CHAPTER 3

Wiring Methods and Materials

ARTICLE 300

General Requirements for Wiring Methods and Materials

300.1 Scope.

(A) All Wiring Installations. This article covers general requirements for wiring methods and materials for all wiring installations unless modified by other articles in Chapter 3.

(B) Integral Parts of Equipment. The requirements of this article are not intended to apply to the conductors that form an integral part of equipment, such as motors, controllers, motor control centers, or factory-assembled control equipment or listed utilization equipment.

Requirements for specific wiring methods can be found in the Chapter 3 article governing that particular wiring method, but the overarching requirements for wiring methods are covered in this first article of Chapter 3. Chapters 5 through 7 modify some of the requirements of Article 300. Chapter 8 is not subject to the requirements of Article 300, except where specifically referenced. Article 300 also covers wiring requirements within boxes, conduit bodies, and fittings.

(C) Metric Designators and Trade Sizes. Metric designators and trade sizes for conduit, tubing, and associated fittings and accessories shall be in accordance with Table 300.1(C).

Metric designators are used for traditional trade size threaded conduit. They do not change the physical dimensions or the traditional "NPT-type" threads of the conduit. Metric designators are simply another method of identifying the size of a circular raceway. Table 300.1(C) identifies a distinct metric designator for each circular raceway trade size. The unit of measure has not been included because it reflects a modular or relative measure rather than an exact dimension. As stated in the table footnote, the metric designators and trade sizes are not actual dimensions.

Each metric designator-sized circular raceway is identical in dimension (including manufacturing tolerances) to its trade size counterpart in Table 4 of Chapter 9. Therefore, the Informative Annex C wire fill tables are applicable to both metric designator and trade size circular raceways.

Threaded joints on circular raceways are a concern. For example, 344.6 requires rigid metal conduit (RMC) to be listed, and the appropriate product standard is ANSI/UL 6, *Electrical Rigid Metal Conduit — Steel*. Listed conduit must be threaded in accordance with ANSI/ASME B.1.20.1-1983, *Pipe Threads, General Purpose (Inch)*. Therefore, only conduit threaded to the traditional dimension of 3/4-inch taper per foot is acceptable. Simply stated, although conduit with a metric designator is permitted, metric-threaded conduit is not permitted by the *NEC*®. This aligns with 500.8(E)(2), for example, which states that although metric threads are permitted on equipment, an adapter must be used for connection to conduit.

TABLE 300.1(C) *Metric Designators and Trade Sizes*

Metric Designator	Trade Size
12	3/8
16	1/2
21	3/4
27	1
35	1 1/4
41	1 1/2
53	2
63	2 1/2
78	3
91	3 1/2
103	4
129	5
155	6

Note: The metric designators and trade sizes are for identification purposes only and are not actual dimensions.

300.2 Limitations.

(A) Voltage. Wiring methods specified in Chapter 3 shall be used for 1000 volts ac, 1500 volts dc, nominal, or less where not specifically limited elsewhere in Chapter 3. They shall be permitted for over 1000 volts ac, 1500 volts dc, nominal, where specifically permitted elsewhere in this *Code*.