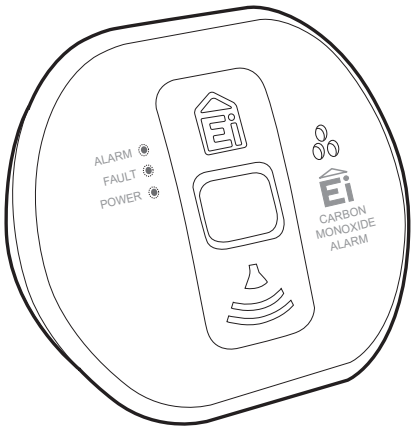
Electronics®
fire + gas detection



EiA200 Series
Z-Wave CO Alarms

Quick Start

This device is a Z-Wave sensor reporting Carbon Monoxide Danger. Pressing the 'Inclusion Button' for one second adds (includes) and removes (excludes) the device from/to the Z-Wave network.

Please refer to the chapters below for detailed information about all aspects of the product.

Model & Description:

Alarm Model	Description
EiA207RFZ	Z-Wave Carbon Monoxide Alarm
EiA207DRFZ	Z-Wave Carbon Monoxide Alarm with Display

Product description

This product combines a certified Carbon Monoxide Alarm with a plug-in Z-Wave module to form a wirelessly reporting Carbon Monoxide Alarm. This enables the Alarm to be wirelessly linked to a third party controller. When any of the linked products are triggered by Carbon Monoxide the Alarm will transmit a message to the Main controller. The Carbon Monoxide Alarm is certified to UL2034 single or multiple station Carbon Monoxide Alarm is also Z-Wave alliance and FCC certified.

This premium quality Carbon Monoxide Alarm is equipped with a large test button, which is conveniently accessible even when mounted on the ceiling. Three colored LEDs on the device indicate Alarm, Fault and Power indicator.

The device is a secure Z-Wave Plus device and can be used in a wireless Z-Wave network. It supports secure communication only when the central controller also supports secure communication. Even if included securely the device is able to communicate unsecured with devices included unsecure using the association groups 2 and 3.

Quick Installation Guidelines

Please refer to the installation guide of the Carbon Monoxide Alarm for information about how and where the Carbon Monoxide Alarm should be installed. Please note that the Carbon Monoxide Alarm will also work stand-alone even if the Z-Wave network is not present.

- The first step is to insert the 2x AAA batteries provided (see Figure 1), then fix the mounting base in the desired location as per the installation guide for Carbon Monoxide Alarms.
- Include the Sensor into your existing Z-Wave based Smart Home Network using the 'Inclusion button' (see Figure 2). The green LED will blink briefly.
- Place the Alarm on the mounting base and turn clockwise. Now the Alarm is armed.

Battery Replacement

See EiA200 Series Installation guide for battery replacement instructions.

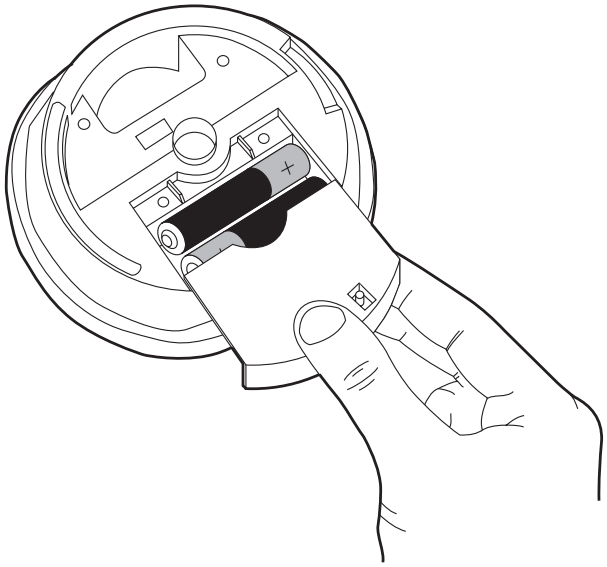


Figure 1

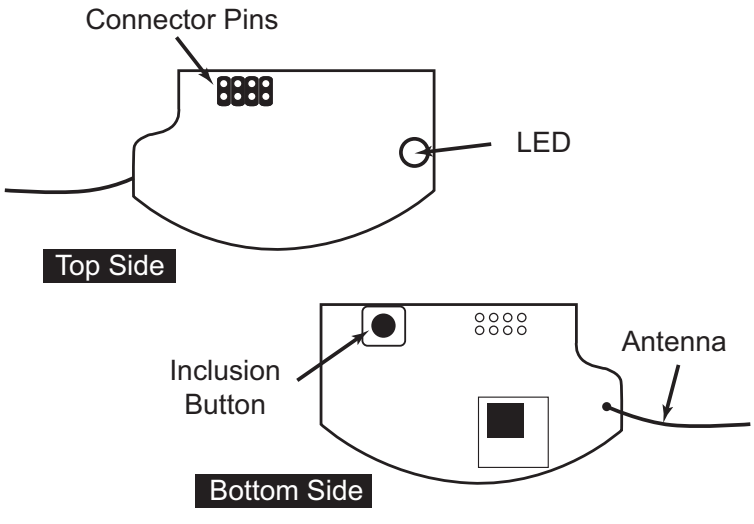


Figure 2

Module Removal & Installation

The Z-Wave module is pre-fitted. To remove the module, carefully use the pull tag to remove the module from the Alarm. To refit the module plug it into the base of the Alarm while being careful to align the connector pins and insert the flexible antenna into the antenna hole (See Fig 3). N.B. Ensure that the module is fully inserted.

The Z-Wave RF module will be pre-installed by the manufacturer. If the Z-Wave module is removed and fitted to another host Alarm, the label displaying the FCC ID: A5FEiA200ZW & ISED ID: 22380EiA200ZW must be placed on the new host Alarm, visible when installed (see Fig 4).

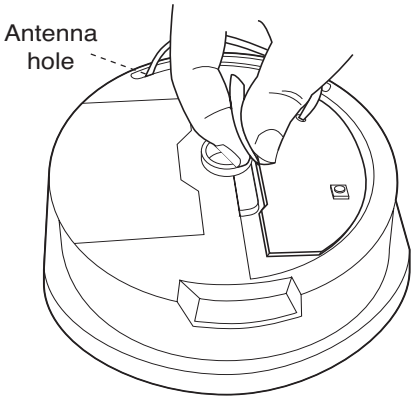


Figure 3

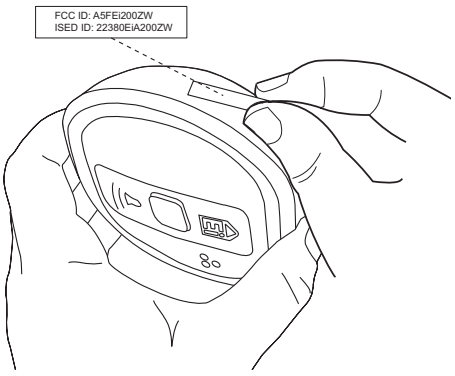


Figure 4

Adding to a Network (Inclusion)

Do not attempt to add your Z-Wave alarm unless you are familar with the operation of your Z-Wave controller.

1. Read the instruction for your Z-Wave controller regarding adding new devices.
2. Initiate the inclusion function within your Z-Wave Controller.

Pressing the button 'Inclusion Button' for one second includes the device with Security. (See fig 2) The green LED will blink briefly.

3. If the button is pressed for at least 2.5 seconds the inclusion will be done without the (Security Command Class). A single click on the button will exclude the device. *Note: some primary controllers may require you to hold the button for longer.
4. If the inclusion is not successful , restart from step 1
5. Press the test button on the Alarm to check that the controller receives a notification.
6. Once the Alarm is included in the Z-Wave system you can define associations groups via the Z-Wave controller. Please refer to your controller manual for further details.

Removing from the Network (exclusion)

Single click the Button to start the removal process. The LED will blink a couple of times. *Note a device must be already added to the network.

Check-In Period:

The frequency of the check-in period is configurable by the controller, the more frequent the check-in period the shorter the Z-Wave module battery life. The following is an indication of typical battery life based on the check -in period.

6 hours check-in = 6 years

4 hours check-in = 4 years

1 hour check-in = 3 years

Operating the device

There is no defined level of Carbon monoxide that will result in an alarm. The danger of CO is a result of the total level of CO in the air plus the duration of exposure. A Z-Wave alarm will be sent out when one of the following conditions where met:

• CO level above 50 ppm for a duration of 60-90 minutes

• CO level above 110 ppm for a duration of 10-40 minutes

• CO level above 250 ppm for a duration of 2 minutes

The alarm will be sent to the controller plus any device listed in the association group 2.

Note: *All communication of the wireless module is performed with application level security if the device was included securely and all communication partners support secure communication as well. In case a non-secure device is associated for switching on a CO Alarm, the CO Alarm will detect this and change its communication style with this very device to non-secure. This process happens one time and will take about 20 seconds. This delay will happen on first communication only.*

Factory reset

To do a factory reset press the inclusion button for at least 10 seconds. After 5 Seconds the LED will start to blink and briefly stop 5 seconds later. This procedure should only be used when the primary controller is inoperable.

Alarm Messages

The device will issue the following (unsolicited) alarm messages:

- **CO Detected** (when alarm levels of CO are detected or when the test button is pressed)
- **Low Battery Alarm** (when the battery goes low)
- **Tamper Detected** (when the CO Alarm head is removed from the base)
- **Fault** (issued, when the Alarm Head detects a Sensor Fault or EOL)

Node Information Frame

The Node Information Frame is the business card of a Z-Wave device. It contains information about the device type and the technical capabilities. The inclusion and exclusion of the device is confirmed by sending out a Node Information Frame. Beside this it may be needed for certain network operations to send out a Node Information Frame.

A simple click on the 'Inclusion Button' sends a NIF.

Associations

The relationship between one device controlling another device is called association. In order to control a different device, the controlling device needs to maintain a list of devices that will receive controlling commands. These lists are called association groups and they are always related to certain events (e.g. button pressed, sensor triggers, ...). In case the event happens all devices stored in the respective association group will receive a common wireless command. Please refer to your Z-Wave controller manual for further instructions.

Association Groups:

1	Lifeline (max. nodes in group: 10)
2	Alarm Reports (max. nodes in group: 10)
3	Switching Command when Alarm (max. nodes in group: 10)

Configuration Parameters

Z-Wave products are supposed to work out of the box after inclusion. As this is a life safety device we strongly recommend that you don't change the configuration parameters as this may effect the performance of the product.

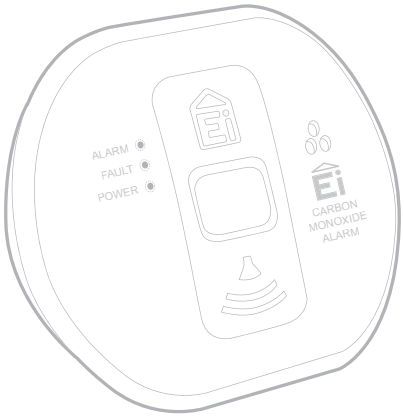
Limitations of the Z-Wave System

1. Alarms are not wirelessly interlinked to each other.
2. Only the initiating Alarms will sound.
3. The Z-Wave protocol is not a life safety protocol and should not be relied upon for life safety.
4. If your internet connection is lost, communication from your 3rd party controller (i.e. to cloud or mobile devices) may not be possible. Your Alarm will still continue to operate as a stand alone Alarm and does not rely on an internet connection to do so.

Command Classes

Supported Command Classes

- Basic (version 1)
- Binary Sensor (version 2)
- Association Group Information (version 1)
- Device Reset Locally (version 1)
- Z-Wave Plus Information (version 2)
- Configuration (version 1)
- Alarm (version 5)
- Manufacturer Specific (version 2)
- Powerlevel (version 1)
- Battery (version 1)
- Association (version 2)
- Version (version 2)
- Wake-up (version 2)



Controlled Command Classes

- Basic (version 1)

Z-Wave Technical Data

Wireless Module Battery type	Powered from Alarm Battery
Frequency	@ 908.42 MHz , FCC part 15
Wireless Range	up to 100m outdoor, 40m in buildings
Explorer Frame Support	Yes
SDK	6.51.6
Device Network Role	Sleeping Reporting Slave (SRS)
Device Type	Sensor
Routing	No
FLiRs	No

FCC

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.

ISED

This device complies with ISED's license-exempt RSSs. 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.

Please return to:
Customer Service
Ei Electronics US, Inc
2 Tunxis Road, Suite 209
Tariffville, Connecticut 0608
web: www.ei-electronics.com

P/N B18821 Rev2