

Electrical Panel



Equipment Description

Electrical panels connect utility power to electrical loads inside a home, and they cut the power when there is an overload or other problem. Electrical power enters the home through the meter to the electrical panel. The panel has a large circuit breaker that acts as a disconnect to protect the entire home. The power flows through the panel's small circuit breakers to supply power to lighting, washing machines, kitchen equipment, air conditioners and other equipment in the home. If there is a problem with one of these items, the breaker supplying electricity should automatically trip, cutting power to the item. The electrical panel is usually located in a basement, closet, or an attached garage.

Loss Scenario

A breaker could fail to open or fail to close which would require replacement of the breaker. If your electrical panel contains fuses, a fuse could blow, which would require fuse replacement. If the same fuse blows or a breaker trips repeatedly after being reset, the cause should be investigated and corrected. Loose connections can occur at any of the breakers or where the utility power cables are connected to the main breaker. Loose connections may cause excessive heat and could lead to fire. If the panel becomes excessively dirty or is exposed to moisture or water, one or more breakers may open.

Size

An electrical panel is rated in amps. The type and size of an electrical panel depends on the age and the number and type of loads in a home. Prior to the 1960s, electrical panels were typically rated 100 amps and contained screw and cartridge type fuses. Today, home electrical panels contain circuit breakers and are typically rated up to 200 amps. Some common fuse and circuit breaker sizes are 15 amps, 20 amps, 30 amps, and 40 amps. Generally speaking a 15- or 20-amp circuit breaker protects lights and wall outlet circuits. Clothes dryers and central air conditioning units are normally protected by 30-amp breakers while ranges are protected by 40-amp breakers.

Maintenance Tips

- Electrical panel maintenance or replacement of circuit breakers should only be done by qualified electrical contractors.
- The panel should always have a cover and any opening should be sealed.
- The panel should be clean and free from rust or other types of dirt.
- The panel should be inspected for any signs of excessive heat or loose connections.

Loss Prevention Tips

- Never reset a breaker or replace a fuse more than once without determining the cause and correcting the issue.
- Do not store anything in front of the panel and ensure there is complete access to the panel.
- Look around, identify, and correct all potential water issues near the electrical panel.
- Never replace a blown fuse with a larger size fuse. The circuit wiring may not be properly sized for the higher fuse. This could lead to overheating and the potential for fire.