

installation location dictates the type of cable permitted within the raceway or assembly as summarized in Table 800.154(a).

A raceway marked "plenum" on its surface or on a marker tape is suitable for use in ducts, plenums, or other spaces used for environmental air in accordance with 800.154. A "plenum" raceway is also suitable for installation in risers, for general-purpose use, and for dwellings.

A raceway or routing assembly marked "riser" on its surface or on a marker tape is suitable for installation in risers in accordance with 800.154. A "riser" raceway or routing assembly is also suitable for general-purpose use and for dwellings.

A raceway or routing assembly marked as "general purpose" is suitable for installation in general-purpose areas in accordance with 800.154 and for dwellings.

ARTICLE

805

Communications Circuits

Part I. General

805.1 Scope. This article covers communications circuits and equipment.

Article 805 contains the requirements that are unique within Chapter 8 for communications circuits. In previous editions of the *NEC*®, these requirements could be found in Article 800, which now contains requirements that apply generally across all of Chapter 8.

Although information technology equipment systems often are used for or with communications systems, Article 805 does not cover wiring of that equipment.

See also

Article 645, which provides requirements for wiring contained solely within an information technology equipment room

Article 722, which provides general wiring requirements that extend beyond a computer room and for wiring of local area networks within buildings

Article 760, which covers wiring requirements for fire alarm systems

805.18 Installation of Equipment. Equipment electrically connected to a communications network shall be listed in accordance with 800.171.

Exception: This listing requirement shall not apply to test equipment that is intended for temporary connection to a telecommunications network by qualified persons during the course of installation, maintenance, or repair of telecommunications equipment or systems.

Part II. Wires and Cables Outside and Entering Buildings

805.47 Underground Communications Wires and Cables Entering Buildings—Underground Block Distribution. Where

the entire street circuit is run underground and the circuit within the block is placed so as to be free from the likelihood of accidental contact with electric light or power circuits of over 300 volts to ground, the insulation requirements of 805.50(A) and 805.50(C) shall not apply, insulating supports shall not be required for the conductors, and bushings shall not be required where the conductors enter the building.

805.50 Circuits Requiring Primary Protectors. Circuits that require primary protectors as provided in 805.90 shall comply with 805.50(A), 805.50(B), and 805.50(C).

(A) Insulation, Wires, and Cables. Communications wires and cables without a metal shield, running from the last outdoor support to the primary protector, shall be listed in accordance with 805.173.

(B) On Buildings. Communications wires and cables in accordance with 805.50(A) shall be separated at least 100 mm (4 in.) from electric light or power conductors not in a raceway or cable or be permanently separated from conductors of the other systems by a continuous and firmly fixed nonconductor in addition to the insulation on the wires, such as porcelain tubes or flexible tubing. Communications wires and cables in accordance with 805.50(A) exposed to accidental contact with electric light and power conductors operating at over 300 volts to ground and attached to buildings shall be separated from woodwork by being supported on glass, porcelain, or other insulating material.

Exception: Separation from woodwork shall not be required where fuses are omitted as provided for in 805.90(A)(1), or where conductors are used to extend circuits to a building from a cable having a grounded metal sheath.

Δ (C) Entering Buildings.

N (1) Installed Inside Buildings. If a primary protector is installed inside the building, the communications wires and cables shall enter the building either through a noncombustible, nonabsorbent insulating bushing or through a metal raceway.

Exception: The insulating bushing shall not be required if the entering communications wires and cables meet one or more of the following conditions:

- (1) Is a metal-sheathed cable
- (2) Pass through masonry
- (3) Meet the requirements of 805.50(A) and fuses are omitted in accordance with 805.90(A)(1)
- (4) Meet the requirements of 805.50(A) and are used to extend circuits to a building from a cable having a grounded metal sheath

N (2) Orientation of Raceways or Bushings. Raceways or bushings shall slope upward from the outside, or, where this cannot be done, drip loops shall be formed in the communications wires and cables immediately before they enter the building.