### Flame Detection Selection Guide

Unsurpassed products comprise the industry’s most extensive lineup of optical flame detectors.

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#### Features Overview

- Eagle Quantum Premier
- Unitized/Stand-Alone
- Retrofit Controller-based
- Hazard Monitoring System
- Data Logger Event Monitoring
- Automatic Optical Integrity
- Millisecond Response Capability
- Relay Outputs
- Tricolor Status/Notification LED
- Isolated/Non-Isolated 4 to 20 ma Output
- Rack Compatible with Gas Controllers
- Hazardous Location Rated
- Intrinsically Safe
- FM/CSA/Cenelec/CE/ATEX Approved

#### Detection Distances (Feet)

<table>
<thead>
<tr>
<th>Flame Source</th>
<th>n Heptane (1 ft x 1 ft)</th>
<th>Diesel (1 ft x 1 ft)</th>
<th>JP5 (2 ft x 2 ft)</th>
<th>Methanol (1 ft x 1 ft)</th>
<th>Methane (30 inch)</th>
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<th>Metal Fires</th>
<th>Black Powder (30 grams)</th>
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<td>Lightning</td>
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<td>Grinding (Metal)</td>
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<td>Artificial Lighting</td>
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</tbody>
</table>

#### Typical Interferences

- No effect
- Some effect
- Severe effect
- Available
- *FM Only

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### Flame Detection Technologies

**MULTISPECTRUM IR**
The Protect IR X3301 and X3302 are the latest advancements in optical flame detectors. Designed to detect hydrocarbon or non-hydrocarbon fires, advanced signal processing techniques are utilized to maintain alarm capabilities with modulated blackbody and other false alarm sources present.

**Applications:**
- Aircraft hangars
- Loading racks
- Powder coating
- Shipyard yards
- Turbines

**Features:**
- Improved signal processing techniques
- Increased range, sensitivity, coverage
- False alarm rejection capability
- Automatic optical integrity ensures reliability with a minimum of maintenance. Approved to FM 5302/2000.

**X9800** is for semiconductor fabrication tools and facilities.

**APPLICATIONS:**
- Aircraft hangars
- Loading racks
- Powder coating
- Shipyard yards
- Turbines

**ULTRAVIOLET/INFRARED**

**X9800** single frequency IR detectors use signal processing TDSA and narrow frequency bandpass filter to detect radiation characteristics of hydrocarbon fires. The detector is completely solar insensitive.

**APPLICATIONS:**
- Automotive Powder coating
- FPSO
- Offshore platform
- Pipelines

**SU b SPECTRUM® IR**
Dual Spectrum® models feature dual wavelength IR flame detection technology, for maximum reliability and a new level of false alarm rejection.

**Applications:**
- Electrostatic painting
- Gas cabinets
- Hydrogen
- Metal fab
- Semiconductor
- Solvent/chemical storage

**SINGLE FREQUENCY IR**

**APPLICATIONS:**
- Aircraft hangars
- Loading racks
- Powder coating
- Shipyard yards
- Turbines

**ULTRAVIOLET**

**APPLICATIONS:**
- Battery rooms
- High temperature locations
- Munitions
- Powder coating

**RETROFIT READY**

**APPLICATIONS:**
- Battery rooms
- High temperature locations
- Munitions
- Powder coating

** Systems **
### FIRE AND GAS
Det-Tronics integrates flame and gas detectors as well as other devices into a complete fire detection system.

- **Power Supplies:** Available to convert line voltage ac into dc operating power for the detection systems.
- **Mounting Cages:** Available in a variety of sizes that hold from one to eight micro-module devices.

**ACCESSORIES**
Swivel assemblies allow easy mounting and sighting of detector assemblies and are available for all detectors.

- **Laser aimers:** Cone of vision tester for detecting and testing the area of coverage of the detector.
- **Air shields:** For reduced maintenance in areas where there is an abnormally high level of airborne contaminants.

- **Test lamps:** To test the system without using an open flame. Gas detectors are available for detectors without manual or mag oil.

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**Production and storage**
- Production
- Transportation and storage

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**Flame Detection Technologies**

**MULTISPECTRUM IR**

- Turbines
- Tank farms
- Solvent/chemical storage
- Offshore platforms
- Hydrogen compressor skids

**APPLICATIONS:**
- Aircraft hangars
- Loading racks
- Powder coating
- Shipyard yards
- Turbines

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- Aircraft hangars
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- Powder coating
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- Turbines

**ULTRAVIOLET/INFRARED**

- X9800 UV detectors are particularly suited for applications where hydrocarbon fires are likely and UV radiation sources may be present. They maintain constant fire protection while arc welding takes place.

**APPLICATIONS:**
- Aircraft hangars
- Loading racks
- Powder coating
- Shipyard yards
- Turbines

**SU b SPECTRUM® IR**

- Dual Spectrum® models feature dual wavelength IR flame detection technology, for maximum reliability and a new level of false alarm rejection.

**Applications:**
- Electrostatic painting
- Gas cabinets
- Hydrogen
- Metal fab
- Semiconductor
- Solvent/chemical storage

**SINGLE FREQUENCY IR**

- X9800 single frequency IR detectors use signal processing TDSA and narrow frequency bandpass filter to detect radiation characteristics of hydrocarbon fires. The detector is completely solar insensitive.

**APPLICATIONS:**
- Automotive Powder coating
- FPSO
- Offshore platform
- Pipelines

**RETROFIT READY**

- Direct retrofit detectors available with pulse output for use with RT404/RT404 controllers.

**Systems**
### FIRE AND GAS
Det-Tronics integrates flame and gas detectors as well as other devices into a complete fire detection system.

- **Power Supplies:** Available to convert line voltage ac into dc operating power for the detection systems.
- **Mounting Cages:** Available in a variety of sizes that hold from one to eight micro-module devices.

**ACCESSORIES**
Swivel assemblies allow easy mounting and sighting of detector assemblies and are available for all detectors.

- **Laser aimers:** Cone of vision tester for detecting and testing the area of coverage of the detector.
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- **Test lamps:** To test the system without using an open flame. Gas detectors are available for detectors without manual or mag oil.
Flame Detection Technologies

**MULTISPECTRUM IR**

The Protect IR X3301 and X3302 are the latest advancements in optical flame detectors. Designed to detect hydrocarbon or non-hydrocarbon fires, advanced signal processing techniques are utilized to maintain alarm capabilities with modulated blackbody and other false alarm sources present.

Features include increased range, sensitivity, coverage and false alarm rejection. Automatic optical integrity ensures reliability with a minimum of maintenance. Approved to FM 3260/2000. Can be installed as Class 1 Division 1, EEx de or EEx d.

**APPLICATIONS:**
- Aircraft hangars
- Automotive
- Compressors
- FPSO
- Hydrogen Stations
- Hydrogen compressors skins
- Offshore platforms
- Solvent/chemical storage
- Tank farms
- Turbines

Micro-module devices. Available in a variety of sizes that allow for easy mounting and sighting of detector assemblies and are available for all end uses.

**01-23-45-67**

**ULTRAVIOLET/INFRARED**

X200 UVIR detectors are particularly suited for applications where hydrocarbon fires are likely and UV radiation sources may be present. They maintain constant fire protection while arc welding takes place.

Signals from both UV and IR sensors are processed to produce a fire alarm when both sensors detect a fire, resulting in good false alarm rejection capability.

**APPLICATIONS:**
- Aircraft hangars
- Loading Racks
- Powder coating
- Power generation and processing
- Transportation and storage

**DUAL SPECTRUM® IR**

Dual Spectrum® models feature dual wavelength IR flame detection technology, for maximum reliability and a new level of false alarm rejection.

**APPLICATIONS:**
- Electrostatic painting
- Gas cabinets
- Hydrogen
- Metal fab
- Semiconductor
- Solvent/chemical storage

**PM-SMPX** is for semiconductor fabrication tools and facilities.

**SINGLE FREQUENCY IR**

X9800 single frequency IR detectors use signal processing TDSA and narrow frequency bandpass filter to detect radiation characteristics of hydrocarbon fires. The detector is completely solar insensitive.

**APPLICATIONS:**
- Battery rooms
- High temperature locations
- Munitions
- Powder coating

**ULTRAVIOLET**

X200 UV detectors utilize a high speed, maximum sensitivity tube. Virtually all fires emit radiation in this band. The products’ unique design renders the UV detector solar blind.

**APPLICATIONS:**
- Flame detection
- Gas cabinets
- Electrostatic painting

**RETROFIT READY**

Direct retrofit detectors available with pulse output for use with RT404/ RT404 controllers.

**RELIABILITY**

Features include increased range, sensitivity, coverage and false alarm rejection. Automatic optical integrity ensures reliability with a minimum of maintenance. Approved to FM 3260/2000. Can be installed as Class 1 Division 1, EEx de or EEx d.

**APPLICATIONS:**
- Aircraft hangars
- Automotive
- Compressors
- FPSO
- Hydrogen Stations
- Hydrogen compressors skins
- Offshore platforms
- Solvent/chemical storage
- Tank farms
- Turbines

**Systems**

**FIRE AND GAS**

Det-Tronics integrates flame and gas detectors as well as other devices into a complete fire detection system.

**Comprehensive special hazard management systems are also custom designed for unique applications.**

**Eagle Quantum Premier** is an NFPA-72 compliant, combination fire and gas detection and releasing system. This system offers unsurpassed functionality including high speed flame detection, programmable configuration as well as fire and gas logic and agent releasing capability, with high performance gas detection.

Each system can be customized to meet specific application requirements. System capabilities include design, engineering, assembly, wiring, documentation, testing and startup.

Air shields for reduced maintenance in areas where there is an abnormally high level of airborne contaminants.

Test lamps to test the system without using an open flame are available for detectors without manual or mag oil.

**Accessories**

**ACCESSORIES**

Swivel assemblies allow easy mounting and sighting of detector assemblies and are available for all detectors.

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### Typical Interferences

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- Modulated IR Radiation
- Electrical Arcs
- Radiation (Nuclear)
- Lightning
- Grinding (Metal)
- Artificial Lighting
- Sunlight

### Features Overview

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- Retrofit Controller-based
- Hazard Monitoring System
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- Millisecond Response Capability
- Relay Outputs
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- Isolated/Non-Isolated 4 to 20 ma Output
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- Hazardous Location Rated
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- FM/CSA/Cenelec/CE/ATEX Approved

* No effect  ▲ Some effect  △ Severe effect  ▼ Available  *FM Only

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