(D) All Others. For all other installations, the service disconnecting means shall have a rating of not less than 60 amperes.

230.80 Combined Rating of Disconnects. Where the service disconnecting means consists of more than one switch or circuit breaker, as permitted by 230.71, the combined ratings of all the switches or circuit breakers used shall not be less than the rating required by 230.79.

230.81 Connection to Terminals. The service conductors shall be connected to the service disconnecting means by pressure connectors, clamps, or other approved means. Connections that depend on solder shall not be used.

Δ **230.82 Equipment Connected to the Supply Side of Service Disconnect.** Only the following equipment shall be permitted to be connected to the supply side of the service disconnecting means:

(1) Cable limiters.

Cable limiters or other current-limiting devices are often applied ahead of the service disconnecting means for the following reasons:

1. To individually isolate faulted cable(s) from the remainder of the circuit or paralleled set of conductors
2. To maintain continuity of service even though one or more cables are faulted
3. To reduce the possibility of severe equipment damage or burndown as a result of a fault on the service conductors
4. To provide protection against high short-circuit currents for services and to provide compliance with 110.10

(2) Meters and meter sockets nominally rated not in excess of 1000 volts, if all metal housings and service enclosures are grounded in accordance with Part VII and bonded in accordance with Part V of Article 250.

(3) Meter disconnect switches nominally rated not in excess of 1000 volts that have a short-circuit current rating equal to or greater than the available fault current, if all metal housings and service enclosures are grounded in accordance with Part VII and bonded in accordance with Part V of Article 250. A meter disconnect switch shall be capable of interrupting the load served. A meter disconnect shall be legibly field marked on its exterior in a manner suitable for the environment as follows:

METER DISCONNECT
NOT SERVICE EQUIPMENT

The meter disconnect is not the service disconnecting means. It is a load-break disconnect switch designed to interrupt the service load. The purpose of the meter disconnect switch is to facilitate meter change, maintenance, or disconnecting of the service. A meter disconnect switch must have a short-circuit current rating that is not less than the available short-circuit current at the line terminals of the meter disconnect switch.

(4) Instrument transformers (current and voltage), impedance shunts, load management devices, surge arresters, and Type 1 surge-protective devices.

(5) Conductors used to supply energy management systems, circuits for standby power systems, fire pump equipment, and fire and sprinkler alarms, if provided with service equipment and installed in accordance with requirements for service-entrance conductors.

(6) Solar photovoltaic systems, fuel cell systems, wind electric systems, energy storage systems, or interconnected electric power production sources, if provided with a disconnecting means listed as suitable for use as service equipment, and overcurrent protection as specified in Part VII of Article 230.

(7) Control circuits for power-operable service disconnecting means, if suitable overcurrent protection and disconnecting means are provided.

(8) Ground-fault protection systems or Type 2 surge-protective devices, where installed as part of listed equipment, if suitable overcurrent protection and disconnecting means are provided.

(9) Connections used only to supply listed communications equipment under the exclusive control of the serving electric utility, if suitable overcurrent protection and disconnecting means are provided. For installations of equipment by the serving electric utility, a disconnecting means is not required if the supply is installed as part of a meter socket, such that access can only be gained with the meter removed.

(10) Emergency disconnects in accordance with 230.85(B)(2) and (B)(3), if all metal housings and enclosures are grounded in accordance with Part VII and bonded in accordance with Part V of Article 250.

(11) Meter-mounted transfer switches nominally rated not in excess of 1000 volts that have a short-circuit current rating equal to or greater than the available fault current. A meter-mounted transfer switch shall be listed and be capable of transferring the load served. A meter-mounted transfer switch shall be marked on its exterior with both of the following:
   a. Meter-mounted transfer switch
   b. Not service equipment

(12) Control power circuits for protective relays where installed as part of listed equipment, if overcurrent protection and disconnecting means are provided.

Δ **230.85 Emergency Disconnects.** For one- and two-family dwelling units, an emergency disconnecting means shall be installed.

This section recognizes the need for an outdoor disconnect for first responders. Prior to the 2020 *NEC*, first responders and utility personnel have not had a way to safely remove power from a structure. This new requirement mandates that a means to disconnect the electric utility be located in a readily accessible,