ARTICLE

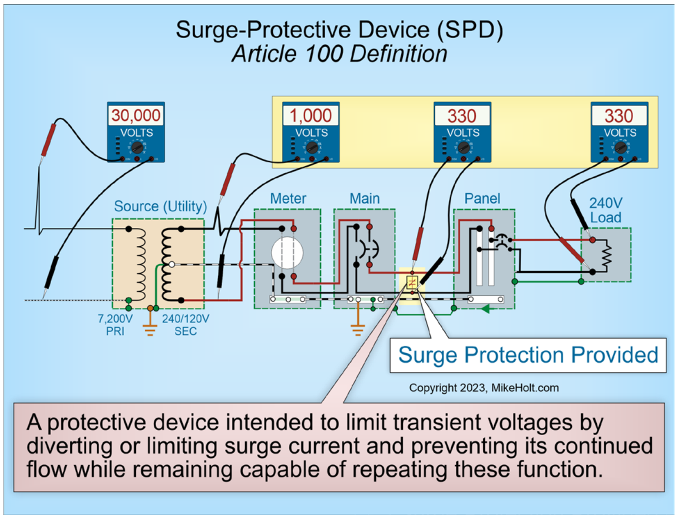
242 OVERVOLTAGE PROTECTION

Introduction to Article 242—Overvoltage Protection

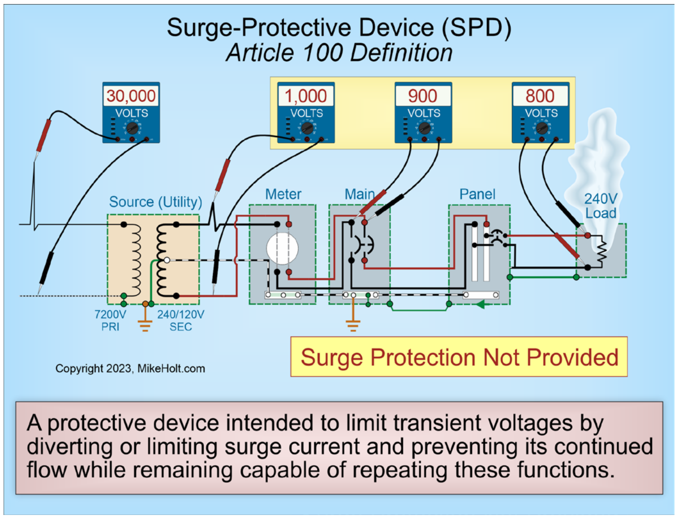
This article provides the general, installation, and connection requirements for overvoltage protection and overvoltage protective devices (surge-protective devices or SPDs). Surge-protective devices are installed to reduce transient voltages present on the premises electrical system to protect electronic safety equipment such as smoke detectors, AFCIs, GFCIs, and electronic breakers from damage. Some topics covered in this material for Article 242 include:

- Short-Circuit Current Rating
- SPD Types
- Location
- Conductor Routing and Sizing

According to Article 100, "Surge Protection Device (SPD)" is a protective device intended to limit transient voltages by diverting or limiting surge current and preventing its continued flow while remaining capable of repeating these functions. ▶Figure 242–1 and ▶Figure 242–2



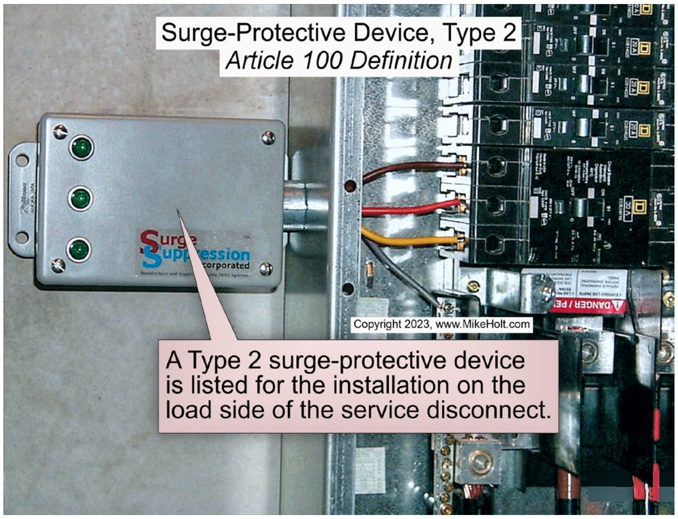
▶Figure 242–1



▶Figure 242–2

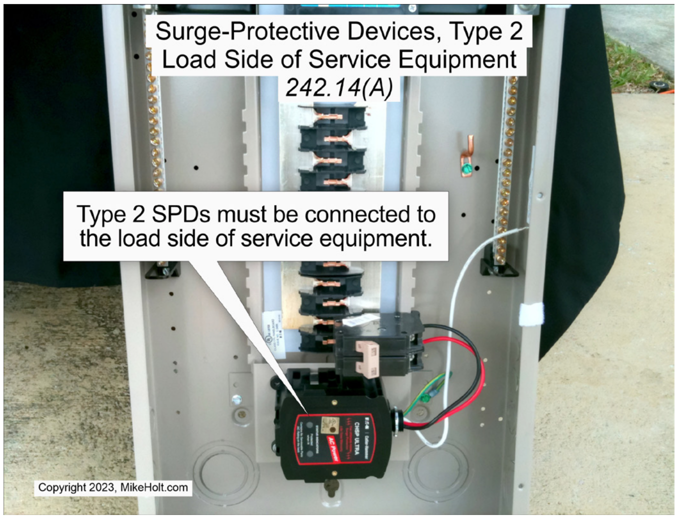
242.14 Type 2 SPDs—Feeder Circuits

According to Article 100, "Type 2 SPD" is listed for the installation on the load side of the service disconnect. ▶Figure 242–10



▸Figure 242–10

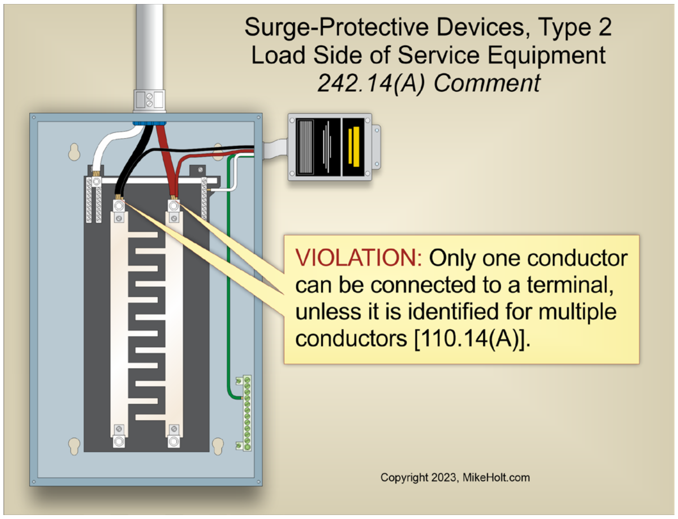
(A) Load Side of Service Disconnect. Type 2 surge-protective devices must be connected to the load side of the service disconnect. ▸Figure 242–11



▸Figure 242–11

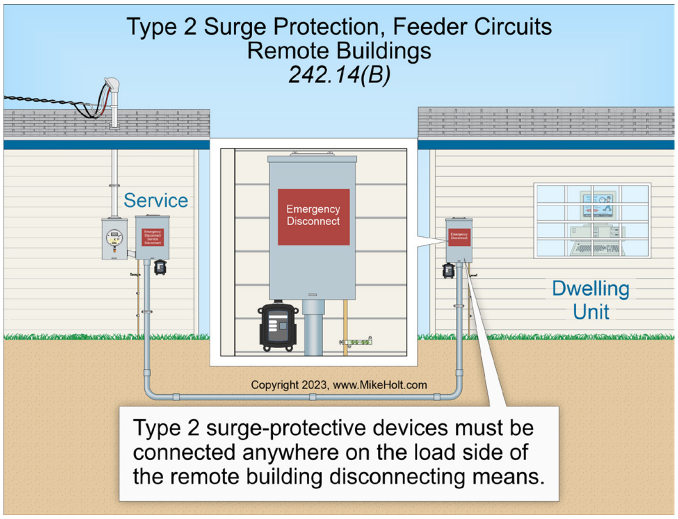
Author's Comment:

- Only one conductor can be connected to a terminal unless the terminal is identified for multiple conductors [110.14(A)]. ▸Figure 242–12



▸Figure 242–12

(B) Feeder-Supplied Remote Buildings. Type 2 surge-protective devices must be connected anywhere on the load side of the remote building disconnecting means. ▸Figure 242–13



▸Figure 242–13

(C) Separately Derived Systems. Type 2 surge-protective devices must be connected anywhere on the load side of the separately derived system disconnect overcurrent protective device.