



## CALIFORNIA ELECTRICAL CODE

### ARC-FAULT CIRCUIT-INTERRUPTER (AFCI) REQUIREMENTS IN DWELLINGS

- 1.** New 120-volt, single-phase, 15 and 20-amp branch circuits require AFCI protection for the entire branch circuit if they supply any outlets or devices in the following locations [CEC 210.12(A)]:
  - Kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, laundry areas (including laundry areas in a garage), hallways, or similar rooms or areas, and dormitory units.
  - An “outlet” of a circuit can be a receptacle outlet, a lighting outlet, or a smoke or CO alarm outlet. A switch is a device, not an outlet [CEC 100]. A patio light, that is controlled by a switch in the house requires protection because the device controlling the outlet is in an area requiring AFCI protection.
- 2.** For new circuits, protection must be provided by a combination-type AFCI circuit breaker. Older branch feeder AFCI breakers are acceptable if the first outlet box of the circuit contains an OBC AFCI. The words “combination type” or “branch feeder” are written on the face of the circuit breakers.
- 3.** Outlet Branch Circuit (OBC) AFCI’s resemble GFCI (Ground-Fault Circuit-Interrupter) receptacle outlets, except that they say AFCI on their face. New circuits can be protected by OBC AFCIs if the OBC is the first outlet of the circuit and the wiring between an ordinary breaker and the OBC is either concrete-encased, metal conduit (including FMC and LFMC) or steel-jacketed cable.
- 4.** When existing circuits are modified, extended, or replaced, the wiring of that circuit must be protected by either a combination-type AFCI circuit breaker or by an OBC AFCI at the first receptacle outlet of the existing circuit. This measurement shall not include the conductors inside an, enclosure, cabinet or junction box. [CEC 210.12(D)].
- 5.** When a service is upgraded or relocated and sections of existing branch circuit wiring are replaced as part of the work, those branch circuits require AFCI protection when serving the areas listed above. This does not apply to service upgrades where the panel is relocated and the length of wire to connect the original circuits to a new panel location is less than 6 feet.
- 6.** New wiring for hard-wired smoke and CO alarms is required to have AFCI protection, which can only be supplied by a circuit breaker [CEC 210.12(A), CRC 314.4]. If the existing electrical panel is a type that does not accept AFCIs, it must be replaced or be supplemented with a subpanel.
- 7.** Most houses have one or more multiwire branch circuits, and some brands of AFCI breakers cannot be installed with those circuits.
- 8.** Replacement receptacles in any of the areas listed in item 1 must have AFCI protection [CEC 406.4(D)(4)]. This can be provided by a combination-type AFCI breaker, or by an OBC AFCI, or by an OBC AFCI in the same circuit and ahead of the replacement receptacle. If no equipment grounding conductor is present, one must be added, or, the OBC receptacle outlet must be a dual-function AFCI-GFCI type.
- 9.** All AFCI controls (breaker test buttons and outlet test buttons) must be in readily accessible locations [CEC 210.12 & CEC 406.4(D)]. “Readily Accessible” is defined as “Capable of being reached quickly for operation, renewal, or inspections without requiring those to whom ready access is requisite to resort to actions such as to use tools, to climb over or remove obstacles, or to resort to portable ladders, and so forth.”[CEC 100]