



HÜBER

Electric Radiator User Guide



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General Information

Maktek HÜBER oil filled electric radiators are manufactured to all the relevant European specifications at our partners modern factory facility in Turkey.

They heat up quickly to bring effective and efficient heating to your living areas.

HÜBER radiators should be installed alongside our Salus (PR-4) programmable room thermostat, to be fully compliant with ECO Design directives 2018.

By using your HÜBER radiator in conjunction with our PR-4, you will have full time and temperature control.

Installation is straight forward and can be carried out by any competent person. We do however strongly recommend that any wiring is carried out by a fully qualified tradesman for complete peace of mind.

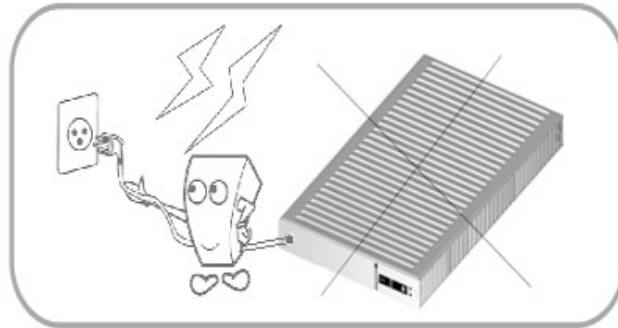
HÜBER radiators are not for use in wet areas. They can be used in unclassified bathroom zones but please check with a professional tradesman to be sure of compliance.

Safety

- Please read this user guide carefully and keep it safe for future reference
- Never cover the radiator
- Do not use near to a source of water or spill any fluids inside the Radiator
- Ensure the Radiator has been installed in accordance with these instructions and relevant Building regulations
- The electric thermostat wheel should be at the top and the power cable towards the bottom of the radiator when installed.
- Do not plug the radiator into a socket extension.
- Do not open or attempt to modify the radiator.
- The Radiator will be hot when in use
- Monitor Children and the elderly when the radiator is turned on
- Do not store flammable products near the Radiator
- The Radiator must only be mounted horizontally
- Isolate the radiator from the power supply when not in use for long periods
- For domestic or office use only
- Do not use the radiator outside.
- Clean with a damp cloth. Never use harsh cleaners or chemicals.

Remember: The HUBER is an electrical heating appliance. Be sensible and careful when using or in the near vicinity of the radiator when in use. Problems resulting from ignorance or carelessness are solely your responsibility.

Before you Start



Warning:

Do not turn the radiator on when laying flat. This will damage the element and invalidate the Guarantee

Important:

This is a Class 1 fully earthed product and must be connected to a suitably grounded supply

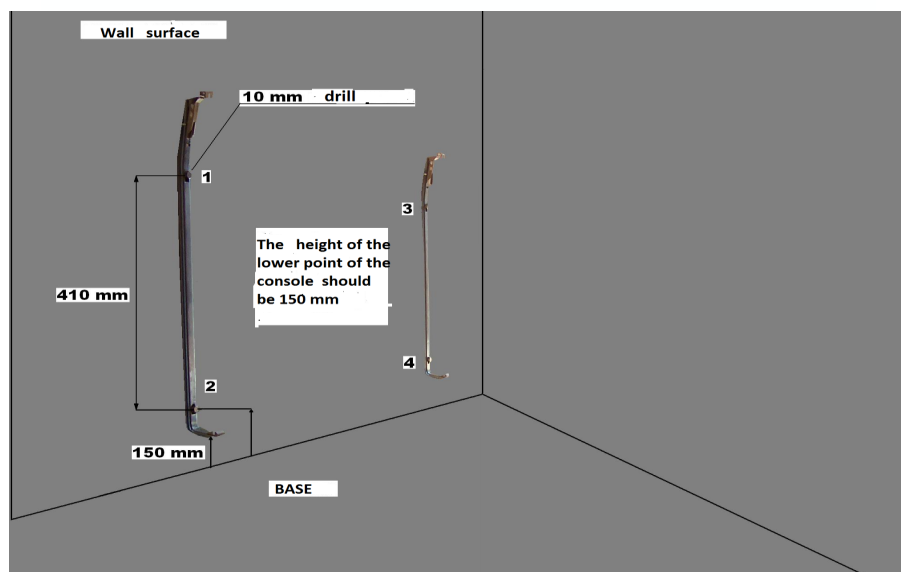
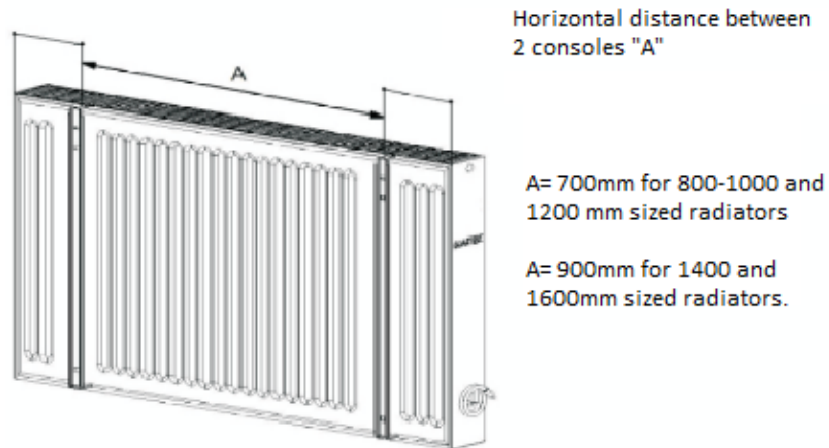
Minimum Clearances: 150mm from the floor to the bottom. 50mm from each side. Avoid placing furniture directly against the appliance

The radiator is not suitable for bathroom zones 1 or 2

This Radiator is only suitable for 230/240v 50hz supply.

Do not cover the Radiator

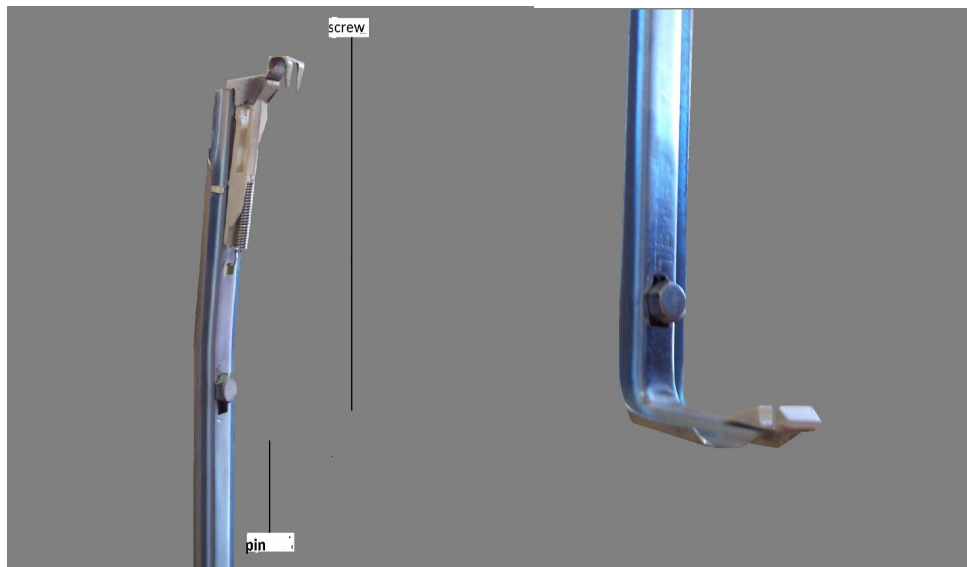
Wall Bracket Installation



SECURE THE WALL BRACKETS, TOP AND BOTTOM, WITH THE SCREWS AND PLUGS SUPPLIED.

ALTERNATIVELY USE SUITABLE WALL FIXINGS FOR HOLLOW OR LIGHTWEIGHT WALLS.

Top and Bottom of the Wall Bracket Supplied



Once the brackets are securely fastened to the wall, the radiator can be put into place.

Remove the small retaining screw from the top of each wall bracket allowing the spring clip to move up and down

The Radiator is heavy. Always exercise caution and lift the heater correctly, to avoid damage to you or the radiator.

Carefully lift the bottom of the radiator onto the bottom of the bracket. Make sure the radiator sits in the space between the front and rear of the support.

Now offer the top of the radiator to the top of the bracket. Carefully lift the top spring clips on each bracket. The radiator will sit inside the clips. The top spring will hold the top of the radiator.

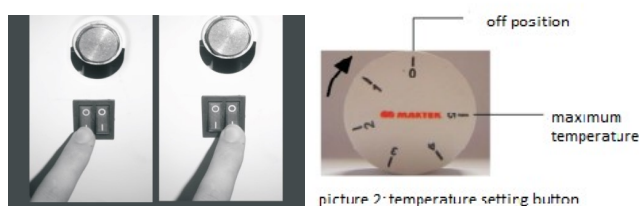
Replace the small retaining screw into the top of the spring clip to ensure it can not be removed accidentally.

First Start

To turn the radiator on, push the switch to the “I” icon.

To turn the radiator off push the switch to the “O” icon.

When the Radiator is heating, the Red light on the switch will be illuminated



The numbers on the thermostat wheel are a guide to the following surface temperatures.

Level	Oil Temperature
1	15 °C
2	30 °C
3	45 °C
4	65 °C
5	80 °C

The electronic thermostat control will cycle the radiator on/off at the set temperature. Lowering the oil temperature will reduced the radiator's surface temperature.

The PR-4 programmer will control the room's air temperature. (see page 11 for details)

The programmer regulates the radiator based on the room temperature. For best results, set the radiator's control wheel to level 4. Then let the programmer determine when the radiator will be On/Off.

Useful Information

Radiator not getting warm

POWER SUPPLY:

Make sure the power supply to the Radiator and Pr-4 reviver unit is good.

If there is no power to the radiator, manually override the receiver unit. (See page 11-12)

THERMOSTAT WHEEL:

Make sure the thermostat wheel is set to position "5"

WARNING LAMPS:

Check that the Failure Warning Laps are not illuminated.

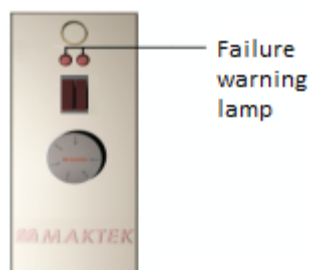
If they are please contact your supplier.

SAFETY THERMOSTATS:

There are two over heat limiters inside the radiator. To ensure the internal fluid does not exceed 100°C . If the over heat limit is exceeded the radiator will switch off and these warning lamps will illuminate.

Over heating can occur if the air flow through the radiator is obstructed.

Before contacting your supplier, isolate the heater from the power supply and allow 60 minutes for the radiator to cool down. Remove any obstruction clothing etc and start the radiator again .



Further info

To be compliant with Erp2018/Lot20 this radiator must be used in conjunction with our Pr- 4 programmer.

The programmer allows the user to program a 24 hour 7 day heating schedule.

Ideally the radiator should be positioned under a window and away from curtains.

The room's Insulation is essential to ensure the radiator works efficiently. If the insulation is poor, the heat loss will be high. Resulting in the Radiator heating for longer periods; costing more money to run. Keep doors and windows closed where possible.

One method of programming, used commonly in Scandinavia, is to set 2 set temperatures, a comfort and (21°C) reduced (16°C) mode. This keeps a warmth in fabric of the building, meaning less power is required to bring the room back to the comfort temperature.

We estimate a 1°C reduction in the room temperature set at 21°C will show an energy saving of 6%.

If you have a double panel Radiator(1000w & 1400w) , you have the option to run each element independently .

TECHNICAL SPECTS	TEST VALUES	TEST METHOD
Viscosity (40 °C, cSt)	32-35	ASTM D 445
Density (15°C, gr/cm ³ ,typical)	0,875	ASTM D 1298
Fire point (°C)	Min 220	ASTM D 92
Yield point (°C)	Max - 10	ASTM D 97
T.A.N (mg KOH/g)	Max – 0,1	ASTM D 974

The oil used in the radiator s resistant to oxidation even at high temperatures. It is non corrosive and non-toxic. It does not need renewing.

Pr-4 Wiring Instruction

The wiring diagram below explains how to wire the Pr-4 receiver unit. The image above shows the rear of the pr-4 receiver unit. The cable on the left is the load to the heater. The cable on the right is the 240v supply.

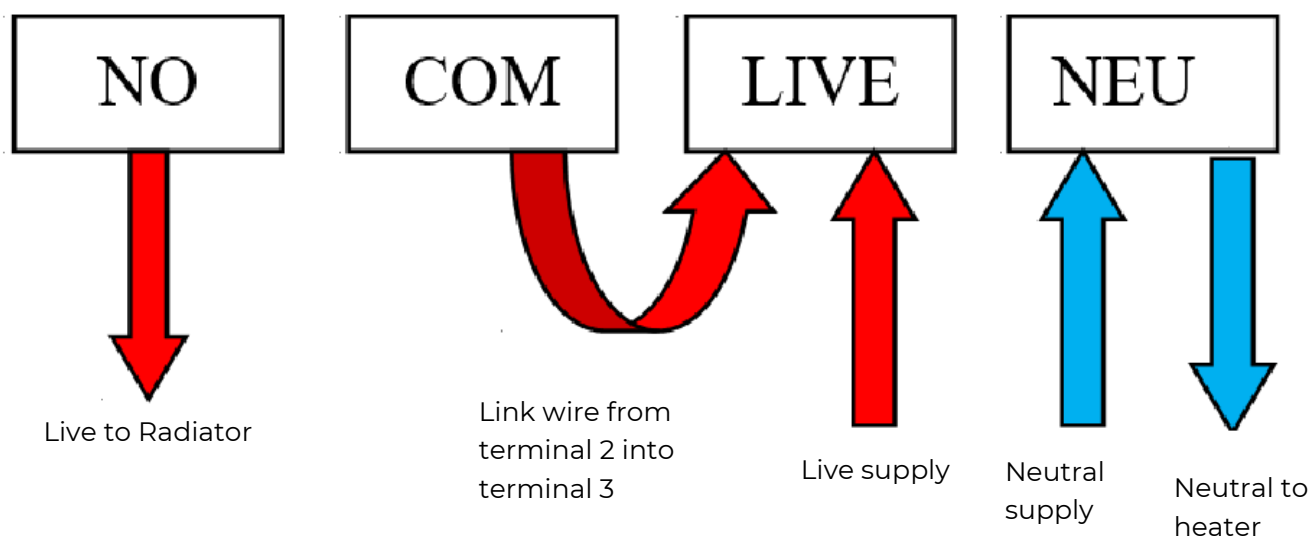


Terminal

1. Live to heater
2. Link wire to 3 (not supplied)
3. Live supply and link wire from 2
4. Both neutral load and supply cables

The PR-4 uses a common neutral and a switching live through the 16 amp terminals.

Connect the earth cables into the terminal block and sit into the recess. (as shown to the left)





Quick Guide

Introduction

The RT520 and RT520RF are the latest additions to SALUS' tried and tested RT range of thermostat heating controls. With a new on-board load compensation feature, they offer the most cost effective fully compliant Boiler Plus solution on the market providing the homeowner with optimum efficiency and maximum heating control comfort. Available in both wired and wireless RF versions, the new RT520 series include all the features of the previous RT series with a larger more intuitive LCD display and a handy new suite of additional operational and efficiency functions.

Before use please read this manual carefully.

Product Compliance

This product complies with the essential requirements and other relevant provisions of the following EU Directives: EMC 2014/53/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.salustech.com

(9) 868.0-868.0MHz, <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.

⚠ Always ensure the AC mains power is switched off before re-wiring or working on any component (this includes replacing the batteries). Use only AA 1.5V alkaline batteries in the thermostat. Place the batteries into the battery slot located in the back of the thermostat. Do not use rechargeable batteries.

Technical Specification

	RT520 Thermostat	RT520TX Thermostat
Thermostat supply	2 x AA alkaline batteries	2 x AA alkaline batteries
Thermostat rating max	3(1)A	-
Open/therm terminals	A/B	-
Outputs	Voltage free NC/NO/COM terminals	-
Temperature range	5°C – 33.5°C	5°C – 33.5°C
Temperature accuracy	0.1°C or 0.5°C	0.1°C or 0.5°C
EP control class	V	V
Radio frequency	-	868 MHz
Dimension (mm)	118 x 95 x 26 (mm)	118 x 95 x 26 (mm)

	RXRT520 Receiver
Receiver supply	230V AC
Receiver rating max	16 (5) A
Open/therm terminals	A/B
Outputs	Voltage free NO / COM terminals
Radio frequency	868 MHz
Dimension (mm)	96 x 96 x 26 (mm)

Button Functions

RT520 / RT520RF Thermostat

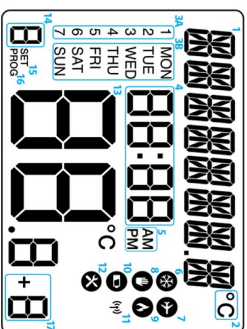


RXRT520 Receiver



1. MENU - enter the menu options, press and hold for 3 sec to return to main screen or to deactivate Boost Mode
2. SELECT - confirm changes and enter menus
3. DOWN - decrease the temperature and move through the menus
4. UP - increase the temperature and move through menus
5. BOOST - activate Boost Mode
6. MANUAL - activate / deactivate Manual Mode

LCD Icon Description



1. Text Bar
2. Temperature limit
- 3A. Day of the week (numeric)
- 3B. Day of the week (alphabetical)
4. Clock
5. AM / PM
6. Frost Protection Mode On
7. Holiday Mode On
8. Manual Mode On
9. Heating Mode On
10. Low battery status
11. Wireless connection with the receiver
12. Service Mode On
13. Temperature measured / set
14. Program number
15. Settings
16. Program indicator
17. Boost function

RT520 Thermostat Terminals Description

Terminal	Description
B / A	Open/therm Communication Wire
NC	Switched Live OFF terminals
NO	Switched Live ON
COM	Common terminal



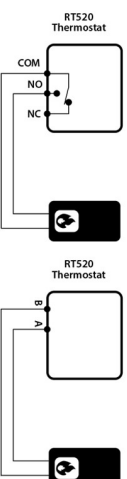
RXRT520 Receiver Terminals Description

Terminal	Description
B / A	Open/therm Communication Wire
NO	Switch Terminal
COM	Common Switch Terminal
L-N	Supply (230V AC)

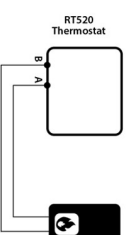


RT520 Wiring Diagram

TP1, SPAN



OPENTHERM

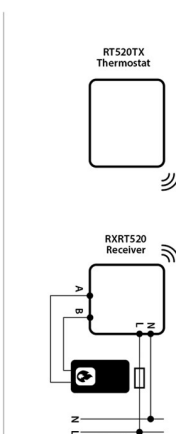


RT520TX Wiring Diagram

TP1, SPAN



OPENTHERM



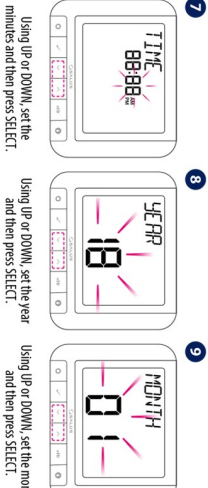
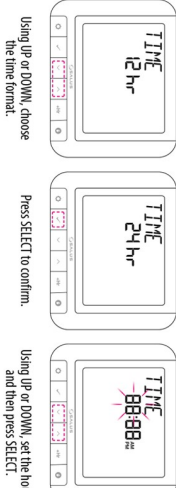
OpenTherm Power Up and Configuration

OpenTherm Modulating Control is a method of control used by modern heating systems. Instead of switching a boiler on and off at intervals, modulating control allows the amount of heat provided by the boiler to be controlled to match the varying demand from the thermostat. This means the customer has greater system efficiency, energy saving and room comfort from our heating controls.

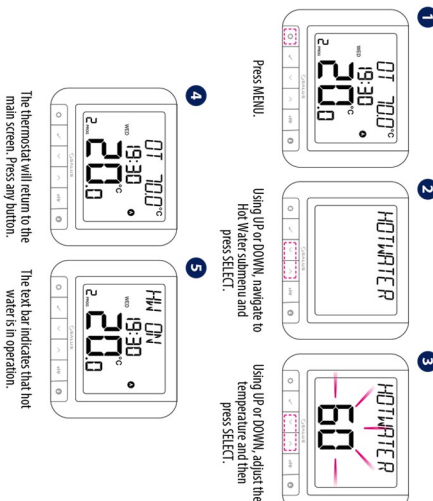
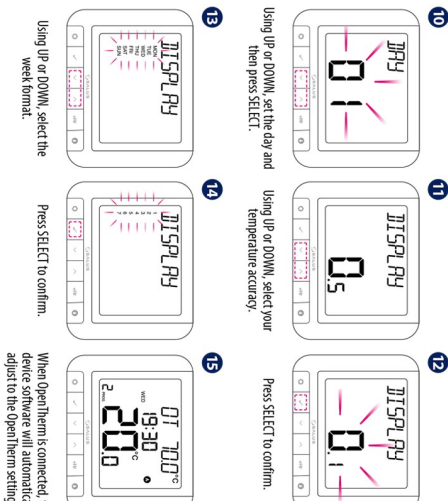
⚠ Please make the receiver connections and power the receiver before inserting the batteries into the thermostat.



After inserting the batteries, the thermostat will power up.



OpenTherm - Hot Water



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For PDF Installation guide please go to www.salus-manuals.com


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W009



Standard Power Up and Configuration

1 Please follow steps 1 to 14 from section **OpenTherm Power Up and Configuration**.

2



TPI (Time Proportional & Integral) is a self-learning, time-proportional algorithm. TPI type of regulation ensures economical system operation through more accurate temperature maintenance during controlling process and limits overload conditions. In addition to the exact and stable room temperature, the advantage of this system is the minimization of energy consumption and significant savings. M1520 offers 3 types of TPI control: 1. for radiator (dCh), 2. for underfloor heating (SCPh), 3. for electric heating (dCh).

Press SELECT.

3



4



5



Using UP or DOWN, select the TPI type you want to use.

Press SELECT to confirm.

Span is the difference between the measured temperature and the set temperature.

6



7



8



Press SELECT.

Using UP or DOWN, select the Span value.

Press SELECT to confirm.

Optimum Start is a selectable function which, depending on the ambient room temperature, will start the boiler operation at the optimum time to achieve the set-point temperature. It saves energy by only firing the boiler for the minimum required time.

9



10A




10B



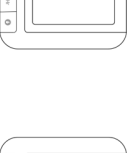
Press SELECT.

Press SELECT.

11




12



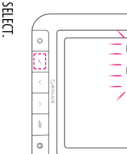
Using UP or DOWN, select ON or OFF.

Press SELECT to confirm.

13A




13B




Optimum Stop calculates how long the house will take to cool down, then turns off the boiler at the earliest possible moment. This means the system is not running when it's not actually necessary. If there is a sudden heat loss during this period, then optimum stop will be overridden to regain comfort conditions.


14



15



16



Using UP or DOWN, select ON or OFF.

Press SELECT to confirm.

The thermostat will go to the main screen.

Programming - Automatic Mode

In this mode, user can set the schedules for thermostat (temperature setpoints for specific periods of time). Programmed schedules should use all time periods.

1



2



3A

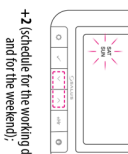


Press MENU.

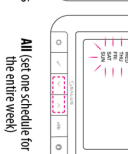
Press SELECT.

Using UP or DOWN, select the program type between 5


3B



4



5




+2 schedule for the working days and for the weekend.


All set one schedule for the entire week.

Individual (set a daily schedule). Press SELECT to confirm.

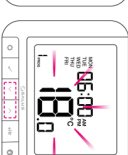
6



7



8



Using UP or DOWN, set the hour and then press SELECT.

Using UP or DOWN, set the minutes and then press SELECT.


Using UP or DOWN, set the temperature and then press SELECT.

1 Repeat the process for all time periods.


Landlord Settings

Landlord settings is a pin code protected feature that allows the landlord to set a service reminder on the thermostat that will warn the tenant when the boiler is due its annual service.


1




2




3



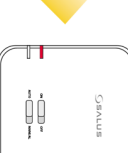
4



5



6



Press MENU.

Using UP or DOWN, navigate to Landlord submenu and press SELECT.


Using UP or DOWN, enter the PIN code number. Press SELECT to confirm every digit.

Press SELECT.


Using UP or DOWN, select ON and press SELECT.

Using UP or DOWN, select the due date and then press SELECT.

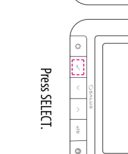
7



8



9



Using UP or DOWN, select the warning period and then press SELECT.

Using UP or DOWN, select the lock temperature and then press SELECT.

Press SELECT.

10



11



12



Using UP or DOWN, enter the phone number. Press SELECT to confirm every digit.

Now you can check your settings. If you want to make a change, press UP or DOWN on the relevant screen.

13



14



15




1 Once service mode has become active, the device will lock the set point temperature as set by the installer/landlord. To unlock this device, the landlord needs to be contacted and the boiler serviced.

RTS20TX Thermostat Pairing with the Receiver


If you are using the RTS20RF pack, the pairing between the thermostat and the receiver is already done.

1 If you bought the RTS20TX and RTS20 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.


1



2



3



Press MENU.

Using UP or DOWN, navigate to Pairing submenu and press SELECT.

Using UP or DOWN, select PAIR and press SELECT.

4



5



The pairing process takes up to 10 minutes.

Once device are successfully paired, LED on the receiver will go solid red.

Test the Pairing Process

1



2



3




Press MENU.

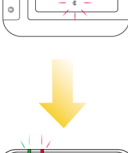
Using UP or DOWN, navigate to Pairing submenu and press SELECT.

Using UP or DOWN, select TEST and press SELECT.

4



5




The testing process takes up to 10 minutes.

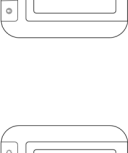
The red LED and the green LED on the receiver will begin to flash.

Factory Reset

1



2



To reset the thermostat, press MENU, DOWN and BOOST simultaneously for 5 seconds.

1 Landlord settings will not be reset.

Guarantee

Product Guarantee

The Huber radiators are guaranteed for a 3 years period from the date of purchase.

To validate the claim, your supplier will need to be provided with a proof of purchase. Guarantees are not transferrable.

The product's guarantee covers mechanical and electrical failure. It does not cover failure due to misuse or modifications to the radiator. (Other than shortening the power cable to connect into the PR-4 receiver)

In the unlikely event of a product failure we ask you check the following:

- Is the radiator covered with clothing etc? This will affect the airflow through the radiator
- Is there power from the supply to the PR-4? (Check supply at terminal 3)
- Is there power from the PR-4 to the Huber radiator? Check supply at terminal 1
- Are there any lights illuminated on the Huber radiator at all?

These checks are important to know when we discuss your guarantee claim with you. All work should be carried out by a certified professional.

If the Radiator or the PR-4 fails, we will supply a replacement Radiator or part free of charge.

The guarantee does not cover any refitting costs or other costs occurred as a result of the product's failure.

Your statutory rights are not affected by this guarantee.

Please retain this document for future reference.

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