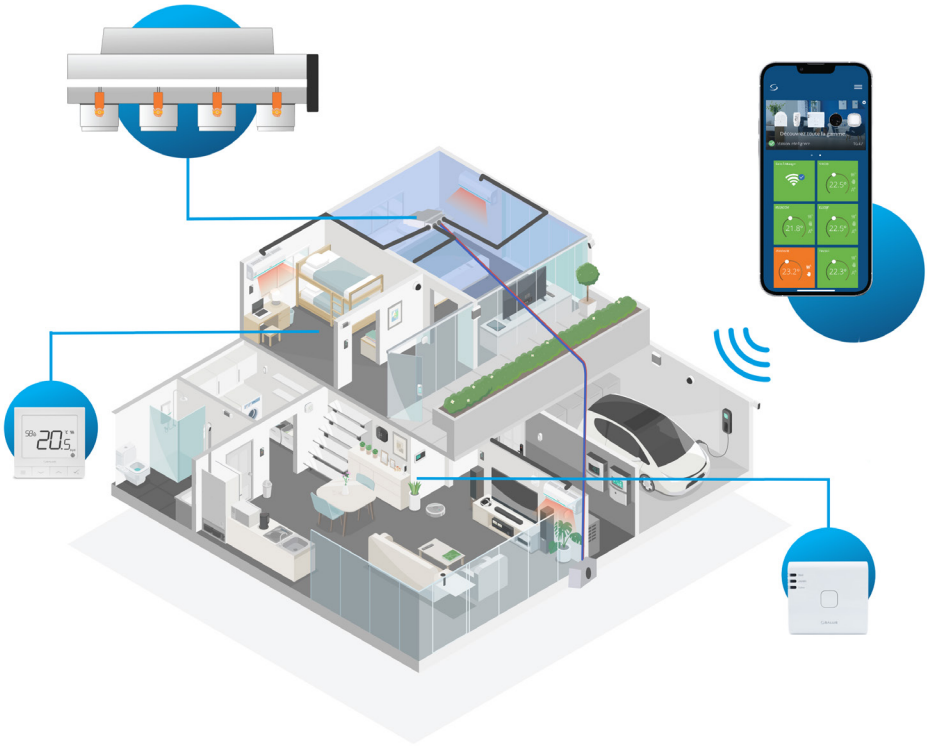
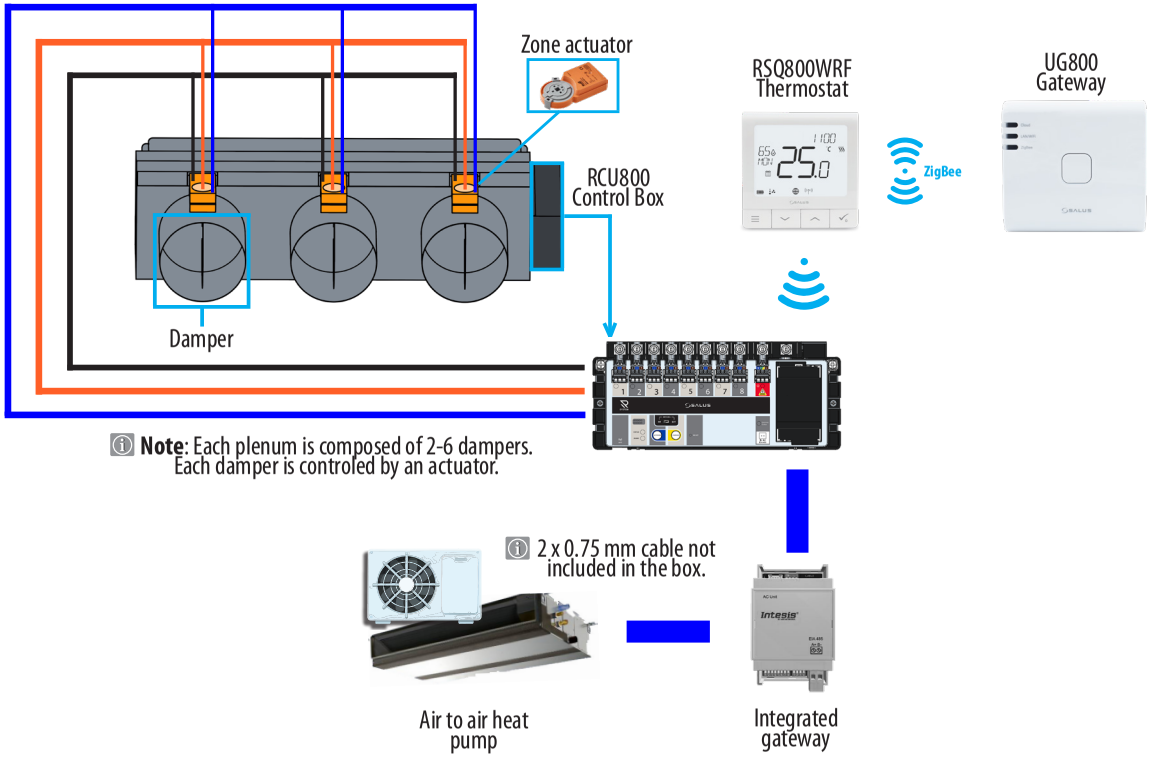
SALUS CONTROLS

R-SYSTEM



Installation Manual

Salus Ducted Air-Air Heat Pump System



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Before you start

The installation, maintenance, and servicing of the system **must be performed only by a qualified personnel per applicable local regulations.** The installer must ensure the installation follows local, regional and national regulations and guideline.

When using electric products, basic precautions should always be followed.

Turn off power at the circuit breaker before installing or cleaning the system.

Do not install or use the system near flammable, explosive, or combustible materials, chemicals or solvents, gas pipes or steam outlets, radiators or batteries, and areas that are easily get flooded, at high humidity or with running water.

Maximum operating temperature is between 0°C and 50°C.

Do not use cleaning solvents on any part of the system. Use a clean, dry cloth to remove dust and dirt.

The information in this manual may be changed without prior notice. It does not represent any obligation on the part of the manufacturer. Images in this manual are for illustration purposes only and might differ from the delivered product.

Product compliance

- The RCU800 control box complies with the essential requirements and other relevant provisions of Directives 2014/53/EU and 2015/863/EU. The full text of the EU Declaration of Conformity is available at the following internet address: www.saluslegal.com.

  2405-2480MHz, <14dBm

- The RSQ800WRF thermostat complies with the essential requirements and other relevant provisions of Directives 2014/53/EU and 2011/863/EU. The full text of the EU Declaration of Conformity is available at the following internet address: www.saluslegal.com.

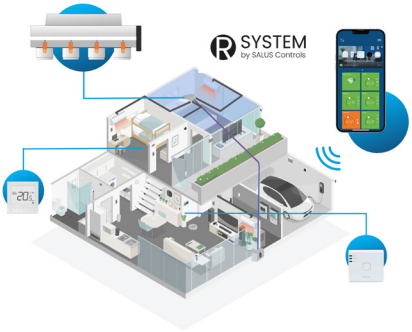
  2405-2480MHz, <14dBm V C

- The UG800 gateway complies with the essential requirements and other relevant provisions of 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.

  2405-2480MHz; <20dBm (Wifi)

Introduction

The SALUS R-System is an advanced automation solution for controlling ducted air-to-air heat pumps.

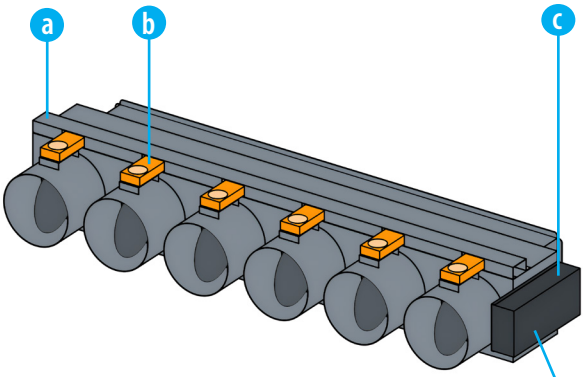


It provides precise temperature control in multi-zone homes, offering both heating and cooling functions.

The system uses motorised dampers to regulate airflow in each zone and integrates with a user-friendly control box and thermostat for effortless operation.

Box content

1 x Motorized plenum (2-6 dampers)



a. Plenum body
b. Damper actuators
c. RCU800 control box + integrated gateway

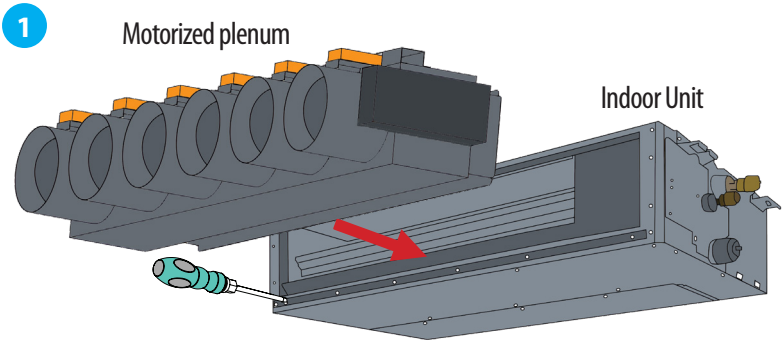
Note: There are different types of integrated gateways depending on the type of heat pump used in each air-air system.

1 x UG800 Gateway

1 x Installation Manual

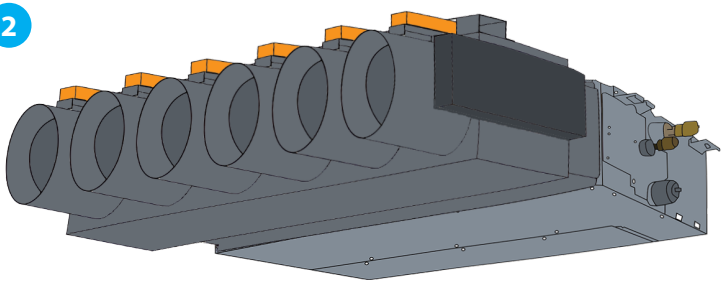
Installation of the plenum

1



When installing the motorized plenum on the indoor unit, make sure that there is correct alignment.

2



The assembly is now ready for the installation of the ducts.

Caution: The plenum and surrounding metal parts may have sharp edges that pose a risk of cuts or other injuries. When mounting the plenum to the indoor unit assembly, handle all components with care. Wearing protective gloves is recommended.

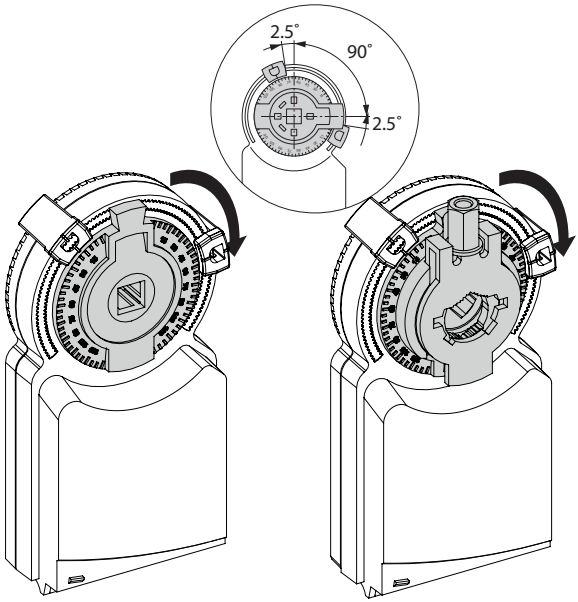
Damper actuators

Introduction

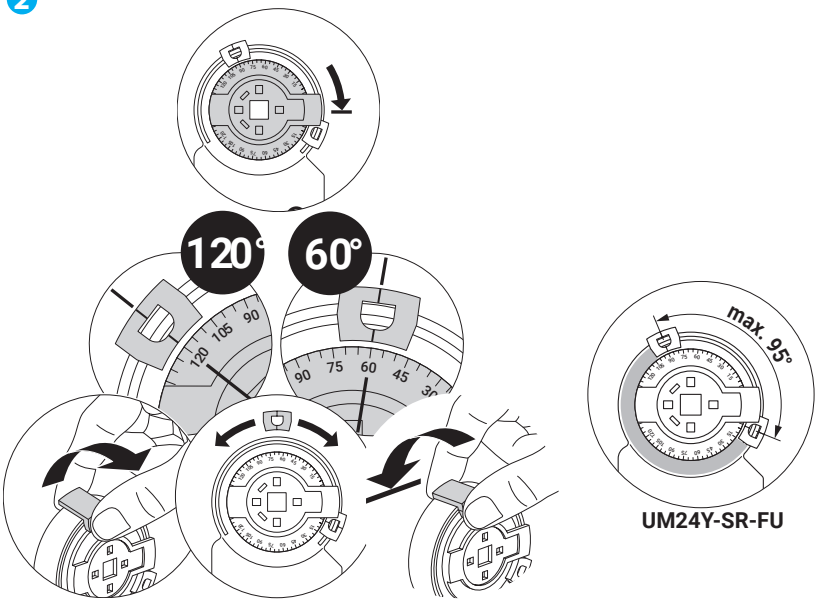
The UM24Y-SR-F-L damper actuators are part of the motorized plenum and are designed for stationary heating, ventilation and air-conditioning systems. The actuators are overload protected, require no limit switches and automatically stop when the end stop is reached.

Mounting procedure

1

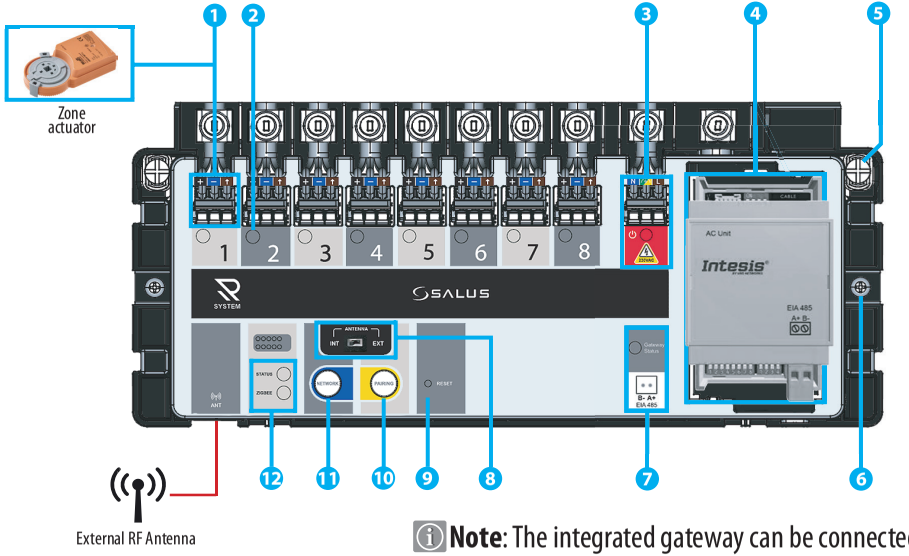


2



Note: Please ensure that values remain within the 0–90 degree range. Selecting values outside this range may cause damage to the damper's insulation.

Control box description



1. Terminal (for each zone actuator)
2. Terminal status LED
3. Power supply (230 V AC)
4. Integrgated gateway housing
5. Front cover screws
6. Wall-anchoring screws
7. Mod bus gateway connector output green-red status LED
8. Antenna switch
9. Reset button
10. Pairing button
11. Network button
12, Status & ZibBee LEDs

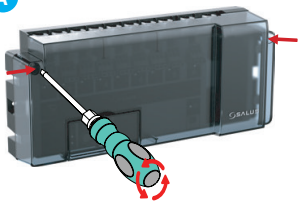
Note: The integrated gateway can be connected to the RCU800 control box via the mod bus EIA 48 connector (7) using the provided 2-pin cable.

Introduction

Compact and streamlined, the RCU800 controls ducted air-air heat pump installations. It supports up to 8 actuators, adapting flexibly to diverse cooling and heating requirements. It allows seamless integration with other Salus smart home devices.

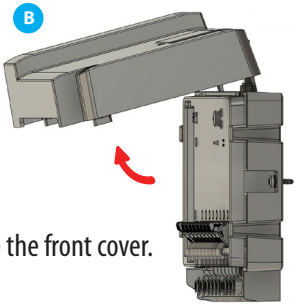
Power supply the RCU800 Control Box

A



Turn the front cover screws **a quarter turn anticlockwise**.

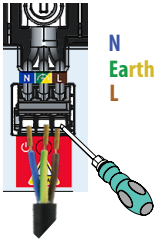
B



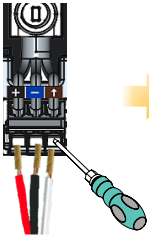
Remove the front cover.

C

230V AC Power

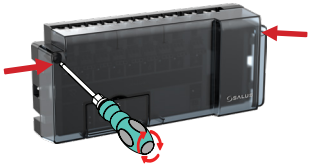


Zones 1-8 connection



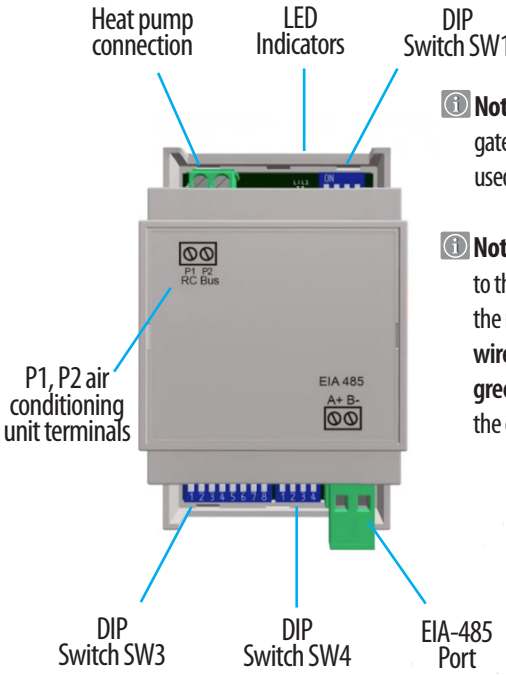
Press firmly on the push-in terminals and connect the wires.

D



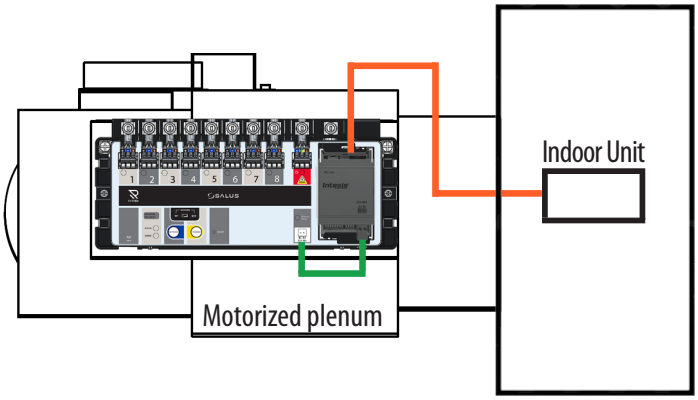
Mount back the front cover by turning both screws **only a quarter turn clockwise**.

Integrated gateway



Note: There are different types of integrated gateways depending on the type of heat pumps used in each air-air system.

Note: The integrated gateway is already attached to the RCU800 control box and connects with it via the mod bus EIA-485 compatible cable. **The white wire corresponds to the A+ connector** and **the green wire corresponds to the B+ connector** on the gateway.



UG800 Gateway

Introduction

The NEW Universal Gateway is the key product for the SALUS Smart Home and supports cloud integration to AWS IoT and other cloud platforms with firmware customization. This will offer you an ideal solution for connecting multiple Zigbee wireless devices to the cloud in a smart home system by using your smartphone or your computer via Internet. You can connect up to 100 devices to one gateway.

LED description

Cloud	Device is connected to the Cloud.
Cloud	Device cannot connect to the Cloud.
ZigBee	ZigBee network closed.
ZigBee	Identifying

ZigBee	ZigBee network open (search and add devices)
ZigBee	When exceeding the maximum number of allowed devices.
LAN/WiFi	Gateway connected to router via LAN or Wi-Fi
LAN/WiFi	Gateway isn't connected to router via LAN or Wi-Fi

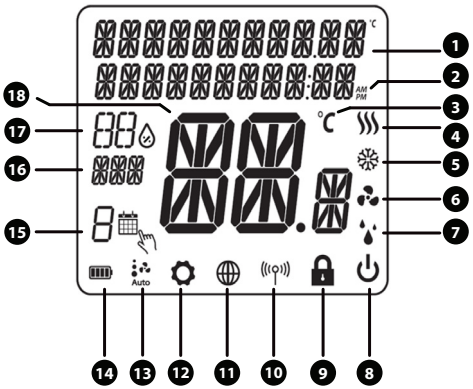
ⓘ To check which devices of your system are paired and have been configured correctly, you can use Identify mode. Press the button to activate Identify mode. The UG800 gateway will put all equipment that is connected to your system into Indetify mode. Press the button again to cancel the Identify process. Identify mode will time out after 10 minutes.

RSQ800WRF THERMOSTAT

Introduction

The RSQ800WRF smart thermostat is a ZigBee temperature and ventilation controller for wireless control of air duct systems. In order to control different modes of the heat pump, RSQ800WRF can function as a master or as a slave. The master thermostat can define the system operating mode, control airflow and fan speed for system heating and cooling. It has five operation modes, such as (heating, cooling, ventilation, dehumidify, standby mode) depending on the heat pump, as well as four airflow control settings, including High, Medium, Low and Auto. It requires to be paired with a universal gateway (UG800). It can work either locally or using the Salus Premium Lite app.

Icons description



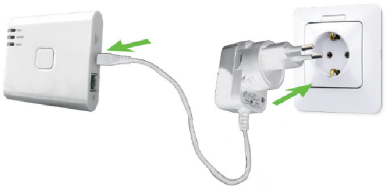
1. Menu/Settings description + Clock
2. AM/PM
3. Temperature unit
4. Heating indicator (icon is animating when there is heating demand)
5. Cooling indicator (icon is animating when there is cooling demand)
6. Ventilation mode
7. Dehumidify mode
8. Standy mode icon
9. Key lock function
10. RF connection indicator
11. Internet connection indicator
12. Settings icon
13. Fan speed indicator
14. Battery indicator
15. Schedule program number
16. Day indicator/SET information
17. Humidity level indicator
18. Current temperature

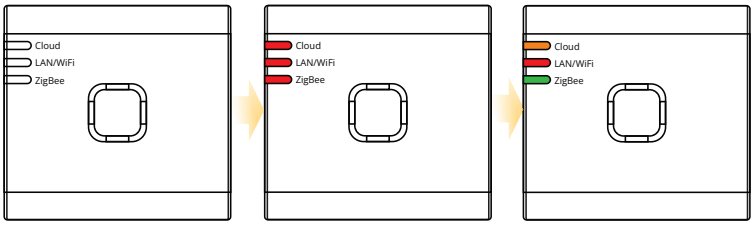
Button functions

Button	Function
	**MENU button / RETURN button** 1) When main screen or standby screen is displayed -> short press -> go to SETTINGS. 2) For new settings, pressing this button will return to previous menu without saving. Press and hold for 3 sec - go to main screen or standby screen without savings at any time. 3) When main screen is displayed: a) If schedule is enabled, if there is not temporary override, long press this button for 2s will switch the mode between schedule mode and permanent mode. b) If schedule is enabled, if there is temporary override, long press this button for 2s will cancel the temporary override mode and return to schedule mode. c) If schedule is disabled (permanent manual mode) long pressing this button for 2 s will enable schedule and switch to permanent manual mode
	**DOWN button** 1) Decrease some parameter value, moving on the menu in down direction. 2) DOWN button for backward direction.
	**UP button** 1) Increase some parameters value, moving on the menu in up direction. 2) UP button for forward direction.
	**Validation button** 1) Confirm Value, Go to next menu and settings are saved. 2) Press and hold for 3 sec - go to main screen or standby screen with saving the settings at any time.
	In the **MAIN SCREEN** - press and hold these buttons together for 2 seconds to **LOCK / UNLOCK** the Thermostat keys).

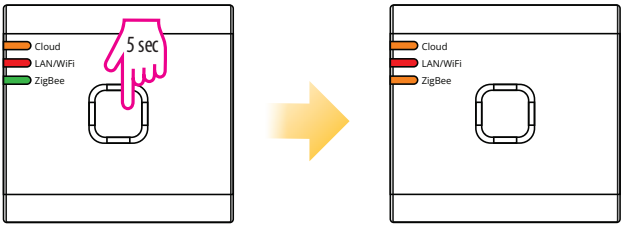
Configuration in Offline Mode

1. Open the network from the UG800 gateway



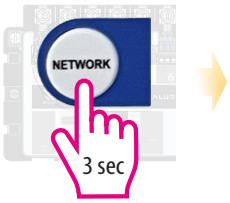


2.

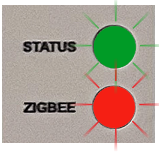


To start the system installation press and hold the button for 3 seconds until the ZigBee LED turns solid orange. This means that the ZigBee network is ready to accept Salus Premium devices.

3.



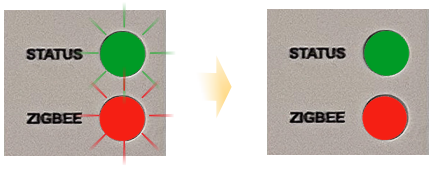
Press and hold the NETWORK button for 3 seconds.



Status LED will start blinking **1 time per second green**.
ZigBee LED will start blinking **3 times per second red**.

The network will stay open for 2-3 minutes.

4



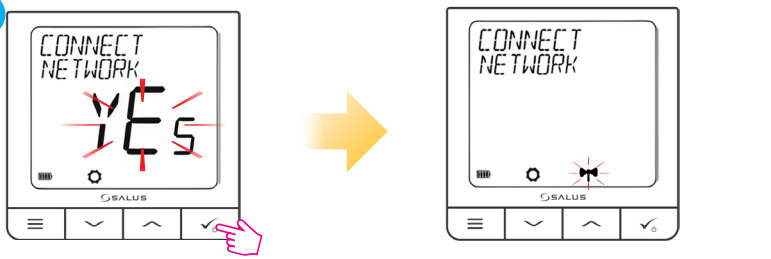
Both **STATUS** and **ZIGBEE** LEDs are flashing.

Once connected, both **STATUS** and **ZIGBEE** LEDs **will show solid colors** on the control box.

The RCU800 control box is now paired with the UG800 gateway.

ⓘ After the thermostat powers up and you choose your language, it will prompt you to connect to a network. Follow the instructions provided for each thermostat in order to join and enter pairing mode.

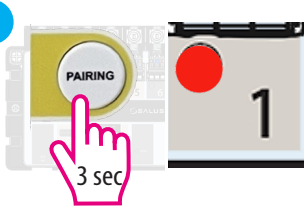
5



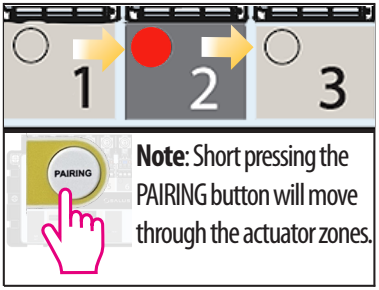
Connect to the ZigBee network.
If the choice is"YES", the device will start the pairing process automatically.

The device will automatically detect and join the ZigBee network.

6

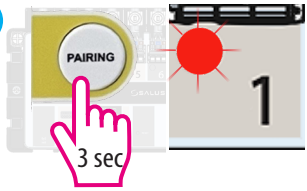


Press the PAIRING button for 3 seconds to start the pairing process then short press to choose the zone.



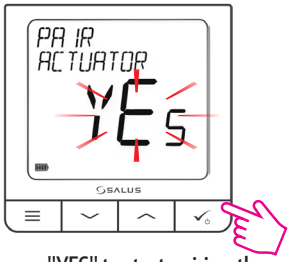
Note: Short pressing the PAIRING button will move through the actuator zones.

7



Long press the PAIRING button for 3 seconds. LED of selected zone will start flashing red (3 times per second) and will enter pairing mode.

8



Choose "YES" to start pairing the selected actuator.

Note: Short press the PAIR button again to select the next zone. Long press for 3 sec to enter pairing mode. If a new round of pairing is required, long press the PAIRING button again to restart the pairing process.

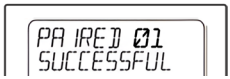
9

The thermostat will automatically start pairing with this zone.

10

Actuator zone LED flashes GREEN 3 times.

11



The thermostat will display actuator number for 3 seconds.

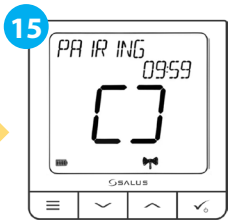
12

Actuator zone LED flashes BLUE.

Note: You can pair the actuator with an existing thermostat or you can replace it with a new thermostat by choosing YES or NO when prompted. If "YES", the zone unpairs with the existing thermostat and pairs with the new one.

If you choose "NO" and press on the "OK" button, the device will stay on the same screen.

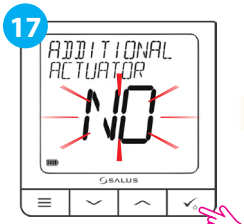
If you choose "YES" and press on "OK" the button, the device will go to next step to start pairing process automatically.



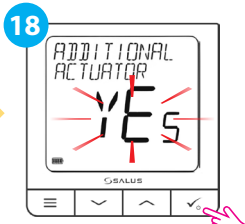
The thermostat will automatically start pairing with this zone.

Note: At Step 9, if the device successfully pairs with the control box's zone, it will go to the next step. Otherwise, it will go back to the previous step and ask to pair with the actuator again after pairing process timeout.

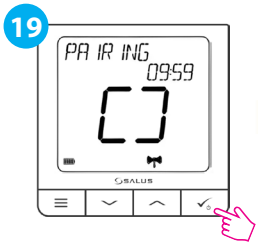
Once the thermostat paired with the actuator, it will show the actuator number on the screen for 3 seconds.



If you choose "NO", press the "OK" button. The device will go to main screen.



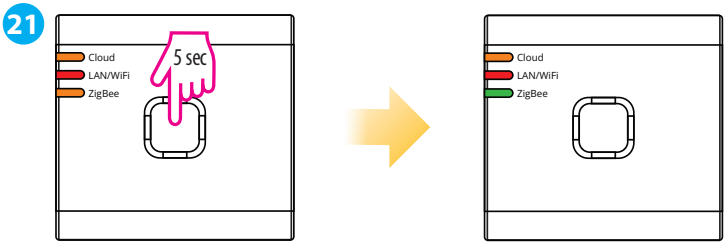
If you choose "YES", press the "OK" button. The device will start pairing with the zone.



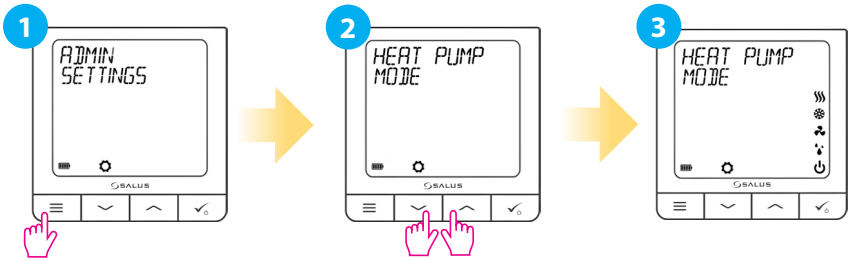
The thermostat will automatically start pairing with this zone.

If pairing is successful, the thermostat will show the actuator number for 3 seconds and will go back to step 10.

Important note: If the device does not connect to the ZigBee network and/or it does not pair with the actuator, the installation process is not complete.



Heat pump modes (only for master thermostat)



Press the [Menu] button and go to Admin Settings.

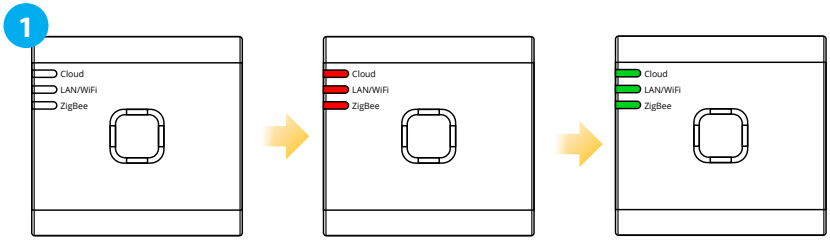
Use the [Up] or [Down buttons to go to HEAT PUMP MODE.

You can choose between the 5 different modes available.

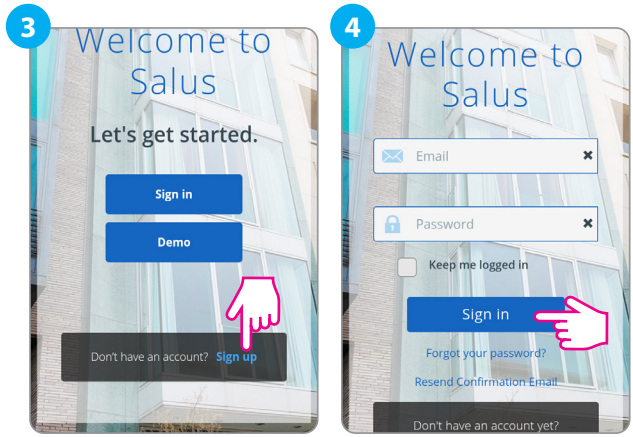
- — Heating mode
- — Cooling mode
- — Ventilation mode
- — Dehumidify mode
- — Standby mode

Note: You can add one master thermostat for each control box. If the heat pump does not support dehumidity function, it should not show the dehumidify option if the gateway can provide this information to the control box.

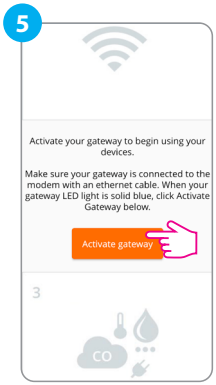
Configuration in Online Mode using Ethernet cable

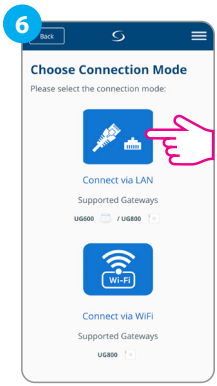


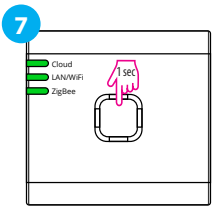
SCAN FOR
APP INSTALLATION

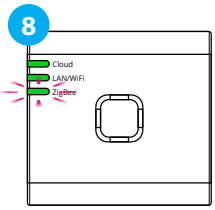


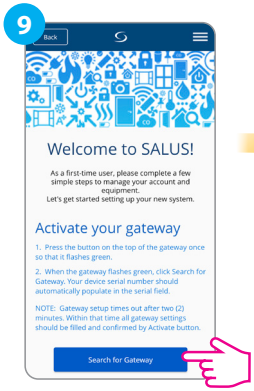
Sign up, create an account and confirm it. After that please Sign in.

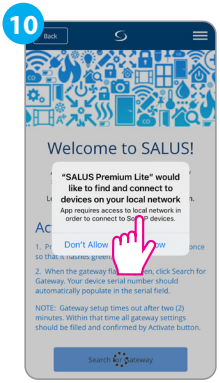


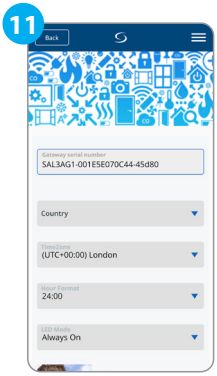


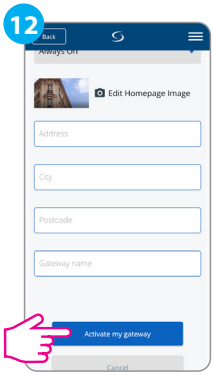


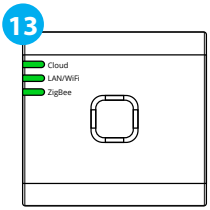








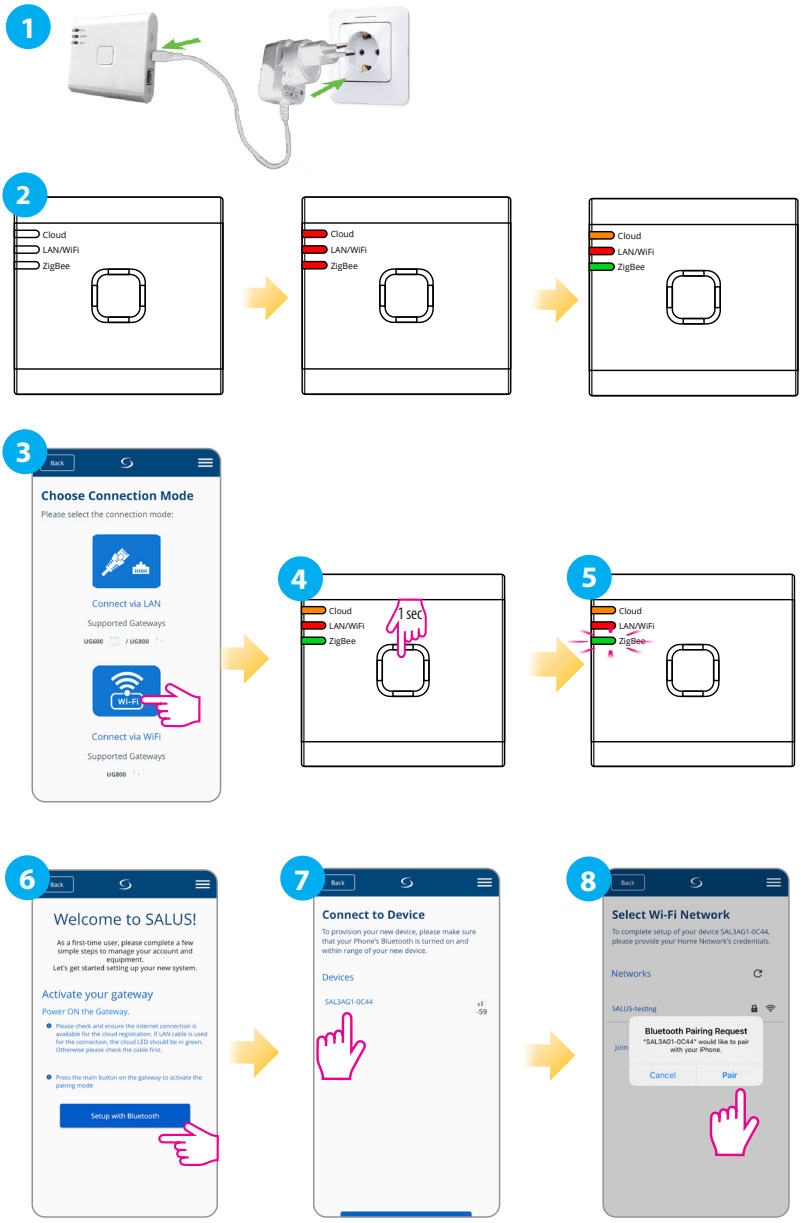


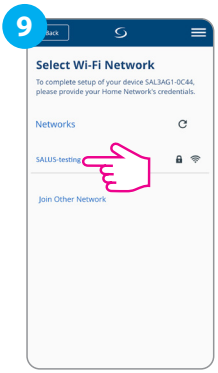


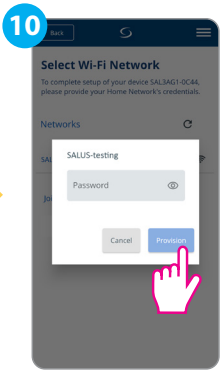
After entering all your data, click on "Activate my gateway". The process can take up to 6 minutes.

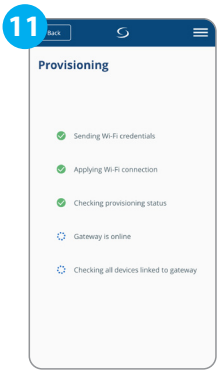
The app will automatically go to the Dashboard and the three LEDs on the gateway will show solid green.

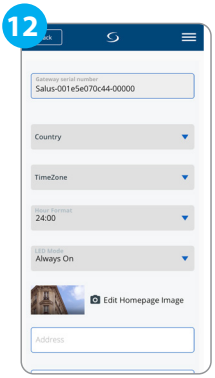
Installing the UG800 Gateway using Bluetooth

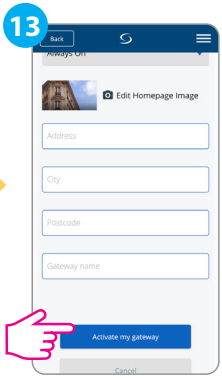




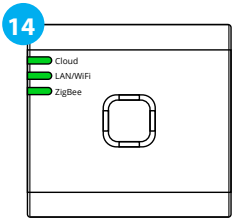








After entering all your data click on"Activate my gateway". The process can take up to 6 minutes.

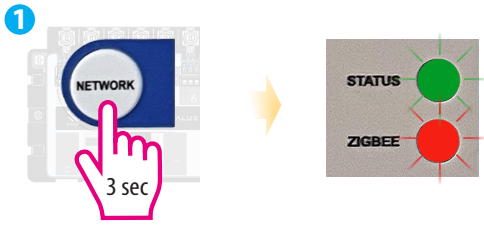


After the gateway was activated, the application will automatically go to the Dashboard and the three LEDs on the gateway will light up solid green.

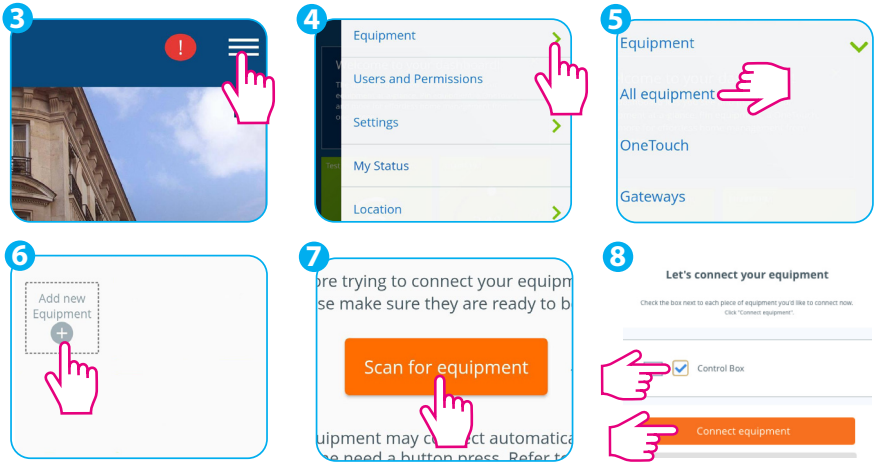
Adding the RCU800 Control Box in the app

To operate in Online mode, make sure that the UG800 gateway is connected to the Internet.

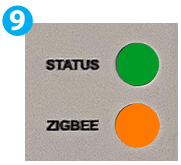
Add Control Box to Smarphone App (Salus Premium Lite)



Press and hold the NETWORK button for 3 seconds.



Note: After connecting your equipment, press NEXT and then FINISH to complete the setup process in the Salus Premium Lite app.

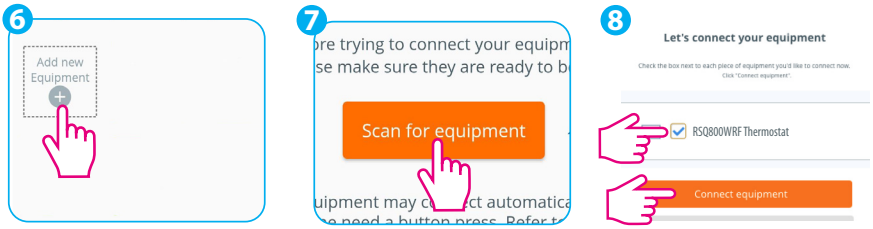


Status LED will show solid green.
ZigBee LED will show solid orange.

Adding the RSQ800WRF Thermostat in the app

To operate in Online mode, make sure that the UG800 gateway is connected to the Internet.

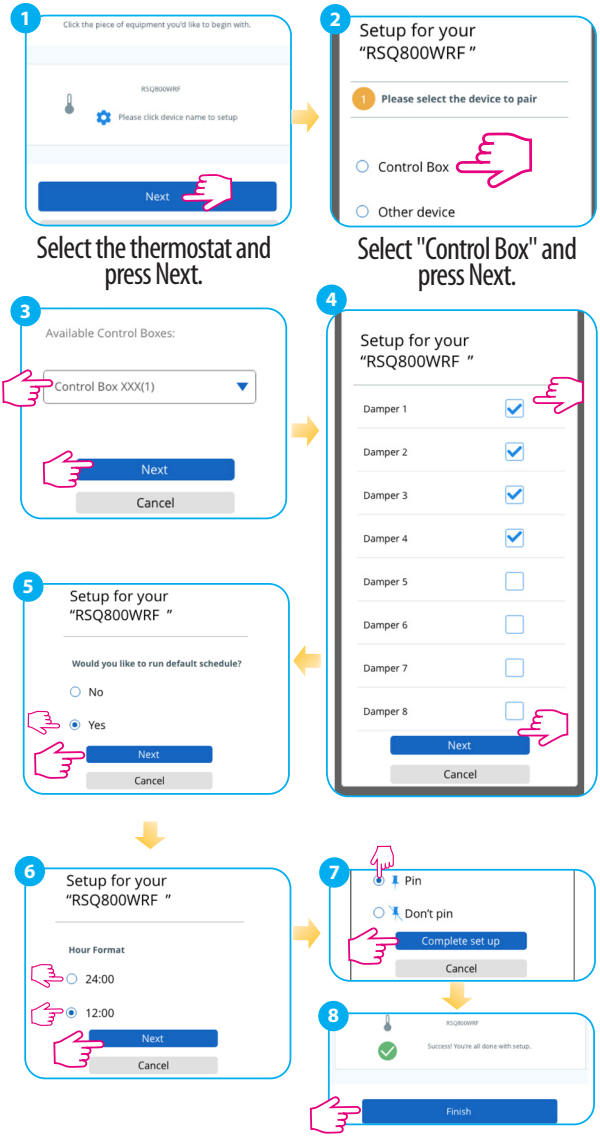
Add the thermostat to Smarphone App (Salus Premium Lite)



Note: After connecting your equipment, press NEXT and then FINISH to complete the setup process in the Salus Premium Lite app.

Thermostat pairing with damper/zone on the RCU800

ⓘ In online mode, all compatible thermostats can be paired with the same control box.



Technical specifications

Damper Actuators

Nominal voltage	AC/DC 24 V
Nominal voltage frequency	50/60 Hz
Connection plug	Molex Mini-Fit Jr. 39303045
Torque motor	1 Nm
Position accuracy	±5%
Direction of motion	clockwise rotation
Sound power level	35 dB
Protection IEC/EN	IP20
Ambient humidity	Max. 95% RH, non-condensing
Weight	0.09 kg

RSQ800WRF Smart Thermostat

Local Communication	ZigBee 2.4 GHz
Protection Class	IP 30
Operating Temperature	0℃ ~ 45℃
Operating Humidity	10%~90% non-condensing
Storage Temp. / Humidity	-20℃ ~ 60℃, 10%~90% non-condensing
Power supply	Lithium-Ion rechargable battery
Safety Approval	Class III

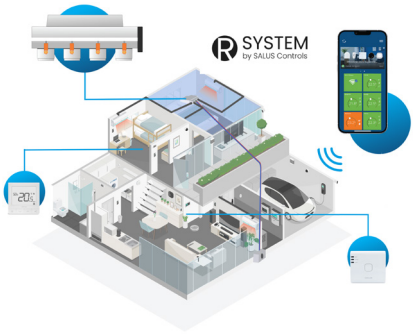
RCU800 Control Box

Input voltage	230V AC 50Hz
Total load max	Mode 30 W
Number of zones	8 zones
Integrated gateway compatibility	Yes
INT/EXT antenna support	Yes
ZIGBEE compatibility	ZigBee 3.0
Communication	RF 2.4 GHz
Firmware update	Yes
Accessories	2 x wall mounting screws 2 x washers 1 x EIA 485 cable

UG800 Gateway

Local Communication	ZigBee 2.4 GHz
Protection Class	IP 30
Operating Temperature	0℃ - 50℃
Operating Humidity	10%~90% non-condensing
Storage Temp. / Humidity	-10℃ ~ 60℃,
Port	1 x 10/100 LAN port
Dimensions	88 x 56 mm

Thank you for choosing Salus R-System!



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