



MAX! Radiator Thermostat +

Installation and User Guide

Product Code EHC-MX08





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1. Intended Use

The MAX! Radiator Thermostat+ is a component of the MAX! system. It is responsible for regulating single radiators. During ventilation, the MAX! Radiator Thermostat+ automatically reduces the temperature to save costs for heating.

Communication between MAX! components is bi-directional. This ensures that the information sent reaches the recipient.

The configuration of the MAX! Radiator Thermostat+ is made according to the system variant used.



MAX! House Solution

MAX! House Solution is the solution for the entire house. With a MAX! Cube, all settings of connected devices in your house can be made via the MAX! software. By using the MAX! Cube, several MAX! Radiator Solutions and MAX! Room Solutions can be connected to a MAX! House Solution in a new installation. In this installation, the MAX! Eco Switch can optionally be integrated.



MAX! Room Solution

In the MAX! Room Solution, the settings of all connected devices in your room can comfortably be made via the MAX! Wall Thermostat+. Up to 8 MAX! Radiator Thermostat+ and 8 MAX! Window Sensors can be connected and controlled via the MAX! Wall Thermostat+. The MAX! Wall Thermostat+ has an internal sensor that measures the temperature in the room and cyclically transmits it to the radiator thermostats.

With a MAX! Cube, this solution can be extended to a MAX! House Solution.



MAX! Radiator Solution

With the MAX! Radiator Solution, you can easily start using the MAX! system. The temperature in a room can be controlled and regulated with up to 2 radiator thermostat+ and 3 window sensors. Connected devices can be configured

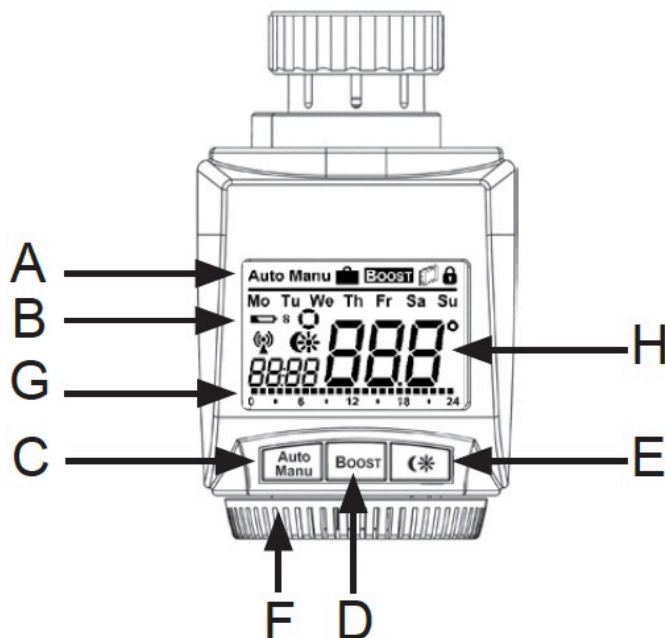


directly via the MAX! Wall Thermostat+.

In connection with a MAX! Window Sensor, opening and closing of windows is detected at the precise time it occurs. Whilst the window is open, the temperature is reduced.

With a MAX! Wall Thermostat+, this solution can be extended to a MAX! Room Solution and with a MAX! Cube the solution can be extended to a MAX! House Solution.

2. Operation and Display



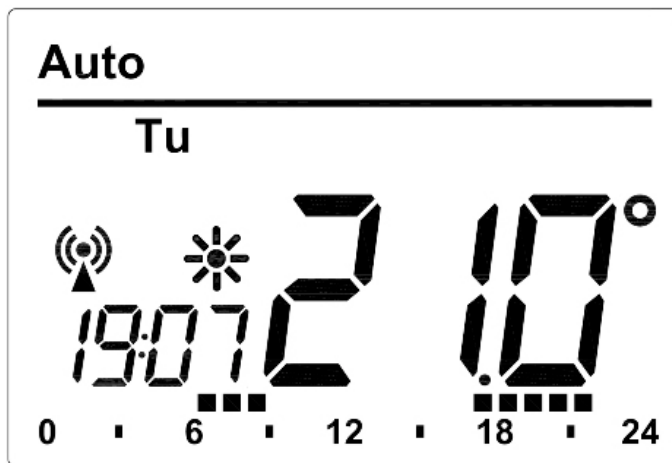
- A Automatic mode (**Auto**), manual mode (**Manu**), holiday mode (🏠), boost function (**Boost**), open window function (🪟), operating lock (🔒)
- B Weekday, replace batteries of radiator thermostat (🔋), replace batteries of connected device (e.g. window sensor) (🔋 S), antenna symbol (radio synchronicity) (📶), reduction/comfort temperature (☀️), time/date, activity symbol (🕒)
- C Auto/Manu button: Switch between automatic and manual operation, exit the holiday function
- D Boost button: Activate the boost function, confirm, start teach-in procedure
- E Switch between set-back and comfort temperature



- F Hand wheel: Make (temperature) settings, select and set menu items
- G Bar chart of the programmed heating phases of the current

2.1. Display content during normal operation

During normal operation, the operating mode, weekday, setpoint temperature, time, radio-controlled operation and heating phases are displayed. In the



example below, the MAX! Radiator Thermostat+ is in automatic mode (auto), and the comfort temperature (☀️) of 21.0°C is set. The weekday displayed is Tuesday (Tu) and the time is 19:07 h. The antenna symbol (📶) indicates that the connection to taught-in component has been established. The heating phases are displayed as bar chart.



The bars for the heating phases in the week program will only be displayed if the saved temperature is higher than the set-back temperature. Please see section 14.1 for examples.

3. Safety Information



The device may only be operated indoors and must be protected from the effects of damp and dust, as well as solar or heat radiation. Using this device for any purpose other than that described in this operating manual does not fall within the scope of intended use and shall invalidate any warranty or liability. This also applies to any conversion or modification work. This device is intended for private use only.



This device is not a toy; do not allow children to play with it. Do not leave packaging material lying around, as it can be dangerous in the hands of a child. Do not open the device: it does not contain any components that need to be serviced by the user. In the event of an error, please return the device to our service department.

4. Instructions for Disposal



Do not dispose of the device with regular domestic waste!

Electronic equipment must be disposed of at local collection points for waste electronic equipment in compliance with the Waste Electrical and Electronic Equipment Directive.



The CE Marking is simply an official symbol relating to the free movement of a product; it does not warrant a product's characteristics.



Used batteries should not be disposed of with regular domestic waste! Instead, take them to your local battery disposal point.

5. Inserting / Replacing Batteries

- Pull off the battery compartment cover.
- Insert 2 LR6 (mignon/AA) batteries in the battery compartment, making sure they are the right way round.
- Replace the battery compartment cover and latch it into position.

After inserting the batteries, the radiator thermostat has to be mounted on the radiator first (see chapter 7.). Afterwards, the radiator thermostat will start an adaptation run. Further details can be found in chapter 8.



The service life of new alkaline batteries is approximately two years.

Using rechargeable batteries is not possible.




Never recharge standard batteries. Doing so will present a risk of explosion. Do not throw the batteries into a fire. Do not short-circuit batteries.

6. Setting date and time

After inserting or replacing batteries, the firmware version number will be showing briefly. Following this, date and time will be requested automatically.

- Set the year, month, day, hour and minute with the hand wheel and confirm with the boost button. The motor moves the control pin backwards during the setting of date and time.

- If „InS“ and the rotating activity symbol „“ are displayed, the motor still reverses. If only „InS“ is shown in the display, the MAX! radiator thermostat+ can be mounted on the valve.

The MAX! Radiator Thermostat+ can be configured already before installation. Therefore, press auto/manu while „InS“ is displayed. For further details, please see section „14. Configuration menu“. After finishing configuration, „InS“ is displayed again and the MAX! radiator thermostat+ can be mounted.

7. Mounting on a radiator

The MAX! radiator thermostat+ is easy to install, and can be done without draining heating water or intervening in the heating system. No special tools are required, nor does the heating have to be switched off.

The union nut attached to the MAX! radiator thermostat+ can be used universally and without accessories for all valves with a thread size of M30 x 1.5 from the most popular manufacturers. By means of the adapters in the delivery, the device can be installed on radiator valves of type Danfoss RA, Danfoss RAV and Danfoss RAVL.



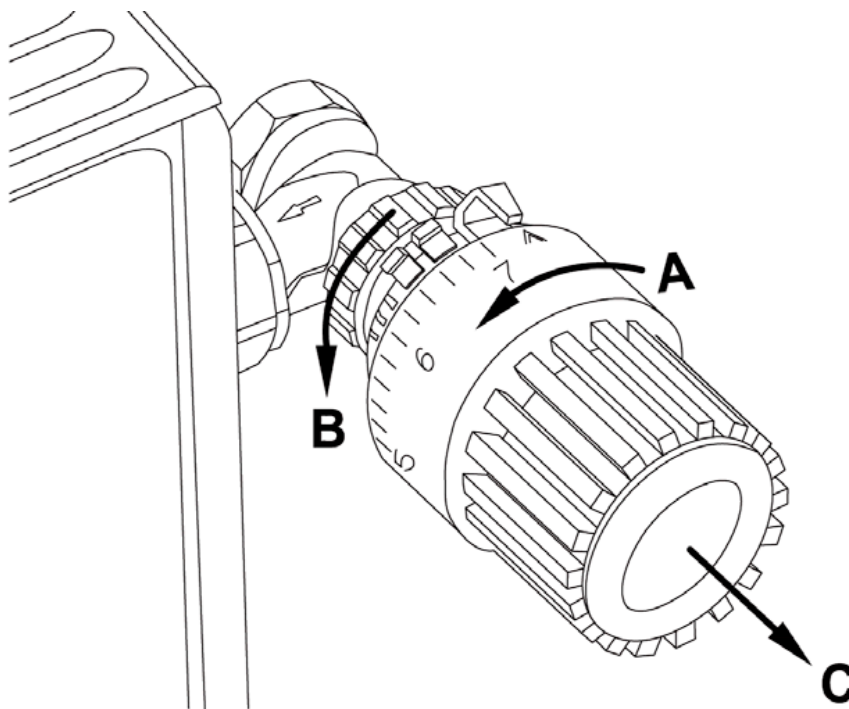
7.1. Remove the old Thermostatic Head

Rotate the thermostat dial to the maximum value (**A**) (anti-clockwise). The thermostat dial then no longer presses against the valve spindle, making it easier to remove.

There are different ways of fixing the position of the thermostat dial:

- **Union nut:** Unscrew the union nut in an anti-clockwise direction (**B**). Then you can remove the thermostat head (**C**).
- **Snap-on fastenings:** Thermostat dials that have been attached using this method can be easily released by giving the lock/union nut a slight turn in the anti-clockwise direction (**B**). The thermostat dial can then be removed (**C**).
- **Compression fittings:** The thermostat dial is held in place by a mounting ring which is held together with a screw. Slacken this screw and remove the thermostat dial from the valve (**C**).

Screwed on with a grub screw: Slacken the grub screw and remove the thermostat dial (**C**).



7.2. Adapter for Danfoss

One of the enclosed adapters is required for installation on Danfoss valves. The arrangement of the suitable adapter ring for the appropriate valve can be found in the following figures:

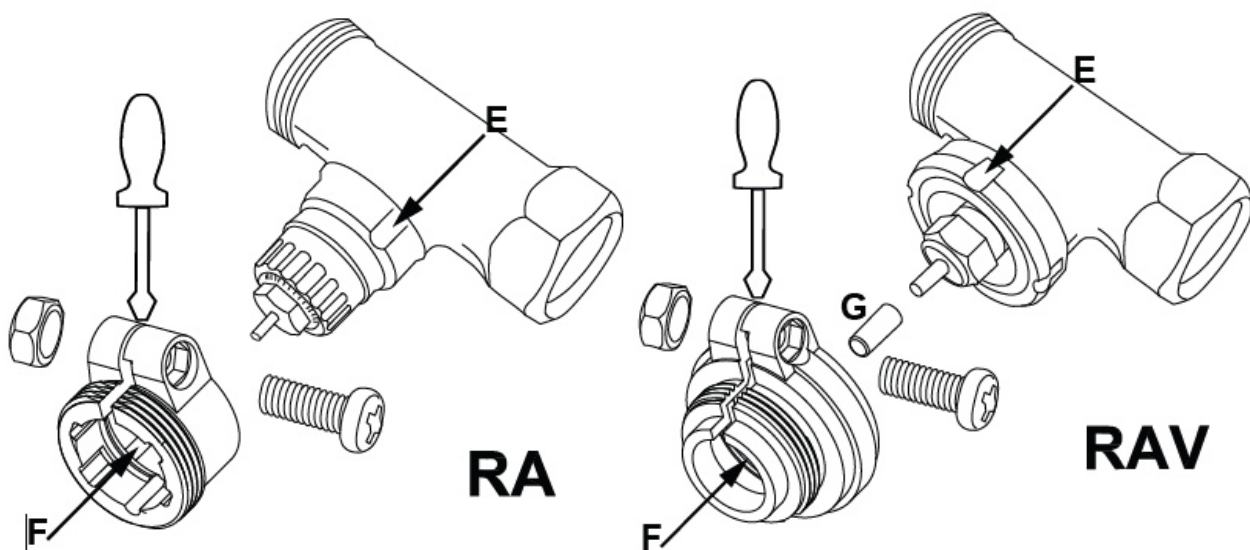


Take care during installation that you do not trap your fingers between the two halves of the adapter! The Danfoss valve bodies have elongated indentations (**E**) running all around (see arrow), which also ensure better seating of the adapter after it has been latched into place.



When installing, please ensure that the spigots inside the adapter (**D**) are in the same position as the indentations (**E**) on the valve. Latch the adapter, which corresponds to the valve, completely onto the valve body.

The RA and RAV adapters have been produced with pre-tension to aid better seating. Use a screw driver during installation if necessary and bend these gently upwards in the area of the screw. After they have been latched onto the valve body, fasten the adapters with the enclosed screw and nut.





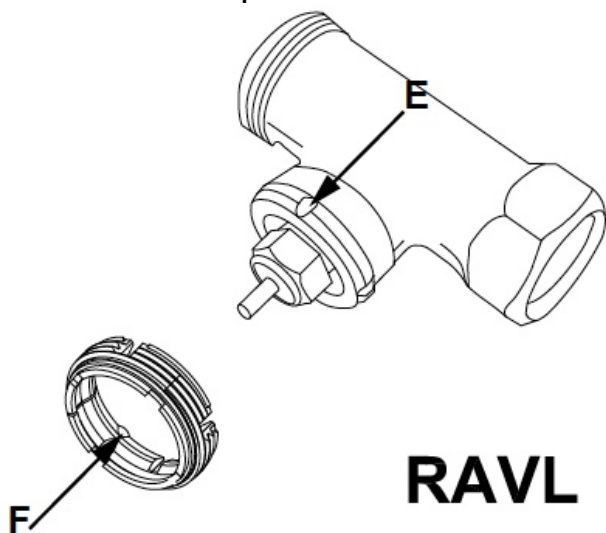
When installing, please ensure that the spigots inside the adapter (**D**) are in the same position as the indentations (**E**) on the valve. Latch the adapter, which corresponds to the valve, completely onto the valve body.

With the RAV type of valve, the tappet extension (**F**) should be placed on the valve pin before installation.



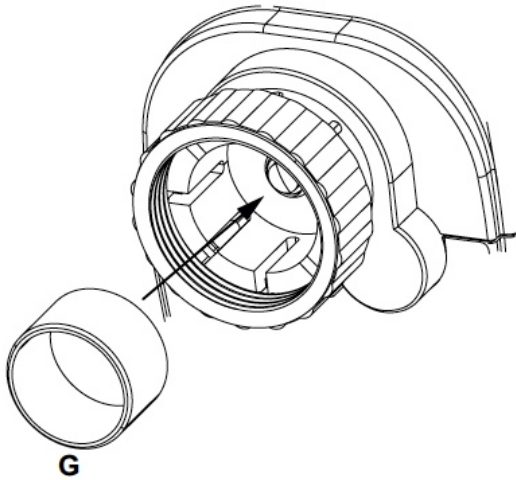
When installing, please ensure that the spigots inside the adapter (**D**) are in the same position as the indentations (**E**) on the valve. Latch the adapter, which corresponds to the valve, completely onto the valve body.

The RAVL adapter does not have to be screwed on:



The valves from different manufacturers may have tolerance fluctuations that make the MAX! radiator thermostat+ more loosely seated on the valve. The stability and seating of the valve can be improved using the provided support ring. Place the support ring (**G**) into the flange or onto the valve connection on the radiator and screw on the thermostat valve.

If the support ring cannot be fitted, there is adequate stability and it is not needed for installation.



8. Adapter Run

Once the batteries have been inserted, the motor reverses; meanwhile, “InS” and the activity symbol (🔄) are displayed. As soon as “InS” is displayed without the activity symbol (🔄), the MAX! Radiator Thermostat+ can be mounted. This is followed by an adapter run (“AdA”) to adapt the thermostat to the valve.

- Attach the radiator thermostat to the valve.
- Tighten the union nut.
- Press the boost button when “InS” is displayed.

The actuator performs an adapter run. “AdA” and the activity symbol (🔄) are displayed; during this time, operation is not possible.

If the adapter run has been initiated prior to mounting or if an error message (F1, F2, F3) is displayed, press the Boost button; the motor reverses to the “InS” position.



If the MAX! Radiator Thermostat+ has not been taught-in to the MAX! Cube, the device automatically switches to manual operation (Manu).



Teach-in mode can be activated also while “InS” is displayed.

9. Teach-In

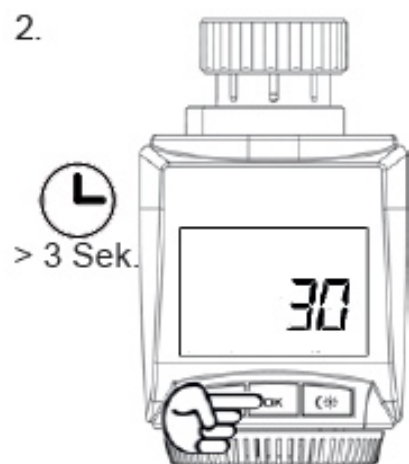
In order to enable use of the MAX! Radiator Thermostat+ in your installation, the device has to be taught-in first. The teach-in procedure depends on the system variant used (House Solution, Room Solution or Radiator Solution). Choose your system variant and follow the instructions below.



MAX! House Solution

In the MAX! House Solution all settings and programming (e.g. week programs) can be made via the **MAX! software**.

- First activate the teach-in mode of the MAX! Cube. Please start the local MAX! software and click on „New device“.
- Now activate teach-in mode on the MAX! radiator thermostat+. Press and hold down the Boost button for at least 3 seconds. The teach-in time remaining in seconds is displayed. The teach-in time is 30 seconds.
- If teach-in has been successful, the display returns to normal display.



As soon as the MAX! Radiator Thermostat+ has been taught in to the MAX! Cube, all data such as date, time or week program is transmitted to it via radio connection.



The MAX! Radiator Thermostat+ can only be taught-in on one MAX! Cube.



If the MAX! Radiator Thermostat+ has already been configured with a MAX! Wall Thermostat+, a factory reset must be performed prior to teaching-in for the first time to a MAX! Cube (see section 11).



MAX! Room Solution

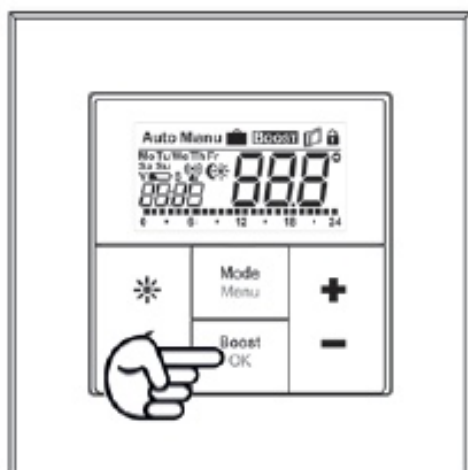
In the MAX! Room Solution all settings and programming (e.g. week program) can be made via the MAX! Wall Thermostat+.

- First activate the teach-in mode of the MAX! Wall Thermostat+ by pressing and holding down the Boost button of the MAX!

Wall Thermostat+.

- Now activate teach-in mode on the MAX! radiator thermostat+. Press and hold down the Boost button for at least 3 seconds. The teach-in time remaining in seconds is displayed. The teach-in time is 30 seconds.

1.



2.



- If teach-in has been successful, the display returns to normal display.

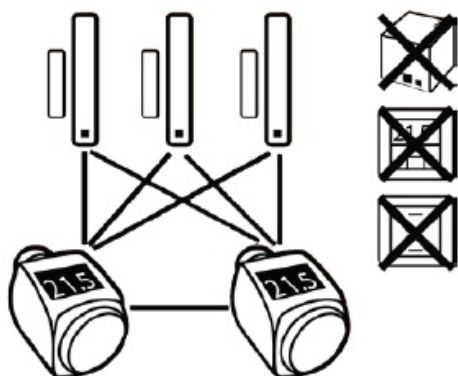


MAX! Radiator Solution

In the MAX! Radiator Solution all settings and programmings (e.g. week program) can be made via the MAX! Radiator Thermostat+.

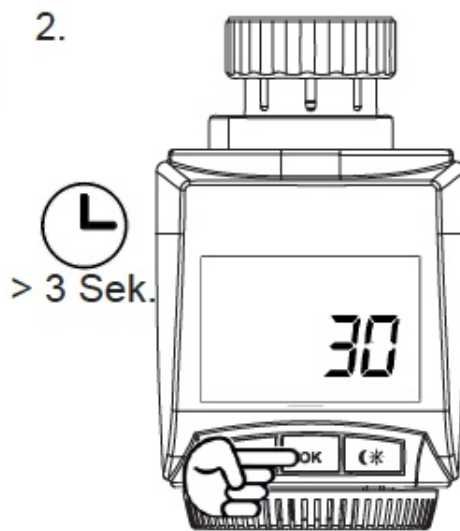
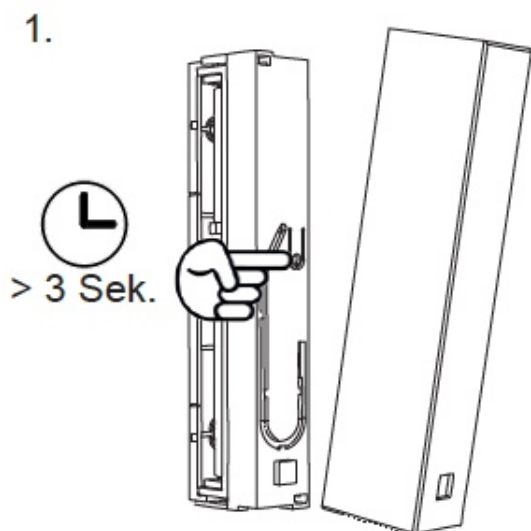
In the MAX! Radiator Solution, up to MAX! radiator thermostat+ and 3 window sensors can be used. All devices

have to be taught-in to each other, i.e. is all MAX! Radiator Thermostat+ and all MAX! Window Sensors have to be taught-in to each other (max. 7 connections).



If you have already taught-in and configured a MAX! Radiator Thermostat+ and want to add another MAX! Radiator Thermostat+ you first have to activate teach-in mode of the device you have already configured. The configuration data will then be transmitted automatically to the new device.

- First activate the teach-in mode of the MAX! Window Sensor according to the operating manual.
- Now activate teach-in mode on the MAX! Radiator Thermostat+. Press and hold down the Boost button for at least 3 seconds. The teach-in time remaining in seconds is displayed. The teach-in time is 30 seconds.



- If teach-in has been successful, the display returns to normal display.



10. Reset

The MAX! Radiator Thermostat+ can be reset to the initial state manually. Restoring the initial state deletes all settings and information about taught-in devices.



Before resetting the MAX! Radiator Thermostat+, please first delete the device from the local MAX! software when using the installation with a MAX! Cube.

- First remove the batteries from the MAX! Radiator Thermostat+.
- Now wait for 60 seconds.
- Press and hold down the three buttons (Auto/Manu, Boost and (☾ ☀)) while you re-insert the batteries.
- Once the factory settings have been restored successfully, “rES” is displayed.

11. Operating Modes (Auto/Manu/Holiday)

To switch between operating modes, press and immediately release the Auto/Manu button (the operating modes only become available for selection once installation is complete).

- **Auto**: Week program - automatic temperature regulation in accordance with the time profile saved (heat/ reduce).
- **Manu**: Manual operation - the temperature set manually using the hand wheel is maintained permanently.
- **Holiday (👛)**: In holiday mode, the set temperature is maintained up to an end time, at which point the device switches to automatic mode.



If the operating mode is changed on one device in a room, this change is applied on all MAX! radiator thermostat+ assigned to that room.



12. Comfort and set-back temperatures

The comfort/set-back temperature button (☾ ☼) makes switching between comfort and set-back temperature simple and user friendly. The factory setting for the comfort temperature is 21.0°C and the set-back temperature 17.0°C. The comfort and set-back temperature can be changed individually.



In the MAX! House Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! software.



In the MAX! Room Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! Wall Thermostat+.



If you use the MAX! Radiator Thermostat+ in the MAX! Radiator Solution, please proceed as follows:

- Hold down the comfort/set-back temperature button (☾ ☼) for a few seconds. The display shows the symbol (☼) and the comfort temperature as defined.
- Change the temperature with the hand wheel and confirm with the Boost button.
- Now the display shows the symbol (☾) and the current set-back temperature as defined.
- Change the temperature with the hand wheel and confirm with the Boost button.

Even in Auto mode, the temperature can be changed with this button at any time. However, the changes will only be maintained until the next change setting of the week program.



13. Setting the holiday function

If you want to maintain a fixed temperature for a certain period, e.g. during your holidays or a party, the holiday function can be used.




In the MAX! House Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! software.



In the MAX! Room Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! Wall Thermostat+.



If you use the MAX! Radiator Thermostat+ in the MAX! Radiator Solution, please proceed as follows:

- Briefly press the Auto/Mode button repeatedly until the suitcase symbol () appears in the display.
- Set the end time until which you want the temperature to be held with the hand wheel and confirm with the Boost button.
- Now set the week day until which you want the temperature to be held and confirm with the boost button.
- Now set the temperature with the hand wheel and confirm with the boost button. The display will flash to confirm.

The set temperature will remain until the set end time after which the MAX! radiator thermostat+ will switch to Auto mode. Radio control commands like those from a window contact or the weekly de-scaling run will still be performed.



14. Configuration Menu



As soon as the MAX! Radiator Thermostat+ is connected to a MAX! Cube, configuration of the device is to be made via the MAX! software. Opening the menu of the MAX! Radiator Thermostat+ is no longer possible.



As soon as the MAX! Radiator Thermostat+ is connected to a MAX! Wall Thermostat+, configuration of the device is to be made via the MAX! Wall Thermostat+. Opening the menu of the MAX! Radiator Thermostat+ is no longer possible.



MAX! Radiator Solution

Settings of the MAX! Radiator Thermostat+ can be changed in the configuration menu. The menu can be accessed by pressing the Auto/Mode button for more than 3 seconds. Menu items can be selected with the hand wheel and confirmed with the Boost button. By pressing the Auto/Menu button again, you can return to the previous level. The menu automatically closes if there is no operation for more than 1 minute. The following settings can be made:

- | | | |
|-------|------|---|
| 14.1 | Pro: | Set week program |
| 14.2 | dAT: | Change time and date |
| 14.3 | bOS: | Set valve opening and length of "Boost" function |
| 14.4 | AEr: | Set "Open window function" for automatic temperature decrease during airing |
| 14.5 | dEC: | Set valve protection function |
| 14.6 | t-d: | Switch time and date display |
| 14.7 | dSt: | (De-)activate automatic switching between summer and winter time |
| 14.8 | tOF: | Set temperature offset |
| 14.9 | UnL: | Reset wireless components |
| 14.10 | rES: | Reset to initial state |



14.1. Setting the weekly profile (Pro)

In the week program, for each weekday up to 6 heating (13 change settings) can be set separately. The programming is carried out for the days chosen, whereby temperature settings have to be set for the entire period between 00:00 and 23:59 h.



In the MAX! House Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! software.

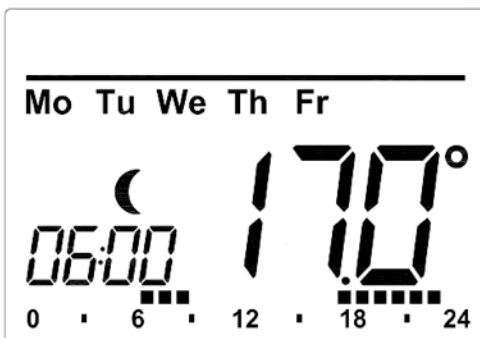


In the MAX! Room Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! Wall Thermostat+.



If you use the MAX! Radiator Thermostat+ in the MAX! Radiator Solution, please proceed as follows:

- Press the Auto/Mode button for more than 3 seconds. The display will show "Pro". Confirm this with the Boost button.
- The display will show "dAy". With the hand wheel choose a single weekday, all weekdays, the weekend or the entire week (example: weekdays).
 - Confirm with the Boost button.
 - Now set the end time of the first time period (example: 6:00 o'clock for the period 0:00 – 6:00 o'clock).
 - Confirm with the Boost button.
 - With the hand wheel select the chosen temperature for the previously chosen time period (example: 17.0°C).
 - Confirm with the Boost button.
 - Repeat this procedure until temperatures are stored for the entire period between 0:00 and 23:59 o'clock.



In Auto mode, the temperature can be changed via the hand wheel or the comfort/set-back button (☾ ☀) at any time. However, the changes will only be maintained until the next change setting of the week program.

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Week program: examples

For each day of the week up to 6 heating phases (13 change settings) with individual temperature settings can be saved with the MAX! Radiator Thermostat+. The factory settings are as follows:

Monday - Friday:

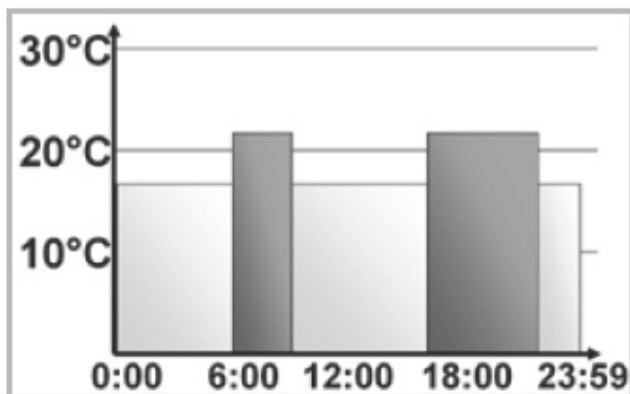
from 00:00 to 06:00 17.0°C

from 06:00 to 09:00 21.0°C

from 09:00 to 17:00 17.0°C

from 17:00 to 22:00 21.0°C

from 22:00 to 23:59 17.0°C



The display will show bars for those heating phases where the set temperature for the period is higher than the saved set-back temperature. In the example above, no bars are displayed for the phase between 0:00 and 6:00 o'clock. Only for the phases from 6:00 until 9:00 and 17:00 until 23:00 o'clock bars are shown in the display.

If you want to heat a room e.g. also during midday, a week program could be configured as follows:

Monday - Sunday:

from 00:00 to 06:00 16.0°C

from 06:00 to 09:00 22.0°C

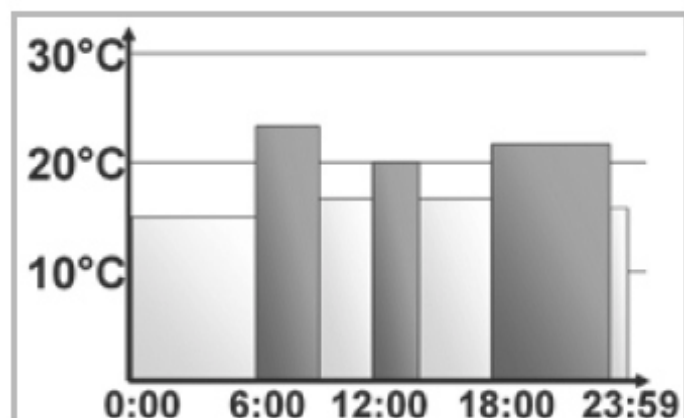
from 09:00 to 12:00 17.0°C

from 12:00 to 14:00 20.0°C

from 14:00 to 17:30 17.0°C

from 17:30 to 23:30 21.0°C

from 23:30 to 23:59 16.0°C



If you have an office at home and only want to heat this throughout the day on working days, you could program the following times:

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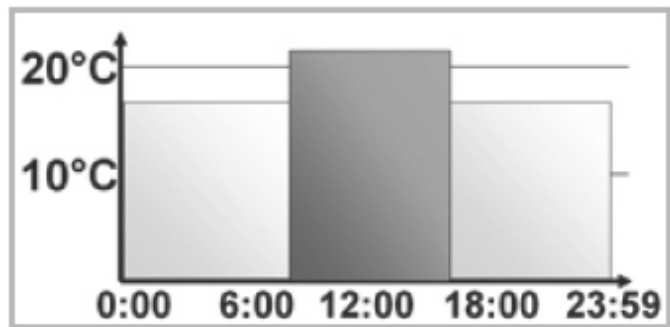


Monday - Friday:

from 00:00 to 08:30 17.0°C

from 08:30 to 17:00 21.0°C

from 17:00 to 23:59 17.0°C



Saturday - Sunday:

from 00:00 to 23:59 15.0°C



14.2. Setting the Date and Time

In the configuration menu, date and time can be adjusted.



In the MAX! House Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! software.



In the MAX! Room Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! Wall Thermostat+.



If you use the MAX! Radiator Thermostat+ in the MAX! Radiator Solution, please proceed as follows:

- Press the Auto/Manu button for more than 3 seconds.
- Choose the menu item „dAT“ with the hand wheel.
- Confirm with the Boost button.
- Adjust year, month, day, hour and minute with the hand wheel and confirm with the Boost button.



14.3. Boost Function (bOS)

With the boost function, cool rooms can be heated within short at the touch of a button.

When activated, the heating valve is immediately opened to 80% for 5 minutes (factory setting). There will be a pleasant room temperature right away because of the radiated heat. By the end of the 5 minute boost phase, the radiator thermostat automatically changes back to the prior operating mode.

Activate boost function:

- Press the Boost button to activate the function.
- The count-down in second intervals of the remaining functioning time (e.g “300” to “000”) and **BOOST** will be shown on the display.
- As long as the valve is opened or closed respectively, the activity symbol (🌀) is shown on the display.
- Once the boost time has completed, the MAX! radiator thermostat+ will switch back to the previously active mode (Auto/Manu) and the previously set temperature.
- The boost function can be deactivated at any time by a renewed press of the Boost button.
-

Adjust length of boost function and valve opening:



In the MAX! House Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! software.



In the MAX! Room Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! Wall Thermostat+.



If you use the MAX! Radiator Thermostat+ in the MAX! Radiator Solution, please proceed as follows:

- Press the Auto/Menu button for more than 3 seconds.
- Choose the menu item „bOS“ with the hand wheel.
- Confirm with the Boost button.
- Adjust the duration of the Boost function (in minutes) with the hand wheel and confirm with the Boost button.



- Adjust the valve opening (in percentage) with the hand wheel and confirm with the Boost button.




The radiated heat will have no immediate effect if the radiator is covered up (e.g. by a settee).



If the duration of the boost function is set so that 999 seconds are exceeded, the display will show the duration in minutes.

14.4. Window open function / airing (AEr)

The MAX! Radiator Thermostat+ automatically reduces the temperature in the room during ventilation, in order to save costs for heating. During ventilation, the window open symbol () is displayed.

Without MAX! Window Sensor:

The MAX! Radiator Thermostat+ is able to automatically detect a sharp fall in temperature during ventilation (temperature fall detection). The temperature is then reduced to 12°C (default factory setting) or the value as configured for 15 minutes.

With MAX! Window Sensor:

When a MAX! Window Sensor is used, the opening and closing of a window is detected at the precise time it occurs. Whilst the window is open, the temperature is reduced to the factory setting of 12°C or the value as configured. When the MAX! Window Sensor detects the closing of the window, all MAX! Radiator Thermostat+ installed in the room are immediately reset to their original mode.

Adjust reduced temperature and duration:

A reduced temperature of 12° C and a duration of 15 minutes is set as default. Both values can be configured individually:



In the MAX! House Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! software.

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In the MAX! Room Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! Wall Thermostat+.



If you use the MAX! Radiator Thermostat+ in the MAX! Radiator Solution, please proceed as follows:

- Press the Auto/Menu button for more than 3 seconds.
- Choose the menu item „Aer“ with the hand wheel.
- Confirm with the Boost button.
- Adjust the reduction temperature with the hand wheel and confirm with the Boost button.
- Adjust the reduction time with the hand wheel confirm with the Boost button.



The temperature fall detection without a MAX! Window Sensor can be deactivated (by setting the duration to 0 minutes). When a MAX! Window Sensor is taught in, the MAX! Radiator Thermostat+ does not react to a temperature fall.

14.5. Setting Valve protection function (dEC)

The MAX! Radiator Thermostat+ can protect against valve calcification automatically. Therefore, an automatic routine descaling is performed once a week. During this period, while the valve opens and closes once, operation is not possible. Routine descaling is factory-set to run on Saturdays at 12:00 individually:



In the MAX! House Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! software.80



In the MAX! Room Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! Wall Thermostat+.



If you use the MAX! Radiator Thermostat+ in the MAX! Radiator Solution, please proceed as follows:

- Press the Auto/Menu button for more than 3 seconds.

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- Choose the menu item „dEC“ with the hand wheel.
- Confirm with the boost button.
- Adjust the weekday with the hand wheel and confirm with the Boost button.
- Adjust the time with the hand wheel and confirm with the Boost button.



“CAL” is displayed during descaling.

14.6. Switching Time / Day (t-d) display

The factory setting will show the time on the display. In the menu the display can be switched to the date.



In the MAX! House Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! software.



In the MAX! Room Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! Wall Thermostat+.



If you use the MAX! Radiator Thermostat+ in the MAX! Radiator Solution, please proceed as follows:

- Press the Auto/Menu button for more than 3 seconds.
 - Choose the menu item „t-d“ with the hand wheel.
 - Confirm with the Boost button.
- Now set the format you want to show on the display by turning the hand wheel (date and time will switch when turning the wheel) and confirm with the Boost button.

14.7. Switching between summer and winter time

An automatic switching between summer and winter time can be activated and deactivated.

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In the MAX! House Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! software.



In the MAX! Room Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! Wall Thermostat+.



If you use the MAX! Radiator Thermostat+ in the MAX! Radiator Solution, please proceed as follows:

- Press the Auto/Menu button for more than 3 seconds.
- Choose the menu item „d-St“ with the hand wheel.
- Confirm with the Boost button.

• Set the option „On“ to activate automatic switching or set the option „OFF“ to deactivate automatic switching with the hand wheel and confirm with the Boost button.

14.8. Setting offset temperature (IOF)

As the temperature is measured on the MAX! radiator thermostat+, the temperature distribution can vary throughout a room. To adjust this, a temperature offset of $\pm 3.5^{\circ}\text{C}$ can be set. If a nominal temperature of e.g. 20°C is set at the radiator but the room presents with only 18°C an offset of -2.0°C needs to be set.



If you use the MAX! Radiator Thermostat+ in connection with a MAX! Wall Thermostat, the temperature will be measured at the MAX! Wall Thermostat.



In the MAX! House Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! software.



In the MAX! Room Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! Wall Thermostat+.

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If you use the MAX! Radiator Thermostat+ in the MAX! Radiator Solution, please proceed as follows:

- Press the Auto/Menu button for more than 3 seconds.
- Choose the menu item „tOF“ with the hand wheel.
- Confirm with the Boost button.
- Turn the hand wheel and set the desired offset temperature (max. $\pm 3.5^{\circ}\text{C}$).
- Confirm with the Boost button.

14.9. Teach-out of wireless components (UnL)

Devices that are taught in to the MAX! Radiator Thermostat+ can be taught-out. Thereby, all devices are unlearned at once.



In the MAX! House Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! software.



In the MAX! Room Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! Wall Thermostat+.



If you use the MAX! Radiator Thermostat+ in the MAX! Radiator Solution, please proceed as follows:

- Press the Auto/Menu button for more than 3 seconds.
- Choose the menu item „UnL“ with the hand wheel.
- Confirm with the Boost button.
- „ACC“ appears in the display. Confirm with the Boost button to unlearn all taught-in devices.

14.10. Resetting to factory status (rES)

The factory settings of the MAX! Radiator Thermostat+ can be restored manually. All previous manual settings and information about taught-in devices will be lost.

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In the MAX! House Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! software.⁸⁴



In the MAX! Room Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! Wall Thermostat+.



If you use the MAX! Radiator Thermostat+ in the MAX! Radiator Solution, please proceed as follows:

- Press the Auto/Menu button for more than 3 seconds.
- Choose the menu item „rES“ with the hand wheel.
- Confirm with the Boost button.

• „ACC“ appears in the display. Confirm with the Boost button to reset the device.



If you have taught-in several MAX! Radiator Thermostat+ or MAX! Window Sensors, all devices have to be reset.

15. Child-proof lock / operating lock

Basic operating lock

Operation of the device can be locked to avoid settings being changed unintended (e.g. through involuntary touch). To activate and deactivate the operating lock proceed as follows:

- Briefly press the Auto/Mode and the (☾ ☀) button simultaneously.
- Once activated, the operating lock symbol (🔒) is shown on the display.
- To deactivate the basic operating lock, press both buttons once again.


Advanced operating lock function (Loc):

The advanced operating lock provides enhanced security for the operation of the MAX! Radiator Thermostat+ with 85





the entry of a four-digit code. When the advanced operating lock is activated on the MAX! Radiator Thermostat+, the device switches to auto mode automatically and operation is reduced to adjusting the temperature using the hand wheel and/or the comfort (☀) and set-back temperature buttons (☾). The adjustable temperature range is also restricted. The minimum and maximum temperature upper limits are between 5.0°C and 24.0°C. In the initial state, the advanced operating lock is deactivated.

Activating the operating lock:

- Press and hold down the Auto/Manu button for more than 3 seconds. Use the hand wheel to select „Loc“ from the menu and press the Boost button to confirm.
- Next, enter the default four-digit code **1357**. Use the hand wheel to select each digit one after the other. Once you have selected the correct digit, press the Boost button to confirm. The cursor moves to the next digit automatically.
- After you have selected the correct code, „ON“ or „OFF“ is displayed. Use the hand wheel to select the required state. „On“ means that the advanced operating lock is activated. „OFF“ deactivates the operating lock. Select „ON“ and press the Boost button to confirm.
- The advanced operating lock is now activated and the  symbol is displayed. If you enter an incorrect code, the display switches back to normal immediately.

Deactivating the operating lock:

- If the  symbol is displayed, the advanced operating lock is activated.
- To deactivate, press and hold down the Auto/Menu button for more than 3 seconds.
- Enter the default four-digit code. Use the hand wheel to select each digit one after the other. Once you have selected the correct digits, press the Boost button to confirm.
- After you have selected the correct code, „On“ or „OFF“ is displayed. Select „OFF“ with the hand wheel and press the Boost button to confirm.
- The display returns to normal. The  symbol is off and the advanced operating lock is deactivated.
- If you enter an incorrect code, the display switches back to normal immediately. The advanced operating lock continues to be activated.

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If you have taught-in several MAX! Radiator Thermostat+ the advanced operating lock has to be activated and deactivated manually on each device.

Changing the code:

- Press and hold down the Auto/menu button for more than 3 seconds. Use the hand wheel to select „Loc“ from the menu and click the Boost button to confirm.
- Enter the code stored in the memory as described above. „On“ or „OFF“ is displayed.
- Press the Auto/Manu button again.
- Use the hand wheel to change each of the four digits in the code one after the other. Press the Boost button after selecting each digit. The new code and „On“ or „OFF“ are now displayed.
- Once you have selected all four digits, press the Boost button. Your code has now changed and the display returns to the normal view.



If you forget the code, the full functional scope of the MAX! Radiator Thermostat+ can only be restored by performing a factory reset or via the MAX! Cube (see Chap. 14.10 Reset (rES)).



The code can only be changed on the device itself and not via the local MAX! software.

16. Activating the heat pause (to prolong the battery life)

Battery life can be prolonged by switching the heating off in summer. To achieve this, the valve is opened fully. The calcification protection function continues to run. To activate this, proceed as follows:

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In the MAX! House Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! software.



In the MAX! Room Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! Wall Thermostat+.



If you use the MAX! Radiator Thermostat+ in the MAX! Radiator Solution, please proceed as follows:

- Press the Auto/Manu button until Manu appears in the display.
- Turn the hand wheel in manual mode to the right, until „On“ appears in the display.

- To save changes and leave manual mode, press the Auto/ Manu button again.

17. Activating frost protection operation (radiator switched off)

If the room does not need to be heated, the valve can be closed. The valve is only opened if there is a risk of frost. The calcification protection function continues to run. To activate this, proceed as follows:



In the MAX! House Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! software.



In the MAX! Room Solution, all settings of the MAX! Radiator Thermostat+ are made via the MAX! Wall Thermostat+.

ECO HOUSE COMFORT



If you use the MAX! Radiator Thermostat+ in the MAX! Radiator Solution, please proceed as follows:

- Press the Auto/Manu button until Manu appears in the display.
- Turn the hand wheel in manual mode to the right, until „OFF“

appears in the display.

- To save changes and leave manual mode, press the Auto/ Manu button again.

18. Scope of Delivery

MAX! Radiator Thermostat+
Adapter Danfoss RA
Adapter Danfoss RAV
Lifter extension Danfoss RAV
Adapter Danfoss RAVL
Cylinder head screw M4 x 12, nut M4
Support ring



19. Troubleshooting and maintenance

Error code on the display	Problem	Solution
Battery symbol (🔋)	Battery voltage too low	Replace batteries
F1	Valve drive sluggish	Check the installation; check whether the pin on the heating valve is stuck
F2	Actuating range too wide	Check the fastening of the actuator
F3	Actuating range too narrow	Check the heating valve; check whether the valve pin is jammed
F4	A MAX! Cube or MAX! Wall Thermostat has already been taught-in	Make sure that the device is not taught in to the MAX! Cube (in the software) or the MAX! Wall Thermostat and reset the device. You can repeat the teach-in procedure afterwards.
Antenna symbol (📶) flashing slowly	Connection to taught-in MAX! Components lost	Check the power supply and batteries to taught-in MAX! Components
Antenna symbol (📶) flashing fastly	Duty cycle has been exceeded	The longest period to wait before sending again would be an hour
CAL	Routine descaling is active	Automatic function, see the section 14.5.



Radio transmission is performed on a non-exclusive transmission path, which means that there is a possibility of interference occurring. Interference can also be caused by switching operations, electrical motors or defective electrical devices.

The range of transmission within buildings can differ greatly from that available in the open air. Besides the transmitting power and the reception characteristics of the receiver, environmental factors such as humidity in the vicinity have an important role to play, as do on-site structural/screening conditions.

eQ-3 Entwicklung GmbH hereby declares that this device complies with the essential requirements and other relevant regulations of Directive 1999/5/EC. You can find the full declaration of conformity at www.eQ-3.de.

20. Technical Characteristics

Short description:.....BC-RT-TRX-CyG-2
Supply voltage:3 V
Max. current consumption:100 mA
Batteries:2x LR6 batteries (mignon/AA)
Battery life:2 years approx.
Display:.....LCD
Receiver frequency:868.3 MHz
Typical open air range:100 m
Receiver class:SRD Class 2
Method of operation:Type 1
Degree of protection:IP2091
Housing dimensions:60 x 65 x 100 mm (W x H x D)
Weight:170 g (without batteries)
Connection:M30 x 1.5
Ambient temperature:+5 to +55°C
Linear travel:4.2 mm
Spring force:Max. 80 N



Maximum number of devices to teach-in:

MAX! House Solution:

max. 50 devices in max. 10 rooms,

max. 4 MAX! Eco Switches

max. 8 MAX! Radiator Thermostat(+), 8 Window Sensor and 1 MAX! Wall Thermostat+ per room.

MAX! Room Solution:

max. 1 MAX! Wall Thermostat+

max. 8 MAX! Radiator Thermostat(+)

max. 8 MAX! Window Sensors

MAX! Radiator Solution:

max. 2 MAX! Radiator Thermostat+

max. 3 MAX! Window Sensor

Subject to technical changes.