AMPAC
ADVANCED WARNING
SYSTEMS

Flame Detector Application Guide

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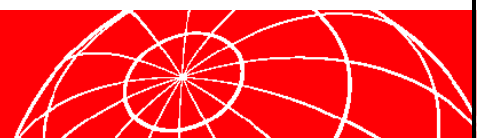
Flame Detector Applications

Flame Detectors are designed to protect areas where open fires may be expected.

Applications for Flame Detectors

UV

UV Flame Detectors are used when detection is required to be unaffected by convection currents, draughts or wind. These include engine rooms in ships, factories affected by draughts or winds and warehouses.

They are fast reacting and respond to a flame more than 25m away. The UV flame detector is affected by arc welding, electrical sparks, lightning, nuclear radiation and UV light sources. For applications where these phenomena are present a UV flame detector should not be used.

UV/Dual IR

This detector is not affected by any of the sources mentioned above. They are used in aircraft hangers, generator rooms (diesel and gas turbines) and paint works.

Triple IR

The triple IR flame detector is also fast reacting but is also tolerant of fumes, vapours, steam, dust and mist, while being unaffected by the phenomena listed above. It may, however, be affected by modulated IR radiation. Triple IR flame detectors are used in waste handling, colour printing and paper manufacturing.

For a full list of applications, see the table overleaf

Illustration shows UV Flame Detector

Illustration shows Triple IR Flame Detector

Applications	UV	UV/IR2	IR3
Aerospace industry (hydrogen and hydrazine fuels)	✓	✓	✓
Aircraft Hangars (under-wing and over-wing protection)		✓	✓
Automotive (manufacturing & paint spray booths)		✓	✓
Battery charging areas		✓	✓
Chemical production plants	✓	✓	✓
Chemical stores	✓	✓	✓
Chemical transportation	✓	✓	✓
Compressor stations		✓	✓
Drilling & production platforms		✓	✓
Explosives & Munitions	✓	✓	✓
Ferries and cargo boats		✓	✓
Fuel loading facilities		✓	✓
Fuel stores	✓	✓	✓
Hangars for military and civil aircraft		✓	✓
Large Industrial warehouses		✓	✓
Large Industrial Plants	✓		✓
LNG/LPG Processing and storage facilities		✓	✓
Loading racks		✓	✓
Magnesium dry treatment (milling)	✓		
Motor test beds	✓	✓	
Natural gas transfer points		✓	✓
Offshore platforms		✓	✓
Oil & Gas (exploration, production, storage & offloading)		✓	✓
Oil refineries		✓	✓
Onshore (refineries, loading terminals & pipelines)		✓	✓
Paint manufacturing	✓	✓	✓
Paint & Solvent processes	✓	✓	✓
Petrol storage and pump stations		✓	✓
Petrochemical (production, storage & shipping facilities)	✓	✓	✓
Pharmaceutical Industry	✓	✓	✓
Polymers & glue			✓
Polymers, Solvents & glue	✓	✓	✓
Power generation faclilities		✓	
Power plants		✓	✓
Printing works	✓	✓	✓
Production facilities			✓
Propane and butane filling stations		✓	✓
Pump stations	✓	✓	✓
Ships' engine room	✓	✓	✓
Tank farms		✓	
Transformer stations		✓	✓
Turbine enclosures		✓	✓
Undergound tunnels		✓	✓
Warehouses (storage facilities for flammable materials)	✓	✓	✓
Waste disposal/recycling		✓	✓
Wood product industry	✓		✓
Wood stores			✓

NB - The triple IR flame detector is only approved for use in marine applications.