



CODE SUMMARY

CARBON MONOXIDE: ALARMS AND DETECTORS (2019 California Fire Code)

A code summary is a compilation of code sections related to a specific topic and does not contain any interpretations or District standards. This code summary lists sections of code pertaining to Carbon Monoxide Alarms and Detectors and the requirements within certain Institutional, Educational and Residential Groups. Under each heading you will find the correlating code language and the reference cited. Please feel free to direct any questions to the Fire and Life Safety Division at (925) 838-6600.

- 1. Carbon Monoxide (CO) is a colorless, odorless gas that is produced from any time you burn fuel in cars or trucks, small engines, stoves, lanterns, grills, fireplaces, gas ranges, or furnaces. CO can build up indoors and poison people and animals who breathe it.**

A **Carbon Monoxide Alarm** is a single- or multiple-station alarm intended to detect Carbon Monoxide gas and alert occupants by a distinct audible signal. It incorporates a sensor, control components and an alarm notification appliance in a single unit. A Carbon Monoxide Alarm is a stand-alone unit that has its own built-in power supply and audible signal. There are also battery-operated combination Smoke/CO Alarms. C.F.C Chapter 2 Definitions

A **Carbon Monoxide Detector** is a device with an integral sensor to detect Carbon Monoxide Gas and transmit an alarm signal to a connected alarm control unit. A Carbon Monoxide Detector is part of a fire alarm system and gets its power from the fire alarm. C.F.C Chapter 2 Definitions

- 2. Carbon Monoxide Alarms shall comply with Sections 915.4.1 through 915.4.4 C.F.C;** these sections cover power source, UL listing, location, interconnectivity and combination alarms. C.F.C. 915.4
- 3. Carbon monoxide alarms shall receive their primary power** from the building wiring where 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 that required for overcurrent protection. C.F.C 915.4.1

Exceptions:

- Where installed in buildings without commercial power, battery-powered carbon monoxide alarms shall be an acceptable alternative.
- Carbon monoxide alarms in Group R occupancies shall be permitted to receive their primary power from other power sources recognized for use by NFPA 720.
- Carbon monoxide alarms in Group R occupancies shall be permitted to be battery-powered or plug-in with a battery backup in existing buildings built prior to January 1, 2011, under any of the following conditions:
 - 3.1 No construction is taking place
 - 3.2 Repairs or alterations do not result in the removal of interior wall and ceiling finishes exposing the structure in areas / spaces where carbon monoxide alarms are required.
 - 3.3 Repairs or alterations are limited to the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck.
 - 3.4 Work is limited to installation, alteration or repair of plumbing, mechanical or electrical systems, which do not result in the removal of interior wall or ceiling finishes exposing the structure in areas / spaces where carbon monoxide alarms are required.

4. **Locations.** Carbon monoxide alarms shall only be installed in dwelling units and in sleeping units. They shall not be installed in locations where the code requires carbon monoxide detectors be installed. Combination carbon monoxide / smoke alarms shall comply with Section 915 C.F.C., and all requirements for listing and approval by the Office of the State Fire Marshal for smoke alarms. C.F.C. 915.4.3
5. **Visible Alarms.** In buildings containing covered multi-family dwellings as defined in Chapter 2, all required carbon monoxide alarms shall be equipped with the capability to support visible alarm notification in accordance to NFPA 720.
6. **Carbon Monoxide detection shall be installed in new buildings** in accordance with Sections 915.1.1 through 915.7. **Carbon monoxide detection shall be installed in existing buildings** in accordance with C.F.C. Section 915 and Chapter 11 of the California Fire Code. C.F.C. 915.1 Pursuant to Health and Safety Code Section 17926, carbon monoxide detection shall be installed in all Group R buildings as required in Section 915 C.F.C.
7. **Carbon Monoxide detection shall be provided in Group I-2, I-4 and R occupancies and in classrooms in Group E occupancies that contain a fuel-burning appliance, fuel burning fireplace or forced-air furnace.** C.F.C 915.1.1 **Exceptions:** reference C.F.C. Sections 915.1.3 and 915.1.4

Group I-2 example: Detoxification Facilities, Hospitals, Nursing Homes and Psychiatric Hospitals

Group I-4 example: Adult Day Care, Child Day Care

Group R example: the use of a building or structure or a portion thereof, for sleeping purposes when not classified as an Institutional Group I or when not regulated by the CA Residential Code in accordance with Section 101.2 of the CA Building Code.
8. **Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms in buildings with attached private garages** C.F.C. 915.1.5 **Exceptions:** reference 1 through 4
9. **Maintenance.** Carbon monoxide alarms and carbon monoxide detection systems shall be maintained in accordance with NFPA 720. Carbon monoxide alarms and carbon monoxide detectors that become inoperable or begin producing end of life signals shall be replaced. C.F.C. 915.6