

Room temperature controller Display

Order no.: 5393 ..

Room temperature controller BT

Order no.: 5394 ..

Operating instructions

1 Safety instructions



Electrical devices may only be mounted and connected by electrically skilled persons.

Serious injuries, fire or property damage possible. Please read and follow manual fully.

Danger of electric shock. Always disconnect before carrying out work on the device or load. In so doing, take all the circuit breakers into account, which support dangerous voltages to the device and or load.

These instructions are an integral part of the product, and must remain with the end customer.

2 Device components

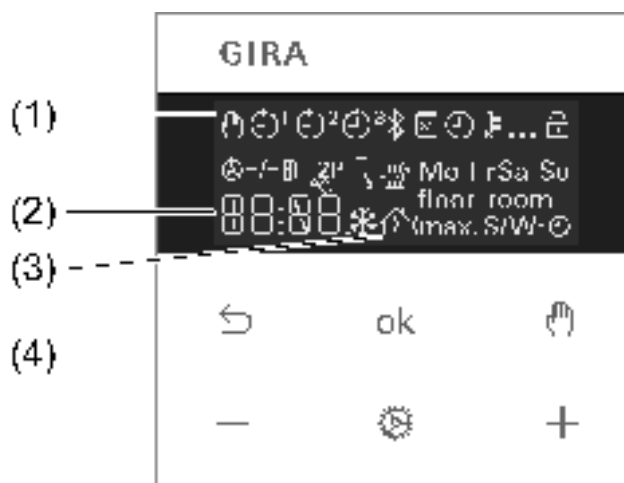


Figure 1: Display and operating area

- (1) Programming menu icons
- (2) Setpoint temperature, actual temperature or current time
- (3) active mode
- (4) Operating area

Icons in the display



Manual mode is active.



Temperature value is regulated to comfort temperature



Temperature value is regulated to reduction temperature



Cooling icon lights up: no cooling is taking place

Cooling icon flashes: cooling is taking place



Heating icon lights up: no heating is taking place

Heating icon flashes: heating is taking place

Icons of the operating area (4)



Step back / display current time

- ok** Confirm input / display current time
-  Switch between manual operation and automatic operation
With Bluetooth version: boost function (press 4 s)
- / +** Increase or reduce the displayed temperatures or times / navigation in menu
-  Call up and terminate the programming menu
With Bluetooth version: Activate coupling mode (pairing) prior to commissioning (press 4 s)

3 Intended use

- Manual and time-controlled regulation of the room temperature
- Operation and programming with mobile end device (smartphone or tablet) via Bluetooth with app (Bluetooth version only)
- Operation on room temperature controller insert or switch insert from system 3000

4 Product characteristics

- Timer with three memory areas
Comfort and reduction time for Mo-Fr and Sa-Su in each memory area
- Setting a comfort, reduction, cooling and frost protection temperature
- Current time can be saved as switching time, quick programming
- Automatic summer time changeover, can be switched off
- Illuminated segment display for easy reading
- Operating lock
- Optimised heating up (temperature is reached at the set time), can be switched off
- Adaptation to valves (deenergised open or deenergised closed)
- Cooling mode possible
- Supports internal and external temperature sensor
- Temperature drop detection (call-up of frost protection temperature when window is opened)
- Offset adjustment (correction value for measured temperature)
- Controller output working method: pulse width modulation (PWM) or two-point
- Valve protection function (once a week opening and closing of valve, on Saturdays at 11 a.m.)
- Interrupts the heating process after 60 minutes for 5 minutes
- Display switch-off after 2 minutes or permanent display available

Additional functions with the Bluetooth version

- The entire operation and commissioning can be performed using an app via a connected smartphone or tablet
- Weekly timer with 40 individually programmable switch points and temperatures
- Holiday mode (start, end, temperature)
- Boost function: fast heating up for max. 5 minutes
- Local operation can be disabled
- Integration of an external temperature sensor possible via Bluetooth
- Automatic date and time update when connecting with mobile device
- Minimum and maximum temperature values can be set
- Settings and time programs can be copied to other cover units

5 Functional description

Heating and cooling operating mode

Modern heat pump systems often also provide the option of cooling rooms. This function is supported by the cover by means of the "Heating and cooling" operating mode. In this operating mode the system permanently regulates the temperature to the set cooling temperature. There are no time programs in cooling mode. The only way to change the cooling temperature consists in adjusting the temperature parameters, the +/- buttons cannot be used.

In conjunction with a room temperature controller insert, cooling mode is activated by applying mains power to input terminal "C". With switch inserts, cooling mode is activated by applying mains power to extension input "1".

Frost protection / temperature drop detection

The frost protection temperature is the minimum temperature regulated by the controller in order to avoid frost damage. In case of a significant temperature drop, e.g. after opening a window, the system regulates to the frost protection temperature for a maximum of 30 minutes. This requires the temperature drop detection parameter  to be activated.

Optimised heating up

Heating is started at most 4 hours before the switching time, so that the desired temperature has been reached at the switching time rather than starting to heat up at that time. The display icon  flashes during the heat-up phase.

Note: Optimised heating up is designed for panel heating/radiators.

Offset -/+

If the system detects that the displayed actual temperature differs from the general room temperature, this parameter can be used to enter a correction value. The actual temperature will then be corrected by this offset value.

Controller adaptation **2P**

The control principle should be adjusted depending on the heating system and the insert used.

Two-point control (2P): The output remains switched on until the selected setpoint temperature has been exceeded by 0.5 °C. The output will not be switched on again until the setpoint value is undercut by 0.5 °C. Since most heating systems respond very slowly, this type of control can entail temperature overshooting.

Pulse width modulation control (PWM): Optimised for electrothermal valve drives, e.g. 2169 00. The output is not permanently actuated, but only for a time period (pulse width) that depends on the difference between setpoint and actual temperature. This method brings the actual temperature gradually closer to the setpoint temperature. The cycle time is 15 minutes.

Valve adaptation

This parameter is used to adapt to the electrothermal valve drives. There are drives that are either open (deenergised open, setting **NO**) or closed (deenergised closed, setting **NC**) when no power supply is applied.

Temperature sensor **room****floor**

The room temperature controller cover features a built-in temperature sensor, which is used to detect the room temperature. With the Bluetooth version, an app can be used to integrate a brightness/temperature sensor. In this case, the internal sensor will be deactivated.

In conjunction with a room temperature controller insert a remote sensor can be connected, either to measure the room temperature or limit the maximum floor temperature.

The following settings are possible.

room: The room temperature is measured using the internal temperature sensor or the BT brightness and temperature sensor.

floor: The room temperature is measured using the remote sensor. The internal temperature sensor is deactivated.

room and floor: The room temperature is measured using the internal temperature sensor and the floor temperature is measured using the remote sensor for monitoring the floor temper-

ature. If the maximum temperature is exceeded, the floor heating will be switched off until the floor temperature is below the maximum value again. This way, an unpleasantly hot floor is avoided.

Behaviour after a mains voltage failure

Voltage failure less than power reserve

- All data and settings are preserved

Voltage failure greater than power reserve

- Date and time are reset and need to be set again
- Temperature control is performed like before the power failure
- All times set in the weekly timer are retained
- All settings are retained

Default setting

Times for comfort  and reduction temperature 

	Mo - Fr			Sa - Su	
					
 ¹	06:00	08:30		07:00	22:00
 ²	12:00	14:00		--:--	--:--
 ³	17:00	22:00		--:--	--:--

- Automatic mode is active
- Automatic summer time changeover is active
- Controller output depending on insert: room temperature controller insert = pulse width modulation, switch insert = two-point control
- Valve drive output is deenergised closed (NC)
- Optimised heating up is not active
- Temperature drop detection is active
- Heating and cooling mode is not active
-  Comfort temperature: 21 °C,  reduction temperature: 18 °C
-  Frost protection temperature: 7 °C,  cooling temperature: 24 °C
- Internal temperature sensor for room temperature measurement is active
- Display switch-off after 2 minutes of inactivity (no button actuation) is active

6 Commissioning

Setting date, time and other parameters

-  With the Bluetooth version of the device, commissioning can also be performed conveniently via the app using a mobile end device. Before proceeding, the app must be installed on the mobile end device and a connection to the room temperature controller cover must be established (see 'Installing app on mobile end device' and 'Coupling mobile end device via Bluetooth').

When the year is flashing on the display, you must set or confirm the data listed in the table.

- Briefly press the – or + button to change values or toggle between **YES / No**.
- A long press of the – or + button accelerates value changes.
- Press the  button to go back in the menu.
- Press the **ok** button to apply the setting and call the next value. After editing the last parameter, all values will be saved and automatic mode will be invoked.

Parameters	Display icon	Setting option/ <u>Default setting</u>
Year		2019 or later
Month		01 ... <u>12</u>
Day		01 ... <u>31</u>
Hour		00 ... <u>12</u> ... 23
Minute		<u>00</u> ... 59
Automatic summer time changeover	  S/W- 	<u>YES</u> / No
Controller output ¹⁾	2P	YES / <u>No</u>
Valve adaptation ²⁾		NO / <u>NC</u>
Optimised heating up	 	YES / <u>No</u>
Temperature drop detection	 	<u>YES</u> / No
Comfort temp.	 	5 ... <u>21.0</u> ... 30 °C
Reduction temp.	 	5 ... <u>18.0</u> ... 30 °C
Frost protection		5 ... <u>7.0</u> ... 30 °C
Heating / cooling		YES / <u>No</u>
Cooling temp. ³⁾	 	5 ... <u>24.0</u> ... 30 °C
Temperature sensor	room	<u>room</u> , floor or both
Max. floor temp. ⁴⁾	floor max.	10 ... <u>35.0</u> ... 45 °C
Offset		-5 ... <u>0.0</u> ... +5 °C

¹⁾ Pulse width modulation (PWM) = **No**, two-point control = **YES** (see functional description).

²⁾ **NC**: Valve is closed when deenergised.

NO: Valve is open when deenergised.

³⁾ This parameter only appears if the device is set to "Heating and cooling".

⁴⁾ This parameter only appears if **room** and **floor** has been set for the temperature sensor.

Install app on a mobile end device (Bluetooth version only)

Requirement for operation via app is a mobile end device with Bluetooth interface, running the Android operating system or iOS.

- Download and install the **Gira System 3000 App** from the App Store (iOS) or Google Play Store (Android).

Coupling mobile end device via Bluetooth (Bluetooth version only)

Prerequisite: The insert must be connected. The cover is placed on the insert and the mobile end device is close to the cover.

-  In order to enter coupling mode (pairing) prior to initial commissioning, the  button must be pressed for more than 4 seconds until the  icon flashes in the display.
- Activate coupling mode (pairing) after initial commissioning: Press the  button.
¹ flashes in the display.
- Use the – or + button to select the Bluetooth  menu item and confirm with **ok**. Then select **YES** and confirm once again with **ok**.
The  icon flashes in the display. The coupling mode is active for one minute.
- Start **Gira System 3000 App** and search for device to be coupled (paired).
"Thermostat" is displayed in the app.
- Perform coupling.
The coupling mode is automatically exited after successful coupling. When the connection between mobile end device and room temperature controller cover is active, the  icon in the display lights up permanently.
-  If no coupling takes place, the coupling mode is automatically exited after approx. 1 minute.
-  A maximum of 8 mobile end devices can be coupled with a cover. When coupling the 9th device, the least used device will be deleted.
-  When power is applied again, coupling can take place without a password within 2 minutes if a password has been configured via the app.

7 Operation

All settings and operations are also possible via the Bluetooth app.

Increasing or reducing the room temperature

- Press the – or + button for less than 1 second.
With every brief press of a button the setpoint temperature changes by 0.5 °C. The set value is retained in manual mode; in automatic mode it is retained until the next switching time is reached.
-  In cooling mode the – or + buttons cannot be used to change the setpoint temperature.
-  If the display is switched off or has been set to indicate the actual temperature or time, the – or + button will have to be pressed a second time or even more before a change in the setpoint value takes place.
- Press the – or + button for more than 1 second.
In heating mode, the saved setpoint temperature is retrieved:
– = reduction temperature
+ = comfort temperature
-  During a detected temperature drop, changing the setpoint temperature is not possible.

Activating the boost function (Bluetooth version only)

With the boost function, the output is switched on for a maximum of 5 minutes without temperature control action in order to obtain a temporary increase in temperature.

-  The boost function can only be activated while in heating mode and no temperature drop has been detected.
- Press the  button for longer than 4 seconds.
The boost function is active. The display counts down from 300 seconds and then switches back to normal mode.
-  Press the  button once again for more than 4 seconds to terminate the boost function prematurely.

Activating the holiday mode (Bluetooth version only)

The holiday mode can only be set and activated via the app.

When the holiday mode is active, the display indicates the setpoint temperature for the holiday period and switches between the  and  icons.

Briefly actuating the – or + button interrupts the holiday mode and the temperature set at that moment is maintained by the controller.

Briefly actuating the  button restarts the holiday mode.

8 Activate functions

Automatic operation/manual operation

Pressing the  button toggles between automatic mode and manual mode.

 If all timer blocks are deactivated, the cover will automatically switch to manual mode. Automatic mode cannot be activated.

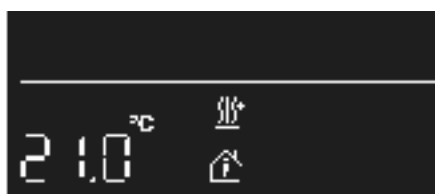


Figure 2: Setpoint temperature display in automatic mode

The setpoint temperature is shown in the display. Active heating is indicated by the flashing heating icon . If heating is not active, the  icon lights up permanently. The  icon indicates that the system is being regulated to the saved comfort temperature.



Figure 3: Setpoint temperature display in manual mode

In manual mode, the  icon appears in addition to the normal display.

Programming menu overview

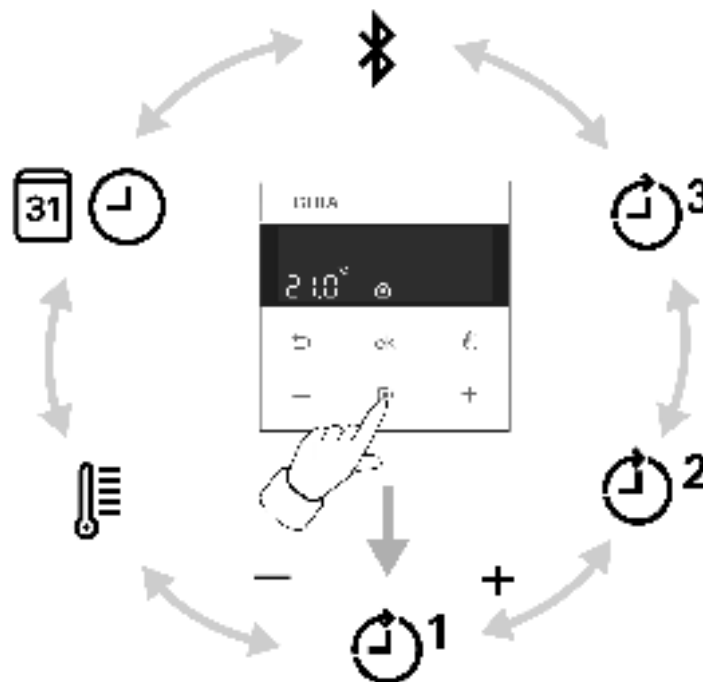


Figure 4: Programming menu

- ⌚¹ ⌚² Three memory areas for comfort and reduction temperature for the two weekday blocks Mo - Fr and Sa - Su
- ⌚³
- 📶 Activate coupling mode (see Commissioning section)
- 📅 ⌚ Setting date, time and automatic summer time changeover
- 🌡️ Setting the comfort temperature, reduction temperature and cooling temperature, activating optimised heating up, temperature drop detection and setting an offset value

Press the button to call up or exit the programming menu.

Navigate through the menu with the – or + button and confirm the selection with the **ok** button.

Bluetooth version only: If the extended operating mode has been activated via the app, the three memory areas are hidden in the menu. Changes to the switching times can only be made via the app then.

Setting switching times

- Press button.
- Select memory area ⌚¹, ⌚² or ⌚³.
- Confirm with the **ok** button.
YES or **No** flashes in the display.

No is used to deactivate all times in the selected memory area.

The switching times of the memory areas (⌚¹, ⌚², ⌚³) must not overlap or be set to an identical time. Otherwise, temperature control cannot be reliably performed.

The available memory areas are described in the table in the Default setting section.

- Change selection with the – or + button and confirm with the **ok** button.
The first switching time for the comfort temperature appears in the display.

The flashing switching time can be changed with the – or + button and saved with the **ok** button. The times for comfort and reduction temperature can be saved consecutively for the week-day blocks Mo-Fr and Sa-Su each.

The menu is exited upon saving the last time setting.

Set the clock - :- - to deactivate individual switching times.

 After one minute without any operation the menu is exited automatically without saving.

Set date and time

- Press  button.
- Setting the  .
- Confirm with the **ok** button.
The year flashes in the display.
- Date, time and automatic summer time changeover can be edited as described in the Commissioning section.

Changing temperature parameters

- Press  button.
- Setting the .
- Confirm with the **ok** button.
The setpoint value for the comfort temperature  flashes in the display.
- Change the setpoint value with the – or + button and confirm with the **ok** button.
- Use the same procedure to set the values for the reduction temperature  and, if parameterised, the cooling temperature  as well.
- Activate/deactivate optimised heating up  and temperature drop detection .
- Set the offset value –/+.

 After value changes, the device will start with the saved setpoint values.

Activating/deactivating the operating lock

An activated operating lock prevents users from directly operating the system on the cover.

- Press and hold the – and  buttons simultaneously for more than one second.
 appears in addition to the normal display. The operating lock is active.
Also press and hold the – and  buttons simultaneously for more than one second to deactivate the operating lock.

Changing control parameters

Various settings are made during initial commissioning in order to adapt the temperature control to local conditions. This menu item can be used to change the settings.

- Press  and  buttons simultaneously for longer than 10 seconds.
While actuating the buttons, a countdown from 9 to 0 is displayed.
The **2P** and **YES** icons or **No** appear in the display.

The parameters can be confirmed (**ok** button) or changed (– or + button) as described in the Commissioning section.

 After value changes, the device will start with the saved setpoint values.

Saving current time as switching time, quick programming

Switching times can also be saved without calling up the programming menu. The current time is saved as the switching time for **Mo-Fr** and **Sa-So**.

 Quick programming overwrites the existing reduction or comfort temperature in the first memory area ¹. The switching times from memory areas 2 and 3 are deactivated.

- Press and hold the **ok** button and additionally press the **+** button for the comfort temperature  for more than 1 second.
or
- Press and hold the **ok** button and additionally press the **–** button for the reduction temperature  for more than 1 second.
SAVE appears in the display. The current time is saved as the new switching time for the comfort  or reduction temperature .
-  Bluetooth version only: If the extended operating mode has been activated via the app, the quick saving option is not available.

Display: setpoint temperature, actual temperature or current time

After commissioning, the device indicates the setpoint temperature and switches off the display after 2 minutes without any operation. Alternatively, the actual temperature or current time can be displayed.

The display can also remain switched on continuously.

- Press the **ok** and  buttons simultaneously for longer than 10 seconds.
A countdown runs in the display. When "0" is reached, the actual temperature is shown in the display.

The active temperature sensor is shown in the display when the actual temperature indication is selected.
room or **room** and **floor**: The measured value is provided by the internal sensor or the Bluetooth sensor.
floor: The measured value is provided by the remote sensor connected to the insert.
- Press the **ok** and  buttons simultaneously again for more than 10 seconds.
A countdown runs in the display. When "0" is reached, the current time is displayed.
-  Use the same operating step to switch back to setpoint temperature display.
- Press the **ok** and  buttons simultaneously for longer than 10 seconds.
A countdown runs in the display. When "0" is reached, the display is switched on continuously.
-  Use the same operating step to switch the display off again after 2 minutes. The display briefly turns dark to indicate confirmation.

In setpoint or actual temperature display mode, the **ok** or  button can be pressed for more than 1 second to display the current time as long as the button is actuated.

Resetting the cover to the default setting

- Press the  and  buttons simultaneously for 10 seconds.
A countdown runs in the display. The reset is performed with "0".

The default setting is restored. The year flashes in the display and the device must be re-commissioned (see Commissioning section).
-  With Bluetooth cover version, resetting to default settings can only be performed during the first 2 minutes after switching on mains voltage.
-  After resetting to the default settings, the Bluetooth device has to be removed from the app. On iOS equipment, the device also has to be removed from the list of paired Bluetooth devices (Settings/Bluetooth). Otherwise, re-pairing will not be possible.

9 Information for electrically skilled persons

 This device includes an integrated battery. At the end of its useful life, dispose of the device together with the battery in accordance with the environmental regulations. Do not throw device into household waste. Consult your local authorities about environmentally friendly disposal. According to statutory provisions, the end consumer is obligated to return the device.

**DANGER!****Mortal danger of electric shock****Disconnect the device. Cover up live parts.****Fitting the device**

Switch or room temperature controller insert are mounted and connected properly (see instructions of the relevant inserts).

- Fit the cover with frame on the insert.
- Switch on mains voltage.
All display icons are briefly actuated and the software version is displayed for approx. 3 seconds. Subsequently, the year flashes in the display and the device must be commissioned (Commissioning).

If **Err** appears in the display, the cover was previously connected to another insert. To enable operation again, either place the cover onto the correct insert or press the **+** and **–** buttons for more than 4 seconds.

After changing the insert, the year flashes in the display and all settings must be confirmed (see Commissioning section).

10 Overview of button combinations

Button combination	Length of button press	Display Reading	What happens
– and	Longer than one second	is shown or hidden	Button lockout is activated or deactivated
and	Longer than 10 seconds	Countdown from 9 to 0	Parameters for control can be changed
ok and – or +	Longer than one second	SAVE	The current time is saved as the switching time.
ok and	Longer than 10 seconds	Countdown from 9 to 0	Display: toggling between setpoint temperature, actual temperature and current time
ok and	Longer than 10 seconds	Countdown from 9 to 0	Display: toggling between display permanently on and switch-off after 2 minutes
and	Longer than 10 seconds	Countdown from 9 to 0	The default setting for the device is restored
+ and –	Longer than 4 seconds	Err	Cancelling of lockout when changing cover or insert

11 Technical data

Ambient temperature	-5 ... +45 °C
Storage/transport temperature	-20 ... +70 °C
Accuracy per month	± 10 s
Power reserve	> 4 h
Additional specifications for the Bluetooth version	
Radio frequency	2.400 ... 2.483 GHz
Transmission capacity	max. 2.5 mW, Class 2

Transmitting range

typ. 10 m

12 Parameter list (Bluetooth version only)

Adjustable parameters via app

Device parameters

Parameters	Setting options Default setting	Explanations
Setting the operating mode	Comfort and standby, extended mode Default setting: comfort and standby	Comfort and standby: Timer with three memory areas; comfort and reduction time for Mo-Fr and Sa-Su in each memory area Extended mode: Weekly timer with 40 individually programmable switch points and temperatures Note: In extended mode, the switching points can only be displayed and changed via the app. Note: When switching from extended mode to comfort and standby, the switching times defined in the device will be lost.
Cooling	On, Off Default setting: Off	When the parameter is switched on, the cooling input on the insert can be used to activate cooling mode. Note: If cooling mode cannot be activated via the insert, a jumper can be installed on the insert between L and the cooling input. This will enable cooling mode to be activated or deactivated via this parameter.
Setting temperatures	Comfort, standby, frost protection and cooling	The setpoint values for the temperatures can be set and changed.
Maximum and minimum temperature values	5 °C ... 30 °C	This parameter is used to limit the range in which temperature setpoint values can be set. The limits apply to the comfort temperature, reduction temperature and holiday temperature. Regardless of the set minimum temperature, the frost protection temperature is the lowest temperature the controller can adjust.
Teaching in a temperature sensor	Input of MAC address	After the MAC address of the BT brightness/temperature sensor has been entered, the transmitted temperature is used for measuring the room temperature. The internal temperature sensor in the cover is inactive. Note: When selecting the temperature sensor, the internal sensor must be active, room icon.
Temperature sensor operating mode	Room, floor, room and floor Default setting: room	Room: The room temperature is measured using the internal temperature sensor or the brightness/temperature sensor, if taught in.

Parameters	Setting options Default setting	Explanations
		Floor: The room temperature is measured using the remote sensor. The internal temperature sensor is deactivated. Room and floor: The room temperature is measured using the internal temperature sensor or the brightness/temperature sensor, if taught in. The floor temperature is measured using the remote sensor in order to allow for monitoring of the maximum floor temperature.
Temperature sensor offset	Offset setting: - 5 °C ... +5 °C	If the system detects that the displayed actual temperature differs from the general room temperature, this parameter can be used to enter a correction value. The actual temperature will then be corrected by this offset value.
Valve control, control method	PWM control, two-point control Default setting depending on insert: PWM control for room temperature controller insert, two-point control for switch insert	Pulse width modulated control (PWM): The output is not permanently actuated, but only for a time period (pulse width) that depends on the difference between setpoint and actual temperature. This method brings the actual temperature gradually closer to the setpoint temperature. The cycle time is 15 minutes. Two-point control: The output remains switched on until the selected setpoint temperature has been exceeded by 0.5 °C. The output will not be switched on again until the setpoint value is undercut by 0.5 °C.
Valve control, valve type	Active closing (NC), active opening (NO) Default setting: Active closing (NC)	This parameter is used to adapt to the electrothermal valve drives. Active closing (NC): The available drive is closed when deenergised. Active opening (NO): The available drive is open when deenergised.
Temperature drop detection	On, Off Default setting: On	In case of a significant temperature drop, e.g. after opening a window, the system regulates to the frost protection temperature for a maximum of 30 minutes.
Optimised heating up	On, Off Default setting: Off	Heating is started at most 4 hours before the switching time, so that the desired temperature has been reached at the switching time. Optimised heating up is optimised for panel heating/radiators.
Local display	Setpoint temperature, actual temperature, time Default setting: setpoint temperature	Setpoint temperature: The cover displays the setpoint temperature. Actual temperature: The cover displays the actual temperature. When pressing the – or + button, the display briefly switches to the setpoint temperature.

Parameters	Setting options Default setting	Explanations
		The room or floor sensor icon is shown in the display when the actual temperature indication is selected. Time: The device displays the current time of day. When pressing the – or + button, the display briefly switches to the setpoint temperature.
Display	Automatic, permanently activated Default setting: automatic	Automatic: The display remains switched on for 2 minutes after the last operation and then switches off. Permanently activated The display remains permanently switched on.
Operation	No lock, operating lock, device lock Default setting: no lock	Operating lock: An activated operating lock prevents users from directly operating the system on the cover. Operation via the app remains possible.  appears on the cover in addition to the normal display. The operating lock can also be deactivated on the cover. Device lock: An activated device lock prevents users from directly operating the system on the cover. Operation via the app remains possible.  appears on the cover in addition to the normal display. The device lock cannot be deactivated on the cover.

13 Conformity

Gira Giersiepen GmbH & Co. KG hereby declares that the radio system type art. no. 5394 .. meets the directive 2014/53/EU. You can find the full article number on the device. The complete text of the EU Declaration of Conformity is available under the Internet address: www.gira.de/konformitaet

14 Warranty

The warranty is provided in accordance with statutory requirements via the specialist trade. Please submit or send faulty devices postage paid together with an error description to your responsible salesperson (specialist trade/installation company/electrical specialist trade). They will forward the devices to the Gira Service Center.

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