



## SMOKE AND CARBON MONOXIDE ALARMS

**REFERENCE:** 2021 (IRC) International Residential Code, Section R314, R315  
2021 (IPMC) International Property Maintenance code  
City of Marion Ordinance Chapter 162  
2020 National Electric Code  
Iowa Department of Public Safety Chapter 210

### SMOKE ALARM TYPES

Smoke alarms are required to be listed under Underwriters Laboratory Standard UL 217.

### CARBON MONOXIDE DETECTORS

1. Required outside sleeping rooms only.
2. Can be plug-in or hardwired
3. Can be a separate alarm or can be combined with one of the smoke alarms.

### WHEN NEEDED:

1. **Additions, alterations, or repairs:** When interior alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, smoke/carbon monoxide alarms shall be provided throughout the dwelling, located as required for new dwellings.

Exceptions: (Requires prior approval of the Building Official)

1. Permits that do not require a plan review and for which an electrician would not otherwise be involved in the remodeling project may be exempt. (Example: counter tops, plumbing fixtures, wall finish for existing room, replace cabinets of same size and locations)
  2. Repairs to the exterior surfaces of dwellings are exempt from the smoke alarm requirements. (Examples: roofing, siding, window replacement, open decks)
2. **Electrical service upgrade:** When an electrical service and panel are installed or replaced in a dwelling unit or multiple dwelling unit building, smoke/carbon monoxide alarms shall be installed throughout the dwellings, located as required for new dwellings.

## **Smoke alarms are required to be hardwired/battery back-up**

**POWER SOURCE:** Smoke alarms shall receive their primary power from the building wiring and shall be equipped with a battery backup source. Alarms shall be electrically interconnected so when one alarm sounds, **all** alarms will be activated. Carbon monoxide alarms can be plug-in type, battery powered, or direct wired or installed in combination with a smoke alarm.

1. For new construction
2. When doing a service upgrade \*
3. For remodels \*

\* Exception: (Requires prior approval of the Building Official)

1. Smoke alarms in existing areas may not be required to be interconnected or hard wired to the building wiring where the alterations or repairs do not result in the removal of interior wall or ceiling finishes and there is not ready access through an unfinished basement or attic.
2. RF (Radio Frequency) Alarms maybe installed in place of hard wired with prior approval given by the Building Official.

**SOUND LEVEL:** The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed. Minimum sound level shall be 70 decibels.

**INSTALLATION:** According to the manufacturer's listing and instructions.

**LOCATIONS REQUIRED (R314.3 for smoke alarms) (315.3 for Carbon monoxide alarms)**

### **Smoke Alarms:**

- In each sleeping room.
- Outside each sleeping area in the immediate vicinity of the sleeping rooms.
- On each story of the dwelling including basements and cellars.

### **Carbon monoxide alarms:**

- Outside each sleeping area in the immediate vicinity of the sleeping rooms.

### **Rental Properties:**

If the existing smoke detectors are in good working order, they can remain however if they need to be replaced, they must be replaced with alarms that have a 10-year tamper resistant battery. See above for required locations.

Carbon Monoxide Detectors shall be installed per Section 705 of the IPMC in existing dwellings that have attached garages or in existing dwellings within which fuel-fired appliances exist, carbon monoxide alarms shall be provided in accordance with Section R315.