OSID-DE

RELIABLE SMOKE DETECTION IN EDUCATIONAL FACILITIES

Open spaces like those found in lecture halls, dining halls, gyms, science rooms, large sports complexes, labs, libraries, etc., present many challenges for smoke detection. Many of these areas are not accessible during normal working hours, making traditional spot or point smoke detectors' installation and maintenance expensive and difficult to accomplish.

The presence of large numbers of students and staff makes fire safety extremely important.

A common alternative is beam smoke detectors, although they don't necessarily fit the aesthetic requirements with their large, industrial-looking reflectors and often require a control unit at ground level which is prone to vandalism.

Fire Detection Challenges

- Reliable detection with minimal false alarms
- Quick installation and easy maintenance without causing disruptions
- Minimum wiring when retrofitting
- Aesthetics
- Unobtrusive monitoring to minimize vandalism and tampering

Open-Area Smoke Imaging Detection (OSID-DE)

OSID-DE by Xtralis overcomes the weaknesses of beam detectors due to its aesthetics and multi-emitter capability. An OSID-DE system can consist of up to seven Emitters and one Imager placed on opposite walls, roughly aligned with one another.

Emitters can be powered by batteries or wired and placed at different heights, adjusting easily to the modern architectural design of rooms and lobbies.

The installation requires minimal wiring, only along the walls while leaving the ceilings untouched.

The labor component of the installation is equally low. Three Emitters will cover an area of up to 600 m^2 (6,000 sq. ft.); five Emitters will go up to 2,000 m^2 (20,000 sq. ft.), all using just a single 80-degree Imager placed in a corner of the room. One-on-one Imager-Emitter configuration using a 7-degree Imager can protect corridors of up to 150 m (492 ft.).

In addition, OSID-DE offers many advantages over traditional beam and spot smoke detectors, the primary one being the use of dual light frequencies. Ultraviolet (UV) and infrared (IR) wavelengths, which are outside the range visible to humans, assist in the identification of real smoke compared to larger objects such as insects and dust, thus reducing false alarms. Furthermore, OSID-DE is equipped with a CMOS imaging chip with many pixels rather than a single photo-diode.

This concept allows the Imager to provide simple alignment as well as excellent tolerance to building movement and vibration, without the use of moving parts.

Alignment of the Emitter is simple, achieved by using a low-cost laser alignment tool to rotate the optical spheres until the laser beam is aligned with the Imager. No further alignment is required, resulting in extremely fast installation and set-up. Only the Imager has to be wired.

Benefits of OSID-DE

- High resistance to false alarms
- Simple, quick installation
- Fast and easy maintenance
- Aesthetically discreet
- High resistance to intruding objects