

## Dräger Flame 3000 Flame Detection

The Dräger Flame 3000 is an imaging based explosion proof flame detector. This visual flame detection system uses digital image processing and advanced algorithms to process and interpret flame characteristics. This principle offers an extended field of view and fewer false alarms.



## Benefits

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### Superior False Alarm Immunity

The unique software algorithm of the Dräger Flame 3000 is capable of discriminating between genuine fire conditions and other radiant sources that may cause conventional detectors to become desensitized or produce unwanted alarms. The detector is immune to common sources of unwanted alarms such as welding work, hot CO<sub>2</sub> emissions and flare reflections. This makes it a great partner on your oil rig or industry plant.

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### Enlarged Field of View

The Dräger Flame 3000 can detect n-heptane fires of 0.1 m<sup>2</sup> or greater at a distance of 60 m (200 ft) within a 120° horizontal and 80° vertical field of view. The detector's field of view is a rectangular pyramid shape. This gives it one of the greatest standard coverage area and range of any flame detector currently available.

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### Flexible operation

The Dräger Flame 3000 operates as a stand-alone unit or can be connected to a control system or a fire panel to provide fault and fire signalling. This is achieved using a 0 to 20 mA signal or relay outputs.

Depending on the environmental conditions you can choose between an aluminium or a stainless steel housing.

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### Functional testing

The Dräger FS-5000 flame simulator tests Dräger Flame Detectors at distances up to eight metres (26 ft). With reduced need for scaffold or ladders to access the detector, maintenance costs can be decreased.

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### Easy to install and use

The detector is very easy to install using a mounting bracket of stainless steel. The swiveling mounting bracket ensures that the device is optimally aimed towards potential sources of fire. The device status is displayed to nearby workers by tri-coloured LED light.

## System Components

D-6806-2016



### Dräger REGARD® 7000

The Dräger REGARD® 7000 is a modular and therefore highly expandable analysis system for monitoring various gases and vapours. Suitable for gas warning systems with various levels of complexity and numbers of transmitters, the Dräger REGARD® 7000 also features exceptional reliability and efficiency. An additional benefit is the backward compatibility with the REGARD®.

D-2777-2009



### Dräger REGARD® 3900

The Dräger REGARD® 3900 is a standalone, self contained control system for the detection of Toxic, Oxygen and Ex hazards. The control system is fully configurable between 1 and 16 channels, depending upon the type and quantity of input/output boards installed.

## Accessories

ST-8006-2008



### Dräger FS-5000

The Dräger FS-5000 flame simulator is used to simulate the presence of fire or flames to test the correct operation of the Dräger Flame 5000 or the Dräger Flame 3000.

## Related Products



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### Dräger Flame 5000

The Dräger Flame 5000 is an imaging based explosion proof flame detector. This visual flame detection system uses digital image processing and advanced algorithms to process and interpret flame characteristics. This principle offers an extended field of view and fewer false alarms. Each detector is equipped with a colour CCTV camera.

## Technical Data

### Detector Characteristics

Type	Explosion proof visual flame detector	
Spectral range	Near Infrared	
Field of view	Horizontal 120°, vertical 80°	
Response Time	4 seconds (typical), configurable up to 30 seconds	
Detection range (Pan fire 0,1 m <sup>2</sup> /1 ft <sup>2</sup> )	Methane	26 m (85 ft)*
	Ethanol	30 m (100 ft)
	n-heptane/petrol	60 m (200 ft)
	JP4	90 m (300 ft)**
	Diesel	50 m (165 ft)
	Ethylene glycol	20 m (65 ft)
	Crude oil	50 m (165 ft)***

\* Plume fire 0.9 m (3 ft), \*\* Pan fire 0.4 m<sup>2</sup> (4 ft<sup>2</sup>), \*\*\* Pan fire 0.25 m<sup>2</sup> (2.7 ft<sup>2</sup>)

### Ambient Conditions

Temperature	#60 to +85 °C (#76 to +185 °F)
Pressure	915 to 1,055 hPa
Humidity	0 to 95 % RH, non-condensing

### Electrical Data

Relay	Alarm and fault	
Signal Output	0 to 20 mA	
	Fault	0 mA
	Optical Fault	2 mA
	Operating mode	4 mA
	Alarm	18 mA
Supply Voltage	24 VDC nominal (18 bis 32 VDC)	
Power Input	2.8 W (typical)	

### Housing

Material	Aluminium or Stainless Steel
Cable Gland	M20, M25, ½"NPT or ¾"NPT
Weight	2,5 kg (5,5 lbs) Aluminium or 6 kg (13,2 lbs) Stainless Steel
Dimensions (D x L)	200 x 100 mm (7.9 x 3.9 inch)
Protecting Class	IP66, NEMA 4X

### Approvals

ATEX	II 2 G Ex d IIC T4
IECEx	Ex d IIC T4
FM/CFM	Class 1 Division 1 Groups B, C and D T4 Class 1 Zone 1 AEx/Ex d IIC T4

Declaration of Conformity of Performance	FM3260 (Radiant Energy#Sensing Fire Detectors for Automatic Fire Alarm Signaling), FM3600, FM3615, FM3810, ANSI/NFPA 72
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## Ordering Information

Dräger Flame 3000 M25 Aluminium	4209460
Dräger Flame 3000 M20 Aluminium	4209462
Dräger Flame 3000 ¾" NPT Aluminium	4209464
Dräger Flame 3000 ½" NPT Aluminium	4209476
Dräger Flame 3000 M25 Stainless Steel	4209468

## Ordering Information

Dräger Flame 3000 M20 Stainless Steel	4209470
Dräger Flame 3000 ¾" NPT Stainless Steel	4209477
Dräger Flame 3000 ½" NPT Stainless Steel	4209474
Dräger FS-5000	4209307

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