

Accessory Manual

Wireless Room Thermostat

WTK GEN 1.0 – ES Wireless Thermostat Kit

Table of contents

1 Introduction.....	3
2 Parts list	3
3 Installation.....	4
3.1 Preparation before the installation	4
3.2 Mounting the wireless thermostat.....	5
3.3 Installing the RF Gateway.....	6
3.4 Commissioning the wireless thermostat.....	12
4 User interface.....	12
4.1 View the current room temperature	13
4.2 Change the temperature setting	14
4.3 Activate or deactivate child lock.....	14
4.4 Factory reset.....	14
5 Troubleshooting.....	14

1 Introduction

The ES Wireless Thermostat Kit is specifically designed for the ES M R290 series, and includes an ES Wireless Thermostat and an ES RF Gateway. This kit enables seamless wireless communication with your heat pump.

By connecting a second wireless thermostat (WT GEN 1.0), you can control two separate temperature zones in your home. Please note that two thermostats can be connected per system.

This manual covers the main steps and detailed installation procedure for the wireless thermostat.

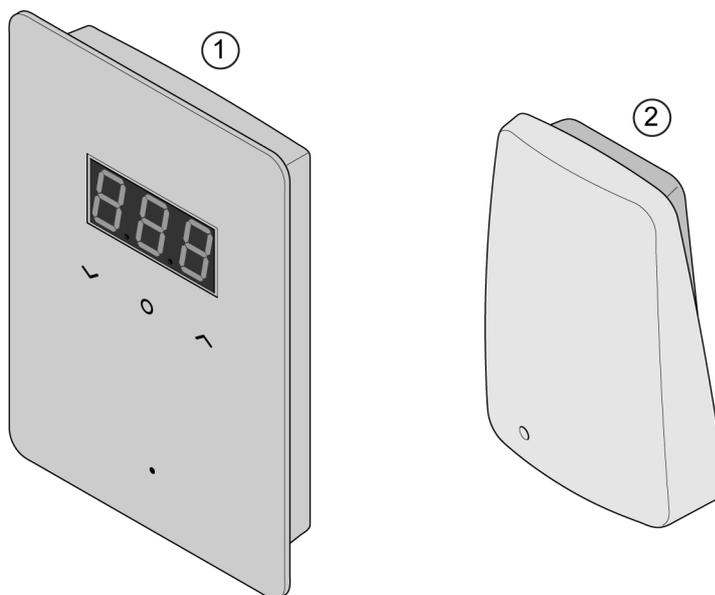
The wireless room thermostat comes in two versions:

- **WTK GEN 1.0** – ES Wireless thermostat kit (also including RF Gateway and cables)
- **WT GEN 1.0** – ES Wireless thermostat (only)

The manual is intended for personnel involved in the installation of the heat pump as well as the connected equipment.

2 Parts list

Description	Article number
WTK GEN 1.0	120720
WT GEN 1.0	120716



Item no.	Part name	Quantity
1	Wireless thermostat (in separate carton box)	1 pcs
2	RF Gateway (WTK GEN 1.0 only)	1 pcs
	Plastic wall insert	2 pcs
	Wall plastic frame for wireless thermostat	1 pcs

Item no.	Part name	Quantity
	Screws	2 pcs
	AAA batteries (inserted into the wireless thermostat)	2 pcs
	Connection cable for RF Gateway (WTK GEN 1.0 only)	1 pcs



NOTE

Please check the package and make sure all the parts are present. If anything is missing or damaged, please contact your local distributor.

3 Installation

3.1 Preparation before the installation

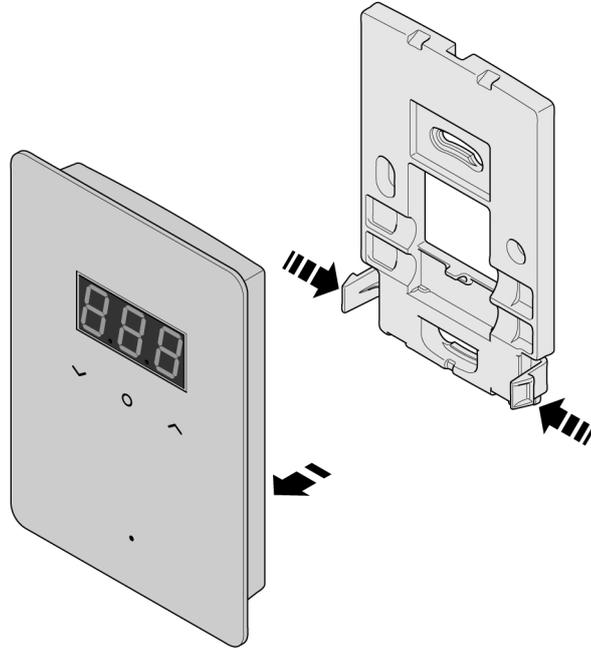
In order to ensure accurate room temperature measurements, the following is required regarding the installation location for the thermostat:

- Mount the wireless thermostat at about 1.5 m above floor level.
- Avoid exposure to direct sunlight.
- Avoid exposure to drafts.
- Avoid mounting on cold surfaces, such as exterior walls.

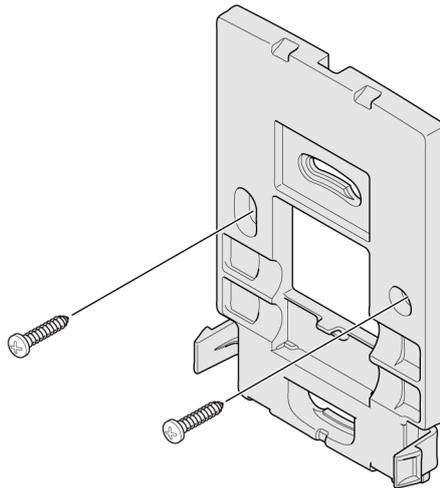
Batteries can be inserted or changed after the mounting, by removing the front part of the thermostat using a screwdriver. The expected battery life is 3 years.

3.2 Mounting the wireless thermostat

- 1 Detach the back plate from the thermostat. Release it by squeezing the two snap-fit latches at the bottom. If needed, you can then use a screwdriver to carefully pry the two parts apart.

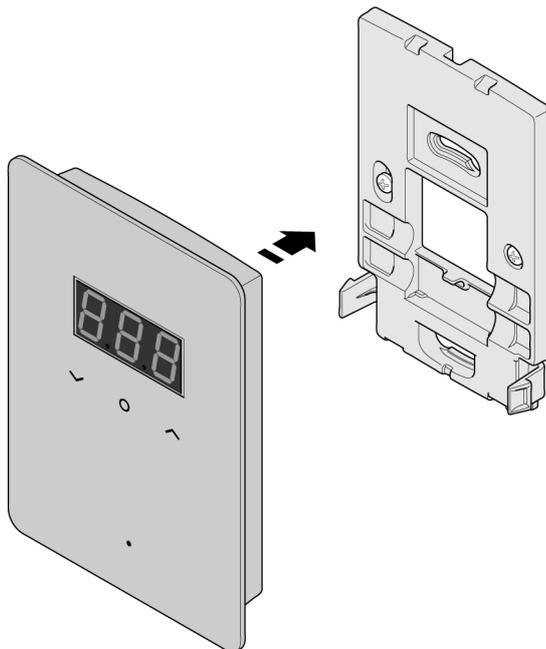


- 2 On the intended installation location, attach the back plate using the screws that come in the package.



- 3 Remove the battery insulator from the thermostat.

4 Snap the thermostat into place on the back plate.



3.3 Installing the RF Gateway

The RF Gateway is used to provide wireless communication between the wireless thermostat and the indoor unit. It comes with a cable for connection to the indoor unit. The cable is 1 metre long and the wires are colour marked and with markings A, B, V and G.

Connect the RF Gateway to the indoor unit according to the instructions in Section 3.3.1 "Connection of RF Gateway", page 6 or Section 3.3.2 "Connection of wireless thermostat and electrical meter", page 8.

3.3.1 Connection of RF Gateway

Marking on cable	Colour of cable	Additional info on the cable
A	Yellow	Modbus connection +
B	Green	Modbus connection -
V	Brown	Power supply 12 VDC+
G	White	Power supply 0 VDC-

RF Gateway connection to ES MHB, ES 100L ST, ES 100L ST UK, ES 250L ST, ES 250L ST UK

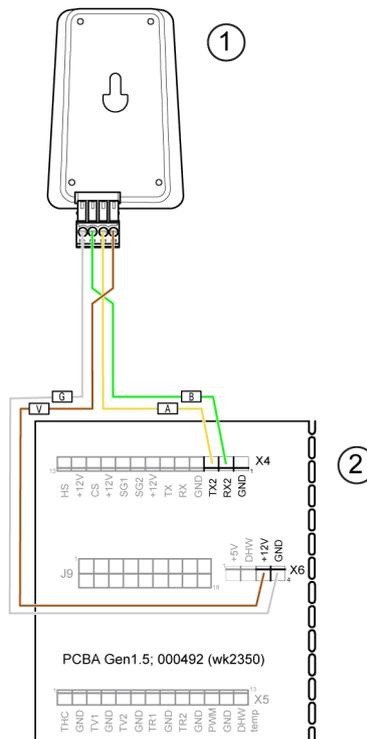


Figure 1: RF Gateway connection for ES MHB, ES 100L ST, ES 100L ST UK, ES 250L ST, and ES 250L ST UK

- 1 RF Gateway
- 2 Indoor unit, PCBA board connections, communication

RF Gateway	Indoor unit, PCBA board
Yellow (A)	TX2
Green (B)	RX2
Brown (V)	+12V
White (G)	GND

RF Gateway connection to ES MCB

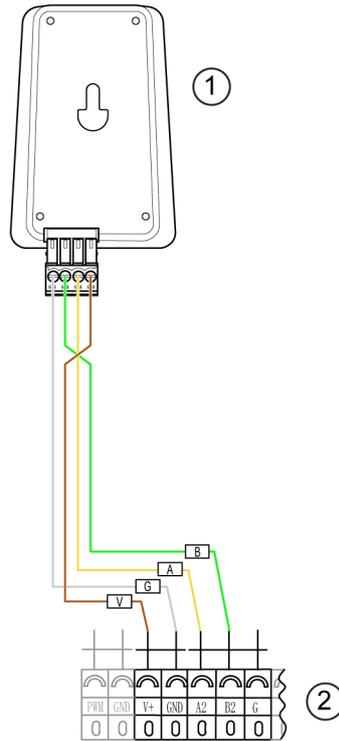


Figure 2: RF Gateway connection for ES MCB

1 RF Gateway

2 Indoor unit, terminal connections, communication

RF Gateway	Indoor unit, terminal connections
Yellow (A)	A2
Green (B)	B2
Brown (V)	V+
White (G)	GND

3.3.2 Connection of wireless thermostat and electrical meter

If both the wireless thermostat (with RF Gateway) and electrical meter are used, the connection points in the indoor unit are shared between the two devices.

RF Gateway and electrical meter EM 3P – connection for ES MHB, ES 100L ST, ES 100L ST UK, ES 250L ST, ES 250L ST UK

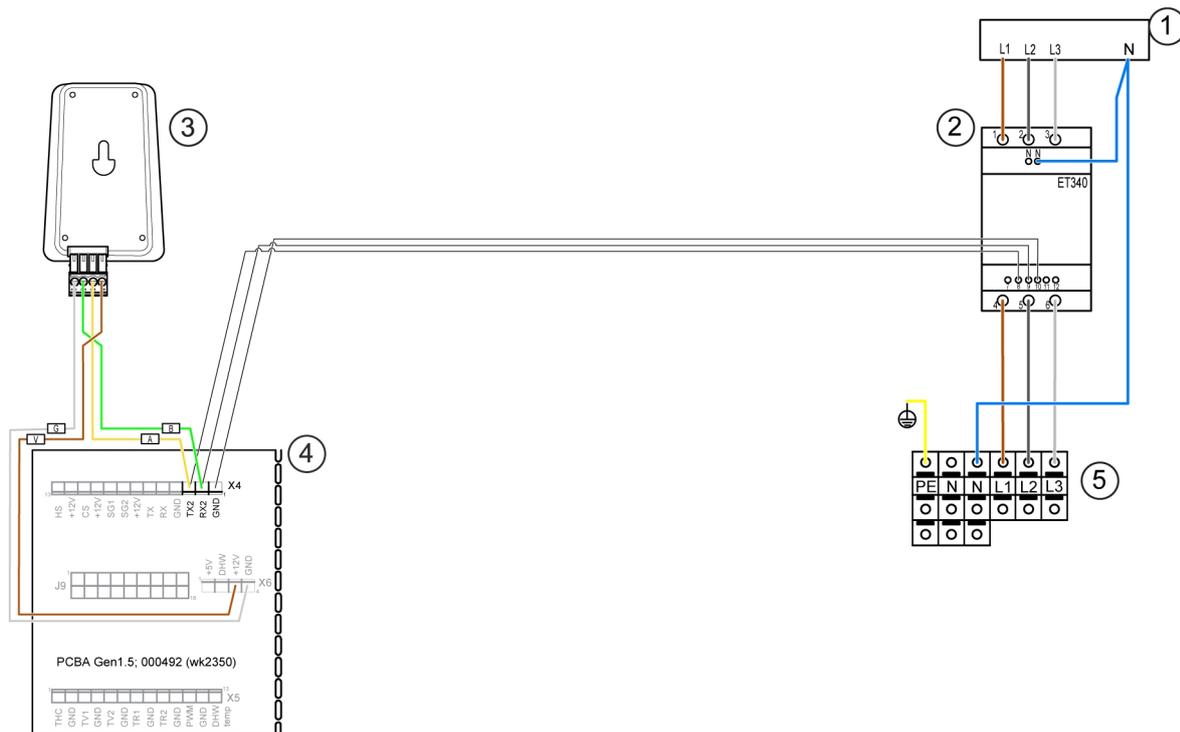


Figure 3: RF Gateway and EM 3P connection for ES MHB, ES 100L ST, ES 100L ST UK, ES 250L ST, ES 250L ST UK

- 1 Fuse box, power supply
- 2 Electrical meter, EM 3P
- 3 RF Gateway
- 4 Indoor unit, terminal PCBA board connections, communication
- 5 Indoor unit, main power supply terminals

RF Gateway	Indoor unit, PCBA board
Yellow (A)	TX2
Green (B)	RX2
Brown (V)	+12V
White (G)	GND

EM 3P	Indoor unit, PCBA board
8	TX2
9	RX2
10	GND

RF Gateway and electrical meter EM 3P – connection for ES MCB

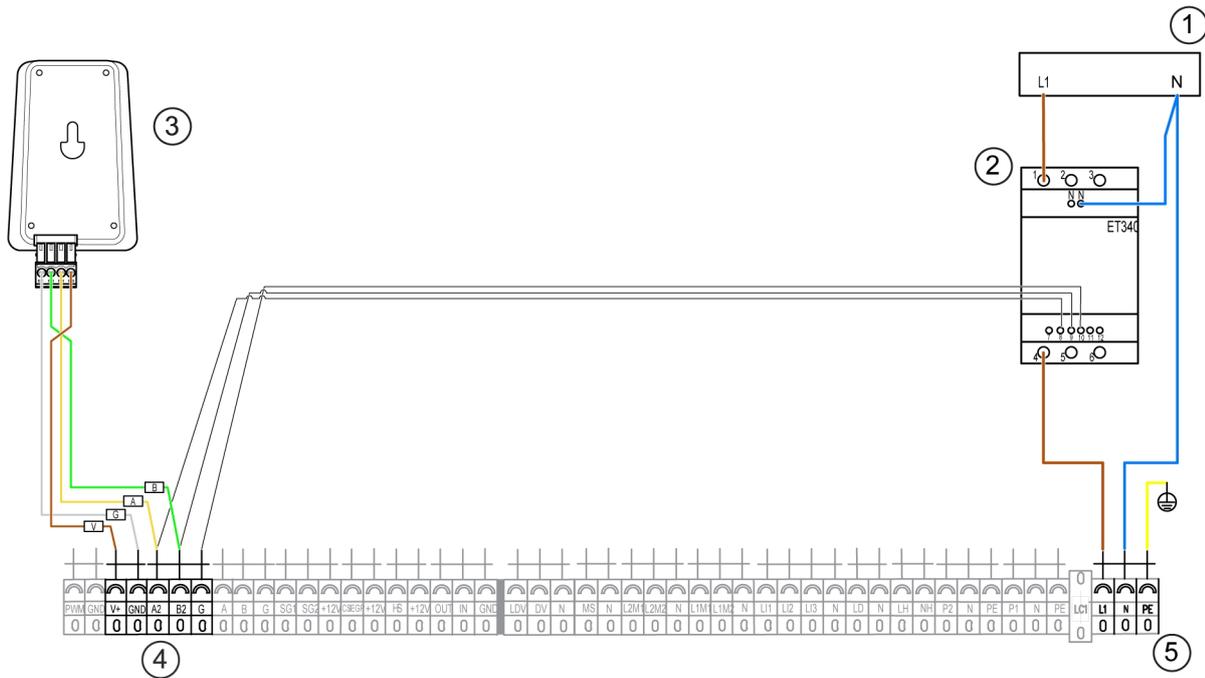


Figure 4: RF Gateway and EM 3P connection for ES MCB

- | | | | |
|---|-------------------------|---|--|
| 1 | Fuse box, power supply | 4 | Indoor unit, terminal connections, communication |
| 2 | Electrical meter, EM 3P | 5 | Indoor unit, main power supply terminals |
| 3 | RF Gateway | | |

RF Gateway

RF Gateway	Indoor unit, terminal connections
Yellow (A)	A2
Green (B)	B2
Brown (V)	V+
White (G)	GND

EM 3P

EM 3P	Indoor unit, terminal connections
8	A2
9	B2
10	G

RF Gateway and electrical meter EM 1P – connection for ES MCB

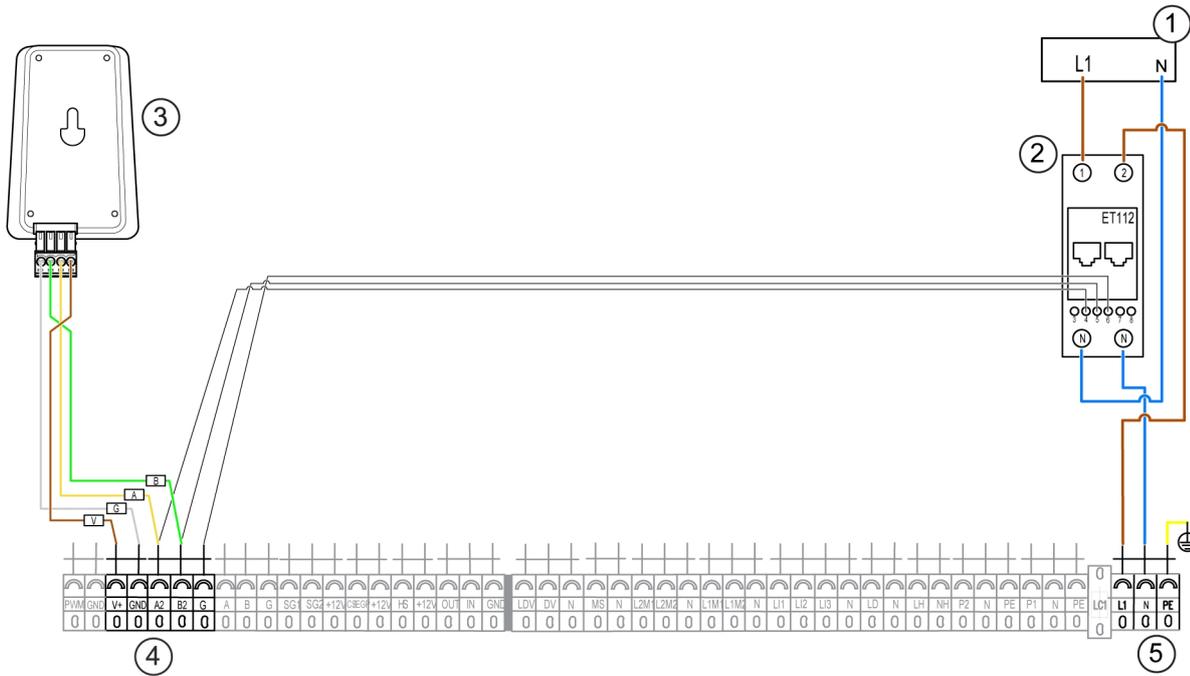


Figure 5: RF Gateway and EM 1P connection for ES MCB

- | | | | |
|---|-------------------------|---|--|
| 1 | Fuse box, power supply | 4 | Indoor unit, terminal connections, communication |
| 2 | Electrical meter, EM 1P | 5 | Indoor unit, main power supply terminals |
| 3 | RF Gateway | | |

RF Gateway

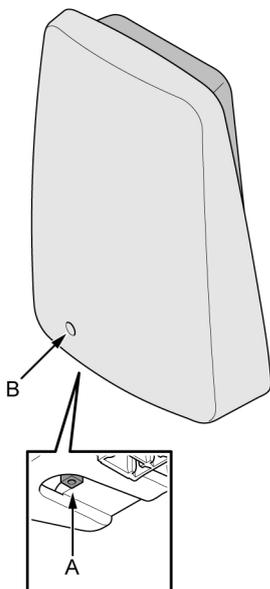
RF Gateway	Indoor unit, terminal connections
Yellow (A)	A2
Green (B)	B2
Brown (V)	V+
White (G)	GND

EM 1P

EM 1P	Indoor unit, terminal connections
4	A2
5	B2
6	G

3.4 Commissioning the wireless thermostat

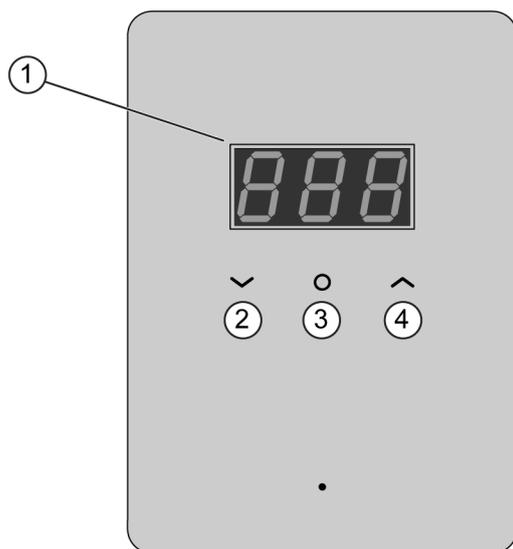
- 1 On the RF Gateway, press the button on the bottom (A) to set the RF Gateway to pairing mode.
The LED indicator (B) starts blinking.



- 2 On the wireless thermostat, press the center button.
Con will start blinking on the display.
- 3 Press the center button once more to start pairing.
Con will stop blinking and show steadily on the display.
- 4 When the wireless thermostat is connected to the RF Gateway, it will display the wireless thermostat ID, for example "**C1.1**".
- 5 Repeat the previous steps to connect any additional wireless thermostat units.
- 6 On the heat pump display, go to **Menu » Installer settings » Commissioning » Zones**. For each zone, go to the **Room temperature sensor** menu to select the corresponding thermostat unit ID, for example **Wireless thermostat C1.1** or **Wireless thermostat C1.2**.

4 User interface

The front of the wireless room thermostat has an LCD screen which displays menus and values with three characters or digits. Below, there are three buttons used for navigating the menu, selecting menu options, and adjusting values.



- 1 LCD screen
- 2 Down button

- 3 Center button
- 4 Up button

Menu navigation

- To enter a menu or confirm a selection, press the center button.
- To scroll through a list of menu options, press the up and down buttons.
- To adjust a value, press the up and down buttons.
- To exit a menu, select the **Esc** menu option.

Menu tree

The following menus are reached from the home screen:

Main menu	Submenu	Description
1dE		ID of the wireless thermostat
Br2		Brightness setting of the display (1 – 4)
bAt		Battery level indication (0 – 100%)
LOC		Child lock activation (ON/OFF)
AdU		Advanced settings
	SSt	Signal strength of the communication between wireless thermostat and RF gateway
	rES	Factory reset
	ESC	Exit to upper (Advanced) menu
ESC		Exit menu

4.1 View the current room temperature

- 1 Tap on the display to view the current room temperature.

4.2 Change the temperature setting

- 1 Press the up or down button to enter temperature set point mode.
The current room temperature set point will appear on the display and blinking.
- 2 Use the up or down button to adjust the temperature set point.
- 3 Confirm the set point with the center button.
Alternatively, leave the display without any further interaction. After time-out, the newly adjusted value will be automatically confirmed.

4.3 Activate or deactivate child lock

- 1 To activate child lock, go to **LOC** and select **ON**.
- 2 Confirm with the center button.



NOTE

When child lock is activated, it is only possible to view the current room temperature. All other actions will be locked out.

To deactivate the child lock, press the center button three times.

4.4 Factory reset

- 1 To do a factory reset, go to **Adv » Res** and select **ON**.
- 2 Confirm with the center button.



NOTE

Factory reset will unpair the wireless thermostat from the RF Gateway.

5 Troubleshooting

Error code	Reason	Action
E1	No communication with the RF Gateway	The RF Gateway is not within range, or is not powered.
E2	Internal room sensor broken	Replace the wireless thermostat.
bAt	Battery level low	Replace the batteries (AAA type, 2 pcs).

•EIS ENERGY SAVE

Sweden (HQ)
Energy Save Holding AB
Metallgatan 2-4, SE-441 32
Alingsås, Sweden

Norway
Energy Save AS
Kirkeveien 50, 1396 Hvalstad,
Norway

Slovenia
Energy Save Nordic D.O.O.
Ulica Heroja Nandeta 37, 2000
Maribor, Slovenia
www.energysave.se