



Give your customers
complete control

Baxi uSense 2 Wired Smart Thermostat **Installation guide**

BAXI |  uSense 2

Contents

- 1 Compatibility
- 2 In the box
- 3 Before you start
- 4 Installation
- 5 OpenTherm hot water control (combi only)
- 6 Outdoor sensor
- 7 Technical specifications

You can find more detailed instructions at www.baxi.co.uk

⚠ Warning: High Voltage wiring must only be installed and worked on by a suitably qualified person.

1. Compatibility

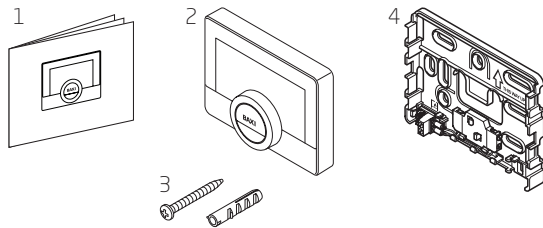
The Baxi uSense 2 Wired Smart Thermostat is compatible with all appliances using the 230 V switched live and also has OpenTherm and RUB capability.

A Gateway & Power Adapter Kit is only required for certain products in the Baxi range, see the table below.

<h2>Compatibility</h2>		
<p>The Baxi uSense 2 Smart Room Thermostat is compatible with</p> <ul style="list-style-type: none"> • All Baxi, Potterton & Main Combi boilers • Baxi Air Source Heat Pumps (ASHP). <p>An additional uSense 2 Gateway & Power Adapter Kit Accessory may also be required (see table below)</p>		
Range	Baxi uSense 2 Part Number : 7775937	uSense 2 Gateway & Power Adapter Kit (sold separately) Part Number : 7822453
Baxi 200 Combi 2 Ranges	✓	✗
Baxi 400 Combi 2 Ranges	✓	✗
Baxi 600 Combi 2 Ranges	✓	✗
Baxi 800 Combi 2 Ranges	✓	✗
Baxi Assure 500 Combi 2 Ranges	✓	✗
Main Eco Compact Ranges	✓	✓
All other Baxi, Potterton & Main Combi Ranges	✓	✓
Baxi Split ASHP (Heat Pump)	✓	✗
Baxi Assure Mono ASHP (Heat Pump)	✓	✓
Baxi HP40 Mono 2 AWHP (Heat Pump)	✓	✓
Baxi Assure HP50 Mono 2 AWHP (Heat Pump)	✓	✓

(i) Baxi uSense 2 is Boiler Plus Compliant when fitted via OpenTherm or RBUS connection.
(ii) For multiple zones a Baxi uSense 2, Gateway & Power Adapter Kit is required for each zone.
(iii) This control is NOT compatible with System or Heat Only Boilers.

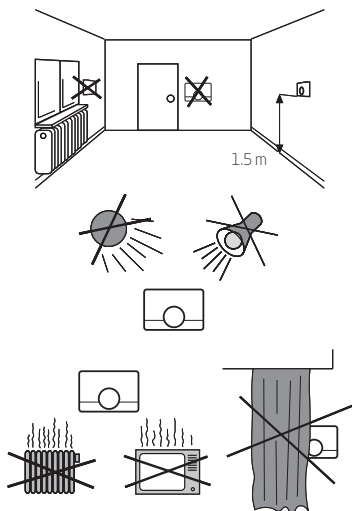
2. In the box



Room unit package:

- 1 User guide
- 2 Room unit
- 3 Screw and plug fixings
- 4 Mounting bracket

3. Before you start



⚠ Warning: High Voltage wiring must only be installed and worked on by a suitably qualified person.

Wear appropriate Personal Protection Equipment e.g. protective gloves, safety footwear etc.

Positioning the uSense 2:

The room unit must be positioned taking into account the following factors:

- On an internal wall
- Away from draughts
- 1.2-1.5 m from the floor
- Not behind doors, bookcases or other objects
- Not in direct sunlight
- In a room where the user spends most of their time
- Away from heat sources (fireplace, radiators, light, candles, etc.)
- The maximum cable length from the gateway to the room unit is 50 m

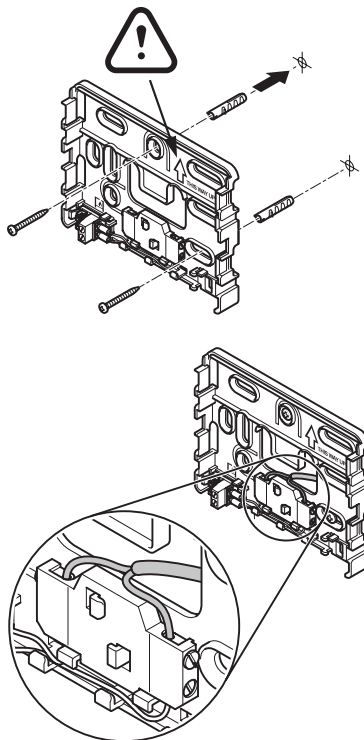
Prior to installation make sure to:

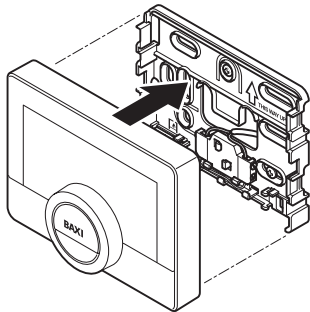
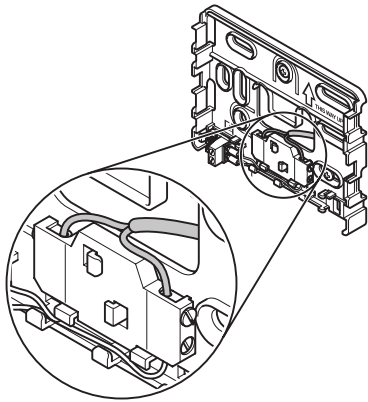
- 1. Isolate the power to the heating and control system and make safe (remove or lock off fuse)**
- 2. Check that the power has been isolated using suitable test equipment.**

4. Installation

1. Choose a suitable location for the uSense 2 thermostat (see Before you start section on page 5)
2. Remove existing thermostat (if applicable)
3. Fix the room unit backplate to the wall using the screws provided
4. Either use existing thermostat wires or run new wires from the gateway (there is no polarity - either wire can be connected to either position)
5. Trim the wires coming out of the wall, connect them into the connector block on the room unit backplate

continued opposite





6. Slacken the screws at the sides of the connectors and insert each wire into the top at either side of the connector, then re-tighten the screws
7. Make sure the wires are as flat as possible against the back plate so that they do not interfere with the controller when it is mounted in position
8. Press the room unit onto the backplate until it clicks into place
9. Connect the other end of the wires to the **R-BUS** or **OpenTherm** terminals in the boiler (or gateway if fitted). There is no polarity - either wire can be connected to either position
10. **⚠ The connections between the room unit and boiler or gateway are low voltage. 230 V will damage the room unit and gateway!**

5. OpenTherm hot water control

The uSense 2 room unit will override the hot water temperature controls on your appliance (OpenTherm only).

1. The room unit will automatically default the hot water temperature to 60 °C when connected by OpenTherm
2. The room unit will automatically default the heating flow temperature to 80 °C when connected by OpenTherm
3. These settings can be adjusted to your required comfort level using the uSense 2 room unit only (the appliance controls and App can't adjust these settings when the room unit is connected with OpenTherm).

6. Outdoor sensor

Connecting to an outdoor sensor

If an outdoor sensor weather compensator is connected in conjunction with the uSense 2 (OpenTherm installations only) you can **ONLY** adjust the heating curve on the uSense 2 App (you **CANNOT** adjust using the room unit or appliance controls).

1. Open the Baxi uSense 2 App
2. Click on the installer menu
3. Click on advance settings
4. Enter service code 0012 **Remember to re-enter this code to disable installer access when you finish adjusting the heating curve**
5. You will see a message 'Your access level has been updated'
6. Click OK
7. Click on heating curve
8. Change the curve to suit the requirements of the user in accordance with the recommendations of the sensor manufacturer
9. Do not adjust any other settings in the Advanced Feature menu, as they may affect the correct operation of the appliance
10. Either completely close the App or re-enter the code to cancel the access level so that your customer can't adjust important settings.

7. Technical specifications

uSense 2 room unit

Dimensions

Width x height x depth (maximum dimensions)	120 x 90 x 27 mm
---	------------------

Power supply

R-Bus connection voltage	24 V \pm 5%
--------------------------	---------------

Maximum power consumption	1.5 W
---------------------------	-------

Electrical connection

Maximum cable length for dedicated room unit R-Bus	50 m
--	------

Ambient conditions

Storage temperature	25 - 70 °C
---------------------	------------

Relative humidity	5 - 95 °C Condensation is not allowed
-------------------	---------------------------------------

Operating conditions	0 - 60 °C
----------------------	-----------

uSense 2 room unit

Technical data	
Room temperature measurement range	5 - 60 °C
Maximum temperature deviation at 20 °C	0,3 °C
Maximum room control overshoot after pre-heating	1 °C
Temperature variation	+/- 0,25 °C
Outside temperature	Refer to appliance documentation
Temperature control area	10 - 30 °C

Compliant with standards:

EMC: 108/2004/EC, EN 55022, 55014

Immunity: EN2-6-61000

EN2-6-61000 (EMC part 6.2 generic standards)

ETSI-EN 17-489 301 (electromagnetic compatibility and radio spectrum matters)

R&TTE Directive 5/1999/EC

EN 1-60950 (ITE - Safety - Part 1: general requirements)

Low voltage directive (95/2006/EC)


WEEE directive (96/2002/EC) (disposal requirements)

Drop test: IEC 32-2-60068

Protection classification: IP22

ErP Fiche Information	On modulating appliance	On modulating appliance, with outdoor sensor	On On/Off appliance
Class	V	VI	IV
Contribution to space heating energy efficiency	3%	4%	2%

For tech support

 0344 871 1545

Opening hours

Monday - Friday, 8.00am-6.00pm

Weekends and Bank Holidays, 8.30am-2.00pm

Please note calls may be recorded for training and monitoring purposes



baxi.co.uk



Baxi

Brooks House,

Coventry Road,

Warwick. CV34 4LL

Warranty registration

For the parts warranty to be activated and maintained, please register the uSense 2 Smart Thermostat at: baxiworks.co.uk

Please note: if you do not register the warranty, a basic 12 month warranty will apply.

For full terms and conditions visit baxi.co.uk/usense/terms

Please ensure the uSense 2 is installed in accordance with these installation instructions and that you adhere to the Building Regulations.

e&oe

All descriptions and illustrations provided in this document have been carefully prepared but we reserve the right to make changes and improvements in our products which may affect the accuracy of the information contained in this booklet. All goods are sold subject to our standard Conditions of Sale which are available on request.

7840908-01



UK
CA



BAXI
Make it easy