Flame Detector
Conspec® Flame Detectors are ideal for applications where fast acting and accurate detection of fire is essential. Using infra-red (IR) sensing technology they can detect flames from all fuel types, from hydrocarbon fires with 4.3µm emissions through to invisible fires such as hydrogen. The detectors can detect flames through such elements as dust, steam and smoke, they are also immune to the effects of wind or draughts of air. With the addition of an ultra-violet (UV) sensor the detectors are highly immune to false signals such as sunlight. They use advanced infrared (IR) and ultraviolet (UV) technologies, making them one of the fastest, most reliable and accurate flame detectors in the world. Its technology is truly unique, looking at both the characteristic flicker and energy produced by flames. Conspec® Flame Detectors are the detector of choice for high value, high risk applications.

Product Range

**IR® Flame Detector**
(Dual Infra-red)
High immunity to false sources (for indoor areas)

**IR3 Flame Detector**
(Triple Infra-red)
Excellent immunity to false sources (for indoor or outdoor areas)

**UV / IR2 Flame Detector**
(Ultra-Violet, Dual Infra-red)
Highest immunity to false sources (for indoor or outdoor areas)

**IR Rear Facing Flame Detector**
(Single Infra-red)
Specialist applications (for enclosed and dark areas)

Applications
- Refineries
- Generators
- Compressor Stations
- Fuel Loading Racks
- Chemical Plants
- Tunnels
- Waste Recycling
- Nuclear Power Plants
- Engine Rooms
- Spray Booths
- Pharmaceutical Production
- Military & Marine
- Coal Handling
- Printing
- LNG/LPG Production

Applications
- Refineries
- Generators
- Compressor Stations
- Fuel Loading Racks
- Chemical Plants
- Tunnels
- Waste Recycling
- Nuclear Power Plants
- Engine Rooms
- Spray Booths
- Pharmaceutical Production
- Military & Marine
- Coal Handling
- Printing
- LNG/LPG Production

Applications
- Refineries
- Compressoer Stations
- Fuel Loading Racks
- Chemical Plants
- Tunnels
- Waste Recycling
- Nuclear Power Plants
- Storage Tanks
- Engine Rooms
- Spray Booths
- Pharmaceutical Production
- Military & Marine
- Coal Handling
- Printing
- Biomass Storage & Handling
- LNG/LPG Production

Applications
- Agriculture
- Bed Fillings
- Coal Milling
- Dryers
- Dust Collection & Filters
- Felt Manufacture
- Wallpaper Production
- Woodworking

Warranty
Conspec® includes an industry-leading 3-year warranty as standard on all of the Conspec® Flame Detectors.
Conspec® Flame Detectors are ideal for applications where fast acting and accurate detection of fire is essential. Using infra-red (IR) sensing technology they can detect flames from all fuel types, from hydrocarbon fires with 4.3µm emissions through to invisible fires such as hydrogen. The detectors can detect flames through such elements as dust, steam and smoke; they are also immune to the effects of wind or draughts of air. With the addition of an ultra-violet (UV) sensor the detectors are highly immune to false signals such as sunlight. They use advanced infrared (IR) and ultraviolet (UV) technologies, making them one of the latest, most reliable and accurate flame detectors in the world. Its technology is truly unique, looking at both the characteristic flicker and energy produced by flames. Conspec® Flame Detectors are the detector of choice for high value, high risk applications.

Conspec® - Why use our Flame Detectors…

Warranty

Conspec® includes an industry-leading 3-year warranty as standard on all of the Conspec® Flame Detectors.
Dual IR (IR²) Flame Detectors

These detectors are sensitive to flickering, low frequency (1 to 15Hz) infra-red (IR) radiation emitted by flames during combustion. They are ideal for applications where visible light is present.

- **IR² Flame Detector (Part No. FD-IR2)**
  - Die cast zinc alloy housing
  - High optical interference immunity
  - SIL 2 certified

- **IR² Flame Detector - Intrinsically Safe (IS) (Part No. FDIS-IR2)**
  - Die cast zinc alloy housing
  - High optical interference immunity
  - SIL 2 certified

- **IR² Flame Detector - Flameproof (Exd) (Part No. FDXP-IR2)**
  - Copper free aluminium alloy housing
  - High optical interference immunity
  - SIL 2 certified

UV / IR² Flame Detectors

These detectors give the highest immunity to false alarms. They are sensitive to flickering, low frequency (1 to 15Hz) infra-red (IR) radiation along with ultra-violet (UV) radiation emitted by flames during combustion. They are ideal for indoor or outdoor applications.

- **UV / IR² Flame Detector (Part No. FD-UV/IR2)**
  - Die cast zinc alloy housing
  - Highest optical interference immunity
  - SIL 2 certified

- **UV / IR² Flame Detector - Flameproof (Exd) (Part No. FDXP-UV/IR2)**
  - Copper free aluminium alloy housing
  - Highest optical interference immunity
  - SIL 2 certified

Single IR Rear Viewing Specialist Flame Detectors

The Single IR Rear Viewing specialist flame detector is designed for machine applications to protect enclosed, dark areas where visible light is not present. It has high sensitivity to flame and spark detection.

- **Single IR Rear Viewing Flame & Spark Detector for Bayonet Mounting (Part No. FSD-IR)**
  - Die cast zinc alloy housing
  - High optical interference immunity
  - SIL 2 certified

- **Single IR Intrinsically Safe Rear Viewing Flame & Spark Detector for Bayonet Mounting (Part No. FDIS-IR)**
  - Intrinsically safe (IS) for hazardous areas.
  - Die cast zinc alloy housing
  - Ideal for use on machinery protection applications
  - Suitable for enclosed and dark areas

- **Single IR Rear Viewing Flame & Spark Detector for Bayonet Mounting (Part No. FDXP-IR)**
  - Copper free aluminium alloy housing
  - Excellent interference immunity
  - SIL 2 certified

- **Single IR Intrinsically Safe Rear Viewing Flame & Spark Detector for Bayonet Mounting (Part No. FDXIS-IR)**
  - Intrinsically safe (IS) for hazardous areas.
  - Die cast zinc alloy housing
  - Ideal for use on machinery protection applications
  - Suitable for enclosed and dark areas
Dual IR (IR²) Flame Detectors

These detectors are sensitive to flickering, low frequency (1 to 15Hz) infra-red (IR) radiation emitted by flames during combustion. Should the lens become contaminated by a layer of oil, dust, water, vapour or ice, the unit will remain an effective flame detector. The detector has two infra-red (IR) sensors, which respond to different infra-red (IR) wavelengths in order to discriminate between flames and spurious sources of radiation. They are ideal for applications where visible light is present.

**IR² Flame Detector** (Part No. FD-IR2)
- Die cast zinc alloy housing
- High optical interference immunity
- SIL 2 certified

**IR² Flame Detector - Intrinsically Safe (IS)** (Part No. FDIS-IR2)
- Die cast zinc alloy housing
- High optical interference immunity
- SIL 2 certified

**IR² Flame Detector - Flameproof (Exd)** (Part No. FDXP-IR2)
- Copper free aluminium alloy housing
- High optical interference immunity
- SIL 2 certified

UV / IR² Flame Detectors

These detectors give the highest immunity to false alarms. They are sensitive to flickering, low frequency (1 to 15Hz) infra-red (IR) radiation along with ultra-violet (UV) emitted by flames during combustion. The detector has a ultra-violet (UV) sensor and two infra-red (IR) sensors that respond to different wavelengths from both the ultra-violet (UV) and the infra-red (IR) spectrum. False alarms from flickering sunlight, arc welding and lightning are eliminated by a combination of ultra-violet (UV) and dual infra-red (IR) signal processing techniques. They are ideal for indoor or outdoor applications.

**UV / IR² Flame Detector** (Part No. FD-UV/IR2)
- Die cast zinc alloy housing
- Highest optical interference immunity
- SIL 2 certified

**UV / IR² Flame Detector - Flameproof (Exd)** (Part No. FDXP-UV/IR2)
- Copper free aluminium alloy housing
- Highest optical interference immunity
- SIL 2 certified

Single IR Rear Viewing Specialist Flame Detectors

The Single IR Rear Viewing specialist flame detector is designed for machine applications to protect enclosed, dark areas where visible light is not present. This detector has high sensitivity to flame and sparks and has a very fast response time. The detector has one infra-red (IR) sensor, which is selective to low frequency modulated infra-red (IR) radiation such as that emitted from flames and sparks. The detector rejects static radiation from sunlight and artificial lighting.

**Single IR Rear Viewing Flame & Spark Detector for Bayonet Mounting** (Part No. FSBD-IR)
- Continues operation at temperatures up to 55°C
- Die cast zinc alloy housing
- Ideal for use on machinery protection applications
- Suitable for enclosed and dark areas

**Single IR Intrinsically Safe Rear Viewing Flame & Spark Detector for Bayonet Mounting** (Part No. FDISIR-IR)
- Intrinsically safe (IS) for hazardous areas
- Copper free aluminium housing
- Ideal for use on machinery protection applications
- Suitable for enclosed and dark areas

**Single IR Rear Viewing Flame Detector** (Part No. FD-IR3)
- Die cast zinc alloy housing
- Excellent optical interference immunity
- SIL 2 certified

**Single IR Rear Viewing Flame Detector - Intrinsically Safe (IS)** (Part No. FDIS-IR3)
- Die cast zinc alloy housing
- Excellent optical interference immunity
- SIL 2 certified

**Single IR Rear Viewing Flame Detector - Flameproof (Exd)** (Part No. FDXP-IR3)
- Copper free aluminium alloy housing
- Excellent interference immunity
- SIL 2 certified

**UV / IR² Flame Detectors**

These detectors give the highest immunity to false alarms. They are sensitive to flickering, low frequency (1 to 15Hz) infra-red (IR) radiation along with ultra-violet (UV) emitted by flames during combustion. The detector has a ultra-violet (UV) sensor and two infra-red (IR) sensors that respond to different wavelengths from both the ultra-violet (UV) and the infra-red (IR) spectrum. False alarms from flickering sunlight, arc welding and lightning are eliminated by a combination of ultra-violet (UV) and dual infra-red (IR) signal processing techniques. They are ideal for indoor or outdoor applications.

**UV / IR² Flame Detector** (Part No. FD-UV/IR2)
- Die cast zinc alloy housing
- Highest optical interference immunity
- SIL 2 certified

**UV / IR² Flame Detector - Flameproof (Exd)** (Part No. FDXP-UV/IR2)
- Copper free aluminium alloy housing
- Highest optical interference immunity
- SIL 2 certified

**Single IR Rear Viewing Specialist Flame Detectors**

The Single IR Rear Viewing specialist flame detector is designed for machine applications to protect enclosed, dark areas where visible light is not present. This detector has high sensitivity to flame and sparks and has a very fast response time. The detector has one infra-red (IR) sensor, which is selective to low frequency modulated infra-red (IR) radiation such as that emitted from flames and sparks. The detector rejects static radiation from sunlight and artificial lighting.

**Single IR Rear Viewing Flame & Spark Detector for Bayonet Mounting** (Part No. FSBD-IR)
- Continues operation at temperatures up to 55°C
- Die cast zinc alloy housing
- Ideal for use on machinery protection applications
- Suitable for enclosed and dark areas

**Single IR Intrinsically Safe Rear Viewing Flame & Spark Detector for Bayonet Mounting** (Part No. FDISIR-IR)
- Intrinsically safe (IS) for hazardous areas
- Copper free aluminium housing
- Ideal for use on machinery protection applications
- Suitable for enclosed and dark areas

**Single IR Rear Viewing Flame Detector** (Part No. FD-IR3)
- Die cast zinc alloy housing
- Excellent optical interference immunity
- SIL 2 certified

**Single IR Rear Viewing Flame Detector - Intrinsically Safe (IS)** (Part No. FDIS-IR3)
- Die cast zinc alloy housing
- Excellent optical interference immunity
- SIL 2 certified

**Single IR Rear Viewing Flame Detector - Flameproof (Exd)** (Part No. FDXP-IR3)
- Copper free aluminium alloy housing
- Excellent interference immunity
- SIL 2 certified
Specialist Application Detectors

IR² Flame Detector - Stainless Steel (Part No. FD-IR2-SS)
- Stainless steel 316 housing
- SIL 2 certified

IR² Flame Detector - Stainless Steel, Flameproof (Exd) (Part No. FDXP-IR2-SS)
- Stainless steel 316 housing
- SIL 2, ATEX & IECEx certified

IR² Flame Detector - Stainless Steel (Part No. FD-IR3-SS)
- Stainless steel 316 housing
- SIL 2 certified

IR² Flame Detector - Stainless Steel, Flameproof (Exd) (Part No. FDXP-IR3-SS)
- Stainless steel 316 housing
- SIL 2, ATEX & IECEx certified

IR² Flame Detector - Flameproof (Exd), High Ambient Temperatures (Part No. FDXP-IR3-HT)
- Copper free aluminium alloy housing
- Continuous operation at temperatures up to 85°C, short term operation at temperatures up to 125°C
- ATEX & IECEx certified

UV / IR² Flame Detector - Stainless Steel (Part No. FD-UV/IR2-SS)
- Stainless steel 316 housing
- SIL 2 certified

UV / IR² Flame Detector - High Ambient Temperatures (Part No. FD-UVIR2-HT)
- Die cast zinc alloy housing
- Continuous operation at temperatures up to 85°C, short term operation at temperatures up to 125°C

UV / IR² Flame Detector - Flameproof (Exd), High Ambient Temperatures (Part No. FDXP-UV/IR2-HT)
- Copper free aluminium alloy housing
- Continuous operation at temperatures up to 85°C, short term operation at temperatures up to 125°C
- ATEX certified

UV / IR² Flame Detector - Stainless Steel, Flameproof (Exd) (Part No. FDXP-UV/IR2-SS)
- Stainless steel 316 housing
- SIL 2 & ATEX certified

Conspec Flame Detector Accessories

Adjustable Mounting Bracket (Part No. AMB-1)
- Stainless steel 316
- Suitable for all front viewing detectors

Electrical Isolation Mount for Brackets (Part No. EIM-1)
- Quick release clips
- Marine grade materials

Stainless Steel 304 Weather Shield (Part No. SSWS-1)
- For all alloy housings

Stainless Steel 316 Weather Shield (Part No. SSWS-1-316)
- For all Exd housings

Flame Detector Test Unit (Part No. FDTU)
- Portable with rechargeable battery pack and charger
- Wide spectral output; UV, visible, near-IR, mid-IR
- Selectable output; constant, regular flash, irregular flicker
- Includes transport case

Rear Viewing Detectors Accessories

Bayonet - Mount 1” BSP/NPT Male (Plated Steel) (Part No. BM-1)

Bayonet - Blanking Plug (Solid) (Part No. BBP-1)

2 Hole Mounting Flange Kit (Part No. 2HMFK-1)
- 1” BSP/NPT (No window)
- For use with bayonet mount BM-1

4 Hole Mounting Flange with 1” BSP/NPT (Part No. 4HMFK-1)
- Pyrex window 5.5mm thick
- High temperature gaskets and fixings
- For use with bayonet mount BM-1

Purge Air Adaptor (Part No. 2PAA-1)
- 1/4” BSP air inlet to keep viewing window clear from heavy dust contamination
- For use with 2 hole mount 2HMFK-1

Purge Air Adaptor (Part No. 4PAA-1)
- 1/4” BSP air inlet to keep viewing window clear from heavy dust contamination
- For use with 4 hole mount 4HMFK-1
Specialist Application Detectors

**IR2 Flame Detector - Stainless Steel** (Part No. FD-IR2-SS)
- Stainless steel 316 housing
- SIL 2 certified

**IR2 Flame Detector - Stainless Steel, Flameproof (Exd)** (Part No. FDXP-IR2-SS)
- Stainless steel 316 housing
- SIL 2, ATEX & IECEx certified

**IR3 Flame Detector - Stainless Steel** (Part No. FD-IR3-SS)
- Stainless steel 316 housing
- SIL 2 certified

**IR3 Flame Detector - Stainless Steel, Flameproof (Exd)** (Part No. FDXP-IR3-SS)
- Stainless steel 316 housing
- SIL 2, ATEX & IECEx certified

**IR3 Flame Detector - Flameproof (Exd), High Ambient Temperatures** (Part No. FDXP-IR3-HT)
- Copper free aluminium alloy housing
- Continuous operation at temperatures up to 85°C, short term operation at temperatures up to 125°C
- ATEX & IECEx certified

**UV / IR2 Flame Detector - Stainless Steel** (Part No. FD-UV/IR2-SS)
- Stainless steel 316 housing
- SIL 2 certified

**UV / IR2 Flame Detector - High Ambient Temperatures** (Part No. FD-UV/IR2-HT)
- Die cast zinc alloy housing
- Continuous operation at temperatures up to 85°C, short term operation at temperatures up to 125°C

**UV / IR2 Flame Detector - Flameproof (Exd), High Ambient Temperatures** (Part No. FDXP-UV/IR2-HT)
- Copper free aluminium alloy housing
- Continuous operation at temperatures up to 85°C, short term operation at temperatures up to 125°C
- ATEX certified

Conspec Flame Detector Accessories

**Adjustable Mounting Bracket** (Part No. AMB-1)
- Stainless steel 316
- Suitable for all front viewing detectors

**Electrical Isolation Mount for Brackets** (Part No. EIM-1)
- Quick release clips
- Marine grade materials

**Stainless Steel 304 Weather Shield** (Part No. SSWS-1)
- For all alloy housings

**Stainless Steel 316 Weather Shield** (Part No. SSWS-1-316)
- For all Exd housings

**Flame Detector Test Unit** (Part No. FDTU)
- Portable with rechargeable battery pack and charger
- Wide spectral output: UV, visible, near-IR, mid-IR
- Selectable output: constant, regular flash, irregular flicker
- Includes transport case

Rear Viewing Detectors Accessories

**Bayonet - Mount 1” BSP/NPT Male (Plated Steel)** (Part No. BM-1)

**Bayonet - Blanking Plug (Solid)** (Part No. BBP-1)

**2 Hole Mounting Flange Kit** (Part No. 2HMFK-1)
- 1” BSP/NPT (No window)
- For use with bayonet mount BM-1

**4 Hole Mounting Flange with 1” BSP/NPT** (Part No. 4HMFK-1)
- Pyrex window 5.5mm thick
- High temperature gaskets and fixings
- For use with bayonet mount BM-1

**Purge Air Adaptor** (Part No. 2PAA-1)
- 1/4” BSP air inlet to keep viewing window clear from heavy dust contamination
- For use with 2 hole mount 2HMFK-1

**Purge Air Adaptor** (Part No. 4PAA-1)
- 1/4” BSP air inlet to keep viewing window clear from heavy dust contamination
- For use with 4 hole mount 4HMFK-1

www.conspec-controls.com
Connect with Conspec today

To know more about Conspec Controls and its complete line of flame detectors, call 1 (800) 487-8450, or visit www.conspec-controls.com.