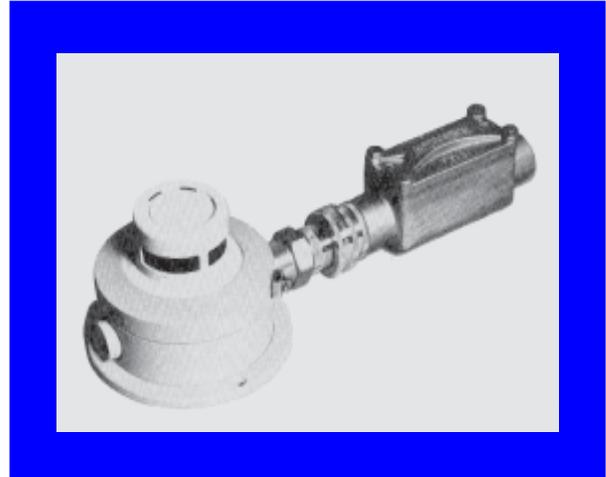




EXPLOSION-PROOF CONTROLS and SENSORS

SDX Series Explosion Proof Smoke Detectors



FEATURES

- Explosion Proof NEC Class I, Groups C and D and Class II, Groups E, F, and G in Div. 1 or 2
- Complies with CENELEC Std. EEx q II T5
- Effective with all Types of Fires
- Reliable Solid State Design
- Preset Threshold Sensitivity Minimizes False Alarms

TYPICAL APPLICATIONS

- Warehouses and Storage Spaces for Combustibles
- Munitions Manufacturing and Magazines
- Storage of Volatile and Hazardous Chemicals
- Chemical Processing Plants and Refineries
- Turbine Enclosures
- Oil and Gas Production Platforms

DESCRIPTION

The SDX smoke detectors use a solid state infrared emitting diode (IRED) and a light sensing photovoltaic cell arranged in a labyrinth assembly. The labyrinth permits free access to smoke but traps external light.

In the absence of smoke, the detector samples the air approximately every four seconds for a period of less than 1 millisecond. The photo voltaic smoke cell, which is placed at an angle to the pulsed invisible light source, is sensitive to the infrared light of the frequency emitted by the IRED. It is designed to receive a signal only when the IRED is activated.

of smoke into the detection chamber is detected by a rate compensating circuit. When the rate of increase in smoke level within the chamber exceeds a preset value, the light level of the source increases. This results in increased detector sensitivity. An alarm occurs if the rate of smoke increase continues to build at the higher rate. If not, the detector reverts to normal operation.

This design results in high sensitivity with positive response and a minimum chance for false alarms.

When smoke enters the chamber, the light from the IRED is reflected by the smoke particles and reaches the photovoltaic cell. When the reflected light reaches the factory preset level, the smoke alarm circuit is activated. In most smoky atmospheres the detector will not respond as long as the smoke concentration does not trigger the fixed alarm sensitivity.

The detector will respond to a smoldering fire with a preset sensitivity of 2.3 percent. If a fast burning fire or a fire generating black smoke should occur, then the rapid movement

SDX-028 Smoke Detector, Explosion proof, 20-28 VDC

SDX-120 Smoke Detector, Explosion proof, 120V, 60 Hz

SDX-230 Smoke Detector, Explosion proof, 230 V, 50 Hz



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