

Installation Manual & Users Guide

SPECIFICATIONS

Frequency: 908.42MHz

Battery: One 3Vdc lithium CR123A (1550 mAh)

Battery life: 5 years

Detection distance: 6 in max

Operating Temperature: 32°-120°F (0°-49°C)

Operating Humidity: 5-95% RH non condensing

Compatible with Z-Wave+ controllers

Supervisory signal interval: 64 min(approx.)

Maximum current draw: 30mA during transmission

OPERATION

The FireFighter™ sensor is designed to listen to the alarm sounder of any smoke detector. Once confirmed as an alarm, it will transmit a notification to the z-wave controller which if connected to a central monitoring station, will dispatch the fire department.

WARNING: This audio detector is intended only for use with smoke detectors but it does not detect the presence of smoke, heat, or fire directly.

MOUNTING (see IMAGE: 2 & 3)

Included with this device is a mounting bracket, hardware and double sided tape. To ensure proper operation ensure the side of the device with the small holes is directly facing the sounder holes on the smoke detector. Secure the mounting bracket to the wall or ceiling using the two mounting screws and double sided tape provided, then secure the audio detector to the mounting bracket using the small screw provided. **The FireFighter™ must be mounted within 6 inches of the detector for optimal operation.**

WARNING: Non-interconnected smoke detectors require an audio detector by each smoke detector sounder.

This equipment should be installed in accordance with Chapter 2 of the National Fire Alarm Code, ANSI/NFPA 72, (National Fire Protection Association, Batterymarch Park, Quincy, MA 02269). Printed information describing proper installation, operation, testing, maintenance, evacuation planning, and repair service is to be provided with this equipment. Warning: Owner's instruction notice: 'Not to be removed by anyone except occupant'.

Adding Sensor

- A) Be sure that the Z-Wave Controller you are using is compatible with the FireFighter™.
- B) Either mount or move the sensor as close as possible to the place in the building where the sensor is to be mounted in order that the new Z-Wave node is added to the correct place in the mesh network routing tables.
- C) To add the sensor to an existing Z-Wave network, follow the directions to put your Z-Wave Controller into add (inclusion) mode. The FireFighter™ enters add and remove (inclusion/exclusion) mode on pressing the learn button for 1 second which is located on the PCB between the LED and the tamper switch. If the LED starts blinking continuously, the sensor has no node ID and was not successfully added, so start step C over again.
- D) If after 5 seconds the LED is not blinking, look on the Z-Wave controller's interface for feedback on whether the sensor was added successfully. If you do not see any feedback that the sensor was added, follow directions for removing the sensor from a Z-Wave network, and then try adding the sensor again. If you are still having problems, you may need to add additional Z-Wave listening devices in-between the controller and the sensor.

Removing Sensor

- A) Any sensor can be removed from any Z-Wave network with any Z-Wave controller. Follow the directions to put your Z-Wave Controller into Z-Wave exclusion mode.
- B) Press the learn button located near the LED and Tamper switch. If successfully removed from the Z-wave network, the sensor's LED should blink continuously if successful.

Factory Default

The FireFighter™ can be restored back to factory default settings which will remove its Z-Wave node ID from the sensor (but not the controller) with the following steps.

- A) Put the battery into the sensor.
- B) Do not press the tamper switch.
- C) Hold the learn button down for 10 seconds until the LED turns RED.
- D) Release the learn button and wait for the sensor's green LED to "breathe" on and off continuously. The sensor is now ready to be added to a Z-Wave network, and all settings have been restored.

TESTING (see IMAGE: 1)

To test the RF transmission from the mounted position you can either generate a tamper by removing the cover. This will send a signal to the control panel. To test the audio detection, press and hold the smoke detector's test button. Ensure the FireFighter™ cover is on and that you wear hearing protection.

NOTE: This system must be checked by a qualified technician at least once every three (3) years. Please test the unit once per week to ensure proper functionality.

Co Alarm Detection

In addition to Smoke Alarm detection, the FireFighter™ can detect the presence of a carbon monoxide alarm. By default, the sensor is configured to not be guaranteed to detect a CO alarm, but can be configured to more reliably catch a CO alarm in exchange for halving the battery life. This mode is activated or disabled upon powerup by holding both the tamper switch and learn button while inserting the battery. The LED on power up blinks red and green to indicate whether or not more reliable CO alarm detection is activated. The current mode is written to non-volatile memory, and will therefore persist on replacing the battery.

RED + GREEN = CO not reliably detected, and battery will last twice as long.

RED + RED + GREEN = CO is more reliably detected, and battery will last half as long.

LED

The Firefighter™ is equipped with a multi-color LED. When a valid audio signal is heard the LED will turn yellow and flash in sequence to the smoke detector sounder. When the Firefighter™ has determined the audio signal heard is a valid alarm, the LED will turn red to indicate it has transmitted to the panel. It will also turn red when the case is opened to indicate a tamper transmission to the control panel. On power up the LED will also flash red then green as part of its power up cycle.

Insert Battery = One RED blink, then one GREEN blink

In frequency sound detected = Flash YELLOW for the duration of that sound

Fire Alarm detected = Solid RED for 3 seconds, then blink RED when tone detected

Tamper = Solid RED until tamper condition removed

Learn button pressed = Solid GREEN for 3 seconds

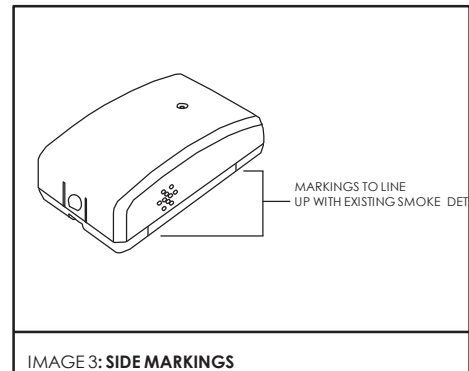
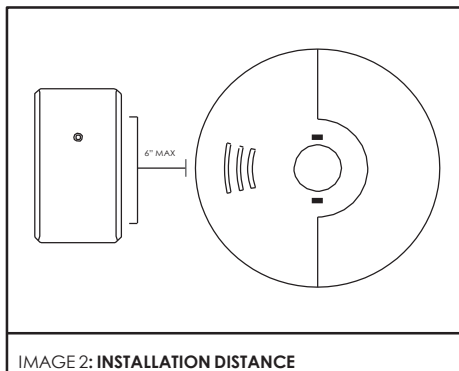
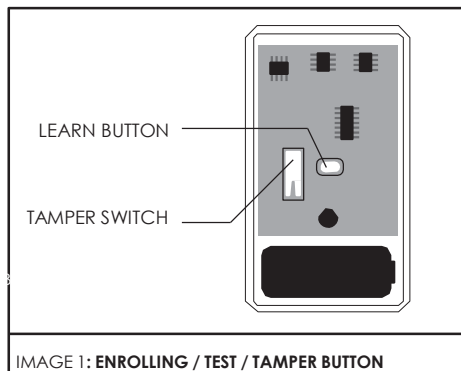
REPLACING THE BATTERY

When the battery is low a low battery notification will be sent to the life line nodes. To replace the battery:

1. Remove the top cover to reveal the battery. This will send a tamper signal to the lifeline nodes.
2. Replace with a Panasonic CR123A battery ensuring the + side of the battery faces as indicated on the device.
3. Re-attach the cover, you should hear a click when the cover engages properly.

WARNING: While the audio detector monitors its own battery, it does not monitor the battery in the smoke detectors. Batteries should be changed as per the original smoke detector manufacturer's instructions. Always test

the audio detector and smoke alarms after battery installation to confirm proper operation



Z-Wave Specific Information

Z-Wave is a wireless mesh network and data protocol that allows devices from many different manufacturers to interoperate. This device implements Z-Wave+ functionality, Network Wide Inclusion, and Explorer frames. This device is asleep most of the time but can respond to queries on a Wake Up Notification; however for test purposes, the device will stay awake while tampered for testing Z-Wave command class functionality. The following information is intended for software engineers working on Z-Wave controllers and home automation enthusiasts to integrate the Z-Wave FireFighter™ into their system.

Device Classes	Generic Device Class	GENERIC_TYPE_SENSOR_NOTIFICATION
	Specific Device Class	SPECIFIC_TYPE_NOTIFICATION_SENSOR
Command Classes	COMMAND_CLASS_ZWAVEPLUS_INFO	v2
	COMMAND_CLASS_VERSION	v2
	COMMAND_CLASS_MANUFACTURER_SPECIFIC	v2
	COMMAND_CLASS_DEVICE_RESET_LOCALLY	v1
	COMMAND_CLASS_POWERLEVEL	v1
	COMMAND_CLASS_BATTERY	v1
	COMMAND_CLASS_SENSOR_MULTILEVEL	v7
	COMMAND_CLASS_NOTIFICATION_V5	v5
	COMMAND_CLASS_ASSOCIATION	v2
	COMMAND_CLASS_ASSOCIATION_GRP_INFO	v1
	COMMAND_CLASS_WAKE_UP	v2
COMMAND_CLASS_FIRMWARE_UPDATE_MD	v2	
Manufacturer ID	MFG_ID_ECOLINK (0x014A)	
Product Type	0x05	
Product ID	0x0F	

Z-Wave Command Class Notification

These notifications are sent unsolicited to the lifeline Association group.

Notification Type	Event	Cause
Smoke Alarm (0x01)	Smoke Detected, Unknown Location (0x02)	Smoke Alarm Sounding
	Event Inactive (0x00)	Smoke Alarm Silent
CO Alarm (0x02)	Carbon Monoxide Detected, Unknown Location (0x02)	CO Alarm Sounding
	Event Inactive (0x00)	CO Alarm Silent
Home Security (0x07)	Tampering, Product Cover Removed (0x03)	Case Tampered
	Event Inactive (0x00)	Case Restored to Closed Position
Power Management (0x08)	Replace Battery Soon (0x0A)	Battery is Getting Low
	Replace Battery Now (0x0B)	Battery Needs Replacing

Z-Wave Command Class Basic

For backwards compatibility with older Z-Wave Controllers, the Basic Command Class is supported in the following manner. If either a smoke alarm or a co alarm is detected, the lifeline nodes will receive an unsolicited Basic Report of 0xFF. When no more smoke or co alarm sound detected, the lifeline nodes will receive an unsolicited Basic Report of 0x00. The device has no functionality mapped to receiving a Basic Set command, and does not control devices with a Basic Set.

Z-wave Command Class Multi Level Sensor

The Firefighter™ has a temperature sensor built into the device and can be queried on a Wake Up Notification with a Multi Level Sensor Get command. The sensor supports reporting both in Celsius and Fahrenheit.

FCC COMPLIANCE STATEMENT

This equipment has been tested and found to comply with the limits for Class B digital devices, 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 instruction manual, 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 or more of the following measures:

- Re-orient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment to an outlet on a different circuit from the receiver
- Consult the dealer or an experienced radio/TV contractor for help.

WARNING: Changes or modifications not expressly approved by Encore Controls could void the user's authority to operate the equipment.

This device complies with Industry Canada license-exempt RSS standard(s). 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.

C'et appareil est conforme la norme d'Industrie Canada exempts de licence RSS. Son fonctionnement est soumis aux deux conditions suivantes: (1) c'et appareil ne peut pas provoquer d'interférences, et (2) c'et appareil doit accepter toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement de la dispositif.

FCC ID: XQC-FFZ5 IC: 9863B-FFZ5

The Firefighter™ detector does not detect the presence of smoke, heat, or fire directly. It relies solely on the presence of an audio alarm signal generated by an existing smoke or fire detector in proximity to the Firefighter™ detector to make such a determination. The Firefighter™ detector must be used with smoke detectors certified according to UL Standards, and in strict accordance with the installation and operation instructions provided with such detectors. It is the owner's responsibility to ensure that smoke or fire detectors used in conjunction with the Firefighter™ detector are maintained and tested on a regular basis in accordance with the manufacturer's instructions. Encore Controls expressly disclaims any responsibility for the failure of the Firefighter™ detector to detect the presence of smoke or fire due to the failure of any smoke or fire detector used in conjunction with the Firefighter™ detector to operate properly due to any condition, including improper installation, operation, maintenance or testing of such smoke or fire detector.



