



MICROPACK

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FDS300 FLAME DETECTOR



Description

The MICROPACK FDS300 is a flame detector that has unsurpassed false alarm immunity.

The Micropack flame detection range are the safest and most advanced flame detectors on the market today, and their track record on the numerous facilities where they are installed has proven the technology to be robust, even in the harshest of environments.

FDS300 flame detectors identify flame using certified flame recognition software. FM Approvals ensures that our flame recognition software is fit for purpose through rigorous research and testing in a range of difficult environments.

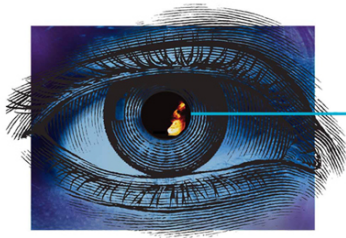
Production losses caused by common sources of alarm from existing flame detection technologies are addressed by the FDS300 flame detector.

The FDS300 has been designed for use as a stand alone operation.

Features

- The FDS300 has a 120° horizontal x 80° vertical field of view with an increased range of 60 metres to an n-heptane 0.1m² pan fire.
- Single detection sensitivity setting because the FDS300 is unaffected by the background radiation experienced in industrial environments.
- Superior False alarm immunity to common sources of unwanted alarms such as Hot process, Hot Work, Hot CO₂ emissions and Flare Reflections.
- Advanced optical verification test assuring readiness to perform when needed.
- Output options include: relay contacts and 4-20 mA.
- Separate termination chamber for ease of installation.
- Flame simulation tester to verify operation from distances of 3-8 metres, removing the need for scaffolding or ladders.
- FDS300 can operate via standard 3 wire termination for 4-20mA operation or using 4 wire termination for relay fault and fire alarm contacts.





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FDS300 TECHNICAL SPECIFICATION

Environmental

Operating Temp : -60°C to +85°C (-76°F to +185°F)
 Storage Temp : -60°C to +85°C (-76°F to +185°F)
 Humidity : 0 to 90% RH non-condensing
 Ingress : IP66, NEMA 4X

Operating Voltage

24Vdc Nominal - (18 to 32 Vdc Range)

Power Consumption

2.4 Watts Nominal at 24Vdc (3.2W at 32Vdc)

Speed of Response

<5 seconds (Typical)

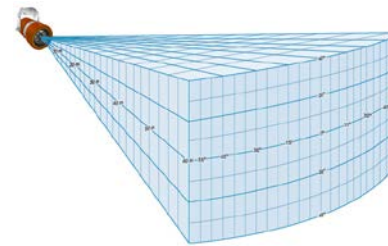
Flame Sensitivity

Fuel	Fire Size	Distance
n-Heptane: Pan Fire	0.1m ² (1sqft) pan	60m (200 feet)
n-Heptane: in direct sunlight	0.1m ² (1sqft) pan	60m (200 feet)
n-Heptane: in modulated sunlight	0.1m ² (1sqft) pan	60m (200 feet)
n-Heptane: modulated black body	0.1m ² (1sqft) pan	60m (200 feet)
n-Heptane: Arc welding	0.1m ² (1sqft) pan	60m (200 feet)
n-Heptane: 1000watt lamp	0.1m ² (1sqft) pan	60m (200 feet)
Ethanol: Pan Fire	0.1m ² (1sqft) pan	30m (100 feet)
Methane Jet Fire	0.9m (3ft) plume	26m (86 feet)
Gasoline Fire	0.1m ² (1sqft) pan	60m (200 feet)
JP4	0.4m ² (4sqft) pan	90m (300 feet)
Ethylene Glycol	0.1m ² (1sqft) pan	20m (65 feet)
Diesel	0.1m ² (1sqft) pan	50m (165 feet)
Crude Oil (heavy fuel oil) Pan Fire	0.25m ² (2.7sqft)	50m (165 feet)

Enclosure

Dimensions : 100 Diameter x 200 Length Overall (mm)
 Material : HE30 Al (Red epoxy), 316 stainless steel
 Entries : 1 - M25 or ¾"NPT (Variants on Request)
 Weight : 2.5kg (HE30) or 6kg (316)

Field of View



Horizontal FOV -120°

Vertical FOV - 80°

Outputs

Relay contacts - alarm and fault

Current source 4-20mA

Certification

ATEX : II 2 G Ex d IIC T4

Factory Mutual : 3260

IECEx Ex d IIC T4

Class I DIV I GROUPS B,C,D,T4

Class I Zone I AEx/Ex d IIC T4

Class I Zone I Ex d IIC T4

