

Smoke Detectors

There are two primary types of residential smoke detectors

Ionization:

Ionization smoke detectors contain a very small amount of americium-241 within an ionization chamber. They create an electric current between two metal plates, which sound an alarm when disrupted by smoke entering the chamber.

Ionization smoke alarms can quickly detect the small amounts of smoke produced by fast flaming fires, such as cooking fires or fires fueled by paper or flammable liquids.

Photoelectric:

Photoelectric smoke detectors contain a light source in a light-sensitive electric sensor, which are positioned at 90-degree angles to one another. When smoke enters the chamber, it scatters the light, which then hits the sensor and triggers the alarm.

Photoelectric smoke detectors typically respond faster to a fire in its early smoldering stage-before the source of the fire burst into flames. These detectors are more sensitive to the large combustion particles that emanate during the slow smoldering fires which usually occur at night when people are asleep.