

be greater than the number for which the raceway is designed. Cables shall be permitted to be installed where such use is not prohibited by the respective cable articles.

The adjustment factors of 310.15(C)(1) shall not apply to conductors installed in surface metal raceways where all of the following conditions are met:

- (1) The cross-sectional area of the raceway exceeds 2500 mm² (4 in.²).
- (2) The current-carrying conductors do not exceed 30 in number.
- (3) The sum of the cross-sectional areas of all contained conductors does not exceed 20 percent of the interior cross-sectional area of the surface metal raceway.

The number, type, and sizes of conductors permitted to be installed in a listed surface metal raceway are marked on the raceway or on the package in which it is shipped.

386.30 Securing and Supporting. Surface metal raceways and associated fittings shall be supported in accordance with the manufacturer's installation instructions.

386.56 Splices and Taps. Splices and taps shall be permitted in surface metal raceways having a removable cover that is accessible after installation. The conductors, including splices and taps, shall not fill the raceway to more than 75 percent of its area at that point. Splices and taps in surface metal raceways without removable covers shall be made only in boxes. All splices and taps shall be made by approved methods.

Taps of Type FC cable installed in surface metal raceway shall be made in accordance with 322.56(B).

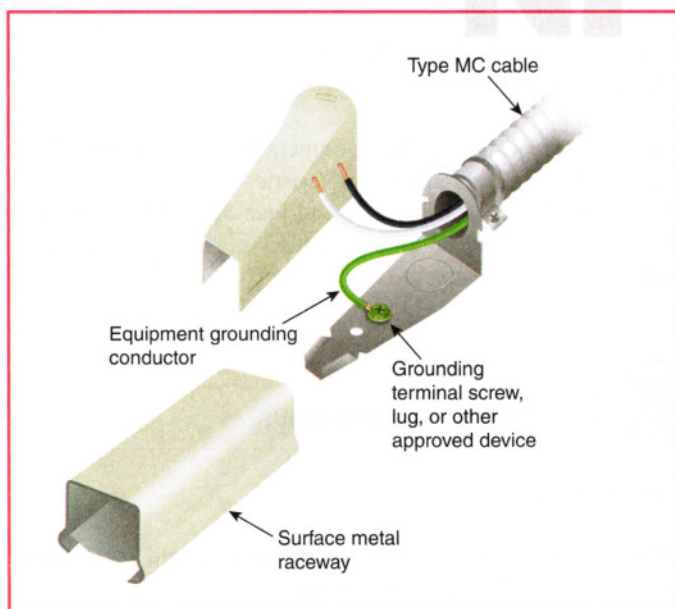


EXHIBIT 386.2 One means for terminating an EGC at a surface metal raceway.

386.60 Grounding. Surface metal raceway enclosures providing a transition from other wiring methods shall have a means for connecting an equipment grounding conductor.

As the example in Exhibit 386.2 shows, where a surface metal raceway is supplied by Type MC or NM cable, a means (e.g., grounding terminal screw or lug) for terminating the equipment grounding conductor (EGC) must be available at the surface metal raceway.

386.70 Combination Raceways. When combination surface metal raceways are used for both signaling and for lighting and power circuits, the different systems shall be run in separate compartments identified by stamping, imprinting, or color coding of the interior finish.

Part III. Construction Specifications

386.100 Construction. Surface metal raceways shall be of such construction as will distinguish them from other raceways. Surface metal raceways and their elbows, couplings, and similar fittings shall be designed so that the sections can be electrically and mechanically coupled together and installed without subjecting the wires to abrasion.

Where covers and accessories of nonmetallic materials are used on surface metal raceways, they shall be identified for such use.

386.120 Marking. Each length of surface metal raceway shall be clearly and durably identified as required in the first sentence of 110.21(A).

ARTICLE

388

Surface Nonmetallic Raceways

Part I. General

388.1 Scope. This article covers the use, installation, and construction specifications for surface nonmetallic raceways and associated fittings.

Surface nonmetallic raceways may resemble base or chair rail molding and allow for circuit conductors to be installed without the need for wall penetration. The installation shown in Exhibit 388.1 is typical of how a surface nonmetallic raceway can be used to supply power, community antenna television (CATV), and communications outlets.

388.6 Listing Requirements. Surface nonmetallic raceway and associated fittings shall be listed.

Part II. Installation

388.10 Uses Permitted. Surface nonmetallic raceways shall be permitted as follows:

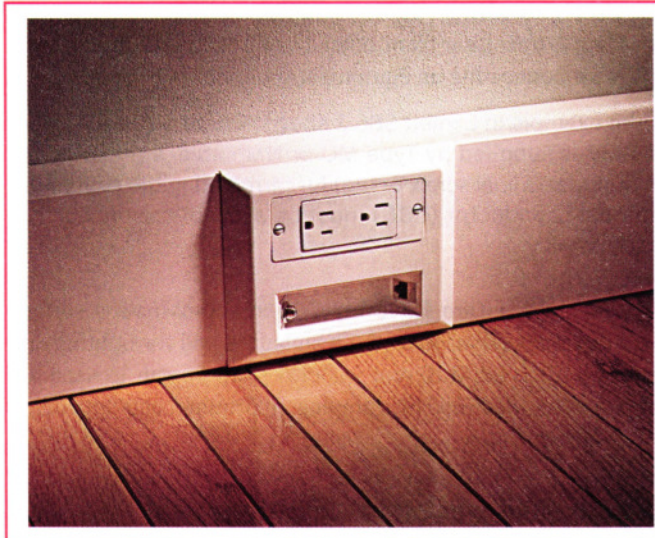


EXHIBIT 388.1 An example of a surface nonmetallic raceway, resembling base molding, that supplies a receptacle outlet on the top and CATV and communications on the bottom. (Courtesy of Legrand®).

- (1) The use of surface nonmetallic raceways shall be permitted in dry locations.
- (2) Extension through walls and floors shall be permitted. Surface nonmetallic raceway shall be permitted to pass transversely through dry walls, dry partitions, and dry floors if the length passing through is unbroken. Access to the conductors shall be maintained on both sides of the wall, partition, or floor.

388.12 Uses Not Permitted. Surface nonmetallic raceways shall not be used in the following:

- (1) Where concealed, except as permitted in 388.10(2)
- (2) Where subject to severe physical damage
- (3) Where the voltage is 300 volts or more between conductors, unless listed for higher voltage
- (4) In hoistways
- (5) In any hazardous (classified) location, except as permitted by other articles in this *Code*
- (6) Where subject to ambient temperatures exceeding those for which the nonmetallic raceway is listed
- (7) For conductors whose insulation temperature limitations would exceed those for which the nonmetallic raceway is listed

388.21 Size of Conductors. No conductor larger than that for which the raceway is designed shall be installed in surface nonmetallic raceway.

388.22 Number of Conductors or Cables. The number of conductors or cables installed in surface nonmetallic raceway shall not be greater than the number for which the raceway is designed. Cables shall be permitted to be installed where such use is not prohibited by the respective cable articles.

388.30 Securing and Supporting. Surface nonmetallic raceways and associated fittings shall be supported in accordance with the manufacturer's installation instructions.

388.56 Splices and Taps. Splices and taps shall be permitted in surface nonmetallic raceways having a cover capable of being opened in place that is accessible after installation. The conductors, including splices and taps, shall not fill the raceway to more than 75 percent of its area at that point. Splices and taps in surface nonmetallic raceways without covers capable of being opened in place shall be made only in boxes. All splices and taps shall be made by approved methods.

Δ **388.60 Grounding.** Where equipment grounding is required, a separate grounding conductor shall be installed in the raceway.

388.70 Combination Raceways. When combination surface nonmetallic raceways are used both for signaling and for lighting and power circuits, the different systems shall be run in separate compartments identified by stamping, imprinting, or color coding of the interior finish.

Part III. Construction Specifications

388.100 Construction. Surface nonmetallic raceways shall be of such construction as will distinguish them from other raceways. Surface nonmetallic raceways and their elbows, couplings, and similar fittings shall be designed so that the sections can be mechanically coupled together and installed without subjecting the wires to abrasion.

Surface nonmetallic raceways and fittings are made of suitable nonmetallic material that is resistant to moisture and chemical atmospheres. It shall also be flame retardant, resistant to impact and crushing, resistant to distortion from heat under conditions likely to be encountered in service, and resistant to low-temperature effects.

388.120 Marking. Surface nonmetallic raceways that have limited smoke-producing characteristics shall be permitted to be so identified. Each length of surface nonmetallic raceway shall be clearly and durably identified as required in the first sentence of 110.21(A).

ARTICLE

390

Underfloor Raceways

Part I. General

390.1 Scope. This article covers the use and installation requirements for underfloor raceways.

An underfloor raceway is a practical means of bringing light, power, and signal and communications systems to desks, work