

Special Equipment

ARTICLE

600

Electric Signs and Outline Lighting

Part I. General

600.1 Scope. This article covers the installation of conductors, equipment, and field wiring for electric signs, retrofit kits, and outline lighting, regardless of voltage. All installations and equipment using neon tubing, such as signs, decorative elements, skeleton tubing, or art forms, are covered by this article.

Informational Note: Sign and outline lighting illumination systems include, but are not limited to, cold cathode neon tubing, high-intensity discharge lamps (HID), fluorescent or incandescent lamps, light-emitting diodes (LEDs), and electroluminescent and inductance lighting.

Covered under the requirements of this article are signs of the fixed, stationary, and portable self-contained types. Electric signs and outline lighting frequently include sources of illumination identical to those of luminaires; however, the structure and electrical operation of many electric signs are far more complex than simply a set of fluorescent lamps within an enclosure. The terms *electric sign* and *outline lighting* as defined in Article 100 distinguish the function and use of equipment covered by these requirements from the equipment covered by the requirements of Article 410.

Neon tubing is used extensively in the sign industry, and its uses go far beyond the typical electric sign or outline lighting applications. Neon tubing is used in decorative and artistic applications to enhance the indoor and outdoor appearance of buildings and structures. Neon art forms are mounted on enclosures, sign bodies, and other support structures, or they are field-installed skeleton tubing. Depending on how neon art forms are constructed and installed, they are subject to the requirements of either Part I or Parts I and II of Article 600.

600.3 Listing. Fixed, mobile, or portable electric signs, section signs, outline lighting, photovoltaic (PV) powered signs, and retrofit kits, regardless of voltage, shall be listed and

labeled, provided with installation instructions, and installed in conformance with that listing, unless otherwise approved by special permission.

Electric signs and outline lighting are occasionally designed for a very specific purpose and may be a one-time construction for which the manufacturer might not obtain listing. Listing or approval by special permission helps ensure that electrical equipment does not pose a shock or fire hazard.

(A) Field-Installed Skeleton Tubing. Field-installed skeleton tubing shall not be required to be listed where installed in conformance with this *Code*.

(B) Outline Lighting. Outline lighting shall not be required to be listed as a system when it consists of listed luminaires wired in accordance with Chapter 3.

600.4 Markings.

(A) Signs and Outline Lighting Systems. Signs and outline lighting systems shall be listed and labeled; marked with the manufacturer's name, trademark, or other means of identification; and input voltage and current rating.

(B) Signs with a Retrofitted Illumination System. Signs with a retrofitted illumination system shall contain the following:

- (1) The sign shall be marked that the illumination system has been replaced.
- (2) The marking shall include the kit providers and installer's name, logo, or unique identifier.
- (3) Signs equipped with tubular light-emitting diode lamps powered by the existing sign sockets shall include a label alerting the service personnel that the sign has been modified. The label shall meet the requirements of 110.21(B). The label shall also include a warning not to install fluorescent lamps and shall also be visible during relamping.

Retrofit kits for electric signs must be listed in accordance with 600.3. As part of the listing, installation instructions are required to be provided. The installation instructions specify the