FIXED SYSTEMS

FGARD UVIR

Multi Spectrum IR Flame Detector

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

Tailor made to detect hydrocarbon flames outside the visible spectrum, the FGard UVIR flame detector is an explosion proof ultraviolet-infrared flame detector designed to provide elite detection of hydrocarbon fires.

The Fgard UVIR incorporates the latest IR flame detection algorithms to prevent the risk of false alarms, and with three different sensitivity settings, you can customize the sensors for your space and needs.

Designed to operate in all conditions, the microprocessor controlled heated optics ensure continuous operation even in harsh weather environments at risk of snow, ice, and condensation.

With advanced optical verification, an automatic test verifies cleanliness of the lens and electronic circuitry to ensure the detector is always primed for optimal performance, requiring no reflector optical check. Plus, its large optical surface minimizes the risk of false alarms, so you can respond efficiently with confidence to any alarm.

FEATURES

False alarm immunity

- Utilizes the latest IR flame detection algorithms to ensure maximum false alarm immunity
- Perfect for hazardous environments where false alarms are unacceptable
- Independently tested to demonstrate it can detect a hydrocarbon fuel pan fire at over 130 ft in less than 5 seconds.

Adjustable sensitivity levels

- Choice of three different sensitivity settings for selection of the most appropriate level for your specific application
- Provides application flexibility and ensures detectors do not cross vote.

Advanced optical verification

- Automatic test verifies cleanliness of the lens and electronic circuitry
- No need for reflector optical checks
- Large optical surface results in far fewer false alarms
- Intelligent heated optics mean no risk of condensation, ice or water on the lens for unimpaired performance in all weather.

APPLICATIONS

- On/offshore oil and gas processing facilities
- Refineries
- Petrochemical plants
- Chemical facilities
- Pharmaceutical
- Aircraft hangers
- Road tunnels
- Power generation
- Tank farms
- Road and rail loading racks
- Lng / lpg
- Warehouses / storage areas
- Waste recycling / biomass plants
- Printing industry.

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DETECTING GAS. SAVING LIVES.

SPECIFICATIONS

DEVICE SPECIFICATIONS	
ENCLOSURE MATERIAL	Copper free aluminum or 316 stainless steel
DIMENSIONS	4” Dia x 8” L (inches) / 100mm Dia x 200mm
WEIGHT	Alu: 5.5lbs (2.5kg) / SS: 13.2lbs (6.0kg)
ENTRY SIZE	3/4 inch NPT or M25
OPERATING VOLTAGE	24 Vdc Nominal – (Range 18 to 32 Vdc)
POWER CONSUMPTION	3 W minimum (without heater), 15 W maximum (with heater).
RESPONSE TIME	< 5 seconds (Typical)
OUTPUT	Relay contacts (DPDT 2A at 30Vdc) – alarm and fault. 0–20mA, HART®
OPERATING TEMPERATURE	-60°C to +85°C (-76°F to +185°F)
STORAGE TEMPERATURE	-60°C to +85°C (-76°F to +185°F)
HUMIDITY	0 to 93% RH, non-condensing
PERFORMANCE APPROVALS	FM 3260 EN 54-10 Ingress: IP66 / NEMA type 4X Certified SIL 2 – IEC 61508
CERTIFICATION	Class 1 Div 1 Groups B, C, D T4 Ambient -50°C to +85°C Class 1 Zone 1 AEx/Ex db IIC T4 Ambient -50°C to +85°C ATEX II 2 G Ex db IIC T4 IECEx Ex db IIC T4 Ambient -60°C to +85°C INMETRO Ex db IIC T4 – pending PESO Ex db IIC T4 Ta= -60°C to +85°C – pending INMETRO Ex db IIC T4 PESO Ex db IIC T4 – Ta = -60°C to +85°C CCC (China Fire Approvals) – Pending GB-Ex of China – Pending

FLAME SENSITIVITY TABLE

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 / 60cm	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 / 60cm	98 feet (30m)
	Ethanol	1’x1’ / 30cm x 30cm	98 feet (30m)

Disclaimer
Due to ongoing research and product improvement, specifications are subject to change without notice. While every effort has been made to ensure accuracy in this document, no responsibility can be accepted for errors or omissions. Data may change, as well as legislation, and you are strongly advised to obtain copies of the most recently issued regulations, standards, and guidelines. This document is not intended to form the basis of a contract.

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