

ARTICLE 312

CABINETS, CUTOUT BOXES, AND METER SOCKET ENCLOSURES

Introduction to Article 312—Cabinets, Cutout Boxes, and Meter Socket Enclosures

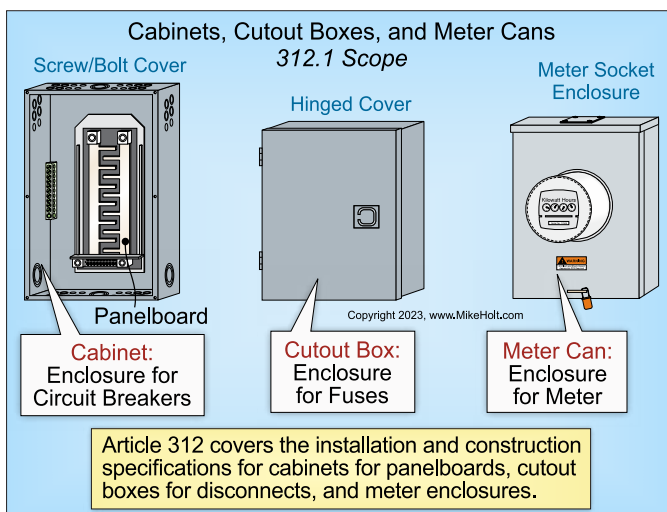
Article 312 covers the installation and construction specifications for cabinets for panelboards, cutout boxes for disconnects, and meter socket enclosures. Notice that these rules cover the cabinets and enclosures that contain electrical equipment such as panel boards—not the equipment itself. Some topics covered in this material include:

- ▶ Damp and wet locations
- ▶ Repairing noncombustible surfaces
- ▶ Cable terminations

Part I. General

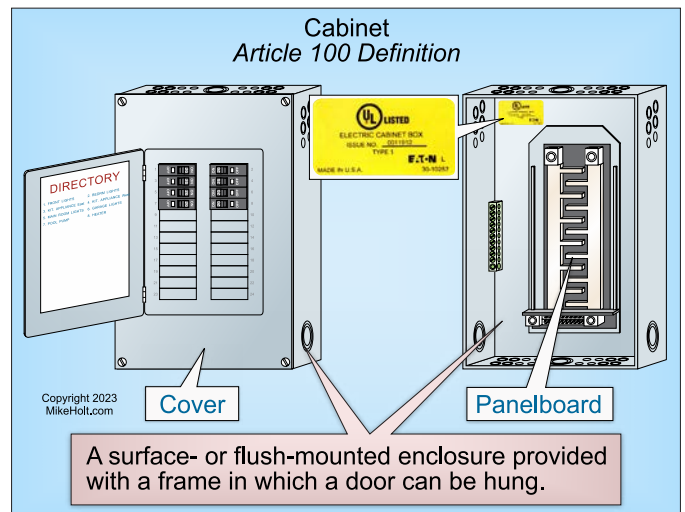
312.1 Scope

Article 312 covers the installation and construction specifications for cabinets for panelboards, cutout boxes for disconnects, and meter socket enclosures. ▶Figure 312-1



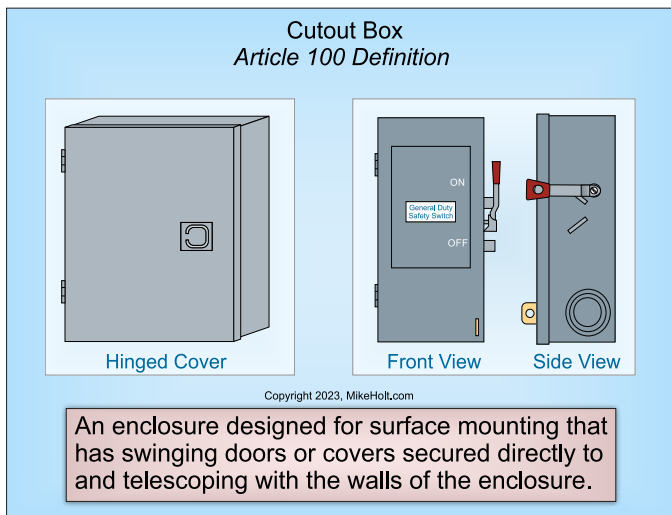
▶Figure 312-1

According to Article 100, “Cabinet” is a surface- or flush-mounted enclosure provided with a frame in which a door can be hung. ▶Figure 312-2



▶Figure 312-2

According to Article 100, “Cutout Box” is an enclosure designed for surface mounting that has swinging doors or covers secured directly to and telescoping with the walls of the enclosure. ▶Figure 312-3



▶Figure 312-3

312.2 Damp or Wet Locations

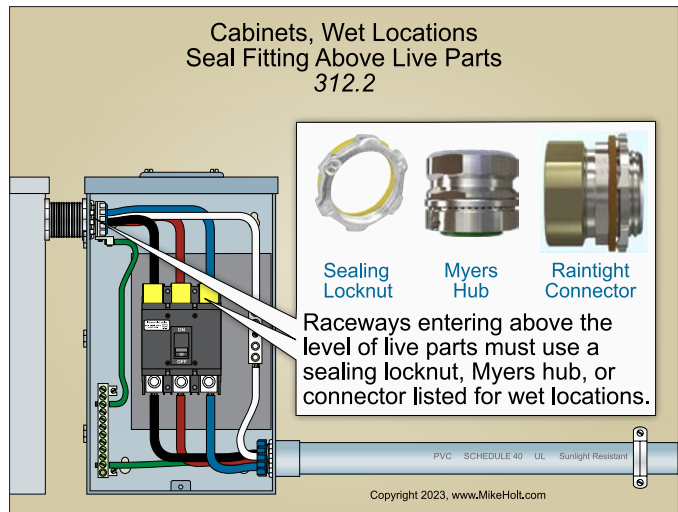
Weatherproof. Cabinets for panelboards, cutout boxes for disconnects, and meter socket enclosures installed in damp or wet locations must be weatherproof.

According to Article 100, “Weatherproof” means constructed or protected so exposure to the weather will not interfere with successful operation [Article 100].

Above Live Parts. Raceways entering above the level of live parts (such as busbars and overcurrent devices) of cabinets, cutout boxes, and meter socket enclosures in wet locations must use a sealing locknut, Myers hub, or connector listed for wet locations. ▶Figure 312-4

Author’s Comment:

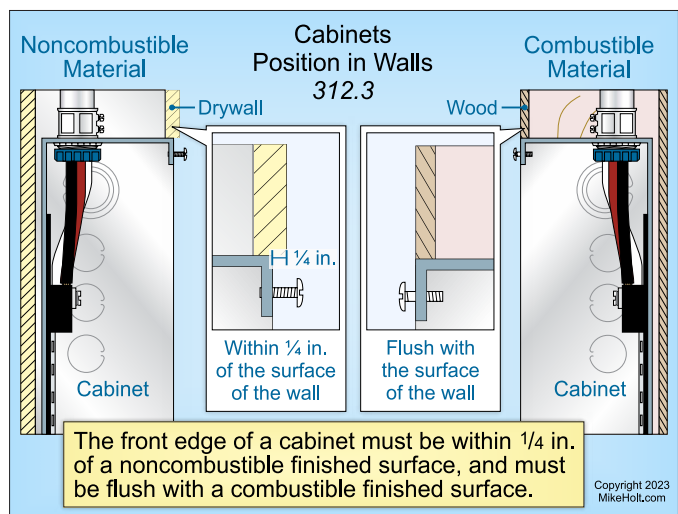
- ▶ In accordance with “UL Guide Information DWTT,” sealing locknuts are permitted on the outside or inside of the enclosure for RMC, IMC, or inside the enclosure for connectors if marked for this use on the fitting carton.



▶Figure 312-4

312.3 Position in Walls

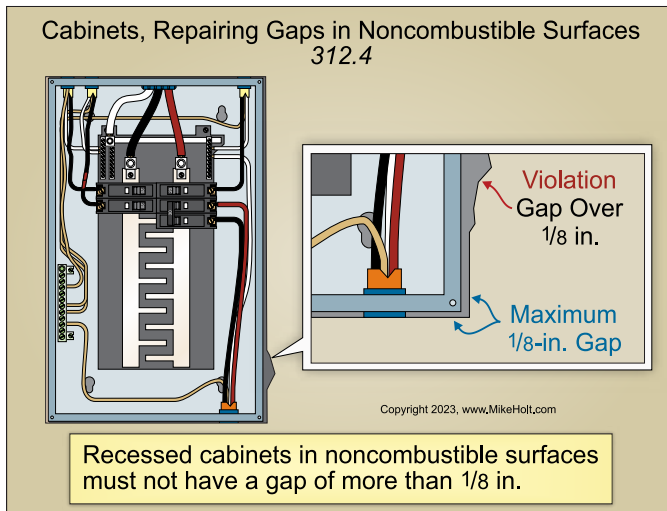
Cabinets for panelboards installed in walls of noncombustible material must be installed so the front edge of the cabinet is set back no more than 1/4 in. from the finished surface. In walls constructed of wood or other combustible material, cabinets for panelboards must be flush with the finished surface or project outward. ▶Figure 312-5



▶Figure 312-5

312.4 Repairing Gaps in Noncombustible Surfaces

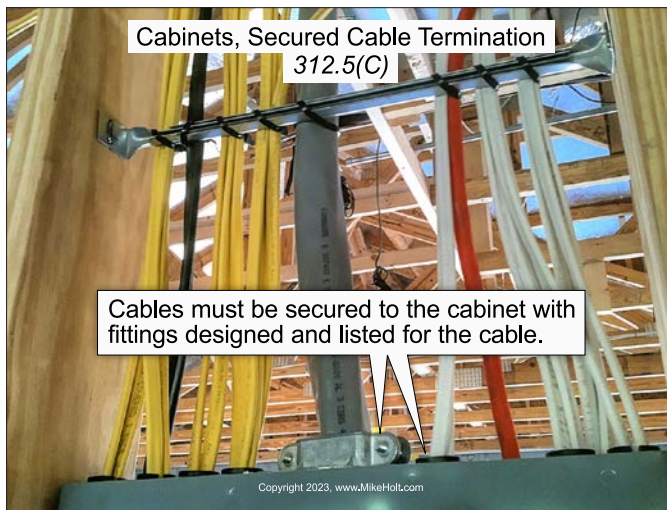
Recessed cabinets for panelboards and cutout boxes in noncombustible surfaces (plaster, drywall, or plasterboard) must not have a gap of more than $\frac{1}{8}$ in. around any edge of the cabinet. ▶Figure 312-6



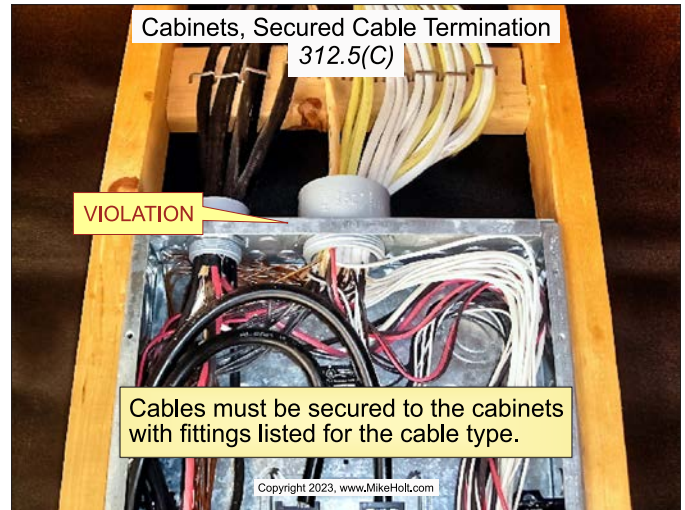
▶Figure 312-6

312.5 Cable Termination to Enclosures

(C) Cable Termination. Cables must be secured to the cabinet, cutout box, or meter socket enclosure with fittings listed for the cable type. See 300.12 and 300.15. ▶Figure 312-7 and ▶Figure 312-8



▶Figure 312-7

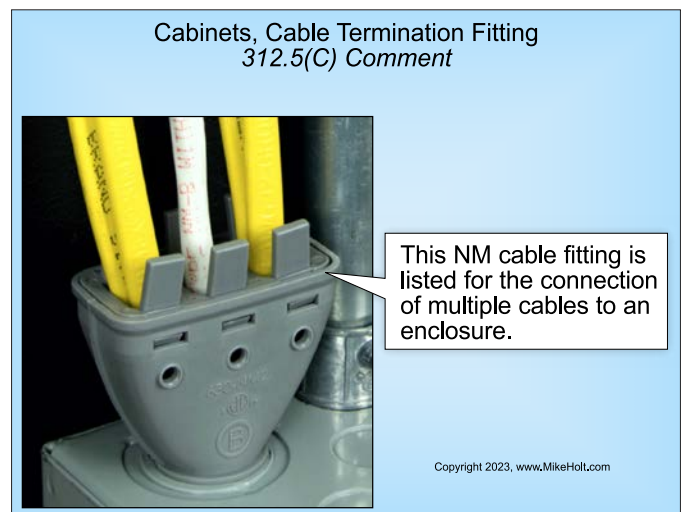


▶Figure 312-8

Author's Comment:

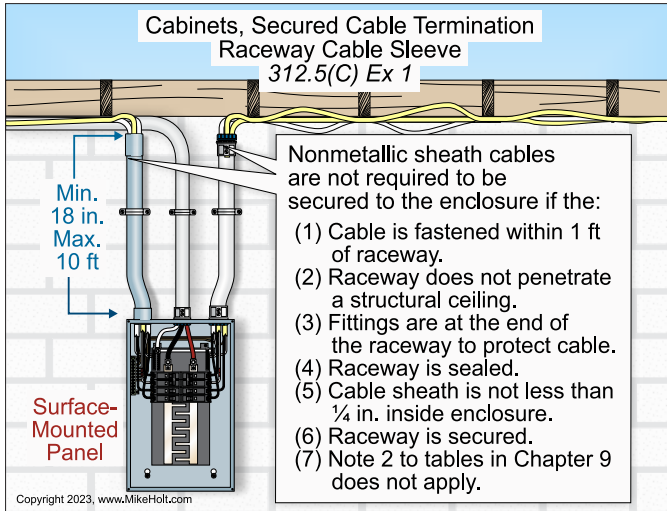
- ▶ In accordance with "UL Guide Information PXJV," type NM cable clamps or cable connectors are only suitable for a single NM cable unless that clamp or connector is identified for more than one cable. Some Type NM cable clamps are listed for two or more Type NM cables within a single fitting.

▶Figure 312-9



▶Figure 312-9

Ex 1: Nonmetallic-sheathed cables are not required to be secured to the cabinet, cutout box, and meter socket enclosure if the cables enter the top of a surface-mounted enclosure through a nonflexible raceway not less than 18 in. or more than 10 ft long, if all the following conditions are met: ▶Figure 312-10



- (1) Each cable is fastened within 12 in. of the raceway.
- (2) The raceway does not penetrate a structural ceiling.
- (3) Fittings are provided on the raceway to protect the cables from abrasion.
- (4) The raceway is sealed.
- (5) Each cable sheath extends into the enclosure beyond the fitting not less than 1/4 in.
- (6) The raceway is properly secured.
- (7) Where installed as conduit or tubing, Chapter 9, Table 1 Notes 5 and 9 apply. Note 2 to the tables in Chapter 9 does not apply to this condition.

►Figure 312-10