

## Spectrex SharpEye 40/40 Series Next-Generation Flame Detectors



*The next step in the optical flame detection industry  
with superior performance and reliability*  
Keeping a SharpEye on your safety for over 50 years



# Detect hydrocarbon-based fuel and gas fires at long distances in under five seconds using pioneering QuadSense™ technology – the next step in the optical flame detection industry with best in class performance and reliability.

The first step in battling a blaze is to quickly recognize it is happening while avoiding false alarms. The enhanced SharpEye fire detectors minimize immediate fire consequences by ensuring they're quickly detected, thereby reducing risk to personnel, the environment and facilities.

As the industry leader, the Spectrex 40/40D and C series continue the tradition of providing innovative, field-tested products that are used throughout the world.



QuadSense Technology - Increased area coverage with greater detection effectiveness and ultra-fast response time, reducing protection costs.



# SharpEye™ Quad-Sense™ 40/40 Series Flame Detectors

## Product overview

The SharpEye™ next-generation 40/40 series is based on proven Spectrex technologies, including IR3 and UV/IR. The SharpEye 40/40 series features QuadSense™ technology, providing the fastest response to fire, longest distance detection or revolutionary UV/IR technology, coupled with high sensitivity and superior immunity to false alarms, functioning in harsh conditions with unparalleled reliability and durability. With an improved design, the detectors are easy to install and maintain and come with universal wiring options and multiple output options for maximum flexibility and compatibility. Ensuring flawless operation, the next-generation series is suited to meet the challenges of wide range of industrial and commercial applications, providing superior protection of high value property and personnel to keep a SharpEye on your safety.

[Spectrex.net](http://Spectrex.net)



## Key specifications

- **Fastest response to fire**
- **Longest distance detection, revolutionary UV/IR technology**
- **Extended detection range increases the detection coverage by >2 times**
- **High sensitivity**
- **Superior immunity to false alarms**
- **Functioning in harsh conditions**
- **Unparalleled reliability and durability**
- **Improved design**
- **Easy to install and maintain**
- **Universal wiring options**
- **Multiple output options for maximum flexibility and compatibility**
- **Ensuring flawless operation**
- **Suited to meet the challenges of wide range and commercial applications**
- **Providing superior protection of high value property and personnel**

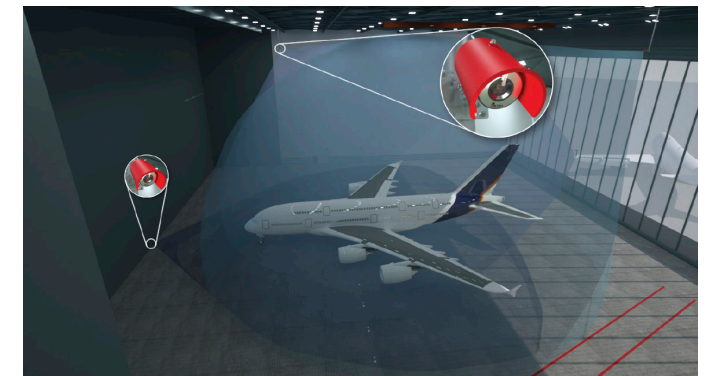


## Selecting the Detector Location

Flame detectors act as the eyes of the plant, meaning they should be installed in a high location where there is likely to be a clear line of sight.

Most flame detectors are placed in a corner of a structure or a fire zone to achieve maximum coverage along both walls and into the protected area.

Detectors should be positioned 45 degrees downward and roughly 1.5 ft (0.5 m) from the ceiling to maximize coverage and prevent accumulation of dust and dirt. \*



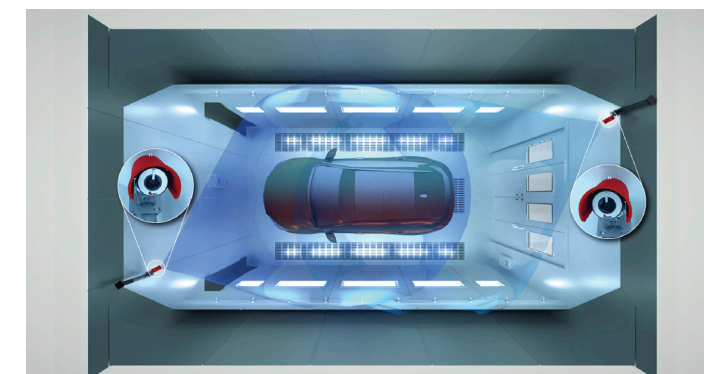
## Maintenance



SharpEye Quad-Sense provides an exceptional ultra-fast detection of hydrocarbon fires up to 90 meters, saving on extra installation and maintenance costs, including wiring infrastructure, engineering and installation labor costs and process down-time maintenance costs.

## Revolutionary Optics

Early detection, using a revolutionary optics device monitors for unnoticed hydrocarbon and hydrogen flames in extreme environments with under 50 mill second ultra fast detection. Monitoring is 24/7 365 days of the year.



\* Installation should comply with NFPA 72E or any other local and International regulations and standards, as applicable to flame detectors and installation of Ex approved products.

# 40/40 Series

	40/40D-I	40/40D-M	40/40D-LB	40/40D-L4B
<b>Detection Range</b>	300 ft (90 m)		93 ft (28 m)	
<b>Coverage Area - square meters</b>	6336	5426	641	641
<b>Coverage Area - cubic meters</b>	446357	321832	13356	13356
<b>Standard Response Time</b>	Typically <2 sec at 131 ft (40 m)		Typically 5 sec at 93 ft (28 m)	
<b>Ultra Fast Response Time</b>	Typically <1 sec at 100 ft (30 m)		20 msec for flash fire pan fire from 10 ft (3 m) distance via analog voltage output	20 msec for flash fire pan fire from 3 m distance
<b>High Speed Response Time (explosion)</b>	50 msec for 1ft diameter sphere LPG-air mixture explosion at 66 ft (20 m) via analog voltage output		50 msec for 1 ft diameter sphere LPG-air mixture explosion at 32.8 ft (10 m) via analog voltage output	
<b>No. of Sensitivities Options</b>	6		3	
<b>Field of View</b>	Horizontal 100°; Vertical 95°	Horizontal 80°; Vertical 80° - for Gasoline Horizontal 90°; Vertical 90° - for Hydrogen	Horizontal 100°; Vertical 95°	
<b>Built-In-Test</b>	IR		UV & IR	
<b>Temperature Range</b>	-76 °F to +185 °F (-60 °C to +85 °C)			
<b>Detects</b>	Hydrocarbon fires	Hydrogen and hydrocarbon fires	Hydrocarbon-based fuel and gas, hydroxyl, hydrogen, metal, inorganic, etc.	Hydrocarbon-based fuel and gas fires

	40/40C-I	40/40C-M	40/40C-LB	40/40C-L4B
<b>Detection Range</b>	215 ft (65 m)		50 ft (15 m)	93 ft (28 m)
<b>Coverage Area - square meters</b>	1399	2830	176	613
<b>Coverage Area - cubic meters</b>	48412	121239	2067	13448
<b>Standard Response Time</b>	Typically < 5 sec			
<b>Ultra Fast Response Time</b>	-			
<b>High Speed Response Time (explosion)</b>	-			
<b>No. of Sensitivities Options</b>	5		2	3
<b>Field of View</b>	Horizontal 100°; Vertical 95°	Horizontal 80°; Vertical 80° - for Gasoline Horizontal 90°; Vertical 90° - for Hydrogen	Horizontal 100°; Vertical 95°	
<b>Built-In-Test</b>	IR		UV & IR	
<b>Temperature Range</b>	-40 °F to +185 °F (-40 °C to +75 °C)			
<b>Detects</b>	Hydrocarbon fires	Hydrogen and hydrocarbon fires	Hydrocarbon-based fuel and gas, hydroxyl, hydrogen, metal, inorganic, etc.	Hydrocarbon-based fuel and gas fires

## Accessories



Flame Simulator



Air Shield



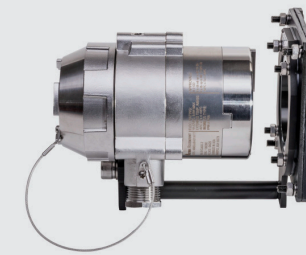
Protective Cover



U-Bolt / Pole Mount



Tilt Mount



Duct Mount



Cone Viewer



USB RS485 Harness Kit

## Hazardous Area Ex



## Reliability

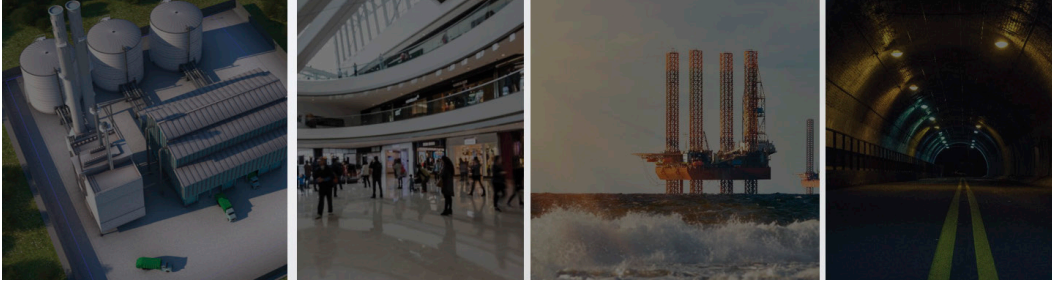
SIL3

## Performance


EN54-10 FM3620



# Revolutionary flame detection in extreme environments.



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