

stranded than Class B and C stranding are required to be identified for the class or classes of conductor stranding and the number of strands. Table 10 in Chapter 9 provides information for the application of this information in the field.

110.15 High-Leg Marking. On a 4-wire, delta-connected system where the midpoint of one phase winding is grounded, only the conductor or busbar having the higher phase voltage to ground shall be durably and permanently marked by an outer finish that is orange in color or by other effective means. Such identification shall be placed at each point on the system where a connection is made if the grounded conductor is also present.

The high leg is common on a 240/120-volt, 3-phase, 4-wire delta system. It is typically designated as “B phase.” The high-leg marking, which is required to be the color orange or other similar effective means, is intended to prevent problems caused by the lack of standardization where metered and nonmetered equipment are installed in the same installation. See Exhibit 110.6. Electricians should always test each phase relative to ground with suitable equipment to determine exactly where the high leg is located within the system.

110.16 Arc-Flash Hazard Warning.

(A) General. Electrical equipment, such as switchboards, switchgear, enclosed panelboards, industrial control panels, meter socket enclosures, and motor control centers, that is in other than dwelling units, and is likely to require examination, adjustment, servicing, or maintenance while energized, shall be field or factory marked to warn qualified persons of potential electric arc flash hazards. The marking shall meet the requirements in 110.21(B) and shall be located so as to be clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.

Proper warning labels raise the level of awareness of electrical arc-flash hazards and decrease the number of accidents that result when electricians do not wear the proper type of protective

clothing while working on “hot” (energized) equipment. Exhibit 110.7 is one example of an equipment warning sign as required by this section.

How to choose suitable personal protective equipment (PPE) appropriate to a particular hazard is described in *NFPA 70E®, Standard for Electrical Safety in the Workplace®*. See Exhibit 110.8.

Accident reports confirm the fact that workers responsible for the installation or maintenance of electrical equipment often do not establish an electrically safe working condition, as described in *NFPA 70E*, before working on the equipment.



EXHIBIT 110.7 One example of an arc-flash warning sign. (Courtesy of the International Association of Electrical Inspectors)



EXHIBIT 110.8 Worker clothed in PPE appropriate for the hazard involved. (Courtesy of Enespro)

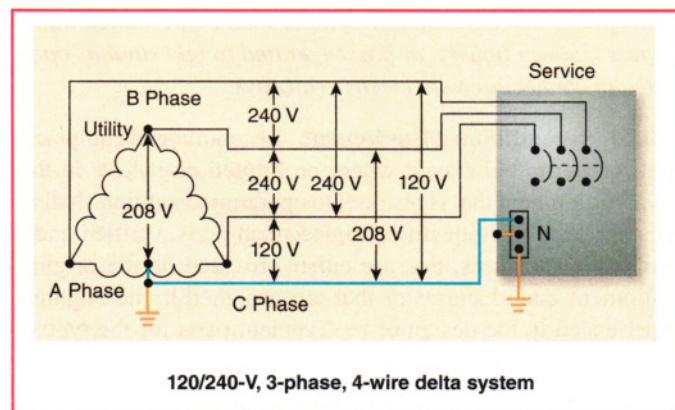


EXHIBIT 110.6 A 240/120-volt, 3-phase, 4-wire delta system.