

UV/IR Flame Detector

Explosion Protection System Components

Advantages:

- High false alarm immunity is provided by the alarm output requiring detection of both ultraviolet (UV) and infrared (IR) radiation.
- Automatic Optical Integrity (AOI) feature provides automatic self-checking of optical integrity and circuitry.
- Integral electronic control ensures rapid detection and highest reliability.
- Tri-color LED on sensor module provides visual indication of detector status.
- Will not alarm solely due to lightning, solar radiation, hot objects, or non-UV emitting artificial lighting.
- CE marked, ATEX compliant.



Application

IEP Technologies UV/IR Flame Detectors are designed to respond in milliseconds to the ultraviolet and infrared light emitted from a flame source. When used in conjunction with an IEP Technologies control unit, UV/IR Flame Detectors provide the signal required to activate an explosion protection system. The primary application for these detectors is for the protection of occupied areas having gas or flammable vapor hazards.

Description

The IEP Technologies UV/IR Flame Detector comprises a sensor module and electronic controller housed within a copper-free aluminum, explosion-proof enclosure. The sensor module incorporates an ultraviolet sensor and an infrared sensor, both of which must respond to an event before generating an alarm signal. Periodically an optical test source within the device emits radiation through the lens of each sensor to a reflective plate. The returned signal provides a periodic check of the optical surfaces, sensors, and signal processing circuitry.

Specifications

Spectral Sensitivity: Ultraviolet: 0.185 to 0.245 microns; Infrared: 4.2 to 4.4 microns.

Cone of Vision: 75° vertical cone of vision, 90° horizontal cone of vision with highest sensitivity along central axis. See illustrations.

Response Time: As fast as 20 milliseconds depending on distance, fuel, and ignition source.

Supply Voltage: 24 V (18 V to 30 V) DC

Power Consumption: 2.8 watts at 24 V DC nominal; 4.8 watts at 24 V DC in alarm.

Weight: Detector, approximately 6 lbs. (2.7 kg); swivel bracket, approximately 13 lbs. (6.0 kg).

Enclosure: Copper-free aluminum enclosure rated for Class I (Division 1 and 2, Groups B, C, and D) and Class II/III (Division 1, Groups E, F, and G), NEMA 4X (IP66).

Electrical conduit entries: 3/4-in. NPT female connections.

Output Relays: Alarm relay: Normally de-energized, Form C. Fault relay: Normally energized, Form C. Relays rated for 5 A @ 30vdc.

Contact Information

For additional information, please contact one of the following locations:

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