Open-Area Smoke Imaging Detection

Open-area Smoke Imaging Detection (OSID) by Xtralis is a new innovation in projected beam smoke detection technology. By using advanced dual wavelength projected beams and optical imaging technology for early warning smoke detection, OSID provides a low-cost, reliable and easy-to-install solution that overcomes typical beam detection issues such as false alarm incidents and alignment difficulties.

The OSID system measures the level of smoke entering beams of light projected over an area of protection. A single OSID Imager can detect up to seven Emitters to provide a wide coverage area. Two innovations in smoke detection technology have been developed for the revolutionary OSID smoke detector:

Dual Wavelength Particle Detection
The beam projected from each Emitter contains a unique sequence of ultraviolet (UV) and infrared (IR) pulses that are synchronized with the Imager and enable the rejection of any unwanted light sources. By using two wavelengths of light to detect particles, the system is able to distinguish between particle sizes. The shorter UV wavelength interacts strongly with both small and large particles while the longer IR wavelength is affected only by larger particles. Dual wavelength path loss measurements therefore enable the detector to provide repeatable smoke obscuration measurements, while rejecting the presence of dust particles or solid intruding objects.

Optical Imaging with a CMOS Imaging Chip
An optical imaging array in the OSID Imager provides the detector with a wide viewing angle to locate and track multiple Emitters. Consequently, the system can tolerate a much less precise installation and can compensate for the drift caused by natural shifts in building structures. Optical filtering, high-speed image acquisition and intelligent software algorithms also enable the OSID system to provide new levels of stability and sensitivity with greater immunity to high level lighting variability.

Operation
Status information (Fire Alarm, Trouble and Power) is communicated through the Imager via Status LEDs, dedicated Trouble and Alarm relays, and the Remote Indicator interface. Specific Trouble (Fault) conditions are identified through coded flashes of the Trouble LED. An internal heating option is also provided on the Imager to prevent condensation on the optical surface, and a reset input enables an external signal to reset the device.

Simple Installation and Maintenance
The OSID system consists of up to seven Emitters, for the 45° and 90° Imager units, located along the perimeter of the protected area, and an Imager mounted opposite. Each

Unique Features:
- Maximum Detection Range of 492 ft. (150 m) [OSI-10]
- Fire, Trouble and Power Status LEDs
- High False Alarm Immunity
- Dust & Intrusive Solid Object Rejection
- Three Selectable Alarm Thresholds

Features:
- Easy Alignment with Large Adjustment & Viewing Angles
- No Need for Precise Alignment
- Tolerant of Alignment Drift
- Automatic Commissioning in Under 10 minutes
- Simple DIP Switch Configuration
- Dual Wavelength LED-based Smoke Detection
- Simple and Easy Maintenance Requirements
- Conventional Alarm Interface for Straightforward Fire System Integration

Listings and Approvals:
- UL Listed
- ULC Listed
As our policy is one of constant product improvement the right is therefore reserved to modify product specifications without prior notice.