

# FDS300

## Visual Flame Detector



**Designed for hazardous industries where fast optical flame detection is critical and nuisance alarms are not an option.**

The FDS300 is an explosion proof visual flame detector. It processes live video images to detect the characteristic properties of flames, by means of its flame detection algorithms and on-board digital signal processing.

### UNRIVALLED FALSE ALARM IMMUNITY

The unique flame detection algorithm in the Micropack FDS300 is capable of discriminating between genuine fire conditions and other radiant sources that may cause blinding of conventional flame detectors or produce unwanted alarms. The detector is immune to common sources of unwanted alarms such as hot work, hot CO<sub>2</sub> emissions and flare reflections. This makes it perfect for application in hazardous/ industrial applications, as recommended by FM Global, where downtime can be very costly.

### FIELD OF VIEW

The FDS300 has an unrivalled 120° horizontal and 80° vertical field of view with an increased range of 60 metres to an n-heptane 0.1m<sup>2</sup> pan fire. The vast coverage provided from this detector will optimise the number of units

required, resulting in reduced maintenance and installation costs. The Field of View is a rectangular pyramid shape and represents a radial projection of the sensing element; therefore, giving it the largest coverage area of any flame detector currently available. This unique Field of View does not reduce at the outer limits unlike conventional flame detectors.

### FUNCTIONAL TESTING

The Micropack FS301 Flame simulator can dependably activate a FDS300 from a distance of up to 8m. The electronics are housed in an Ex db enclosure which is designed for Zone 1 hazardous areas. Again, this further reduces maintenance costs by eliminating the need for scaffolds or ladders when testing the device and allows more freedom in the placement of these detectors to optimise the coverage achieved.

### KEY FEATURES

- The detector is immune to common sources of unwanted alarms such as hot work, hot CO<sub>2</sub> emissions and flare reflections
- The FDS300 can be operated as a stand-alone unit.
- Can also be integrated with a control system or fire panel to provide fault, and fire signalling.
- The FDS300 incorporates an advanced optical verification test which ensures the internal and external surfaces of the window are free of obscurants.

### CERTIFICATION

- ATEX : II 2 G Ex db IIC T4
- Factory Mutual: FM 3260 Radiant Energy Sensing Fire Detectors for Automatic Fire Alarm Signaling
- IECEx Ex db IIC T4
- Class 1 DIV 1 GROUPS B,C,D,T4
- Class 1 Zone 1 AEx/Ex db IIC T4
- Class 1 Zone 1 Ex db IIC T4

## FDS300

**SPECIFICATIONS** Specifications subject to change without notice

<b>Operating Temp</b>	-60°C to +85°C (-76°F to +185°F)
<b>Storage Temp</b>	-60°C to +85°C (-76°F to +185°F)
<b>Humidity</b>	0 to 90% RH non-condensing
<b>Ingress</b>	IP66, NEMA 4X
<b>Dimensions</b>	100 Diameter x 200 Length Overall (mm)
<b>Material</b>	HE30 Al (Red epoxy), 316 stainless steel
<b>Entries</b>	1 – M25 or ¾”NPT (Variants on Request)
<b>Weigh</b>	2.5kg (HE30) or 6kg (316)
<b>Operating Voltage</b>	24Vdc Nominal – (18 to 32 Vdc Range)
<b>Power Consumption</b>	2.8 Watts Nominal at 24Vdc
<b>Speed of Response</b>	<5 seconds (Typical)
<b>Field of View</b>	Horizontal FOV -120° Vertical FOV - 80°
<b>Outputs</b>	Relay contacts - alarm and fault Current source 4-20mA

FLAME SENSITIVITY	FIRE SIZE	DISTANCE
n-Heptane: Pan Fire	0.1m <sup>2</sup> pan	60m
n-Heptane: in direct sunlight	0.1m <sup>2</sup> pan	60m
n-Heptane: in modulated sunlight	0.1m <sup>2</sup> pan	60m
n-Heptane: modulated black body	0.1m <sup>2</sup> pan	60m
n-Heptane: Arc welding	0.1m <sup>2</sup> pan	60m
n-Heptane: 1000watt lamp	0.1m <sup>2</sup> pan	60m
Ethanol: Pan Fire	0.1m <sup>2</sup> pan	30m
Methane Jet Fire	0.9m plume	26m
Gasoline Fire	0.1m <sup>2</sup> pan	60m
JP4	0.4m <sup>2</sup> pan	90m
Ethylene Glycol	0.1m <sup>2</sup> pan	20m
Diesel	0.1m <sup>2</sup> pan	50m
Crude Oil (heavy fuel oil) Pan Fire	0.25m <sup>2</sup>	50m
Silane	0.61m plume	17m



**t** +61 8 6108 0000

**e** [info@gastech.com](mailto:info@gastech.com)

**w** [gastech.com](http://gastech.com)

**HEAD OFFICE**  
24 Baretta Road  
Wangara WA 6065  
Phone: +61 8 6108 0000

**SYDNEY OFFICE**  
21/25 Narabang Way  
Belrose NSW 2085  
Phone: +61 2 9451 0054

**BRISBANE OFFICE**  
PO Box 349  
Cannon Hill Qld 4170  
Phone: +61 7 3160 0901