

Δ **TABLE 315.60(C)(20)** Ampacities of Three Triplexed Single Insulated Aluminum Conductors Directly Buried in Earth

| Conductor Size (AWG or kcmil) | Temperature Rating of Conductor | | | |
|---|---------------------------------|---------------------------------|-------------------------------|---------------------------------|
| | 2001–5000 Volts Ampacity | | 5001–35,000 Volts Ampacity | |
| | 90°C (194°F) Type MV-90 | 105°C (221°F) Type MV-105 | 90°C (194°F) Type MV-90 | 105°C (221°F) Type MV-105 |
| One Circuit, Three Conductors [See Figure 315.60(D)(3), Detail 7.] | | | | |
| 8 | 70 | 75 | — | — |
| 6 | 90 | 100 | 90 | 95 |
| 4 | 120 | 130 | 115 | 125 |
| 2 | 155 | 165 | 145 | 155 |
| 1 | 175 | 190 | 165 | 175 |
| 1/0 | 200 | 210 | 190 | 205 |
| 2/0 | 225 | 240 | 215 | 230 |
| 3/0 | 255 | 275 | 245 | 265 |
| 4/0 | 290 | 310 | 280 | 305 |
| 250 | 320 | 350 | 305 | 325 |
| 350 | 385 | 420 | 370 | 400 |
| 500 | 465 | 500 | 445 | 480 |
| 750 | 580 | 625 | 550 | 590 |
| 1000 | 670 | 725 | 635 | 680 |
| Two Circuits, Six Conductors [See Figure 315.60(D)(3), Detail 8.] | | | | |
| 8 | 65 | 70 | — | — |
| 6 | 85 | 95 | 85 | 90 |
| 4 | 110 | 120 | 105 | 115 |
| 2 | 140 | 150 | 135 | 145 |
| 1 | 160 | 170 | 155 | 170 |
| 1/0 | 180 | 195 | 175 | 190 |
| 2/0 | 205 | 220 | 200 | 215 |
| 3/0 | 235 | 250 | 225 | 245 |
| 4/0 | 265 | 285 | 255 | 275 |
| 250 | 290 | 310 | 280 | 300 |
| 350 | 350 | 375 | 335 | 360 |
| 500 | 420 | 455 | 405 | 435 |
| 750 | 520 | 560 | 485 | 525 |
| 1000 | 600 | 645 | 565 | 605 |

Note: Refer to 315.60(F) for basis of ampacities and Table 315.10(A) for the temperature rating of the conductor.

(D) Ampacity Adjustment.

(1) Grounded Shields. Ampacities shown in Table 315.60(C)(3), Table 315.60(C)(4), Table 315.60(C)(15), and Table 315.60(C)(16) shall apply for cables with shields grounded at one point only. Where shields for these cables are grounded at more than one point, ampacities shall be adjusted to take into consideration the heating due to shield currents.

Informational Note: Tables other than those listed contain the ampacity of cables with shields grounded at multiple points.

(2) Burial Depth. Where the burial depth of direct burial or electrical duct bank circuits is modified from the values shown in a figure or table, ampacities shall be permitted to

be modified as indicated in 315.60(D)(2)(a) and (D)(2)(b). No ampacity adjustments shall be required where the burial depth is decreased.

(a) Where burial depths are increased in part(s) of an electrical duct run, a decrease in ampacity of the conductors shall not be required, provided the total length of parts of the duct run increased in depth is less than 25 percent of the total run length.

(b) Where burial depths are deeper than shown in a specific underground ampacity table or figure, an ampacity derating factor of 6 percent per 300 mm (1 ft) increase in depth for all values of rho shall be permitted.

(3) Electrical Ducts Entering Equipment Enclosures. At locations where electrical ducts enter equipment enclosures from underground, spacing between such ducts, as shown in Figure 315.60(D)(3), shall be permitted to be reduced without requiring the ampacity of conductors therein to be reduced.

The term *electrical ducts*, as defined in Article 100, is used to differentiate them from other ducts, such as those used for air handling. The term is intended to include nonmetallic electrical ducts commonly used for underground wiring, as well as other raceways [such as rigid metal conduit (RMC), intermediate metal conduit (IMC), polyvinyl chloride (PVC) conduit, and high density polyethylene (HDPE) conduit] listed for use underground in earth or concrete.

(4) Ambient Temperature Correction. Ampacities for ambient temperatures other than those specified in the ampacity tables shall be corrected in accordance with Table 315.60(D)(4) or shall be permitted to be calculated using the following equation:

$$I' = I \sqrt{\frac{T_c - T'_a}{T_c - T_a}} \quad [315.60(D)(4)]$$

where:

I' = ampacity corrected for ambient temperature

I = ampacity shown in the table for T_c and T_a

T_c = temperature rating of conductor (°C)

T'_a = new ambient temperature (°C)

T_a = ambient temperature used in the table (°C)

Informational Note: See 110.40 for ambient temperature adjustments for terminals.

(E) Ampacity in Air. Ampacities for conductors and cables in air shall be as specified in Table 315.60(C)(1) through Table 315.60(C)(10). Ampacities shall be based on the following:

(1) Conductor temperatures of 90°C (194°F) and 105°C (221°F)

(2) Ambient air temperature of 40°C (104°F)

Informational Note: See 315.60(D)(4) where the ambient air temperature is other than 40°C (104°F).