

# Flame Detection in Aircraft Hangers

## Monitoring Considerations

Safe operation of commercial and military aircraft hangers is one of the most important considerations in the aerospace and defense industry. Commercial aircraft hangers typically conform to NFPA 409, a standard for fire safety that puts emphasis on the protection of personnel. In contrast, military installations focus on their people then the aircraft. In either application, the response to a flame event must be fast and accurate in order to protect lives, allow the greatest amount of time to respond, and protect valuable property.

Primary fire risks in these areas include aircraft fuel spill ignition (through static discharge, electrical malfunction, maintenance activity, heaters or spark) as well as hydraulic fluids, lubricants, and solvents. There is also the potential for the presence of explosive cargo or ordnance under the wings (the highest risk area).

Aircraft detection zones typically call for four detectors with a certified 90° field of view. Two are mounted at either side of a bay at ground level (1 m) for critical under-wing coverage and two above (approximately 15 m) on either side with at least 30 % overlaying coverage areas. This ensures comprehensive protection and can also be tied into mitigation systems with alarm zone logic for added integrity.

The following are the primary objectives of aircraft hanger flame detection are:

- Detect flame instantly while still in its inceptive stage
- Provide for the optimum human response to a flame event
- Minimize damage to aircraft, equipment, and structure
- Provide the lowest possible incidence of false alarm events

## Optimal Detection Technology

Ultraviolet (UV)/infrared (IR) detection has proven an effective flame detection technology for the protection of aircraft handlers. It provides fast and accurate response with high sensitivity and immunity to false alarms.



*Aircraft Hanger*

## Net Safety UV/IRS Advantages

The UV/IRS flame detector is well suited for providing early warning of flames in aircraft hangers. It has a wide field of view, which effectively reduces the number of flame detectors required to monitor a closed or semi-enclosed, congested space. The sensitivity and time delay settings can be configured in the field without the need for special tools. And since the device consumes little power (on average less than 2 W), it reduces operational costs over time.



*Net Safety UV/IRS Flame Detector*

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