DETECTORS INCORPORATED

safety · security · peace of mind

D371 3IR+UV
Multi-Spectrum
Flame Detector

INDUSTRIAL AND COMMERCIAL FLAME DETECTORS

PRODUCT DESCRIPTION

The Detectors Incorporated Model D371 Multi-Spectrum Flame Detector is the most advanced optical flame optical flame detector designed to respond to both Hydrocarbon and Non-Hydrocarbon fires while rejecting false alarm sources. The D371 detectors sense UV radiation in the Ultraviolet spectrum and Infrared radiation in 3 discrete bands of IR spectrum for detecting fires. Flame response and false source rejection for the D371 model is accomplished by utilizing the Convolution Method and Advanced DSP (Digital Signal Processing) in conjunction with hard coded algorithms identifying specific wavelengths of energy. The detector is able to respond to Hydrocarbon and Non-Hydrocarbon fires at a distance of 200+ feet. All this while rejecting false sources.

The D371 is a stand-alone fire & flame detector in a watertight NEMA 4 & 4X (IP66,67) and explosion-proof Stainless-Steel enclosure designed for indoor/outdoor Class 1, Div. 1 (Zone 1) installations.

The detectors are supplied with Alarm / Auxiliary / Fault relays, 0-20 mA analog and RS485 outputs. They can store 200 events and 6 FireGraphs in their FRMA memory.

APPLICATIONS

- Airports & Aircraft Hangars
- Warehouse & Storage Facilities
- Manufacturing & Food Processing
- Diesel Generators & Fuel Storage
- Battery Rooms & Charging Facilities
- Oil & Gas Facilities
- Refineries & Cogeneration Plants
- Chemical & Hydrogen Plants
- Tank Farms
- Compressor Stations
- Paint Booths
- Paint & Solvent Storage Facilities
- Recycling Centers
- LPG / LNG Facilities
- Power Plants
- Marine Fuel Loading & Unloading

FEATURES AND BENEFITS

- Multi-Spectrum 3IR + UV design
- Detects Hydrocarbon and Non-Hydrocarbon fires with the highest false alarm immunity.
- Standard outputs: Warning / Alarm / Fault / Auxiliary relays, 0-20mA and RS485
- 200 event history log & 6 FireGraphs®
- Adjustable Time/Verification Delay up to 20 seconds.
- Automatic Self-Test checking electronic circuitry and Optical Path Integrity test with OptiRadar®
- Copper free aluminum enclosure, powder coated Test Mode for manual testing.
- Solar Blind
- Heater Option to avoid condensation and icing.
- High False Alarm immunity to external non-fire sources
- Manufactured in the USA with a 5-year warranty.
- RFI & EMC compliant
- Meets SIL 2 requirements
- NEMA 4 & 4X (IP66,67) and explosion-proof Stainless-Steel enclosure
- FM/CFM/CSFM Approved

MODEL D371 FLAME DETECTOR TECHNICAL DATA

GENERAL

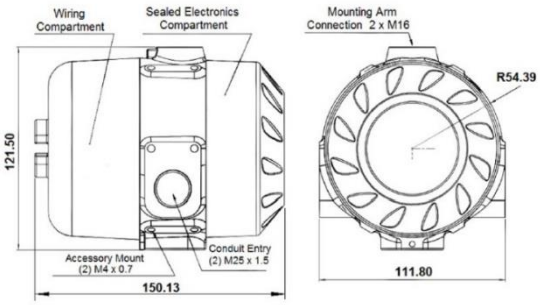
Field-of-View:	90° Horizontal and Vertical
Spectral Sensitivity	UV: 180-260 nanometers IR: 2-5 microns (3 discrete bands)
Detection Range:	12"x12" n-Heptane fire – 200 ft (61m)
Std Response time	Typically 3-5 seconds
Detection Range:	1' x 1' n-Heptane fire: 100 ft. (30.5 m)

ELECTRICAL

Operating Voltage:	24 VDC nominal (18-31), Regulated
Power Consumption:	Standby: 60 mA @ 24 VDC Alarm: 90 mA @ 24 VDC
Heater Option:	120 mA additional
Output Relays:	Alarm / Auxiliary / Fault SPDT—contacts rated 2A @ 24 VDC Alarm & Auxiliary relays: De-Energized Fault relay: Energized
Adjustable Time/ Verification Delay	Aux relay setting .3, 3, 10, 20 seconds
Analog Output:	0-20 mA Stepped - Source
Communication:	RS485 ModBus
Visual Indications:	Green LED - Normal Red LED – Alarm
Conduit Entries:	Standard (2) M25 Optional M25 x ¾" NPT adaptor
Wiring:	12 AWG (3.3mm²) – 22 AWG (.33mm²)

MECHANICAL

Enclosure Material:	316 Stainless Steel
Weight:	10 lbs. (4.5 kg)
Mounting:	Stainless Steel Swivel Arm— Order Separately #DA-001 6.6 lbs. (3 kg)



Dimensions in mm

ENVIRONMENTAL

Humidity Range:	5 to 95% Relative humidity, Non-Cond.
Temperature Range:	-40° to +185° F (-40° to +85°C) FM -55° to +185°F (-48.3° to + 85°C) with Heater Option
Vibration:	In compliance with FM 3260-2003, Meets or Exceeds MIL-STD 810C
Enclosure Type:	NEMA 4 & 4X, IP66/IP67

APPROVALS & CLASSIFICATIONS

US

FM APPROVED

Certification No: **FM17US0336X**

Class I, Div. 1, Groups A, B, C and D; Ta = -40°C to +110°C Class II/ T4 = -40°C to +85°C, T5 = -40°C to +75°C, T6 = -40°C to +60°C

Class I, Zone 1 AEx db eb IIC T4 Gb, Ta = -40°C to +110°C AEx tb IIIC 135°C Db T4, Ta = Ta = -40°C to +110°C T4 = -40°C to +85°C, T5 = -40°C to +75°C, T6 = -40°C to +60°C Type 4X and IP66/IP67

Canada

FM

Certification No: **FM17CA0120X**

Class I, Div. 1, Groups A, B, C and D; T4, Ta = -40°C to +110°C Class II/ III, Groups E, F and G; T4, Ta = -40°C to +110°C T4 = -40°C to +85°C, T5 = -40°C to+75°C, T6 = -40°C to +60°C Class I, Db T4, Ta = Ta = -40°C to +110°C

T4 = -40°C to +85°C, T5 = -40°C to +75°C, T6 = -40°C to +60°C Type 4X and IP66.IP67

Meets or Exceeds MIL-STD 810C. In Compliance with FM3260-2003

Ex IEC IECEx CE Mark

ORDERING INFORMATION

D371	3IR + UV Multi Spectrum Flame Detector in a stainless-steel Enclosure.
D371 Basic	3 IR + UV Multi Spectrum Flame Detector in a stainless-steel Enclosure. Standard outputs: Alarm / Fault / Auxiliary relays only.
DA-001	316 SS Mounting Arm
DA-003	Air Purge Kit
DA-005	Weather Shield
DA-006	Field of View Restrictor
DA-008	Detector Key Test Station
HW-AM25-0001	M25 Male to ¾" Female Adaptor SS

Installation Recommendations: Please refer to our User Manual for mounting and wiring instructions.

The installation of Detectors Incorporated® flame detectors should be executed in accordance with the recognized national or international standards and codes of practice.

Specifications and wiring information are provided for information only and are believed to be accurate. Detectors Incorporated assumes no responsibility for their use. Data and design are subject to change without notice. Installation and wiring instructions are shipped with the products and should always be used for actual installation. For more information, contact your Sales Representative.

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