

NFPA 13, *Standard for the Installation of Sprinkler Systems*

NFPA 15, *Standard for Water Spray Fixed Systems for Fire Protection*

NFPA 17, *Standard for Dry Chemical Extinguishing Systems*

NFPA 2001, *Standard on Clean Agent Fire Extinguishing Systems*

If feeder-circuit equipment is not located in a space that is fully protected by a fire suppression system, the space must have a 2-hour fire resistance rating.

See also

700.10(D)(2)(4) commentary regarding fire-rated assemblies

(4) Source Control Wiring. Control conductors installed between the emergency power supply system/stored-energy power supply system (EPSS/SEPSS) and transfer equipment or control systems that initiate the operation of emergency sources or initiate the automatic connection to emergency loads shall be kept entirely independent of all other wiring and shall meet the conditions of 700.10(D)(2). The integrity of source control wiring shall be monitored for broken, disconnected, or shorted wires. Loss of integrity shall result in the following actions:

- (1) *Generators.* Shall start the generator(s).
- (2) *All other sources.* Shall be considered a system malfunction and initiate the designated signal(s) in 700.6(A).

N 700.11 Wiring, Class-2-Powered Emergency Lighting Systems.

N (A) General. Line voltage supply wiring and installation of Class 2 emergency lighting control devices shall comply with 700.10. Class 2 emergency circuits shall comply with 700.11(B) through (D).

N (B) Identification. Emergency circuits shall be permanently marked so they will be readily identified as a component of an emergency circuit or system by the following methods:

- (1) All boxes and enclosures for Class 2 emergency circuits shall be permanently marked as a component of an emergency circuit or system.
- (2) Exposed cable, cable tray, or raceway systems shall be permanently marked to be identified as a component of an emergency circuit or system, within 900 mm (3 ft) of each connector and at intervals not to exceed 7.6 m (25 ft).

N (C) Separation of Circuits. Class 2 emergency circuits shall be wired in a listed, jacketed cable or with one of the wiring methods of Chapter 3. If installed alongside nonemergency Class 2 circuits that are bundled, Class 2 emergency circuits shall be bundled separately. If installed alongside nonemergency Class 2 circuits that are not bundled, Class 2 emergency circuits shall be separated by a nonconductive sleeve or nonconductive barrier from all other Class 2 circuits. Separation from other circuits shall comply with 725.136.

N (D) Protection. Wiring shall comply with the requirements of 300.4 and be installed in a raceway, armored or metal-clad cable, or cable tray.

Exception No. 1: Section 700.11(D) shall not apply to wiring that does not exceed 1.83 m (6 ft) in length and that terminates at an emergency luminaire or an emergency lighting control device.

Exception No. 2: Section 700.11(D) shall not apply to locked rooms or locked enclosures that are accessible only to qualified persons.

Informational Note: Locked rooms accessible only to qualified persons include locked telecommunications rooms, locked electrical equipment rooms, or other access-controlled areas.

Part III. Sources of Power

700.12 General Requirements. Current supply shall be such that, in the event of failure of the normal supply to, or within, the building or group of buildings concerned, emergency lighting, emergency power, or both shall be available within the time required for the application but not to exceed 10 seconds. The supply system for emergency purposes, in addition to the normal services to the building and meeting the general requirements of this section, shall be one or more of the types of systems described in 700.12(C) through (H). Unit equipment in accordance with 700.12(H) shall satisfy the applicable requirements of this article.

At least two sources of power must be provided — one normal supply and one or more of the emergency systems described in 700.12. The sources (see Exhibits 700.5 and 700.6) can be one of the following:

1. Two services — one normal supply and one emergency supply (preferably from separate utility stations)
2. One normal service and a storage battery (or unit equipment) system
3. One normal service and a generator set
4. One normal service and an uninterruptible power supply (UPS)
5. One normal service and a fuel cell system
6. Direct-current microgrid and a utility service, an engine generator, a storage battery system, a UPS system, or a fuel cell

A means must be provided to transfer the emergency loads to the alternate supply within 10 seconds of normal supply interruption. If a separate service is used, both may operate normally, but equipment for emergency lighting and power must be arranged to be energized from either service.

If the alternate or emergency source of supply is a storage battery or generator set, the single emergency system usually is operated on the normal service, and the battery (or batteries) or generator operates only if the normal service fails. However, a generator can be used for peak load shaving and other standby systems in accordance with 700.4.