MICROPACK
FIRE & GAS

FDS303

MULTI SPECTRUM IR FLAME DETECTOR

DATA SHEET

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

The MICROPACK FDS303 is an explosion proof multi spectrum IR flame detector. The device delivers superior performance, responding to hydrocarbon liquid fuel and gas fires at long distances.

The FDS303 has been independently tested to demonstrate it can detect a hydrocarbon fuel pan fire at nearly 200 feet in less than 5 seconds.

5 YEAR WARRANTY

CERTIFIED • IEC 61508 • SIL 2 CAPABLE • exida

Description

Multi Spectrum IR Flame Detector

The FDS303 compliments the FDS301 and FDS300 Visual Flame Detectors by delivering superior performance in the detection of hydrocarbon fires which are not detectable in the visible spectrum. The FDS303 utilizes the latest IR flame detection algorithms to ensure maximum false alarm immunity.

Applications

Typical applications include:

- On/Offshore Oil and Gas Processing Facilities
- Refineries
- Petrochemical Plants
- Chemical Facilities
- Pharmaceutical
- Aircraft Hangars
- Road Tunnels
- Power Generation
- Tank Farms
- Road & Rail Loading Racks
- LNG / LPG
- Warehouses/ Storage Areas
- Waste Recycling/ Biomass Plants
- Printing Industry

Features and Benefits

- Multi Spectrum IR design delivers long detection distances and enhanced false alarm immunity
- Continuous optical test, without a reflector
  - Verifies operation and improves device up-time
- Microprocessor controlled heated optics
  - Maintains operation in harsh weather conditions (snow, ice, condensation)
- International hazardous area approvals
  - FM / ATEX / IEC Ex
- Certified performance testing to multiple fuels
  - FM 3260
  - EN 54-10
- Adjustable sensitivity levels
  - For application flexibility
  - Ensure detectors do not cross vote
- External testing with a long-range flame simulator
  - Minimizes the need for scaffolding
- Easy integration using industry standard outputs:
  - Alarm and Fault Relays
  - 0-20mA
  - HART®, as standard
- Certified SIL 2 capable
- 5 year warranty

USE
Soluções em Medição e Controle
Tel: 55 21 3575-3700 | www.use.com.br

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TECHNICAL SPECIFICATION

Environmental

Operating Temp	-76°F to +185°F (-60°C to +85°C)
Storage Temp	-76°F to +185°F (-60°C to +85°C)
Humidity	0 to 100% RH non-condensing

Operating Voltage

24 Vdc Nominal – (Range 18 to 32 Vdc)

Power Consumption

3 W minimum (without heater), 15 W at 32 Vdc with heater on maximum

Speed of Response

~5 seconds (Typical)

Flame Sensitivity

	Fuel	Fire Size	Distance
High sensitivity	n-Heptane	1'x1' / 30cm x 30cm	196 feet (60m)
	n-Heptane + arc welding	1'x1' / 30cm x 30cm	196 feet (60m)
	Gasoline	1'x1' / 30cm x 30cm	196 feet (60m)
	Diesel	1'x1' / 30cm x 30cm	164 feet (50m)
	Crude oil (heavy fuel)	20"x20" 0.5mx0.5m	164 feet (50m)
	JP4	1'x1' / 30cm x 30cm	196 feet (60m)
	Methane	24" plume / 60 cm	164 feet (50m)
	Ethanol	1'x1' / 30cm x 30cm	137 feet (42m)
	Methanol	1'x1' / 30cm x 30cm	137 feet (42m)
Standard sensitivity	n-Heptane	1'x1' / 30cm x 30cm	98 feet (30m)
	Gasoline	1'x1' / 30cm x 30cm	98 feet (30m)
	JP4	1'x1' / 30cm x 30cm	98 feet (30m)
	Methane	24" plume / 60 cm	98 feet (30m)
	Ethanol	1'x1' / 30cm x 30cm	98 feet (30m)

Enclosure

Dimensions:	4" Dia x 8" L (inches) 100 mm Dia x 200 mm
Material:	Copper free aluminum or 316 stainless steel
Entry size:	3/4 inch NPT or M25
Weight:	Aluminum 5.5 lbs (2.5 Kg) Stainless steel 13.2 lbs (6 Kg)

Field of View

90° horizontal by 90° vertical

Outputs

Relay contacts - alarm and fault
0-20mA, HART®

Certification

FM approved
Class 1 Div 1 Groups B, C, D T4
Class 1 Zone 1 AEx/Ex d IIC T4
Ambient –50°C to +85°C

ATEX Ex II 2 G Ex db IIC T4
IECEx Ex db IIC T4
Ambient –60°C to +85°C

Performance approvals
FM 3260
EN 54-10

Ingress	NEMA type 4X / IP66
IEC 61508	Certified SIL 2 Capable

Accessories

Flame simulator (FS301)
Pole mount bracket
Retrofit mounting bracket
Marine mounting bracket

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ISO 9001:2015 Certified

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