SALUS CONTROLS

RT510+, RT510TX+, RT510RF+



ITLC Internal Temperature Load Compensation

Boiler PLUS COMPLIANT

Quick Guide

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Computime

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Introduction

RT510+ / RT510TX+ / RT510RF+ is a programmable room thermostat used to control room temperature. Device launching heating system by shorting terminal blocks, simultaneously informing the action and showing this information on the LCD display. Extended features allows us to use various operating modes - automatic (time schedules), manual, frost protection or holiday. Before use please read this manual carefully. Use only AA 1.5 V alkaline batteries in the thermostat. Place the batteries into the battery slot located under the cover. Do not use rechargeable batteries.

Product compliance

This product complies with the essential requirements and other relevant provisions of the following EU Directives: EMC 2014/30/EU, LVD 2014/35/EU, RED 2014/53/EU and RoHS 2011/65/EU. Full text of the EU Declaration of Conformity is available on www.salus-controls.com/uk

868.0-868.6MHz; <13dBm

Safety Information

Use in accordance to national and EU regulations. Use the device as intended, keeping it in dry condition. Product for indoor use only. Installation must be carried out by a qualified person in accordance to national and EU regulations.

Technical specification

	RT510+ Thermostat	RT510TX+ Thermostat
Thermostat supply	2 x AA alkaline batteries	2 x AA alkaline batteries
Thermostat rating max	3 (1) A	-
Outputs	Voltage free NO / COM / NC terminals	-
Temperature range	5 - 35°C	5 - 35°C
Temperature accuracy	0.1°C or 0.5°C	0.1°C or 0.5°C
Control algorithm	ITLC / SPAN	ITLC / SPAN
Radio frequency	-	868 MHz
Dimension [mm]	120x96x27	120x96x27

RXRT510 Receiver	
Receiver supply	230 V AC
Receiver rating max	16 (5) A
Outputs	Voltage free NO / COM terminals
Radio frequency	868 MHz
Dimension [mm]	96x96x27

Button functions

RT510+ / RT510TX+ Thermostat

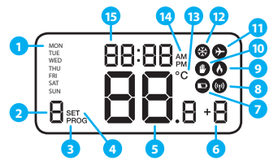


RXRT510+ Receiver



1. Boost function
2. Manual Mode
3. Frost protection / Holiday Mode
4. Increase button
5. Decrease button
6. When in Manual Mode, ON will turn the boiler on.
7. When in Manual Mode, OFF will turn the boiler off.
8. Receiver operates in automatic mode according to the thermostat
9. Receiver output is controlled by the On/Off slide switch.

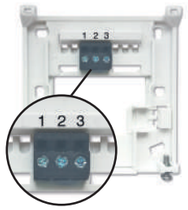
LCD Icon description



1. Day of the week
2. Program number
3. Program indicator
4. Settings
5. Temperature measured / set
6. Boost function
7. Low battery status
8. Wireless connection with the receiver
9. Heating Mode On
10. Manual Mode On
11. Holiday Mode On
12. Frost Protection Mode On
13. Temperature unit
14. AM / PM
15. Clock

RT510+ Terminals description

Terminal	Description
1 - COM	Common Terminal
2 - NC	Switched Live OFF
3 - NO	Switched Live ON



RT510+ (Thermostat) Dip Switch Settings

The DIP Switches can be found on the rear of your thermostat.



Control feature	ITLC	SPAN
Operation	ITLC Internal Temperature Load Compensation for improved efficiency.	When Span is selected on DIP switch № 2, the DIP switch № 1 is not functional.

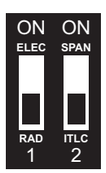
RXRT510 Receiver terminals description

Terminal	Description
NO	Switch Terminal
COM	Common Switch Terminal
L, N	Supply (230 V AC)



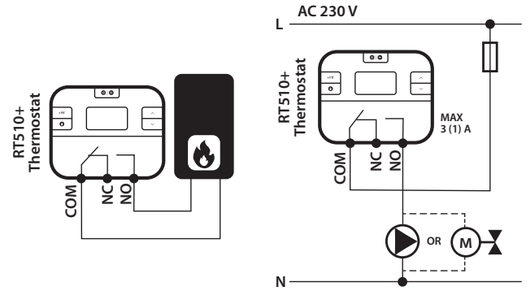
RT510TX+ & RT510RF (Thermostat) DIP Switch Settings

The DIP Switches can be found on the rear of your thermostat.
For all plug-in boiler receiver applications ensure SW1 is set to RAD.



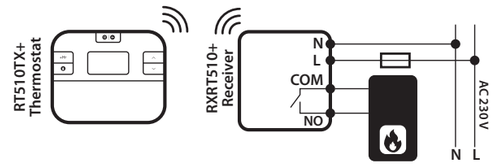
Control feature	ITLC	SPAN
Operation	When ITLC is selected on DIP switch № 2, the DIP switch № 1 is functional. You can choose between radiator or electric heater.	When Span is selected on DIP switch № 2, the DIP switch № 1 is not functional.

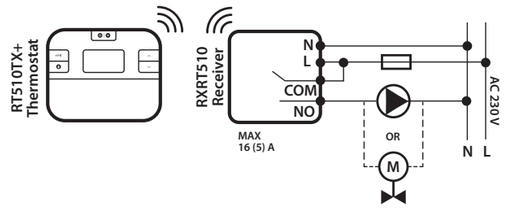
RT510+ Wiring diagram



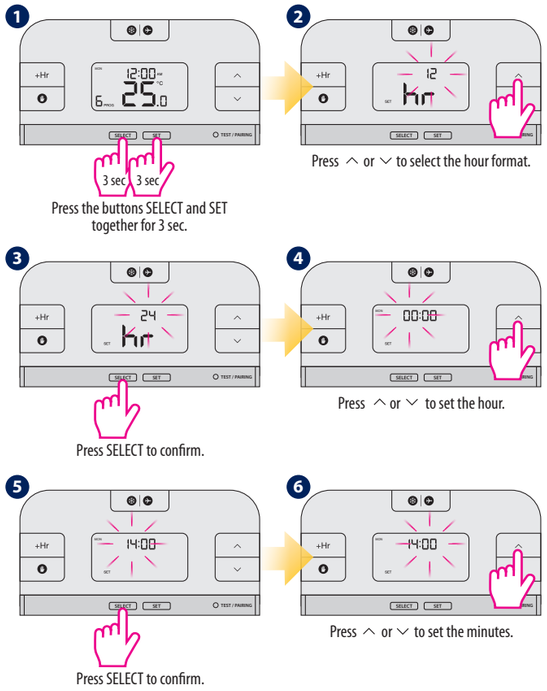
RT510TX+ Wiring diagram

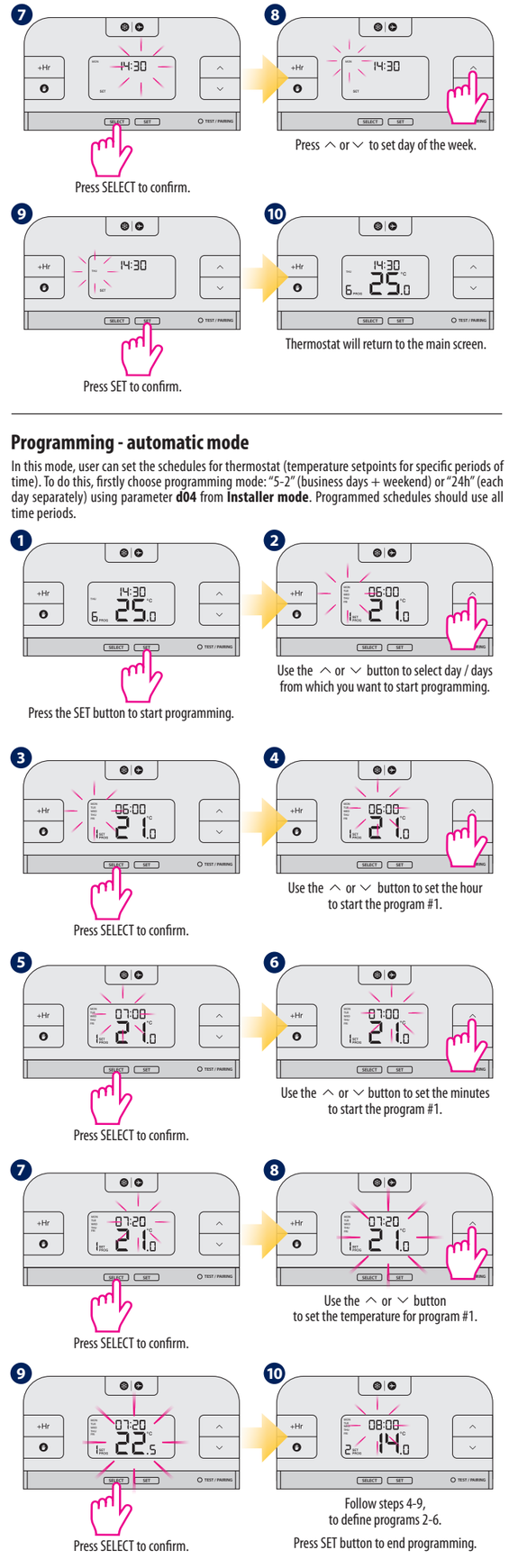
Note: If you are using the RT510RF pack, the pairing between the thermostat and the receiver is already done.





Setting the time



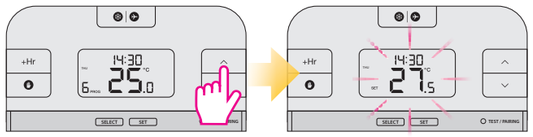


Programming - automatic mode

In this mode, user can set the schedules for thermostat (temperature setpoints for specific periods of time). To do this, firstly choose programming mode: "5-2" (business days + weekend) or "24h" (each day separately) using parameter **d04** from **Installer mode**. Programmed schedules should use all time periods.

Temporary Override Mode

This function is available only in automatic mode (schedule). If a new setpoint temperature will be set during the schedule - it will be maintained until next time interval starts according to programmed schedule.



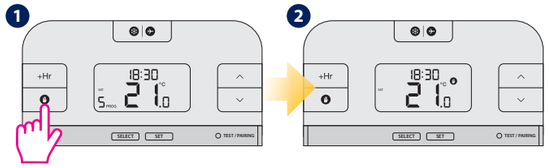
Using ∧ or ∨ buttons set new setpoint temperature.

After new setpoint temperature set, thermostat will return to the main screen.

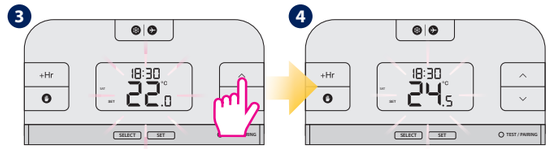
Temporary Override mode will be disabled when new schedule will be set.

Manual Mode and setting setpoint temperature

In this mode thermostat does not work according to the programmed schedule but it will maintain selected temperature.



Press button to activate the Manual Mode.



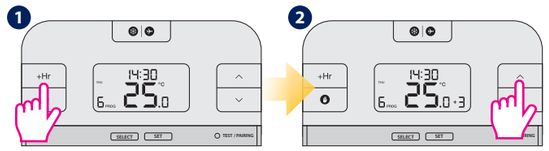
Using ∧ or ∨ buttons set new setpoint temperature.

After new setpoint temperature set, thermostat will return to the main screen.

To turn off the Manual Mode press button. Once the manual mode is off, the hand icon on the thermostat will disappear.

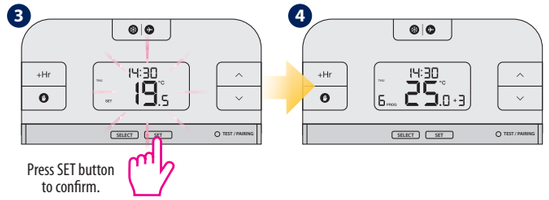
Hourly temperature Override Mode (+Hr)

This function is available in Automatic and Manual Mode. It is used to change the setpoint temperature for a specified number of hours (up to 9 hours). Once that time is over, thermostat returns to previous mode.



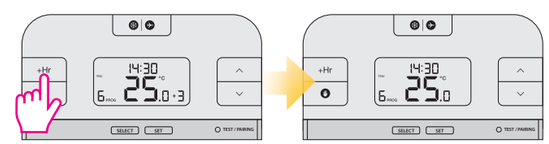
Press +Hr button to set number of hours for temperature override (e.g. to set up override for 3 hours, press the button 3 times).

Using ∧ or ∨ button set a new setpoint temperature for override.



Press SET button to confirm.

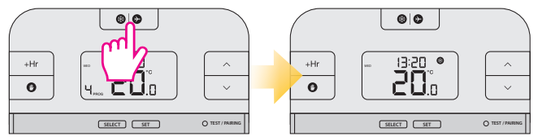
Turning off hourly temperature override mode before time's up



Press the + Hr button until number of hours disappears from display.

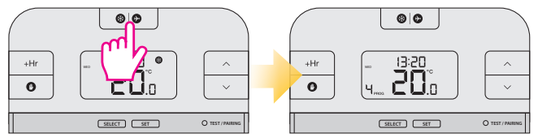
Frost Protection

Temperature of the Frost Protection mode is set as default at 5°C. This temperature can be changed in Installer Mode in d03 parameter.



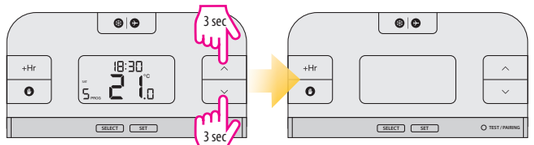
Press button | to turn On Frost Protection mode.

Turning Off the Frost Protection Mode



Press button | again to turn Off Frost Protection mode.

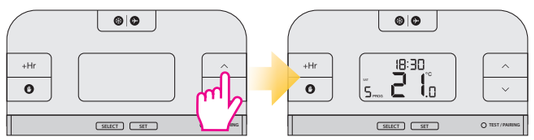
Sleep mode



Hold ∧ and ∨ buttons simultaneously for 3 seconds to start the sleep mode.

Thermostat is in sleep mode.

When the sleep mode is activated, all thermostat functions are paused.

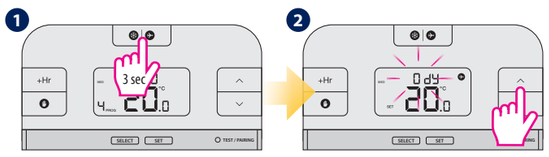


Press any key to deactivate sleep mode.

Thermostat will return to the previous mode.

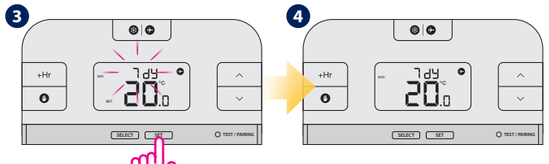
Holiday Mode

In this mode the "frost protection" temperature is maintained for a specific number of days.



Hold down | button for 3 seconds to activate the Holiday Mode.

Use ∧ or ∨ button to set the number of days for Holiday Mode.



Press SET button to confirm. You can set up to 31 days.

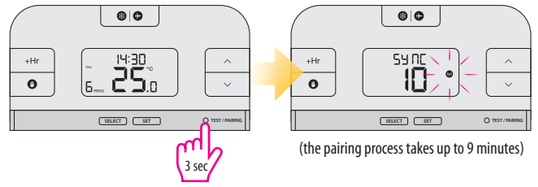
To turn off the Holiday Mode, hold down | button for 3 seconds. The airplane icon should disappear from the display.

RT510TX thermostat pairing with the receiver

Note: If you are using the RT510RF+ pack, the pairing between the thermostat and the receiver is already done.

If you bought the RT510TX+ and RXRT510+ separately or if you want to re-pair thermostat with the receiver, make sure that the device is disconnected from the power supply and the switches on the receiver have been set to AUTO and ON. Then connect the receiver to the power supply and wait for the red LED to light steadily. Then switch to the OFF position and again to ON position quickly. The red flashing LED will confirm entering the pairing mode.

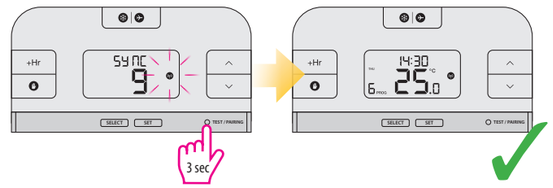
Begin the pairing process



Press and hold TEST/PAIRING button for 3 seconds.

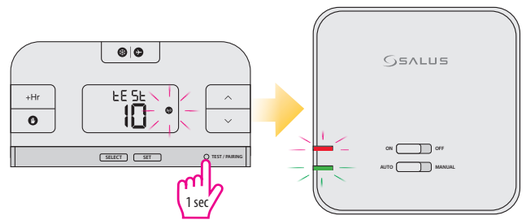
(the pairing process takes up to 9 minutes)

End the pairing process

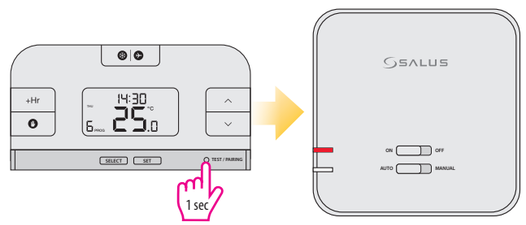


Once devices are successfully paired, LED on the receiver will go solid red. Press and hold TEST / PAIRING button for 3 seconds to end the pairing process.

Test the pairing process

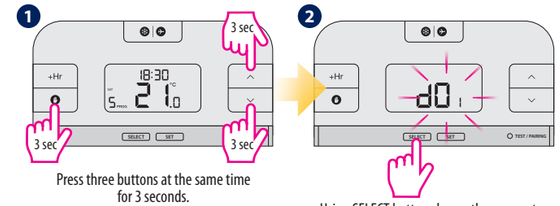


Press TEST / PAIRING button to check the connection with the receiver.



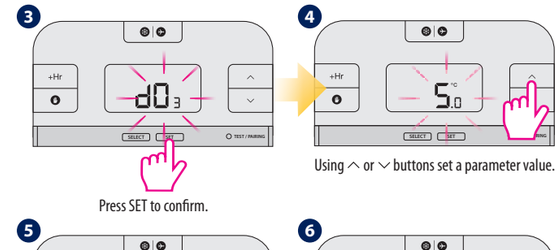
Press TEST / PAIRING button again to return to the main screen.

Installer Mode



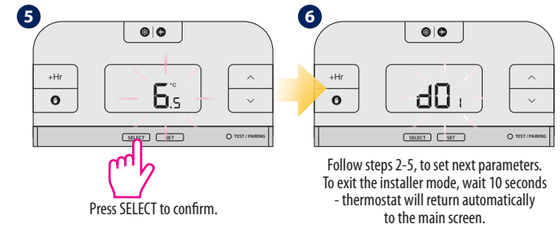
Press three buttons at the same time for 3 seconds.

Using SELECT button choose the parameter.



Press SET to confirm.

Using ∧ or ∨ buttons set a parameter value.

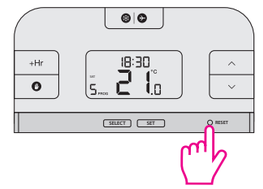


Press SELECT to confirm.

Follow steps 2-5, to set next parameters. To exit the installer mode, wait 10 seconds - thermostat will return automatically to the main screen.

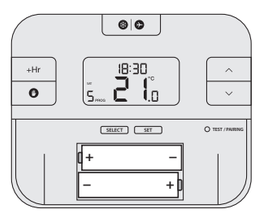
dxx	Function	Parameter	Default value
d01	Temperature display increments	0.1°C or 0.5°C	0.5°C
d02	Temperature offset	+/- 3.0°C	0.0°C
d03	Frost Protection setpoint temperature	5.0°C - 17.0°C	5.0°C
d04	Programmer selection	5/2 or 24 hr (7d)	52d

Reset of the RT510+ thermostat



Press the RESET button once. You can use a paper clip. Your thermostat will be reset and will start up automatically.

Reset of the RT510TX+ thermostat



Remove the batteries without pressing any button. Wait 2 minutes and insert the batteries again. Your device will be restarted.

When you want to change the batteries your device will use the internal memory to backup your settings. You have 30 seconds to change the batteries before losing your settings.

NOTE:
If you do not notice the "low battery" symbol displayed on the screen in time, it will shut down. In this case, after removing the old batteries, it is necessary to wait 5 minutes before inserting the new batteries. Otherwise, it is possible that a condenser will remain partially discharged and it can prevent the thermostat from restarting.