times the [+] button, the desired temperature is set to a value of 55°C (the first 4 LEDs from the left start blinking).



The radiator starts heating. When the temperature of the radiator reaches 40°C the first (blue) LED stops blinking and remains lit.



After some time, the temperature reaches 45°C and the second (green) LED also stops blinking and remains lit.



The same behavior applies to the two subsequent (yellow) LEDs, until the desired temperature of 55°C is reached (all LEDs stop blinking).

**“Standby/Antifreeze” mode:** In this mode the device goes in standby, however as soon as the temperature of the radiator falls below 10°C, the heating element is automatically powered on.

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**“Boost” mode:** Press the **[Boost]** button to activate this operative mode.

This mode activates the heating element to the maximum power for 2hrs (for safety reasons the maximal temperature is limited to 65°C).

To exit the “Boost” mode, press the **[Boost]** button.



“Boost” mode indication: “Boost” LED has red color and it blinks.

**“24hr Boost” mode:** Press the **[Boost]** button for 3 seconds to activate this mode.

The control system activates the “Boost” mode for 2 hours, after that it returns to “Comfort” mode and after 22 hours the “Boost” mode is started again for 2 hours. This sequence will repeat endlessly.

To exit the “24hr Boost” mode press the **[Boost]** button.

NOTE: During the first cycle the duration of the “Comfort” mode is of 21 hours.



“24hr Boost” indication during 2hrs “Boost”: “Boost/ Auto Boost” LED blinking green.



During 22hrs “Comfort”: “Boost/ Auto Boost” LED permanent green.

**“12hr Boost” mode:** Press the **[Boost]** button for more than 5 seconds to activate it.

The control system activates the “Boost” mode for 2 hours, after that it returns to “Comfort” mode and after 10 hours the “Boost” mode is started again for 2 hours. This sequence will repeat endlessly.

To exit the “12hr Boost” mode press the **[Boost]** button.

NOTE: During the first cycle the duration of the “Comfort” mode is of 9 hours.



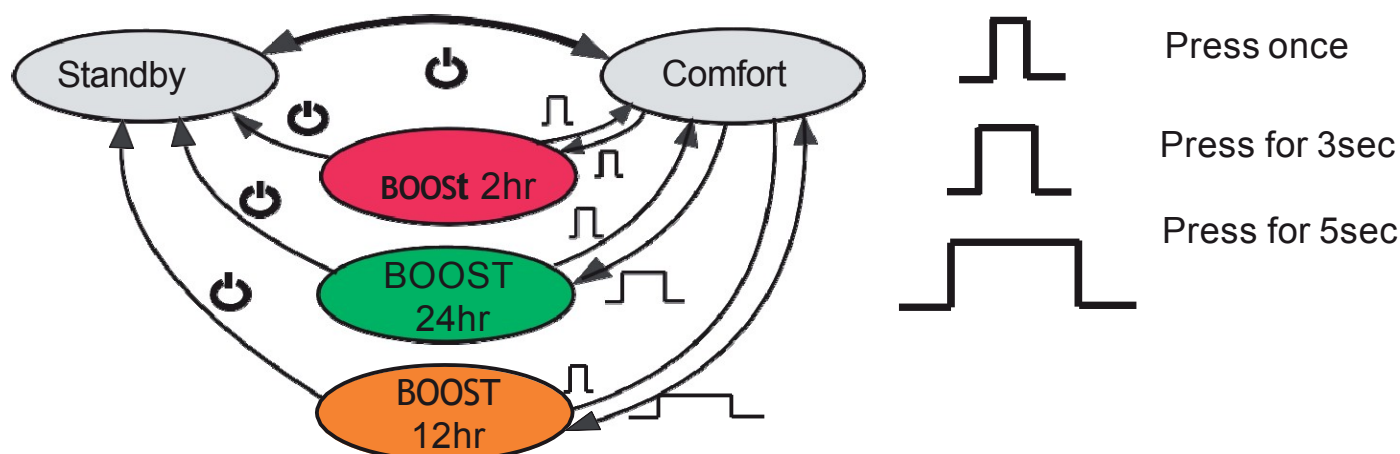
“12hr Boost” indication during 2hrs “Boost”: “Boost/Auto Boost” LED blinking amber.



During 10hrs “Comfort”: “Boost/ Auto Boost” LED permanent amber.

NOTE: For safety reasons, the maximal temperature of the radiator during the 2hrs boost is limited to 65°C.

#### Functional diagram





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#### Boost/Auto Boost LED functioning summary

<b>Blinking red</b>	"Boost" mode active. The heating element is powered for 120 minutes (temperature of the radiator automatically limited to 65°C).
<b>Blinking Green</b>	"Boost" function active in "24hr Boost" mode. The heating element is powered for 120 minutes (temperature of the radiator automatically
<b>Permanent Green</b>	"Comfort" function active for 22hrs in "24hr Boost" mode.
<b>Blinking Amber</b>	"Boost" function active in "12hr Boost" mode. The heating element is powered for 120 minutes (temperature of the radiator automatically
<b>Permanent Amber</b>	"Comfort" function active for 10hrs in "12hr Boost" mode.

**Key lock function:** It is possible to lock the buttons of the device to avoid inadvertent modifications of the settings. Press together the [+] and [-] buttons for 3 seconds to lock all the buttons except the [On/Standby] button.

To unlock the buttons press again together the [+] and [-] buttons for 3 seconds. When key lock is activated the device beeps twice. When key lock is deactivated, the device beeps four times.

#### **Additional indications provided by the “Comfort Bar”:**

- The two central (yellow) LEDs blink when a button is pressed: Key lock is active.
- The external (blue and red) external LEDs blink: Failure on the temperature sensor, the heating element is deactivated. Contact customer support.

#### **Notes.**

In case of interruption of power supply, the system will recover from the previous operative mode\*, with the exception of "Boost" and "Auto Boost" modes.

\*The status of the device is saved 5 seconds after a modification occurs.

#### **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.

#### **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.