

PRODUCT DESCRIPTION

The **Detectors Inc. Models D370 IR/IR/IR & D371 UV+IR/IR/IR** Multi-Spectrum Flame Detectors are the most advanced family of optical flame detectors designed and optimized to respond to both the Hydrocarbon and Non-Hydrocarbon based fires while rejecting False Alarm Sources. The Model 370 senses IR radiation in 3 discrete bands of Infrared Spectrum; while The Model D371 senses 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 both models is accomplished by utilizing the Convolution Method and Advance DSP (Digital Signal Processing) in conjunction with hard coded Algorithms identifying specific wavelengths of Energy. The detectors are able to respond to Hydrocarbon fires at distances of 150+ feet and low energy Non-Hydrocarbon fires at distances of 100+ feet, all this while rejecting False sources.

The **Models D370** and **D371** are stand-alone fire & flame detectors in watertight NEMA 4X (IP66) and explosion-proof Stainless Steel enclosures designed for indoor/outdoor Class I, Div. 1 (Zone 1) Installations. The Detectors are supplied with Alarm / Auxiliary / Fault relays, 4-20 mA analog and RS485 ModBus outputs. The detectors can store 200 events and 6 FireGraphs with time and date stamped in its FRAM memory.

APPLICATIONS

- ▶ Onshore & offshore Oil and Gas facilities
- ▶ Refineries and Cogeneration plants
- ▶ Compressor Stations
- ▶ Chemical and Hydrogen Plants
- ▶ Crude Oil and Products Tank Farms
- ▶ Oil & Gas Pipelines
- ▶ LPG / LNG Facilities
- ▶ Fuel Terminals
- ▶ Marine Fuel Loading & Unloading
- ▶ Airports & Aircraft Hangars
- ▶ Silane Storage Facilities
- ▶ Industrial Warehouses
- ▶ Battery Rooms & Charging Facilities
- ▶ Paint & Solvent Storage Facilities
- ▶ Incinerators & Waste Disposal
- ▶ Power Plants



D371

FEATURES & BENEFITS

- ▶ Multi-Spectrum design for detecting both Hydrocarbon and Non-Hydrocarbon fires
- ▶ Standard outputs: Alarm/Fault/Auxiliary relays, 4-20 mA, and RS485 ModBus®
- ▶ Real-Time Clock and Event recording
- ▶ 200 Event Logs and 6 FireGraphs each 3 seconds long with date & time stamped
- ▶ Multiple selectable sensitivity levels
- ▶ Automatic Self-Test for checking electronic circuitry, and Optical Path Integrity test with **OptiRadar**
- ▶ Standard 316 Stainless Steel enclosure
- ▶ Test Mode for manual testing
- ▶ Encased electronics module for easy field installation and removal
- ▶ Pluggable connector for ease of wiring and installation
- ▶ Separate (isolated) field wiring compartment
- ▶ Manufactured in USA with 3-Year Warranty
- ▶ RFI & EMC compliant
- ▶ Designed to SIL 3 requirements

Models D370 & D371 Flame Detectors Technical Data

General

Field-of-View:	90° Field-of-View
Spectral Sensitivity:	UV: 180-260 nanometers IR: 2-5 microns (3 discrete bands)
Sensitivity Range:	Low, Medium, High
Response Time:	3-5 Seconds
Detection Range:	1' x 1' n-Heptane fire: Model D370: 135 ft. (41 m) Model D371: 100 ft. (30 m)

Electrical

Operating Voltage:	24 VDC nominal (18-34), Regulated
Power Consumption:	Standby: 60 mA @ 24 VDC Alarm: 90 mA @ 24 VDC Heater: 120 mA additional
Relays Outputs:	Alarm / Auxiliary./Fault SPDT—contacts rated 2A @ 24 VDC Alarm & Auxiliary relays: De-Energized Fault relay: Energized Aux. relay settings: 0.3, 3, 10, 20 seconds
Analog Output:	0-20 mA Stepped - Source
Communication:	RS485 ModBus
Visual Indications:	Green LED - Normal Red LED - Alarm Amber LED - Fault
Conduit Entries	(2) M25 Optional M25 x 3/4" NPT adapter
Wiring:	12 AWG (3.3 mm ²) - 22 AWG (.33mm ²)

Mechanical

Enclosure Material:	316 S.S. Standard
Weight:	10 lbs. (4.5 kg)
Mounting:	Stainless Steel Swivel Arm—Optional
Weight:	6.6 lbs. (3 kg)

Environmental

Humidity Range:	5 to 95% Relative humidity, Non-Cond.
Temperature Range:	-40 to +185°F (-40 to +85 °C)
Enclosure Type:	NEMA 4 & 4X, IP66

Approvals & Certifications

CERTIFICATIONS (IN PROCESS):

Factory Mutual (FM/CSA)

- Class I, Div. 1 & 2, Groups A, B, C, D
- Class II/III, Div. 1, Groups E, F, G

Factory Mutual EN54-10 Performance Test:

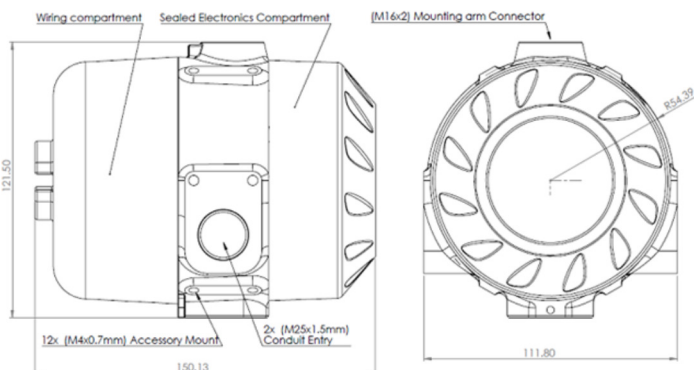
- EN54-10: 2015

Factory Mutual ATEX, IECEx, INMETRO, CCCF China

- IECEx 60079-0
- IECEx 60079-1

Ordering Information & Accessories:

D371-S1-11B1	UV/IR/IR/IR Detector with Relays & 4-20mA Outputs, S.S. Enclosure and 2 x M25 Conduit Entries, Normally De-Energized Alarm & Aux. Relays, Non-Latching, Normally Energized Fault Relay, Non-Latching. Aux. Relay Set at 3 Seconds
D370-S2-22B1	IR/IR/IR Detector with Relays & 4-20 mA Outputs, S.S. Enclosure and Optional M25 X 3/4" Adapter for Conduit Entries, Normally De-Energized Alarm & Aux. Relays, Latching, Normally Energized Fault Relay, Latching. Aux. Relay Set at 3 Seconds
A-001	316 S.S. Swivel Mounting Bracket Assembly



SENSE WITH PEACE OF MIND

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