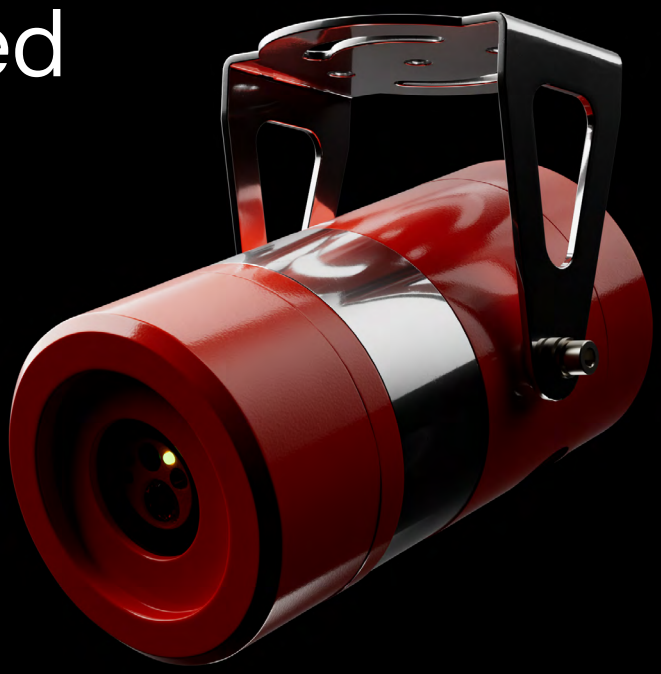
We see what you can't. The future of flame detection is here.

Ultraviolet-Infrared Flame Detector

FDS303 UV/IR

Speed critical detection.
Superior performance.

An explosion proof UV/IR flame detector. Processing radiant light to reliably detect the unique spectral emissions of flames. Delivered through its FM certified flame detection algorithms and on-board digital signal processing. The safest and most advanced flame detector on the market. Proven to perform in the harshest environments anywhere in the world.



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 UV/IR 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

- UV/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 condi-tions (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
- Certified SIL2 capable
- 5 year warranty

Doc Ref: 2200.5200 Rev 2.4

Micropack
CONSILIUM SAFETY GROUP

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 93% 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.

Field of View

100° horizontal by 80° vertical

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)
	Methane	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)

Speed of Response

<5 seconds (Typical)

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, Single or Dual.
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

FM approved
Class 1 Div 1, Groups B, C, D T4
Class 1 Zone 1 AEx/Ex db IIC T5/T6 Gb
T5 Ambient: -50°C to +85°C
T6 Ambient: -50°C to +70°C

ATEX II 2 G Ex db IIC T5/T6 Gb
IECEx Ex db IIC T5/T6
T5 Ambient: -60°C to +85°C
T6 Ambient: -60°C to +70°C

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

Performance approvals
FM 3260
EN 54-10

Ingress:
IP66/67 | NEMA type 4X/6P

IEC 61508:
Certified SIL 2 Capable

Marine:
DNV GL Type Approval
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

Fire Training Centre,
Schoolhill, Portlethen
Aberdeen AB12 4RR
Tel: +44 (0)1224 784055
Email: sales@micropack.co.uk

Micropack
CONSILIUM SAFETY GROUP