Operation Description

Wireless Smoke and Carbon Monoxide Alarms

Wireless smoke and carbon monoxide (CO) alarms are designed for residential installation. The devices detect fire and CO, produce an audible alarm, and send radio notification to a control panel for monitoring and supervision. The two devices use the same radio and similar hardware except for the sensor circuitry.

A processor regularly measures sensor input, battery status, and button input (for test/hush). The processor makes a calculation based on inputs and sets internal status flags to indicate normal, alarm, and trouble status. In alarm the piezo sounder is activated.

Status is communicated from the main circuit board to the radio by means of digital logic signals. The radio monitors these signals for state changes. The radio transmits a frame of data when the state changes and at regular intervals depending on the detector state.

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