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Mayor



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Rule 4.4. 2020 Indiana Residential Code

4/10/2020

2020 Indiana Residential Code

--Electrical--

SUMMARY:

SMOKE ALARM

R314.3; location

Smoke alarms shall be installed in the following locations:

1. In the living area remote from the kitchen and cooking appliances.
2. In each room designed for sleeping.
3. On each level of a dwelling, or on the ceiling of the upper level near the top or above each stairway, other than a basement stairway, in any multistory dwelling. The alarm shall be located so that smoke rising in the stairway will not be prevented from reaching the alarm by an intervening door or obstruction.
4. On the basement ceiling near the stairway.

PROHIBITED SMOKE ALARM LOCATIONS.

R314.3.2

A smoke alarm required under this section shall not be placed:

1. within 3 feet (914 mm) horizontally from any grille moving conditioned air within the living space, or a door or opening of a bathroom containing a bathtub or shower; or
2. in any location or environment prohibited by the terms of the listing.

CARBON MONOXIDE ALARMS

R315.1 General. Carbon monoxide alarms shall comply with Section R315.

R315.2.1 New construction. For new construction, carbon monoxide alarms shall be provided in dwelling units where either or both of the following conditions exist.

1. The dwelling unit contains a fuel-fired appliance.
2. The dwelling unit has an attached garage with an opening that communicates with the dwelling unit.

R315.3 Location. Carbon monoxide alarms in dwelling units shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.

R315.4 Combination alarms. Combination carbon monoxide and smoke alarms shall be permitted to be used in lieu of carbon monoxide alarms.

R315.5 Interconnectivity. Where more than one carbon monoxide alarm is required to be installed within an individual dwelling unit in accordance with Section R315.3, 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 dwelling unit.

THIS IS WHERE YOU CAN GET THE CODES:

2020 Indiana Residential Code (free, fully integrated, read-only digital copy)

<https://codes.iccsafe.org/content/document/1562>

To purchase the fully integrated "2020 Indiana Residential Code" go to the ICC website
shop.iccsafe.org/state-and-local-codes/indiana/2020-indiana-residential-code.html

Smoke alarm locations

Section R314.3;location

Smoke alarms shall be installed in the following locations:

1. In the living area remote from the kitchen and cooking appliances.
2. In each room designed for sleeping.
3. On each level of a dwelling, or on the ceiling of the upper level near the top or above each stairway, other than a basement stairway, in any multistory dwelling. The alarm shall be located so that smoke rising in the stairway will not be prevented from reaching the alarm by an intervening door or obstruction.
4. On the basement ceiling near the stairway.

Prohibited smoke alarm locations

Section R314.3.2;Prohibited smoke alarm locations

A smoke alarm required under this section shall not be placed:

1. within 3 feet (914 mm) horizontally from any grille moving conditioned air within the living space, or a door or opening of a bathroom containing a bathtub or shower; or
2. in any location or environment prohibited by the terms of the listing.

SECTION R314.3.3 INSTALLATION REQUIREMENTS.

Smoke alarms required by Section R314.2 shall be mounted in accordance with their listing, installation instructions, and the requirements of this section. SECTION R314.3.3.1 FLAT CEILINGS. In rooms with flat, peaked sloping or single slope ceilings with a slope of less than 1.5/12, smoke alarms shall be mounted either:

1. on the ceiling at least 4 inches (102 mm) from each wall; or
2. on a wall with the top of the alarm not less than 4 inches (102 mm) below the ceiling and not farther from the ceiling than 12 inches (305 mm) or the distance from the ceiling specified in the smoke alarm manufacturer's listing and installation instructions, whichever is less.

SECTION R314.3.3.2 PEAKED SLOPING CEILINGS.

In rooms with peaked sloping ceilings with a slope of 1.5/12 or greater, smoke alarms shall be:

1. mounted on the ceiling or wall within 3 feet (914 mm) measured horizontally, from the peak of the ceiling;
2. at least 4 inches (102 mm), measured vertically, below the peak of the ceiling; and
3. at least 4 inches (102 mm) from any projecting structural element.

SECTION R314.3.3.3 SINGLE SLOPE CEILINGS.

In rooms with single slope ceilings with a slope of 1.5/12 or greater, smoke alarms shall be:

1. mounted on the ceiling or wall within 3 feet (914 mm), measured horizontally, of the high point of the ceiling; and
2. not closer than 4 inches (102 mm) from any adjoining wall surfaces or any projecting structural element.

E3902.16 Arc-fault circuit-interrupter protection. Branch circuits that supply 120-volt, single-phase, 15- and 20-ampere outlets installed in kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreations rooms, closets, hallways, laundry areas and similar rooms or areas shall be protected by any of the following: [210.12(A)]

1. A listed combination-type arc-fault circuit-interrupter, installed to provide protection of the entire branch circuit. [210.12(A)(1)]
 2. A listed branch/feeder-type AFCI installed at the origin of the branch-circuit in combination with a listed outlet branch-circuit-type arc-fault circuit-interrupter installed at the first outlet box on the branch circuit. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit. [210.12(A)(2)]
 3. A listed supplemental arc-protection circuit breaker installed at the origin of the branch circuit in combination with a listed outlet branch-circuit-type arc-fault circuit interrupter installed at the first outlet box on the branch circuit where all of the following conditions are met:
 - 3.1. The branch-circuit wiring shall be continuous from the branch-circuit overcurrent device to the outlet branch-circuit arc-fault circuit-interrupter.
 - 3.2. The maximum length of the branch-circuit wiring from the branch-circuit overcurrent device to the first outlet shall not exceed 50 feet (15.2 m) for 14 AWG conductors and 70 feet (21.3 m) for 12 AWG conductors.
 - 3.3. The first outlet box on the branch circuit shall be marked to indicate that it is the first outlet on the circuit. [210.12(A)(3)]
 4. A listed outlet branch-circuit-type arc-fault circuit-interrupter installed at the first outlet on the branch circuit in combination with a listed branch-circuit overcurrent protective device where all of the following conditions are met:
 - 4.1. The branch-circuit wiring shall be continuous from the branch-circuit overcurrent device to the outlet branch-circuit arc-fault circuit-interrupter.
 - 4.2. The maximum length of the branch-circuit wiring from the branch-circuit overcurrent device to the first outlet shall not exceed 50 feet (15.2 m) for 14 AWG conductors and 70 feet (21.3 m) for 12 AWG conductors.
 - 4.3. The first outlet box on the branch circuit shall be marked to indicate that it is the first outlet on the circuit.
 - 4.4. The combination of the branch-circuit overcurrent device and outlet branch-circuit AFCI shall be identified as meeting the requirements for a system combination-type AFCI and shall be listed as such. [210.12(A)(4)]
 5. Where metal outlet boxes and junction boxes and RMC, IMC, EMT, Type MC or steel-armored Type AC cables meeting the requirements of Section E3908.8, metal wire ways or metal auxiliary gutters are installed for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, a listed outlet branch-circuit type AFCI installed at the first outlet shall be considered as providing protection for the remaining portion of the branch circuit. [210.12(A)(5)]
 6. Where a listed metal or nonmetallic conduit or tubing or Type MC cable is encased in not less than 2 inches (50.8 mm) of concrete for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, a listed outlet branch-circuit-type AFCI installed at the first outlet shall be considered as providing protection for the remaining portion of the branch circuit. [210.12(A)(6)]
- Exception: AFCI protection is not required for an individual branch circuit supplying only a fire alarm system where the branch circuit is wired with metal outlet and junction boxes and RMC, IMC, EMT or steel-sheathed armored cable Type AC or Type MC meeting the requirements of Section E3908.8