

N 225.42 Surge Protection.

N (A) Surge-Protective Device. Where a feeder supplies any of the following, a surge-protective device (SPD) shall be installed:

- (1) Dwelling units
- (2) Dormitory units
- (3) Guest rooms and guest suites of hotels and motels
- (4) Areas of nursing homes and limited-care facilities used exclusively as patient sleeping rooms

N (B) Location. The SPD shall be installed in or adjacent to the distribution equipment that is connected to the load side of the feeder and contains branch circuit overcurrent protective device(s) that supply the location specified in 225.42(A).

Informational Note: Surge protection is most effective when closest to the branch circuit. Surges can be generated from multiple sources including, but not limited to, lightning, the electric utility, or utilization equipment.

N (C) Type. The SPD shall be a Type 1 or Type 2 SPD.

N (D) Replacement. Where the distribution equipment supplied by the feeder is replaced, all of the requirements of this section shall apply.

N (E) Ratings. SPDs shall have a nominal discharge current rating (I_n) of not less than 10kA.

Informational Note: Lead lengths of conductors to the SPD should be kept as short as possible to reduce let-through voltages.

ARTICLE**230****Services****Part I. General**

Δ 230.1 Scope. This article covers service conductors and equipment for control and protection of services **not over 1000 volts ac or 1500 volts dc**, nominal and their installation requirements.

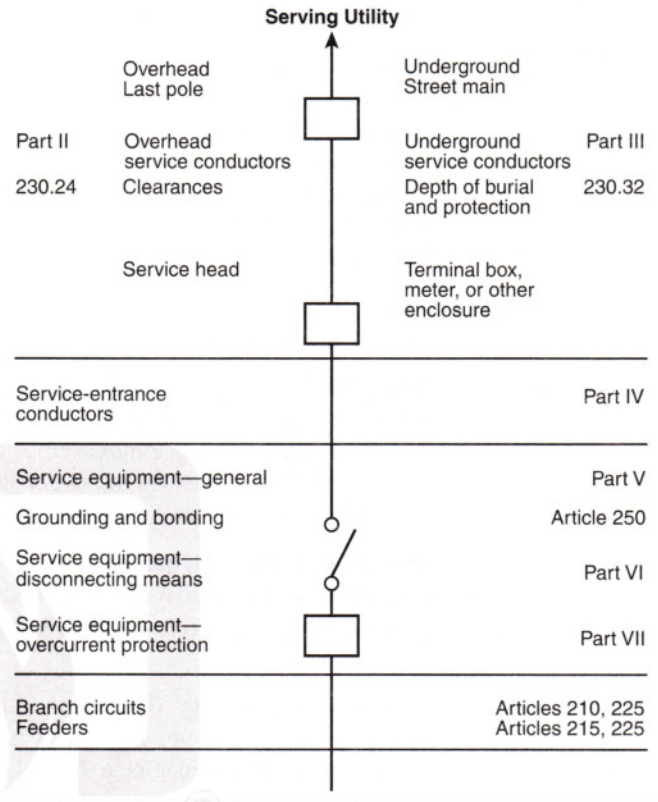
Informational Note No. 1: See Informational Note Figure 230.1.

Informational Note No. 2: See Part V of Article 235 for services over 1000 volts ac or 1500 volts dc, nominal.

230.2 Number of Services. A building or other structure served shall be supplied by only one service unless permitted in 230.2(A) through (D). For the purpose of 230.40, Exception No. 2 only, underground sets of conductors, 1/0 AWG and larger, running to the same location and connected together at their supply end but not connected together at their load end shall be considered to be supplying one service.

The general requirement is for a building or structure to be supplied by only one service. However, under some conditions, a single service might not be adequate. Therefore, the installation

General	Part I
Overhead Service Conductors	Part II
Underground Service Conductors	Part III
Service-Entrance Conductors	Part IV
Service Equipment—General	Part V
Service Equipment—Disconnecting Means	Part VI
Service Equipment—Overcurrent Protection	Part VII



Δ INFORMATIONAL NOTE FIGURE 230.1 Services.

of additional services is permitted as specified in conditions covered by 230.2(A) through (D). Where more than one service (or combination of service, feeder, and branch circuit) is installed, 230.2(E) requires that a permanent plaque or directory with the pertinent information on the multiple sources of supply be located at each supply source disconnecting means. Exhibits 230.1 through 230.6 illustrate examples of the general requirement that a building or structure be supplied by only one service.

(A) Special Conditions. Additional services shall be permitted to supply the following:

- (1) Fire pumps
- (2) Emergency systems
- (3) Legally required standby systems
- (4) Optional standby systems
- (5) Interconnected electric power production sources
- (6) Systems designed for connection to multiple sources of supply for the purpose of enhanced reliability