

# DID YOU KNOW SALES TIPS

From

**DSC®**

## How DSC Smoke Detectors Works

There are two types of smoke detectors technologies. Ionization smoke detectors get their name because they use electrically charged particles called "ions" to detect smoke. Smoke entering the detector's chamber change the electrical current in the chamber's air. The detector will alarm when the change in electrical current reaches a preset level (see Figure 1).

Ionization detectors are best at detecting fast, flaming fires like grease fires and are most sensitive to dark or black smoke. They are also sensitive to steam, which may cause false alarms if installed near kitchens or bathrooms.

### Photoelectric Smoke Detection

DSC smoke detectors are called photoelectric because they use a beam of light and a light sensor to detect smoke. Smoke entering the chamber reflects light that reaches a light sensor. The detector will alarm when enough smoke reflects enough light on to the light sensor (see Figure 2).

Photoelectric detectors are best at detecting slow, smoldering fires like furniture ignited by a cigarette, and are most sensitive to light gray smoke. They are not very sensitive to steam, so they are better for use near a bathroom or kitchen. DSC sells a 4-wire smoke detector ([FSA410](#)), a 2-wire smoke detector ([FSA210](#)), and a wireless smoke detector ([WS4916](#)).

### Heat Detection

DSC smoke detectors also support a built-in heat detector that will go into alarm when the heat levels exceed 135°F or 57°C. This is useful for fires that start behind walls or closed doors that generate a lot of heat but little smoke, like electrical fires.

### Drift Compensation

DSC smoke detectors automatically compensates for long-term environmental changes to maintain a constant smoke sensitivity. This provides a much longer life for the detector before a basic cleaning is required. When the drift compensation has reached its high or low limit of adjustment, the detector will go into a trouble state. Once the detector's chamber has been taken apart and cleaned, a drift compensation reset can be performed and the detector reused.

### Interconnection

Multiple FSA smoke detectors (*with sounders*) can be connected using a Polarity Reversal Module (PRM-2W or PRM-4W). When a fire alarm occurs, the control panel will signal the Polarity Reversal Module to reverse the polarity of the wire loop. This will activate the sounders of all FSA smoke detectors connected on the wiring loop.

