

Wireless Outdoor Air Reset Adaptor - PN: 105121-01

Instruction Sheet

APPLICATION

The Wireless Outdoor Air Reset Adaptor, when connected to the Outdoor Reset IQ Option Card or Sage Control enables efficiency control functionality such as Outdoor Temperature Reset, Boost and Warm Weather Shutdown and freeze protection functions to generate operational savings up to 15%.

This wireless adaptor reduces boiler installation time by eliminating the need to run wires to the outdoor sensor mounted on an outside wall.

This product may be applied to gas or oil fired hot water boilers equipped with the IQ Control System and the Outdoor Reset IQ Option Card, p/n 105648-01 or high efficiency gas boilers with Sage 2.1 or Sage2.2 Controllers. This product is compatible with the IQ Zone Control Circulator Panel (P/N 104590-01).

GENERAL

The Wireless Outdoor Air Reset Adaptor includes a Wireless Receiver Module and a Wireless Outdoor Sensor. The Wireless Outdoor Sensor communicates with the Wireless Receiver Module using a wireless communication network. It is only necessary to wire the Wireless Receiver Module "1,2,3" terminals to the boiler control EnviraCOM "1,2,3" terminals. The completely linked Wireless Outdoor Air Reset Adaptor provides the outdoor temperature signal used by the Outdoor Reset IQ Option Card, Sage2.1 or Sage2.2 Controllers and IQ Zone Panel.

SPECIFICATIONS

Wireless Module

Input Ratings: 24 VAC, 60 hz, (supplied from boiler wiring harness)

Operating Temperature: -30 °F to +150 °F (-34 °C to +66 °C).

Operating Humidity: 0 to 95% RH, non-condensing.



Wireless Receiver Module



Wireless Outdoor Sensor

SPECIFICATIONS (continued)

Wireless Outdoor Sensor

Input Ratings: Battery;
Includes 2 AA Lithium batteries; Up to 5 year battery life; 2 month low battery warning;

Battery warning display: Outdoor Reset IQ Option Card, p/n 105648-01 or Sage2.2 Controllers.

Sensor Element: Thermistor;

Operating Temperature: -40 F to +140F

Operating Humidity: 0 to 100% RH, condensing



INSTALLATION / WIRING

- When Installing this Product....**
1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition. Save instructions for future use.
 2. Installer must be a trained, experienced service technician.
 3. After installation is complete, check out product operation as provided in these instructions.

WARNING
 Installation must be performed in accordance with all national and local codes and ordinances.

Caution
Electrical Hazard
 Disconnect power before beginning installation and wiring. Failure to do so may cause electrical shock or equipment damage. Wiring must comply with applicable codes, ordinances and regulations.

Caution
 Do not mount the **Wireless Receiver Module** on a metallic surface as this can interfere with reception.

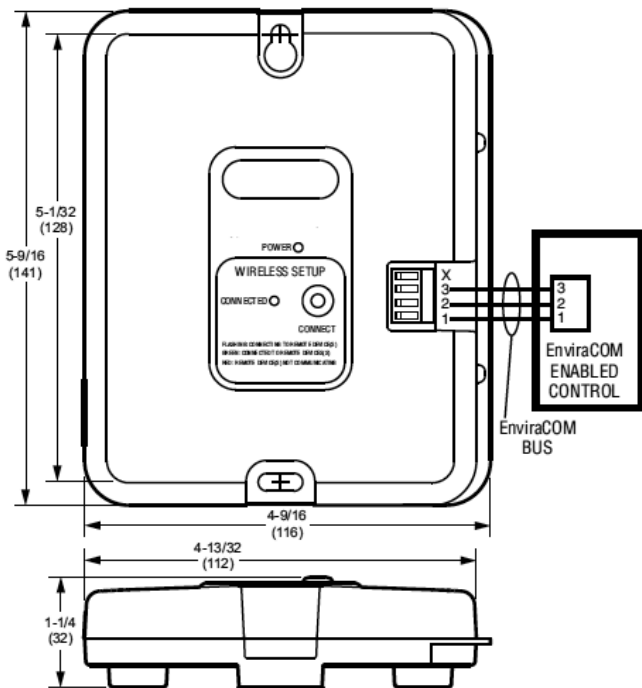


Figure 1, Wireless Receiver Module Wiring Diagram

Wireless Module

1. Turn off all power.
2. The **Wireless Receiver Module** can be wall mounted in any orientation desired or dictated by the surroundings. Precise leveling of the product is not required.
3. The holes are sized for the #6 sheet metal screws (included).
4. Wire the 1, 2, and 3 terminals on the Wireless Receiver Module to the 1, 2, and 3 terminals on the EnviraCOM™, IQ Boiler Control, IQ Option Panel, Intelligent Hydronic Control, Sage Control, or IQ Zone Panel or anywhere on the bus where access to the EnviraCOM bus is available and convenient. See Figure 1.
5. Turn Power On.
6. Bind the Wireless Outdoor Sensor to the Wireless Module. See “Sensor Binding” on next page.

Wireless Outdoor Sensor

7. Before installing the Wireless Outdoor Sensor, make sure 2 AA (lithium preferred) batteries are inserted. See Figure 2.

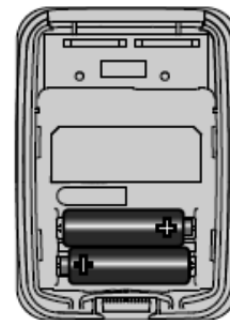


Figure 2. Battery Installation

8. Mount the sensor bracket on a vertical wall at least 6 inches below any overhang. Choose a location protected from direct sunlight. See Figure 3.

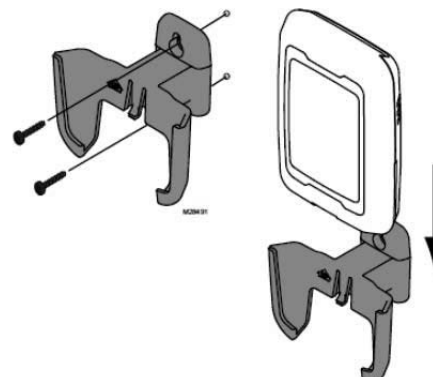


Figure 3 Mounting Sensor Bracket and Sensor

9. Mount the sensor bracket in the selected spot.
10. Once the sensor is bound to the Wireless Receiver Module (see Sensor Binding below), place the sensor in the bracket facing away from the wall.

Sensor Binding

Remove the cover from the Outdoor Sensor to expose the CONNECT button.

- Perform following three actions:

1. Press and immediately release the Wireless Receiver Module CONNECT button.

CONNECTED LED will turn red and then flashes green (1 blink/second).

2. Press and immediately release the Outdoor Sensor CONNECT button.

CONNECTED LED will start to blink fast (4 blinks/ second), then CONNECTED LED will start to blink slower (1 blinks/ second).

3. Press and immediately release the Wireless Receiver Module CONNECT button.

Bonding process is complete when CONNECTED LED is steady green.

Sensor Binding Notes:

- If flashing doesn't speed up to 4 blinks/second, the sensor and the Wireless Receiver Module have not bound. Repeat step 1.
- If binding is not successful during a 15 minutes period, the Wireless Receiver Module will time out. Repeat entire process.
- Make sure the Wireless Receiver Module and the sensor are positioned at least 3 feet apart during the binding process.
- Pressing the CONNECT button on either the Wireless Receiver Module or Wireless Sensor for 15 seconds or more will result in the unbinding of the wireless sensor.
- If the Wireless Receiver Module is bound to a sensor but the sensor signal is lost, the CONNECTED LED will be ON (red).
- If the Wireless Receiver Module is not successfully bound to Outdoor Sensor within

five minutes of power up, the Wireless Receiver Module will generate a missing sensor alarm.
 Wireless Receiver Module LED Summary:

	Wireless Module	
	Power LED	Connected LED
Powered, not bonded	On	Off
After Wireless Receiver Module Connect Button Pressed	On	Flashes Green (1 blink/second)
After Outdoor Sensor Connect Button Pressed	On	Flashes Green (4 blink/second)
Wireless Receiver Module has found the Outdoor Sensor, Press the Wireless Receiver Module Connect button to Bind	On	Flashes Green (1 blink/second)
Sensor and Module Bound	On	On Green
Bonding was complete but sensor has lost communication	On	On Red

Checkout

Once installation is complete perform the following tests to ensure that the Outdoor Air Temperature is received by the boiler control:

When installed with the Outdoor Air Reset IQ Option Card:

1. Use the IQ Option Panel Display as shown in Figure 4.

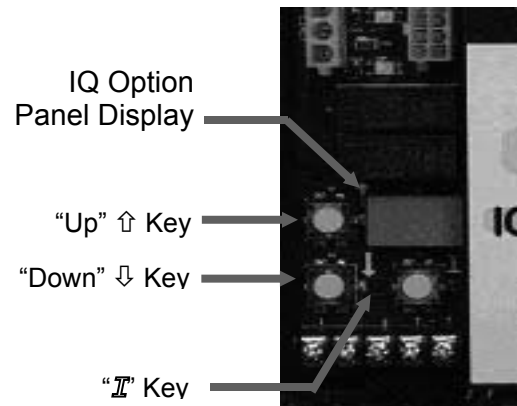


Figure 4 IQ Option Panel User Interface

2. Press the “**I**” key. The display will go from “**OXII**” to **X1**, **X2** and **X3** (when cards are installed) to provide access to each of the card slots and the card plugged into that slot.
3. Press either the Up \uparrow or Down \downarrow keys when the display shows the card number where the reset card is installed. For example, if the reset card is installed in slot one, press the Up \uparrow or Down \downarrow keys when “**X1**” is displayed.
4. Press and release the “**I**” button until **OT** (outdoor temperature) is displayed. When successfully installed the outdoor air temperature will be displayed. If “**---**” is displayed review the installation.

When installed with the Sage2.1 or Sage2.2 Controls use the LCD Touch Screen Display to perform the following steps (refer to the Boilers Operation & Instruction manual for display navigation information):

1. Select “Adjust” from Home screen, Select “Adjust”, Select “Login”, Select “00000” and enter password 86, Select “Save” then Select “Adjust”;
2. Select “System Setup” Button;
3. Select “right arrow” \blacktriangleright twice;
4. Select Outdoor Sensor Source “Wireless”;
5. Select Close Symbol to exit menu;
6. Select “-More-“ Button;
7. Select “Outdoor Reset” Button;
8. Select “Enable” Button;
9. Select Close \boxtimes Button twice;
10. Select “Detail” Menu;
11. Select “Outdoor Reset” and ensure outdoor temperature is displayed.
12. If outdoor temperature is not displayed check component installation and wiring.

TROUBLE SHOOTING

Errors are displayed for weak battery or failed outdoor Sensor. The IQ Option Panel, IQ LCD Display and a connected EnviraCOM enabled thermostat shows the following error codes:

IQ Systems

IQ Display		Status	Boiler / Control Action(s)
Epp	53	Outdoor Temperature Sensor Failure	Outdoor Sensor failure or interface failure (open or short connection or increased connection resistance) or replace batteries.
Epp	156	Outdoor Battery Low	Batteries are low and need to be replaced.

The Sage2.2 Control shows all the below listed error codes. However, the Sage 2.1 only shows the Outdoor Temperature Sensor Failure alarm.

Sage2.1 and Sage 2.2 systems

Display		Status	Boiler / Control Action(s)
Epp	50	Duplicate Outdoor Temp Present	Only one outdoor sensor (wired/wireless) is allowed. Ensure no other outdoor sensors is connected.
Epp	53	Outdoor Temperature Sensor Failure	Outdoor Sensor failure or interface failure (open or short connection or increased connection resistance) or replace batteries.
Epp	156	Outdoor Battery Low	Batteries are low and need to be replaced.

Both Outdoor Reset IQ Option Card, p/n 105648-01 and the Sage2.2 Control restore the control to the Central Heat Setpoint upon a failure of the outdoor sensor. For example, in the event of an outdoor Temperature Sensor Failure when outdoor temperature is warm, the setpoint will change from the reset setpoint of 130 F to 180 F Central Heat setpoint. This ensures adequate heat to the home. Earlier models of the controls do not have this feature.

ORDERING INFORMATION

Part Number	Description
p/n – 105121-01	Wireless Outdoor Air Reset Adaptor, includes Wireless Module, Wireless sensor, mounting screws, mounting bracket and Instructions.

Regulatory information

FCC Compliance Statement (Part 15.19) (USA only)

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

FCC Warning (Part 15.21) (USA only)

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Interference Statement (Part 15.105 (b)) (USA only)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Wireless adapter

To comply with FCC and Industry Canada RF exposure limits for general population/ uncontrolled exposure, the antenna(s) used for these transmitters must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Section 7.1.5 of RSS-GEN

Operation is subject to the following two conditions:

1. this device may not cause interference, and
2. this device must accept any interference, including interference that may cause undesired operation of the device.

Information sur la réglementation

Adaptateur sans fil

Pour être conformes aux limites d'exposition aux radiofréquences établies par la FCC et Industrie Canada pour le grand public/l'exposition non contrôlée, la ou les antennes employées par le transmetteur doivent être installées sur une structure extérieure permanente à au moins 20 cm de distance de toute personne et ne peuvent être situées au même endroit qu'une autre antenne ou un autre transmetteur ou fonctionner conjointement avec une autre antenne ou un autre transmetteur.

Industrie Canada Alinéa 7.1.5 de CNR-GEN

Le fonctionnement de ce système est assorti aux deux conditions suivantes :

1. L'appareil ne peut causer d'interférences nuisibles, et
2. L'appareil doit accepter les interférences reçues, y compris celles qui pourraient nuire à son fonctionnement.



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