circuit in an aluminum raceway or aluminum-sheathed cable differs from the impedance of the same circuit in a steel raceway or steel-sheathed cable; therefore, separate raceways and cables must have the same physical characteristics. Also, the same number of conductors must be used in each raceway or cable.

See also

300.20 regarding induced currents in metal enclosures or raceways

Δ **(4) Ampacity Correction or Adjustment.** Conductors installed in parallel shall comply with 310.15(B)and(C).

(5) Equipment Grounding Conductors. Where parallel equipment grounding conductors are used, they shall be sized in accordance with 250.122. Sectioned equipment grounding conductors smaller than 1/0 AWG shall be permitted in multiconductor cables, if the combined circular mil area of the sectioned equipment grounding conductors in each cable complies with 250.122.

(6) Bonding Jumpers. Where parallel equipment bonding jumpers or supply-side bonding jumpers are installed in raceways, they shall be sized and installed in accordance with 250.102.

The equipment bonding jumper size requirements might be different from the requirements for equipment grounding conductors (EGCs). On the supply side of the service, the size of the bonding jumper is based on 250.102(C)(1), which is the same as the requirement in 250.66 for grounding electrode conductors (GECs). On the load side of the service, the size is based on 250.122, which is also the size requirement for EGCs. The 1/0 AWG minimum size limitation on paralleled conductors does not apply to the equipment bonding jumper.

310.12 Single-Phase Dwelling Services and Feeders. For one-family dwellings and the individual dwelling units of two-family and multifamily dwellings, service and feeder conductors supplied by a single-phase, 120/240-volt system shall be permitted to be sized in accordance with 310.12(A) through (D).

For one-family dwellings and the individual dwelling units of two-family and multifamily dwellings, single-phase feeder conductors consisting of two ungrounded conductors and the neutral conductor from a 208Y/120 volt system shall be permitted to be sized in accordance with 310.12(A) through (C).

(A) Services. For a service rated 100 amperes through 400 amperes, the service conductors supplying the entire load associated with a one-family dwelling, or the service conductors supplying the entire load associated with an individual dwelling unit in a two-family or multifamily dwelling, shall be permitted to have an ampacity not less than 83 percent of the service rating. If no adjustment or correction factors are required, Table 310.12(A) shall be permitted to be applied.

(B) Feeders. For a feeder rated 100 amperes through 400 amperes, the feeder conductors supplying the entire load associated with a one-family dwelling, or the feeder conductors supplying the entire load associated with an individual dwelling unit in a two-family or multifamily dwelling, shall be permitted to have an ampacity not less than 83 percent of the feeder rating. If no adjustment or correction factors are required, Table 310.12(A) shall be permitted to be applied.

TABLE 310.12(A) *Single-Phase Dwelling Services and Feeders*

Service or Feeder Rating (Amperes)	Conductor (AWG or kcmil)	
	Copper	Aluminum or Copper-Clad Aluminum
100	4	2
110	3	1
125	2	1/0
150	1	2/0
175	1/0	3/0
200	2/0	4/0
225	3/0	250
250	4/0	300
300	250	350
350	350	500
400	400	600

Note: If no adjustment or correction factors are required, this table shall be permitted to be applied.

(C) Feeder Ampacities. In no case shall a feeder for an individual dwelling unit be required to have an ampacity greater than that specified in 310.12(A) or (B).

Δ **(D) Grounded Conductors.** Grounded conductors shall be permitted to be sized smaller than the ungrounded conductors, if the requirements of 220.61 and 230.42 for service conductors or the requirements of 215.2 and 220.61 for feeder conductors are met.

Where correction or adjustment factors are required by 310.15(B) or (C), they shall be permitted to be applied to the ampacity associated with the temperature rating of the conductor.

Informational Note No. 1: See 240.6(A) for standard ampere ratings for fuses and inverse time circuit breakers.

Informational Note No. 2: See Informative Annex D, Example D7.

The main service or feeder to a dwelling unit is permitted to be sized at 83 percent of the disconnect rating. The calculation is not based on the rating of the overcurrent device protecting the main feeder. The minimum disconnect rating for a dwelling unit is 100 amperes according to 225.39 and 230.79. This calculation applies only to conductors carrying 100 percent of the dwelling unit's diversified load.

If a 120/240-volt single-phase service supplies a one-family dwelling or an individual unit of a two-family or multifamily dwelling, the reduced conductor size is applicable to the service-entrance conductors or feeder conductors that supply the dwelling unit. The feeder conductors to a dwelling unit are not required to be larger than its service-entrance conductors.

Exhibit 310.1 illustrates where Table 310.12(A) could be applied. The reduced conductor size permitted is applicable only to the service-entrance conductors run to each apartment from