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## Know Your Devices

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Did you know there are two types of smoke alarms?

- Photoelectric
- Ionization

A *photoelectric alarm* is more responsive to a smoldering, smoky fire while an *ionization alarm* is more responsive to a flaming fire. The United States Fire Administration recommends that homes are equipped with a) both photoelectric and ionization smoke alarms, or b) dual sensor smoke alarms.

Areas of a house which are susceptible to "nuisance tripping" (near bathrooms and/or kitchens) are generally advised to install photoelectric alarms.

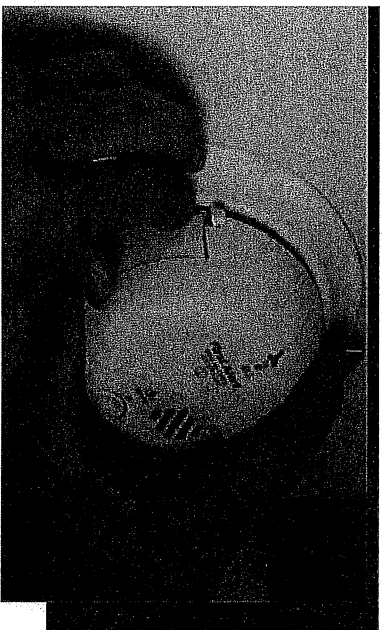
Check with your local Fire Marshal for a list of approved wireless interconnected systems.

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## Maintain Your Devices

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- Test the device monthly
- Replace the batteries annually (unless "long-life" or lithium battery)
- Replace the entire device every 10 years (Carbon monoxide alarms should be replaced every 7 years)



**Smoke and  
Carbon Monoxide Detection  
Save Lives!**

It is the responsibility of the building owner to install and maintain an operable system of smoke and carbon monoxide detection. The installation requirements vary depending on the building's age, so make sure to research the applicable regulations.

State and Local Fire Officials are available to conduct inspections or advise as to installation specifications.

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For More Information:

**Rhode Island Office of the State Fire Marshal**  
560 Jefferson Blvd, Warwick RI 02886  
(401) 889-5555  
<http://fire-marshal.ri.gov>

Rev. 4/2022

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# Smoke & Carbon Monoxide Detection

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## In One & Two Family Dwellings

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*Timothy P. McLaughlin*  
State Fire Marshal

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## Installation Requirements

### Homes built in 1976 or prior:

- Smoke alarms shall be installed outside sleeping areas and on each level (including basements)
- Carbon monoxide alarms shall be installed outside sleeping areas
- Devices may be battery operated and are not required to be interconnected

### Homes built on 1/1/1977 through 12/21/2001:

- Smoke alarms shall be installed outside sleeping areas and on each level (including basements)
- Carbon monoxide alarms shall be installed outside sleeping areas
- Smoke alarms shall be hard-wired with battery back-up and interconnected
- Carbon monoxide alarms may be battery operated and are not required to be interconnected

### Homes built on 1/1/2002 through 02/19/2004:

- Smoke alarms shall be installed outside sleeping areas and on each level (including basements)
- Carbon monoxide alarms shall be installed outside sleeping areas
- Devices shall be hard-wired with battery back-up and interconnected

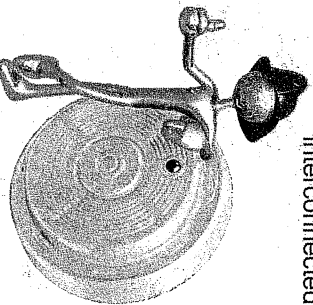
## Installation Requirements Cont.

### Homes built on 2/20/2004 through 12/31/2012:

- Smoke alarms shall be installed inside each bedroom and on each level (including basements)
- Carbon monoxide alarms shall be installed outside sleeping areas and on each level (including basements)
- Devices shall be hard-wired with battery back-up and interconnected

### Homes built on 1/1/2013 to present:

- Smoke alarms shall be installed in all sleeping rooms, outside all sleeping areas, and on each level (including basements)
- Carbon monoxide alarms shall be installed outside sleeping areas and on each level (including basements)
- Devices shall be hard-wired with battery back-up and interconnected



## Device Installation Instructions

- *Ceiling mounted:* Anywhere on the ceiling
- *Wall mounted:* 12 inches from the top of the detector to the ceiling.
- *Peaked or sloped ceilings:* Within 36 inches of the peak or high side of the slope, but no closer than 4 inches vertically or from an adjoining wall surface.
- Devices shall not be installed within 36 inches of heating or cooling registers, the tip of a ceiling paddle fan, a kitchen door or a bathroom door containing a tub or shower.
- Devices within a 20 foot horizontal path of a cooking appliance shall be equipped with an alarm-silencing means or be of the photo-electric type.
- Where stairs lead to other occupied levels, a smoke alarm shall be located so that smoke rising in the stairway cannot be pre-vented from reaching the smoke alarm by an intervening door or obstruction.
- For stairways leading up from a basement smoke alarms shall be located on the basement ceiling within 2 feet of the entry to the stairs.
- Smoke alarms should be placed near the first bedroom door in a hallway closest to the living area.
- All devices shall be installed per manufacturer's recommendations.



## Office of the State Fire Marshal

### State Fire Marshal

560 Jefferson Boulevard, Warwick, RI 02886  
Telephone: (401) 889-5555— Fax: (401) 889-5533

Elizabeth Tanner, Esq  
Director  
Department of Business Regulations

Timothy P. McLaughlin  
State Fire Marshal  
Office of the State Fire Marshal

Rev. 8/2019

# Smoke and Carbon Monoxide Alarms

This document has been developed in order to provide guidance as to the installation of smoke alarms and carbon monoxide alarms in residential occupancies. The use of the word “alarm” indicates a self-contained, single or multiple station device. Smoke detectors which are part of a fire alarm system are not covered in this document.

## WHAT IS A SMOKE ALARM?

A smoke alarm is a device designed to sense indicators of fire and smoke, and provide an audible warning when activated. There are two types of sensors; photoelectric and ionization. A photoelectric smoke alarm is generally more sensitive to smoldering fires with significant release of smoke. An ionization smoke alarm is generally more sensitive to a flaming fire.

Certain areas of a home, such as near a bathroom or kitchen, may require the use of a photoelectric device. This is because they are less prone to “nuisance” alarms in the presence of cooking or steam.

Both the National Fire Protection Association and the United States Fire Administration recommend that homes are equipped with a) both photoelectric and ionization smoke alarms, or b) dual sensor smoke alarms.

## WHY ARE THEY IMPORTANT?

In 2019, the National Fire Protection Association released a study “Smoke Alarms in U.S. Home Fires”. Below are some of the key findings:

- The risk of dying in home fires is 54% lower in homes with working smoke alarms than in homes with no alarms or non-functioning alarms.
- Smoke alarms activated in 88% of reported fires, when present.
- Three out of five fire deaths in 2012-2016 were in properties with no alarms or non-functioning alarms.

## **WHOSE RESPONSIBILITY ARE SMOKE AND CARBON MONOXIDE ALARMS?**

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The owner of a house is responsible for installing and maintaining operational smoke and carbon monoxide alarms. In a rental situation, unless specified in the lease, the responsibility remains that of the landlord.

A property owner must make operable, within seven (7) days after being notified by certified mail by the occupant and/or enforcement official, any inoperable alarms.

If the owner fails to make the alarms operable within the allowed timeframe, the tenant may make the alarm operable if the total reasonable cost of repairs does not exceed fifty dollars (\$50.00). The tenant may then deduct the actual reasonable cost of repairs from his or her rent, not to exceed fifty dollars (\$50.00).

## **TRANSFER OF TITLE INSPECTIONS**

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At the time of the transfer of title on a property, the seller must provide the purchaser with a certificate stating that the smoke and carbon monoxide alarms have been inspected within one hundred twenty (120) days prior to the date of sale. Inspections shall be done by the local fire department or the Office of the State Fire Marshal.

A fee of thirty dollars (\$30.00) shall be collected for the inspection and be the responsibility of the seller. A fee of sixty dollars (\$60.00) shall be collected for any re-inspection due to improper installation, wrong location, improper wiring or failure to appear to a mutually agreed upon appointment.

Refer to the below guidelines in this document for proper installation specifications.

## **INSTALLATION GUIDELINES FOR ONE & TWO-FAMILY DWELLINGS**

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The installation requirements of smoke and carbon monoxide alarms are specific to the year a house was built. For more information, refer to the Rhode Island Fire Safety Code.

**Homes built in 1976 or prior:**

- Smoke alarms shall be installed outside sleeping areas and on each level (including basements)
- Carbon monoxide alarms shall be installed outside sleeping areas
- Devices may be battery operated and are not required to be interconnected
- Devices may be combination smoke and carbon monoxide units

**Homes built on January 1<sup>st</sup>, 1977 through December 21<sup>st</sup>, 2001:**

- Smoke alarms shall be installed outside sleeping areas and on each level (including basements)
- Carbon monoxide alarms shall be installed outside sleeping areas
- Smoke alarms shall be hard-wired with battery back-up and interconnected
- CO detectors may be battery operated and are not required to be interconnected
- Devices may be combination smoke and carbon monoxide units

**Homes built on January 1<sup>st</sup>, 2002 through February 19<sup>th</sup>, 2004:**

- Smoke alarms shall be installed outside sleeping areas and on each level (including basements)
- Carbon monoxide alarms shall be installed outside sleeping areas
- Devices shall be hard-wired with battery back-up and interconnected
- Devices may be combination smoke and carbon monoxide units

**Homes built on February 20<sup>th</sup>, 2004 through December 31<sup>st</sup>, 2012:**

- Smoke alarms shall be installed inside each bedroom and on each level (including basements)
- Carbon monoxide alarms shall be installed outside sleeping areas and on each level (including basements)
- Devices shall be hard-wired with battery back-up and interconnected

- Devices may be combination smoke and carbon monoxide units

**Homes built on January 1<sup>st</sup>, 2013 to present:**

- Smoke alarms shall be installed in all sleeping rooms, outside all sleeping areas and on each level (including basements)
- Carbon monoxide alarms shall be installed outside sleeping areas and on each level (including basements)
- Devices shall be hard-wired with battery back-up and interconnected
- Devices may be combination smoke and carbon monoxide units

## **INSTALLATION GUIDELINES FOR THREE-FAMILY DWELLINGS**

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- Smoke alarms shall be installed inside all sleeping rooms, outside all sleeping areas and on each level (including basements)
- Smoke alarms shall also be located on each floor landing of common stairways, in common corridors and common basements (unless equipped with automatic sprinkler system)
- Carbon monoxide alarms shall be installed outside sleeping areas and on each level (including basements, excluding attics) IF dwelling unit contains fuel-burning appliances, fireplaces or attached garage.
- Devices shall be hard-wired with battery back-up and interconnected. Dwelling areas and common areas will not be interconnected with one another.
- Devices may be combination smoke and carbon monoxide units

A local, supervised fire alarm system shall be permitted in place of smoke alarms. Each system shall be installed as per code.

# INSTALLATION GUIDELINES FOR APARTMENTS, TOWNHOUSES AND CONDOMINIUMS

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- Each dwelling unit shall comply with the applicable requirements of one and two-family dwellings
- Every building having between four and seven units shall be required to have a local fire alarm system
- Every building having more than seven units shall be required to have a municipally connected fire alarm system.

## *Exception:*

- Buildings that have units with suitable fire resistance separation may be exempt from fire alarm system requirements.
- Buildings that have central heating plants that do not transfer heat via ductwork, and that have suitable separation from the rest of the building, and where dwelling units do not have any other fuel burning appliances, fireplaces or attached or integral garages, may be exempt from carbon monoxide requirements.

## PLACEMENT OF SMOKE AND CARBON MONOXIDE ALARMS

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- *Ceiling mounted:* Anywhere on the ceiling.
- *Wall mounted:* 12 inches from the top of the detector to the ceiling.
- *Peaked or sloped ceilings:* Within 36 inches of the peak or high side of the slope, but no closer than 4 inches vertically or from an adjoining wall surface.
- Devices shall not be installed within 36 inches of heating or cooling registers, the tip of a ceiling paddle fan, a kitchen door or a bathroom door containing a tub or shower.
- Devices within a 20-foot horizontal path of a cooking appliance shall be equipped with an alarm-silencing means or be of the photo-electric type.

- Where stairs lead to other occupied levels, a smoke alarm or smoke detector shall be located so that smoke rising in the stairway cannot be pre-vented from reaching the smoke alarm or smoke detector by an intervening door or obstruction.
- For stairways leading up from a basement smoke alarms or smoke detectors shall be located on the basement ceiling within 2 feet of the entry to the stairs.
- Smoke alarms should be placed near the first bedroom door in a hallway closest to the living area.
- All devices shall be installed per manufacturer's recommendations.
- Check with your local Fire Marshal for a list of approved wireless interconnected systems.

## MAINTENANCE AND TESTING OF ALARMS

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It is the responsibility of the property owner to maintain all alarms installed in the building. Alarms that are not required by code should be maintained or removed. At minimum, the following maintenance guidelines should be adhered to:

- Test all alarms at least monthly
- Replace all batteries at least yearly (unless "long-life" or lithium batteries)
- Smoke alarms must be replaced ten (10) years from the date of manufacture unless otherwise specified by the manufacturer
- Carbon monoxide alarms must be replaced seven (7) years from the date of manufacture unless otherwise specified by the manufacturer.

## FOR MORE INFORMATION

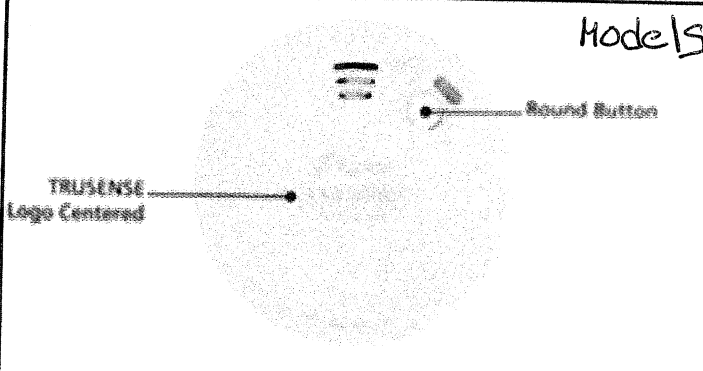
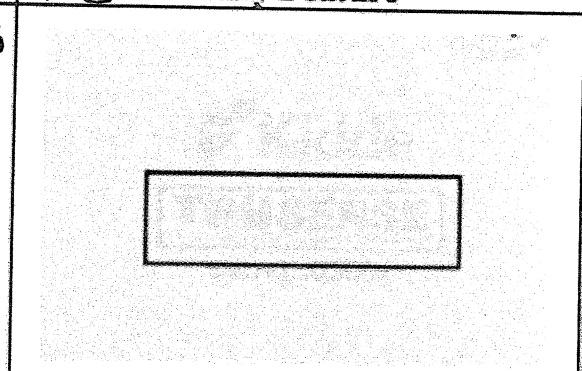
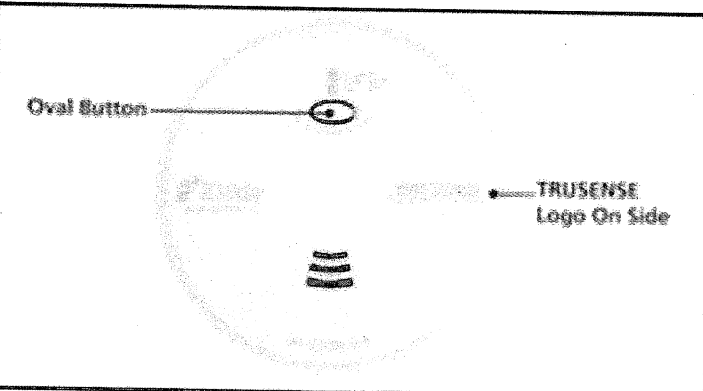
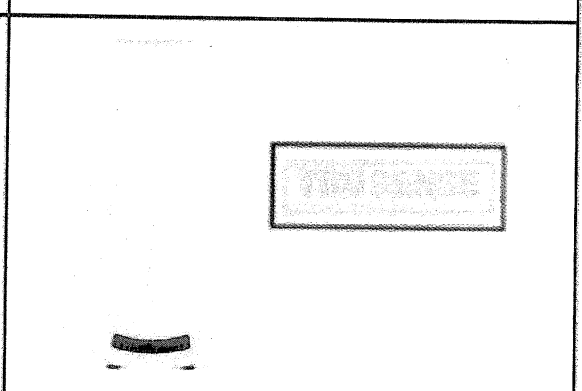
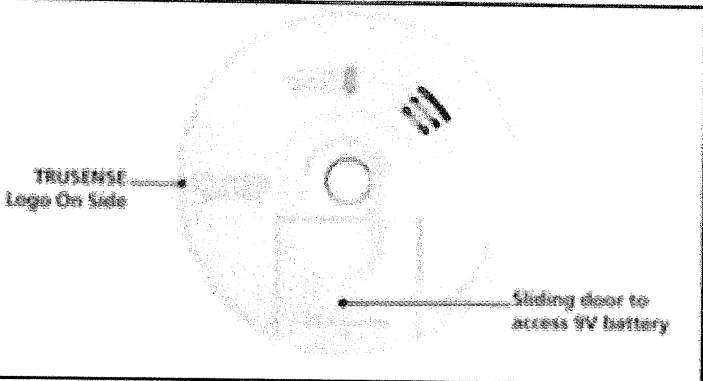
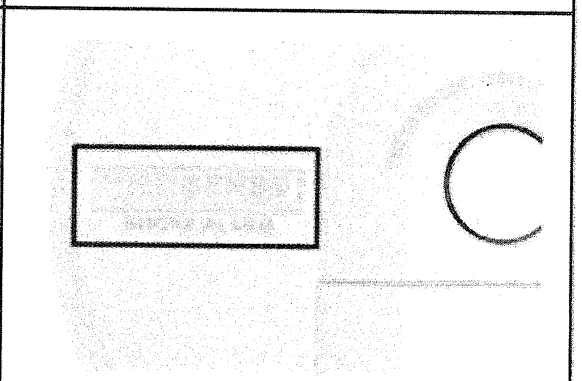
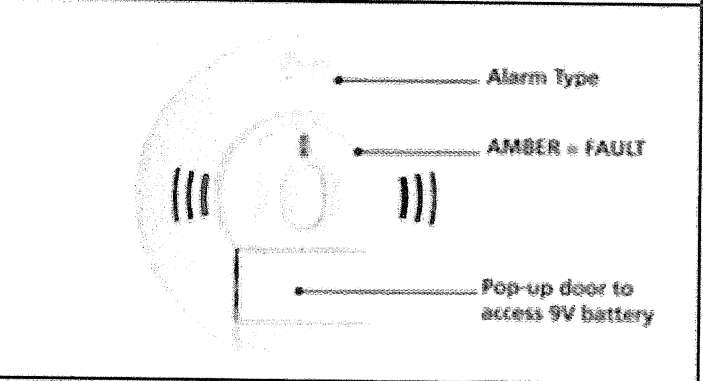
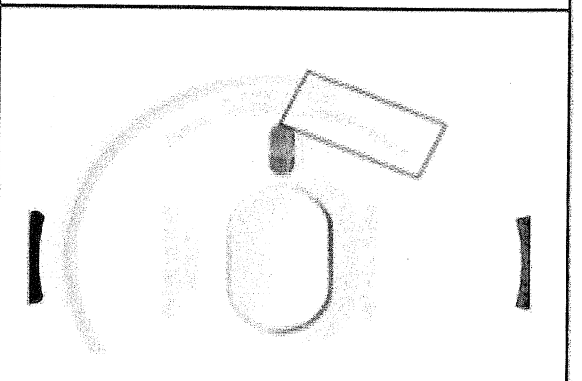
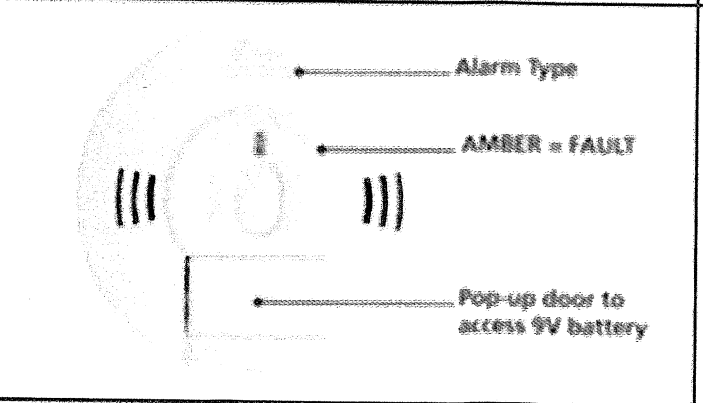
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Contact your local fire department or the Office of the State Fire Marshal for more information.



### Rhode Island Office of the State Fire Marshal

560 Jefferson Blvd, Warwick RI 02886  
 main: (401) 889-5555 | fax: (401) 889-5533  
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Model	Alarm DISCONTINUED Models	Key Feature
2040-DSR	 <p>TRUSENSE Logo Centered</p> <p>Sound Button</p>	
2050-DS10	 <p>Oval Button</p> <p>TRUSENSE Logo On Side</p>	
2060-ASR	 <p>TRUSENSE Logo On Side</p> <p>Sliding door to access 9V battery</p>	
2070-VASR 2070-VDSR	 <p>Alarm Type</p> <p>AMBER = FAULT</p> <p>Pop-up door to access 9V battery</p>	
2070-VDSCR 2070-VASCR	 <p>Alarm Type</p> <p>AMBER = FAULT</p> <p>Pop-up door to access 9V battery</p>	