MICROPACK
FIRE & GAS
A Consilium Group Company

FDS303 UVIR

5 YEAR WARRANTY

ULTRAVIOLET-INFRARED FLAME DETECTOR

DATA SHEET

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

The MICROPACK FDS303 UVIR is an explosion proof ultraviolet-infrared flame detector. The device delivers superior performance, responding to hydrocarbon liquid fuel and gas fires at long distances.

The FDS303 UVIR has been independently tested to demonstrate it can detect a hydrocarbon fuel pan fire at over 128 feet in less than 5 seconds.

Description

Ultraviolet and Infrared Flame Detector

The FDS303 UVIR compliments the FDS series by delivering superior performance in the detection of hydrocarbon fires which are not detectable in the visible spectrum. The FDS303 UVIR utilizes the latest 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

- UVIR 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
- Design to meet 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
- SIL 2 capable
- 5 year warranty

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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.

Fidd of View

100° horizontal by 80° vertical

Speed of Response

<5 seconds (Typical)

Flame Sensitivity

	Fuel	Fire Size	Distance
High sensitivity	n-Heptane	1'x1' / 30cm x 30cm	128 feet (39m)
	n-Heptane + arc welding	1'x1' / 30cm x 30cm	128 feet (39m)
	Gasoline	1'x1' / 30cm x 30cm	128 feet (39m)
	Diesel	1'x1' / 30cm x 30cm	98 feet (30m)
	Crude oil (heavy fuel)	20"x20" 0.5mx0.5m	98 feet (30m)
	JP4	1'x1' / 30cm x 30cm	98 feet (30m)
	Methane	39" plume / 1 m	98 feet (37m)
	Ethanol	1'x1' / 30cm x 30cm	98 feet (30m)
	Methanol	1'x1' / 30cm x 30cm	98 feet (30m)
Standard sensitivity	n-Heptane	1'x1' / 30cm x 30cm	83 feet (25m)
	Gasoline	1'x1' / 30cm x 30cm	83 feet (25m)
	JP4	1'x1' / 30cm x 30cm	55 feet (17m)
	Methane	39" plume / 60 cm	83 feet (25m)
	Ethanol	1'x1' / 30cm x 30cm	55 feet (17m)

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)

Outputs

Relay contacts (SPST 2A at 30Vdc) - alarm and fault.

0-20mA, HART®

Certification

Class 1 Div 1 Groups B, C, D T4
Ambient –50°C to +85°C

FM US APPROVED

Class 1 Zone 1 AEx/Ex db 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

INMETRO Ex db IIC T4*
PESO Ex db IIC T4 *
Ta= -60°C to +85°C

Performance approvals

FM 3260
EN 54-10
*Designed to meet

CE

Ingress NEMA type 4X / 4P & IP66/67
IEC 61508 SIL 2 Capable *
Marine ABS Product Assessment *

Accessories

Flame simulator (FS301)
2", 3" & 4" Pole mount bracket
Retrofit mounting bracket
Marine mounting bracket
Sunshield
Duct Mount Bracket
Air Shield
Detector Sealing Kit

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ISO 9001:2015 Certified

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