

AFCIs

An AFCI is intended to de-energize the circuit when it detects the current waveform characteristics unique to an arcing fault [100].

AFCI protection is required per 210.12(B) through (C) and the AFCI device must be in a readily accessible location. AFCI protection is not required for outlets in bathroom areas, garages, or outside. But it is required for 15A or 20A, 120V branch circuits in the following dwelling unit locations [210.12(B)]:

- (1) Kitchens
- (2) Family rooms
- (3) Dining rooms
- (4) Living rooms
- (5) Parlors
- (6) Libraries
- (7) Dens
- (8) Bedrooms
- (9) Sunrooms
- (10) Recreation rooms
- (11) Closets
- (12) Hallways
- (13) Laundry areas
- (14) Similar areas

AFCI protection is required for 15A or 20A, 120V branch circuits in the following dormitory unit locations [210.12(C)]:

- (1) Bedrooms
- (2) Living rooms
- (3) Hallways
- (4) Closets
- (5) Bathrooms
- (6) Similar rooms

AFCI protection is required for 15A and 20A, 120V branch circuits in the following other occupancy locations 210.12(D):

- (1) Guest rooms and guest suites of hotels and motels.
- (2) Nursing homes and limited care facilities, areas used exclusively as patient sleeping rooms.
- (3) Areas designed for use exclusively as sleeping quarters in fire stations, police stations, ambulance stations, rescue stations, ranger stations, and similar locations.

If 15A or 20A, 120V branch-circuit wiring is extended, modified, or replaced in any of the areas specified in 210.12(B), (C), or (D), the wiring must be AFCI protected by one of the following [210.12(E)]:

- (1) AFCI circuit breaker.
- (2) AFCI receptacle installed at the first receptacle outlet of the existing branch circuit.

Ex: AFCI protection is not required for extension wiring that is less than 6 ft long if no outlets or devices, other than splicing devices, are added. This measurement does not include the conductors inside an enclosure, cabinet, or junction box.