

810.71 General. Transmitters shall comply with 810.71(A) through (C).

(A) Enclosing. The transmitter shall be enclosed in a metal frame or grille or separated from the operating space by a barrier or other equivalent means, all metallic parts of which are effectively connected to a bonding conductor or grounding electrode conductor.

(B) Grounding of Controls. All external metal handles and controls accessible to the operating personnel shall be effectively connected to an equipment grounding conductor if the transmitter is powered by the premises wiring system or grounded with a conductor in accordance with 810.21.

(C) Interlocks on Doors. All access doors shall be provided with interlocks that disconnect all voltages of over 350 volts between conductors when any access door is opened.

ARTICLE

820

Community Antenna Television and Radio Distribution Systems

Part I. General

820.1 Scope. This article covers coaxial cable distribution of radio frequency signals typically employed in community antenna television (CATV) systems.

Article 820 covers the installation of coaxial cable for closed-circuit television, cable television, and security television cameras. This article also covers coaxial cable for radio and television receiving equipment. Article 830 covers network-powered broadband system installations. Many of the requirements that were similar or redundant to other Chapter 8 articles have been consolidated within the new Article 800.

820.3 Other Articles. The wiring methods of Article 830 shall be permitted to substitute for the wiring methods of Article 820.

Informational Note: Use of Article 830 wiring methods will facilitate the upgrading of Article 820 installations to network-powered broadband applications.

820.15 Power Limitations. Coaxial cable shall be permitted to deliver power to equipment that is directly associated with the radio frequency distribution system if the voltage is not over 60 volts and if the current is supplied by a transformer or other device that has power-limiting characteristics.

Power shall be blocked from premises devices on the network that are not intended to be powered via the coaxial cable.

Part III. Protection

820.93 Grounding of the Outer Conductive Shield of Coaxial Cables. Coaxial cables entering buildings or attached

to buildings shall comply with 820.93(A) or (B). Where the outer conductive shield of a coaxial cable is grounded, no other protective devices shall be required. For purposes of this section, grounding located at mobile home service equipment located within 9.0 m (30 ft) of the exterior wall of the mobile home it serves, or at a mobile home disconnecting means grounded in accordance with 250.32 and located within 9.0 m (30 ft) of the exterior wall of the mobile home it serves, shall be considered to meet the requirements of this section.

Informational Note: Selecting a grounding block location to achieve the shortest practicable bonding conductor or grounding electrode conductor helps limit potential differences between CATV and other metallic systems.

Proper bonding of the community antenna television (CATV) system coaxial cable sheath to the electrical power grounding electrode is needed to prevent potential fire and shock hazards. Failure to bond the two systems together can lead to a difference in potential between normally non-current-carrying parts.

See also

250.94 for more information regarding bonding of communications systems

(A) Entering Buildings. In installations where the coaxial cable enters the building, the outer conductive shield shall be grounded in accordance with 820.100. The grounding shall be as close as practicable to the point of entrance.

(B) Terminating Outside of the Building. In installations where the coaxial cable is terminated outside of the building, the outer conductive shield shall be grounded in accordance with 820.100. The grounding shall be as close as practicable to the point of attachment or termination.

(C) Location. Where installed, a listed primary protector shall be applied on each community antenna and radio distribution (CATV) cable external to the premises. The listed primary protector shall be located as close as practicable to the entrance point of the cable on either side or integral to the ground block.

(D) Hazardous (Classified) Locations. If a primary protector or equipment providing the primary protection function is used, it shall not be located in any hazardous (classified) location as defined in 500.5 and 505.5 or in the vicinity of easily ignitable material.

Exception: Primary protection equipment shall be used only if permitted by 501.150, 502.150, and 503.150.

Part IV. Grounding Methods

Δ 820.100 Cable Bonding and Grounding. The shield of the coaxial cable shall be bonded or grounded as specified in 820.100(A) and (B).

Exception: For communications systems using coaxial cable completely contained within the building (i.e., they do not