

# **RT310i THERMOSTAT - FULL USER MANUAL**



1.1 Product Compliance	3
1.2 Safety Information	3
1.3 Introduction	4
1.4 Features	4
2. Overview	5
2.1 Box contents	5
2.2 Proper thermostat location	5
2.3 Montage	6
2.3.1 RT310i thermostat battery insert	6
2.3.2 Connecting the RXRT510 receiver	6
2.3.2.1 RXRT510 switch functions	6
2.3.2.2 LED diodes indicators description	б
2.3.2.3 Receiver's wall mounting	8
2.3.2.4 Connection description	8
2.3.4.5 Pairing with the thermostat procedure	9
2.3.4.6 Test Pairing Function	
3. Before you start	
3.1 LCD icons	11
3.2 Button functions	11
4. Registration in the app	13
5. Operations	15
5.1 Thermostat's interface in the app description	15
5.2 Schedule settings	17
5.3 Schedule mode	
5.4 Temporary or Permanent Override program mode	
5.5 Frost Protection	20
5.6 Heat/Cool Mode	21
5.7 Holiday Mode	23
5.8 Distance Alerts	23
6. Other functions	24
6.1 LCD backlight	24
6.2 Low battery detection	24
6.3 Temperatures outside operating range	24
7. Operating in Offline Mode	
7.1 Reviewing Setpoint Temperature via device	
7.2 Adjusting setpoint via device	
8. Factory reset	
9. Removing the thermostat from the account (app)	
10. Iecnnical info	
11. warranty	

This product complies with the essential requirements and other relevant provisions of the following EU Directives: 2014/30/EU, 2014/35/EU, 2014/53/EU and 2011/65/EU. The full text of the EU Declaration of Conformity is available at the following internet address: www.saluslegal.com.

## **1.2 Safety Information**

- Before starting installation work and before using the product, read the entire manual.
- The information contained in the instructions is essential for proper functioning.

• To avoid accidents resulting in personal injury and material damage, please follow all safety precautions, specified in this manual.

• The device should not be used by people with limited mental, sensory or mental abilities, without experience, of insufficient knowledge as well as children.

- Do not use an unassembled device (eg without a cover).
- The device may only be opened by a qualified person.

• Keep electrical devices out of the reach of children and ensure that they do not play with it. Children should not be left unattended. If necessary, disconnect the control system for the entire room.

• Do not leave the packaging, cabinet, or any loose parts of the device unattended, as they pose a risk to children.

#### WARNING!

• Installation must be carried out by a qualified person with appropriate electrical qualifications in accordance with standards and regulations in force in the given country and in the EU.

• Never try to connect the device other than as described in the manual.

• Before assembly, repair or maintenance as well as during any connection works it is absolutely necessary disconnect the mains supply and make sure that the terminals and electric wires are not live.

• The device may not be exposed to extreme temperatures, strong vibrations or subjected to mechanical shock.

• The device should not be used in unfavorable environmental conditions or in rooms where there is a concentration of flammable gases, fumes or dust.

#### WARNING!

• There may be additional protection requirements for the entire installation that the installer is responsible for maintaining.



Always isolate the AC Mains supply before installing or working on any components that require 230 VAC 50Hz supply.



Care for the natural environment is of paramount importance to us. The awareness that we manufacture electronic devices obliges us to dispose of used electronic components and devices safely. Therefore the company has received a registration number issued by the Chief Inspector for Environmental Protection. The crossed out symbol the trash can on the product means that the product must not be disposed of with ordinary waste containers. Sorting waste for recycling helps to protect the environment. It is the user's responsibility to surrender used equipment to a designated collection point for recycling waste from electrical and electronic equipment.

A room thermostat simply switches the heating system on and off as necessary. It works by sensing the air temperature, switching on the heating when the air temperature falls below the thermostat setting, and switching it off once this set temperature has been reached.

The SALUS RT310i is a Smart phone controlled programmable thermostat. The RT310i thermostat will switch your heating system on or off, as needed, in accordance with the temperature set by you, locally on the device or remotely using the dedicated app.

Turning a room thermostat to a higher setting will not make the room heat up any faster. How quickly the room heats up depends on the design of the heating system, for example, the size of boiler and radiators. Neither does the setting affect how quickly the room cools down. Turning a room thermostat to a lower setting will result in the room being controlled at a lower temperature, and saves energy.

The heating system will not work if a time switch or programmer has switched it off.

The way to set and use your room thermostat is to find the lowest temperature setting that you are comfortable with, and then leave it alone to do its job. The best way to do this is to set the room thermostat to a low temperature – say 18°C – and then turn it up by one degree each day until you are comfortable with the temperature.

#### **1.4 Features**

- Remote control via App
- 5/2 days or 24hrs programming flexibility via App
- Built-in start up programming for quick installation
- Frost protection
- Eco Mode
- Holiday Mode
- Large, easy to read LCD with blue backlight
- User friendly
- Stylish casing
- Geo Location
- Pre-paired from Factory
- RF Test Mode

#### 2. Overview

The RT310i is a stylish thermostat with easy readable LCD and a user-friendly interface. The Receiver is used for wiring connections and heat on/off control. The thermostat provides the user interface and temperature sensing / control. The two units are linked together by a Radio Frequency (RF) signal. The Gateway has a futuristic design and helps connect your devices to the Internet, so that they can be controlled over the RT310i App on your smart-phone.

#### 2.1 Box contents





RT310i thermostat

GSALUS

RXRT510 receiver





4x screws and plugs

2xAA batteries



iTG310



ADSL Cable



Gateway Adaptor suitable

for UK and EU



Quick Guide

## 2.2 Proper thermostat location



## **Please note:**

The ideal position to thermostat mounting is about 1,5m under floor level far from heating or cooling sources. Thermostat can't be exposed to sunlight or any extreme conditions like for example draft.

Because of fire and explosion risk there is not allowed to use thermostat in atmosphere of explosive gases and flammable liquids (eq coal dust). In case if any of listed dangers occur you have to use additional protection measures – anti-dust and explosive gases (tight cover) or prevent their formation. Furthermore, thermostat can't be used in condensation of water vapor conditions and be exposed to water action.

#### 2.3.1 RT310i thermostat battery insert

Before inserting the batteries, please make a note of your SRT number and register your device on the App.





#### 2.3.2 Connecting the RXRT510 receiver

#### 2.3.2.1 RXRT510 switch functions





#### 2.3.2.2 LED diodes indicators description

The status of the RXRT510 receiver is indicated by two LEDs. These are LEDs with the following colors:





	Description
	The receiver is connected to the 230V power supply and is paired with a thermostat.
The <mark>red</mark> LED lights up	The receiver can be thermostat-enabled if it is in automatic mode when the lower switch is in the AUTO position.
	The receiver can be started manually when the lower switch is in the MANUAL position.
	The receiver is in standby mode, i.e. it has not received a signal from the thermo- stat within an hour. The set temperature on the thermostat was kept within the hysteresis and for such a condition the thermostat does not send a heating signal, because there is no such need.
	(or)
The <mark>red</mark> LED flashes	The receiver is in pairing mode and is looking for a signal from the thermostat (then you need to activate the pairing process in the thermostat).
	(or)
	The receiver was paired but lost communication with the thermostat due to out of range or low battery in the thermostat. The receiver starts flashing after one hour of time when it does not receive a signal from the thermostat.
The <mark>red</mark> LED is off	The receiver is disconnected from the 230V power supply or the upper switch is in the OFF position.
	In automatic mode, the receiver received a heating signal from the thermostat.
The green LED lights up	The receiver was powered up in manual mode (upper ON switch, lower MANUAL switch).
The green LED is off	The receiver does not send a heating signal.

## 2.3.2.3 Receiver's wall mounting



Fix the backplate to the wall



Align the front housing at the top edge.



Fit the front housing. Press lightly

## 2.3.2.4 Connection description



08 RT310i Installation Manual

## 2.3.4.5 Pairing with the thermostat procedure



**NOTE:** RT310i THERMOSTAT IS ALREADY PAIRED WITH THE RECEIVER!





If you want to re-pair devices with each other, make sure that the receiver is disconnected from the power supply and the switches on it are in the AUTO and ON positions. Then connect the receiver to the power supply and wait for the red

diode to glow continuously.



position and back to the ON position with a guick motion.



The red LED will start blinking to confirm that the receiver has entered the pairing mode.



Press and hold TEST / PAIRING button for 3 seconds.



Once devices are successfully paired, LED on the receiver will go solid red. Press and hold TEST / PAIRING button for 3 seconds to end the pairing process.



Pairing process can take up to 9 minutes.



Thermostat went back to the main display.



When the red diode on the receiver lights up continuously, the devices have been paired on a new frequency.



WARNING! If the red diode on the receiver has not stopped blinking after 10 minutes, repeat the pairing process taking into account the distance between devices, obstacles and interference.

## 2.3.4.6 Test Pairing Function

Press the "TEST/PAIRING" button once to test the connection between the thermostat and the receiver. If the devices are paired the ON and AUTO LEDs will both flash. You can wait 9 minutes for the process to end or can press the button again to stop.







#### 3.1 LCD icons





#### **3.2 Button functions**

There are few user controls for the RT310i, making this thermostat very easy to operate. These controls are shown below, along with a description of each of their functions. The temperature displayed on the LCD is the current room temperature. All the buttons on the thermostat and receiver with a description are shown below.

#### Thermostat

<b>*</b>		
		0
	Genlus	

Кеу	Function
	Turn on the LCD backlight
	Turn On/Off the Frost Mode
^	Press to increase setpoint temperature, press and hold to enter fast advance.
$\sim$	Press to decrease setpoint temperature, press and hold to enter fast advance.
0	<ol> <li>Press once to enter/exit in RF Test Mode</li> <li>Hold for 3 seconds to enter/exit Pairing Mode</li> </ol>

## 3.3. RT310i app

Download the RT310i application, create an account and register the device. Follow the instructions in the app to complete the installation.

Features available only in the app:

- HOLIDAY mode
- temperature change in frost protection mode
- energy saving mode (sets the lowest temperature in the schedule)
- creating a schedule



You can add multiple RT310i thermostats to one account.





	(51024	100.43
05:00 AM		
06:00 AM	20. 70	
11:00 AM	20s °C	
12:00 PM		
04:00 PM	21a °C	
08:40 PM		
	KOBILI	

You can easily modify your schedule.





Built-in guide on how to use the application.

## 3.4 Connecting the iTG310 Gateway



After connecting the gateway, the red LED should start flashing

When the gateway has successfully connected to the SALUS Controls server, the green LED will light.

# Please note:

If LED diode on the iTG310 Gateway is all the time red, please check your Internet connections, router settings or contact your Internet provider. Make sure ports UDP 80 and TCP 80, 2165, 2155, 3155 are opened. In order to connect iTG310 gateway to the Internet, several requirements have to be met:

1) iTG310 have to be connected to the LAN output of the router.

2) Internet providor cannot block any of the ports: UDP 80 or TCP 80,2165,2155,3155.

3) LAN output must have disabled PoE function (power over ethernet).

4) Internet router should be equipped with 10/100 Auto-Negotiation function (it mainly applies to fiber optic or high speed Internet routers)

5) For some routers like AVM Fritzbox 79xx series standard (straight) Ethernet cable may not work. Please use then cross-over Ethernet cable.

#### 4. Registration in the app



Start the application and then press the REGISTER button to create a new account.



Enter email and password, tap Next.



Enter the code you received via email.

	9	)
Enter name		
Enter address		

Fill all forms and tap Next.





When the thermostat is connected to the App, the *mathefactory* icon will appear on the App screen and the *mathefactory* icon will appear on the thermostat screen. Also, the hand icon *mathefactory* will show on the thermostat LCD.

To make it easier to start, go to the settings and select the "Tutorial" option. Take a look at the steps below:



## 5. Operations

#### 5.1 Thermostat's interface in the app description

When you first enter the application, your home screen will display the room temperature, the set temperature (it will operate based on the default set schedule). The thermostat will be operating in schedule mode. You can easily control your thermostat using the application. By default, the thermostat operates in heating mode, that's why you will have the flame icon on the screen. You can now start setting the time zone, changing modes, and adding schedules

#### Features available only on the App:

- Temperature format
- Clock format
- Time zone
- Daylight Saving Time
- Heating or Cooling Mode
- Temperature accuracy
- Display tolerance

- Temperature offset
- Optimized start
- Schedule/Manual/Off Mode
- Holiday Mode
- Frost Mode\*
- \* Also available on the device



**Note:** Time and date will be automatically added once you connected to the internet, based on your geo-location. What you have to do manually, though, is to select your temperature format, clock format and time zone. This can be easily done by following these steps:



16 RT310i Installation Manual

## 5.2 Schedule settings

With RT310i APP, you can easily set a schedule, see the steps below:

When programming the RT310i thermostat, we set 6 time intervals per day and we can set a different temperature in each of the intervals. When programming individual time intervals, remember that you set the start time of each program, e.g. by setting the program 1 time to 06:00, it means that the program will last from 06:00 to the program start time 2. Example for 4 temperature levels in 6 time intervals:

PROGRAM	WEEKDAY (1 to 5) MO-FRI	WEEKDAY (6 to 7) SAT-SUN
1	Time 6:00 am Setpoint Temp 21°C	Time 6:00 am Setpoint Temp 21°C
2	Time 8:00 am Setpoint Temp 14ºC	Time 8:00 am Setpoint Temp 14ºC
3	Time 11:00 am Setpoint Temp 21ºC	Time 11:00 am Setpoint Temp 21ºC
4	Time 13:00 pm Setpoint Temp 14ºC	Time 13:00 pm Setpoint Temp 14ºC
5	Time 16:00 pm Setpoint Temp 21°C	Time 16:00 pm Setpoint Temp 21ºC
6	Time 21:00 pm Setpoint Temp 14°C	Time 21:00 pm Setpoint Temp 14ºC

22%

9 10

11 12

23°C

19°C

15

16 17

13 14

23°C

20 21

22

18 19

**PLEASE NOTE:** When programming the RT310i thermostat, remember that we must use all 6 time intervals. If we want to set only two temperature levels, we can set one temperature for the period from 1 to 5 and the other for the 6th period.

P1

ς

7 8

## 5.3 Schedule mode

You can switch from Manual Mode to Schedule Mode and start adjusting programs. That's very easy to do and you need to follow the next steps. Note that there are 3 types of scheduling available, with 6 time intervals per day.

- 5+2 (Mon-Fri same, Sat-Sun same)
- Each day individual
- All week the same



You need to follow the same steps for all intervals and all days in order to set schedules for the weekend days. Also, you can copy the schedules from one day to another, which comes very handy if you are setting your days individually. Please see below to see how to copy the schedules from one day to another.

1		2	SCHEDULE	3			3a			4	<b>^</b>	
	SCHEDULE							SCHEDULE		. 5	CHEDULE	
ALL	5/2 INDIVIDUAL	ALL	5/2 INDIVIDUAL	ALL.	5/2 IN	DIVIDUAL	ALL.	5/2. IN		ALL	.5/2 INC	
M. T		M Ŧ		мт	w C	S	M T V		S	M T W		
Start time		Start time		Start time	Temperature		Start time			Start time		
06:10	25 ₀ °C >	08:10	24 a °C	08:10	24 º °C	>	08:10	24 ø °C	>	08:10	24 º °C	
08:10	24 º °C >	11:00	21 a °C	11:00	21 ø °C	>	11:00	21 º °C	>	11:00	21 o °C	
11:00	21 º °C >>	13:00	14 a °C 🔷 🗧	13:00	14 a °C	>	13:00	14 s °C	>	13:00	14 a °C	
13:00	14 º °C 🔹 🔉	16:00	21 a °C 🔷 🗧	16:00	21 º °C	>	16:00	21 o °C	>	16:00	21 º °C	
16:00	21 o °C >	21:00	14 a °C >	21:00	14 s °C	>	21:00	14 x °C	>	21:00	14 a °C	
21:00	14 # °C >	COPY	PASTE		THURSDAY COPIED		СОРУ	PAST	E	СОРУ	THURSDAY R	PASTED
	Select day	Ţ	Гар Сору	Selec marke the c	cted day will ed with blue lay you wan paste into	be .Tap t to	Ta	ap Paste		Sched	ule is save	ed

## 5.4 Temporary or Permanent Override program mode

#### **Temporary Override**

Normally thermostat is running in schedule mode.

Manual and schedule mode can only be changed in the App

In schedule mode , pressing UP or DOWN on the thermostat changes setpoint. This is Temporary Override. You can also change the temperature directly from the App.

During Temporary Override, manually override setpoint will expire by next program forced by schedule. During Temporary Override, Calendar & HAND icons are turned ON.



Temporary override mode

Temporary override mode

#### Permanent Override

In manual mode, pressing UP or DOWN changes setpoint. This is Permanent Override.

You can also change the temperature directly from the App.

During Permanent Override, manually override setpoint will run forever, until schedule model is selected from App again, or another temperature is set.

During Permanent Override, HAND icon is turned ON



Permanent override mode

Permanent override mode

## **5.5 Frost Protection**

Press FROST button 🗱 to activate Frost Protection.

The Setpoint temperature is automatically set to frost setpoint to prevent pipes from frosting. If the room temperature is lower than the frost setpoint, frost protection will be enabled. Press FROST button

again to de-activate Frost Protection.

## **Frost Protection ON**

**Frost Protection ON** 





Frost Mode activated

### Via App





Thermostat is in the frost protection mode.



**Frost Protection OFF** 

NFF 24 °C

Tap manual mode

button.

## Frost Protection OFF



Thermostat is in the manual mode (switched from frost protection mode).

## **Frost Protection Setpoint**

Tap frost protection

mode button.

You can adjust the Frost Protection setpoint using the App. The setpoint range is between 5-9 °C



Tap menu icon.



Go to Frost Protection.



Adjust temperature. Default is 5°C.



Tap Save.

## 5.6 Heat/Cool Mode

You can ONLY shuffle between heat/cool mode from the App. If you want to choose a temperature that is higher than the current room temperature, make sure the thermostat is running in heat mode. If you want to set a temperature that is lower than the current room temperature, make sure you switch to cool mode.

### Changing to Cool Mode





After the thermostat is calling for cooling, the green light on the RXRT510 receiver will go on steady green.

#### Changing to Heat Mode



After the thermostat is calling for heat, the green light on the RXRT510 receiver will go on steady green.

Note: You can ONLY shuffle between heat/cool mode from the App. When the Internet connection is lost and the thermostat is not communicating to the gateway and App it switches to Local mode. RT310i can still run temperature control, auto program, manual override, and control RXRT510 directly. You can still change the setpoint directly from the thermostat, by pressing the  $\land$  or  $\checkmark$  keys directly from the thermostat.

## 5.7 Holiday Mode

You can set your RT310i to holiday mode. During this mode, the thermostat will run like in Frost Protection Mode. When activated, an airplane icon appears on the display of your device  $\bigcirc$ . You can set Holiday mode from the App only. It can be set for maximum 31 days.



## **5.8 Distance Alerts**

You can set your RT310i to notify you whenever you are a certain distance away from your home.





Tap Save

You can also choose to deactivate Distance Alerts in one easy step.



set a distance

#### 6.1 LCD backlight

- LCD backlight is activated when 🛞 or any key is pressed. The backlight will be turned off in 15 seconds after all keys are released.
- LCD backlight will not operate when battery is low.

#### 6.2 Low battery detection

Battery voltage is checked every minute. When the battery voltage drops to a certain level, the Low-Battery warning ndicator appears.

- The thermostat functions normally during low battery. However, user must change the batteries as soon as possible before the battery is too weak for the normal operation to be assured.
- When you change the batteries, you have about 30 seconds to do so without losing your settings.

#### 6.3 Temperatures outside operating range

Temperatures below 10 °C are displayed without the leading '0'. Temperatures exceeding the measurable range will be indicated by 'HI' for temperatures above the upper limit, and 'LO' for temperatures below the lower limit, as shown in the images.



APP VIEW ("Lo" EXAMPLE):



If the Internet connection is lost and the thermostat is not communicating with the App or with the gateway, it can still be operable in offline mode. When in offline mode:

- The thermostat will follow the last set schedule
- Setpoint can be changed and reviewed via device

## 7.1 Reviewing Setpoint Temperature via device

Press once  $\land$  or  $\checkmark$  to review Setpoint temperature. The flame icon won't be turned on.



Actual room temperature

Setpoint temperature

When operating in Frost protection mode, the LCD will show frost setpoint with the Frost Protection indicator displayed.



Press Backlight or wait 2 seconds without key press to return to normal operation, room temperature will be displayed.

## 7.2 Adjusting setpoint via device

By changing the Setpoint temperature, you are permanently altering your temperature. You can change the set point temperature very easily while you are reviewing the set point temperature. Press the UP or DOWN keys repeatedly to change the temperature setting. The set point temperature will flash to indicate that it can be changed: the temperature will be changed in 0.5°C steps per key press.

The RT310i will return to Normal mode if no keys are pressed for more than 2 seconds. Once the new Setpoint has been implemented, the change is permanently overridden until a new Setpoint is set again. Setpoint temperature cannot be changed if Frost Protection mode is enabled.



### 8. Factory reset

To reset the device, remove the batteries for 2 minutes, then put them back in without pressing any buttons. When changing the battery, the device uses internal memory in which your settings are saved. You have 30 seconds to replace the batteries before the settings are lost. Battery reset / replacement does not pair the thermostat with the Receiver.

## 9. Removing the thermostat from the account (app)

Removing thermostat from the app:

1 Bedro	2 MENU Bedroom	3 MANAGE DEVICES	4 MANAGE DEVICES
Disired Temp.	Managé devices	RT310 SRT00039102	ATT310
<b>21.°C</b>	Holiday mode	Firmware version :11.5 + 1.5.2.0	
~	Frost protection Distance alerts		Please confirm you would like to delete this device
Current Temp -	Manage account		No Yes
<sup>(ເຈ)</sup> <b>24</b> .0°C	Settings		
	Tutorial		
SCHEDULE MANUAL OFF	F LOGOUT		
Tap menu icon	Go to Manage devices	Tap delete	Tap Yes

After that you will need to add and set your thermostat all over again.

Product Specification	
Model:	RT310i
Туре:	Wireless Heating/Cooling Thermostat
Frequency:	868MHz
Temperature	
Scale:	℃
Range:	5.0°C - 35.0°C
Temperature Measurement Accuracy:	Maximum +/-0.25°C at 20°C
Display Range:	5.0°C - 35.0°C
Display Resolution:	0.1/0.5°C and 0.5°C default
Frost Protection	
Setting:	5 ℃
Setpoint Temperature Range:	5 °C to 9°C
Thermostat	
Power Source:	2 AA-sized Alkaline Batteries for a minimum of 12 months operation.
Receiver	
Power Source:	230Vac 50Hz
Switch Rating	
Switching Voltage:	230V/50Hz
Switching Current:	16A resistance 5A inductance
Protection Rating:	IP 30
Environment	
Operating Temperature/ Humidity:	0°C ~ 50°C, 10% – 90% non-condensing
Storage Temperature/ Humidity:	-20°C~- 60°C, 10% – 90% non-condensing

SALUS CONTROLS warrants this product to be free from any defects in material or workmanship and to perform as specified for a period of five years from the date of installation. SALUS CONTROLS reserves the sole responsibility for breach of this warranty by repairing or replacing the defective product. This product includes software that matches the distributor's identification at the time of sale. The manufacturer / distributor provides a guarantee covering all functions and specifics of the product in accordance with this marking. The distributor's warranty does not cover the correct operation of the functions and features available as a result of a product software update.

The full warranty conditions are available at www.salus-controls.eu

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Post Code:
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Company Name:
el No: Email:
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