

Smoke Detectors

R317.1 Single- and multiple-station smoke alarms. Single and multiple-station smoke alarms shall be installed in the following locations:

- In each sleeping room.
- Outside of each separate sleeping area in the immediate vicinity of the bedrooms.
- On each additional story of the dwelling, including basements and cellars but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

All smoke alarms shall be listed and installed in accordance with the provisions of this code and the household fire warning equipment provisions of NFPA 72.

R317.1.1 Alterations, repairs and additions. When interior alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be provided with smoke alarms located as required for new dwellings; the smoke alarms shall be interconnected and hard wired.

- Exceptions:
 - Smoke alarms in existing areas shall not be required to be interconnected and hard wired where the alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space, or basement available which could provide access for hard wiring and interconnection without the removal of interior finishes
 - Repairs to the exterior surfaces of dwellings are exempt from the requirements of this section.

R317.2 Power source. In new construction, the required smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Smoke alarms shall be permitted to be battery operated when installed in buildings without commercial power or in buildings that undergo alterations, repairs or additions regulated by Section R317.1.1.

Carbon Monoxide (CO)

Carbon Monoxide (CO) often called the "Silent Killer" poisoning can be lethal, the early symptoms include headache, nausea and dizziness. Not all carbon monoxide detectors are created equal! If you read your local paper's fire run reports you'll see numerous reports of CO alarms. There's an epidemic of false alarms from some highly promoted carbon monoxide detectors which use biomimetic sensors. False alarms can cost money for replacing sensor modules and for unnecessary appliance service calls.

Picking Out the Best Detector

Things to look for in purchasing a carbon monoxide detector are: Solid State semi-conductor sensors are highly accurate, dependable and virtually free of false alarms. They take samples of the air and then clears the sensors every 2.5 minutes, thus reducing the many false alarms. These sensors can be checked or reset after an alarm with a simple push of a button and the sensors last up to ten years. Types of detectors to avoid. Biomimetic sensors store the amount of carbon monoxide until they have accumulated enough CO to set off the alarm. Resetting these sensors after a false alarm requires ventilation with fresh air for up to 48 hours. Many of these type of detectors suggest replacing the sensor every 2-3 years and after any alarm.