

that are fastened in place in any occupancy. In other than dwelling units, such circuits shall be permitted to supply fixed lighting units with heavy-duty lampholders, infrared heating units, or other utilization equipment.

N (D) Branch Circuits Larger Than 50 Amperes. Branch circuits larger than 50 amperes shall supply only nonlighting outlet loads.

N 235.63 Equipment Requiring Servicing. A 125-volt, single-phase, 15- or 20-ampere-rated receptacle outlet shall be installed at an accessible location within 7.5 m (25 ft) of the equipment as specified in 210.63(A) and (B).

Informational Note: See 210.8(E) for requirements on GFCI protection.

N (A) Heating, Air-Conditioning, and Refrigeration Equipment. The required receptacle outlet shall be located on the same level as the heating, air-conditioning, and refrigeration equipment. The receptacle outlet shall not be connected to the load side of the equipment's branch-circuit disconnecting means.

Exception: A receptacle outlet shall not be required at one- and two-family dwellings for the service of evaporative coolers.

N (B) Other Electrical Equipment. In other than one- and two-family dwellings, a receptacle outlet shall be located as specified in 210.63(B)(1) and (B)(2).

N (1) Indoor Service Equipment. The required receptacle outlet shall be located within the same room or area as the service equipment.

N (2) Indoor Equipment Requiring Dedicated Equipment Spaces. Where equipment, other than service equipment, requires dedicated equipment space as specified in 110.26(E), the required receptacle outlet shall be located within the same room or area as the electrical equipment and shall not be connected to the load side of the equipment's disconnecting means.

N Part III. Feeders

N 235.201 General. Part III covers the installation requirements, overcurrent protection requirements, minimum size, and ampacity of conductors for feeders over 1000 volts ac or 1500 volts dc, nominal.

N 235.202 Minimum Rating and Size. The ampacity of conductors shall be in accordance with 310.14 and 315.60 as applicable. Where installed, the size of the feeder-circuit grounded conductor shall not be smaller than that required by 250.122, except that 250.122(F) shall not apply where grounded conductors are run in parallel. Feeder conductors over 1000 volts shall be sized in accordance with 235.202(A), (B), or (C).

N (A) Feeders Supplying Transformers. The ampacity of feeder conductors shall not be less than the sum of the nameplate ratings of the transformers supplied when only transformers are supplied.

N (B) Feeders Supplying Transformers and Utilization Equipment. The ampacity of feeders supplying a combination of transformers and utilization equipment shall not be less than the sum of the nameplate ratings of the transformers and 125 percent of the designed potential load of the utilization equipment that will be operated simultaneously.

N (C) Supervised Installations. For supervised installations, feeder conductor sizing shall be permitted to be determined by qualified persons under engineering supervision in accordance with 310.14(B) or 315.60(B). Supervised installations are defined as those portions of a facility where all of the following conditions are met:

- (1) Conditions of design and installation are provided under engineering supervision.
- (2) Qualified persons with documented training and experience in over 1000-volt systems provide maintenance, monitoring, and servicing of the system.

N 235.203 Overcurrent Protection. Feeders shall be protected against overcurrent.

N 235.205 Diagrams of Feeders. If required by the authority having jurisdiction, a diagram showing feeder details shall be provided prior to the installation of the feeders. Such a diagram shall show the area in square feet of the building or other structure supplied by each feeder, the total calculated load before applying demand factors, the demand factors used, the calculated load after applying demand factors, and the size and type of conductors to be used.

N 235.206 Feeder Equipment Grounding Conductor. Where a feeder supplies branch circuits in which equipment grounding conductors are required, the feeder shall include or provide an equipment grounding conductor, to which the equipment grounding conductors of the branch circuits shall be connected. Where the feeder supplies a separate building or structure, the requirements of 250.32 shall apply.

N 235.212 Identification for Feeders.

N (A) Grounded Conductor. The grounded conductor of a feeder, if insulated, shall be identified in accordance with 200.6.

N (B) Equipment Grounding Conductor. The equipment grounding conductor shall be identified in accordance with 250.119.

N (C) Identification of Ungrounded Conductors. Ungrounded conductors shall be identified in accordance with 235.212(C)(1) or (C)(2), as applicable.

N (1) Feeders Supplied from More Than One Nominal Voltage System. Where the premises wiring system has feeders supplied from more than one nominal voltage system, each ungrounded conductor of a feeder shall be identified by phase or line and