

conductor(s) terminal or bus. A main bonding jumper shall connect the grounded conductor(s) to each service disconnecting means enclosure. The grounded conductor(s) shall be installed in accordance with 250.24(C)(1) and 250.24(D)(1) through (D)(4).

Exception: If two or more service disconnecting means are located in a single assembly listed for use as service equipment, it shall be permitted to connect the grounded conductor(s) to the assembly common grounded conductor(s) terminal or bus. The assembly shall include a main bonding jumper for connecting the grounded conductor(s) to the assembly enclosure.

If the utility service supplying the premises wiring system is grounded, the grounded conductor must be run to the service equipment, regardless of whether line-to-neutral loads are supplied. The grounded conductor must be bonded to the equipment and be connected to a grounding electrode system. Exhibit 250.9 shows an example of the main rule in 250.24(D), which requires the grounded service conductor to be installed and bonded to each service disconnecting means enclosure. On the line side of the service disconnecting means, the grounded conductor is used to complete the ground-fault current path between the service equipment and the utility source. The exception to 250.24(D) permits a single connection of the grounded service conductor to a listed service assembly (such as a switchboard) that contains more than one service disconnecting means, as shown in Exhibit 250.10.

(1) Sizing for a Single Raceway or Cable. The grounded conductor shall not be smaller than specified in Table 250.102(C)(1).

Δ (2) Conductors Connected in Parallel in Two or More Raceways or Cables. If the ungrounded service-entrance conductors are connected in parallel in two or more raceways or cables, the grounded conductors shall also be installed in each raceway or cable and shall be connected in parallel. The size of each grounded conductor(s) in each raceway or cable shall not be smaller than 1/0 AWG and shall be sized in accordance with 250.24(D)(2)(a) or (D)(2)(b) in accordance with 250.24(D)(1).

(a) Shall be based on the largest ungrounded conductor in each raceway or cable.

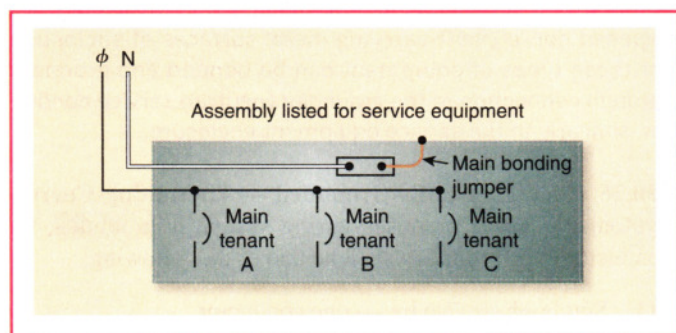


EXHIBIT 250.10 One connection of the grounded service conductor to a listed service assembly containing multiple service disconnecting means.

(b) Shall be based on the sum of the circular mil areas of the largest ungrounded conductors from each set connected in parallel in each raceway or cable.

Informational Note: See 310.10(G) for grounded conductors connected in parallel.

(3) Delta-Connected Service. The grounded conductor of a 3-phase, 3-wire delta service shall have an ampacity not less than that of the ungrounded conductors.

Δ (4) Impedance Grounded Service. The impedance grounding conductor on an impedance grounded system shall be connected in accordance with 250.36 or 250.187, as applicable.

(E) Grounding Electrode Conductor. A grounding electrode conductor shall be used to connect the equipment grounding conductors, the service-equipment enclosures, and, if the system is grounded, the grounded service conductor to the grounding electrode(s) required by Part III of this article. This conductor shall be sized in accordance with 250.66.

Impedance grounded system connections shall be made in accordance with 250.36 or 250.187, as applicable.

(F) Ungrounded System Grounding Connections. A premises wiring system that is supplied by an ac service that is ungrounded shall have, at each service, a grounding electrode conductor connected to the grounding electrode(s) required by Part III of this article. The grounding electrode conductor shall be connected to a metal enclosure of the service conductors at any accessible point from the load end of the overhead service conductors, service drop, underground service conductors, or service lateral to the service disconnecting means.

250.25 Grounding of Systems Permitted to Be Connected on the Supply Side of the Service Disconnect. The grounding of systems connected on the supply side of the service disconnect, in accordance with 230.82, that are in enclosures separate from the service equipment enclosure shall comply with 250.25(A) or (B).

(A) Grounded System. If the utility supply system is grounded, the grounding of systems permitted to be connected on the supply side of the service disconnect and are installed in one or more separate enclosures from the service equipment enclosure shall comply with the requirements of 250.24(A) through (D).

(B) Ungrounded Systems. If the utility supply system is ungrounded, the grounding of systems permitted to be connected on the supply side of the service disconnect and are installed in one or more separate enclosures from the service equipment enclosure shall comply with the requirements of 250.24(F).

This section applies to any equipment permitted to be connected on the supply or line side of the service disconnecting means as permitted by 230.82. However, if the system that is connected on the supply side is intended to operate in parallel or simultaneously with the utility service, such systems fall under the purview of Article 705, Interconnected Electric Power Production Sources.