

EXHIBIT 392.3 Multiconductor cables, 2000 volts or less, with not more than three conductors per cable [ampacity to be determined from Table B.2(3) in Informative Annex B].

Δ (2) Single-Conductor Cables. The ampacity of single-conductor cables shall be as permitted by 310.14(A)(2). The adjustment factors of 310.15(C)(1) shall not apply to the ampacity of cables in cable trays. The ampacity of single-conductor cables, or single conductors cabled together (triplexed, quadruplexed, and so forth), nominally rated 2000 volts or less, shall comply with 392.80(A)(2)(a) through (A)(2)(d).

(a) Where installed according to the requirements of 392.22(B), the ampacities for 600 kcmil and larger single-conductor cables in uncovered cable trays shall not exceed 75 percent of the ampacities in Table 310.17 and Table 310.19. Where cable trays are continuously covered for more than 1.8 m (6 ft) with solid unventilated covers, the ampacities for 600 kcmil and larger cables shall not exceed 70 percent of the ampacities in Table 310.17 and Table 310.19.

(b) Where installed according to the requirements of 392.22(B), the ampacities for 1/0 AWG through 500 kcmil single-conductor cables in uncovered cable trays shall not exceed 65 percent of the ampacities in Table 310.17 and Table 310.19. Where cable trays are continuously covered for more than 1.8 m (6 ft) with solid unventilated covers, the ampacities for 1/0 AWG through 500 kcmil cables shall not exceed 60 percent of the ampacities in Table 310.17 and Table 310.19.

(c) Where single conductors are installed in a single layer in uncovered cable trays, with a maintained space of not less than one cable diameter between individual conductors, the ampacity of 1/0 AWG and larger cables shall not exceed the ampacities in Table 310.17 and Table 310.19.

Exception to (c): For solid bottom cable trays, the ampacity of single conductor cables shall be determined by 310.14(B).

(d) Where single conductors are installed in a triangular or square configuration in uncovered cable trays, with a maintained free airspace of not less than 2.15 times one conductor diameter ($2.15 \times O.D.$) of the largest conductor contained within the configuration and adjacent conductor configurations or cables, the ampacity of 1/0 AWG and larger cables shall not exceed the ampacities of two or three single insulated conductors rated 0 through 2000 volts supported on a messenger in accordance with 310.15.

Informational Note: See Table 310.20.

The configuration of the conductors in the cable tray is the basis for determining the cable's ampacity. The installation must be

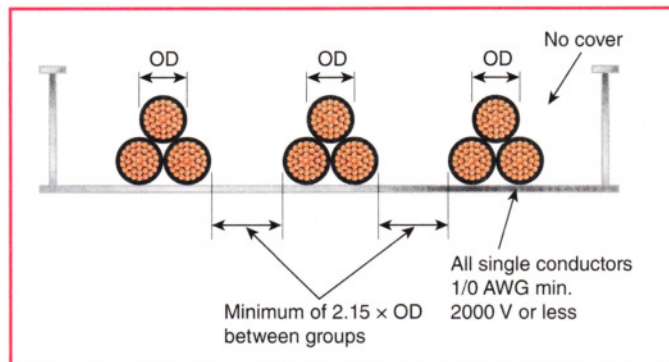


EXHIBIT 392.4 Three single conductors installed in a triangular configuration with spacing between groups of not less than 2.15 times the conductor diameter (ampacities to be determined from Table 310.20).

consistent with the specifications used in the design of the cable tray system. Section 392.80(A)(2)(d) recognizes single conductors in a triangular configuration installed in a cable tray with maintained spacing as having the same ampacity as three single insulated conductors on a messenger. The maintained spacing allows air to circulate around the cable.

Where three single conductors, nominally rated 2000 volts or less, are cabled together in a triangular configuration, with not less than 2.15 times the conductor diameter ($2.15 \times OD$) between groups, as illustrated in Exhibit 392.4, the ampacity of the conductors is determined in accordance with Table 310.20.

Where single conductors are installed in cable trays, their ampacities are permitted to be calculated using the applicable table. Where single-conductor cables emerge from a cable tray installation and are terminated at circuit breakers, distribution switchgear, and similar electrical equipment, the temperature limitations of the electrical equipment terminals should be coordinated with the ampacity of the single-conductor cables. As stated in both the *UL Guide Information for Electrical Equipment Directory* and in 110.14(C)(1), unless the equipment is listed and marked otherwise, conductor ampacities used in determining equipment terminations must be based on Table 310.16 as modified by 310.15(B) and (C).

(3) Combinations of Multiconductor and Single-Conductor Cables. Where a cable tray contains a combination of multiconductor and single-conductor cables, the ampacities shall be as given in 392.80(A)(1) for multiconductor cables and 392.80(A)(2) for single-conductor cables, provided that the following conditions apply:

- (1) The sum of the multiconductor cable fill area as a percentage of the allowable fill area for the tray calculated in accordance with 392.22(A), and the single-conductor cable fill area as a percentage of the allowable fill area for the tray calculated in accordance with 392.22(B), totals not more than 100 percent.
- (2) Multiconductor cables are installed according to 392.22(A), and single-conductor cables are installed according to 392.22(B) and 392.22(C).