

PRODUCT DESCRIPTION

The **Detectors Inc. Models D370 IR3 & D371 UV+IR/IR/IR** Multi-Spectrum Flame Detectors (Patent pending) are new generation 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 a Neural Network Decision process in conjunction with hard-coded Algorithms identifying specific wavelengths of Energy. Together the detectors are able to identify 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 a watertight NEMA 4X (IP66) and explosion-proof Stainless Steel enclosure designed for indoor/outdoor Class I, Div. 1 (Zone 1) Installations. Detectors feature automatic self-test for continuously checking the detector's optical path integrity while monitoring the electronics to ensure utmost reliable operation and fault reporting.

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



FEATRUES & 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 with date & time stamped, and 6 Fire Graphs each 3 seconds long.
- ▶ Multiple selectable sensitivity levels
- ▶ Automatic Self-Test for checking Optical Path Integrity and electronic circuitry
- ▶ Standard 316 Stainless Steel enclosure
- ▶ Test Mode for manual testing or test lamp
- ▶ Encased electronics module for easy field installation and removal
- ▶ Pluggable connector for wiring and ease of installation
- ▶ Separate (isolated) field wiring compartment
- ▶ Manufactured in USA with 3-Year Warranty
- ▶ RFI & EMC compliant
- ▶ Designed to SIL 3 requirements

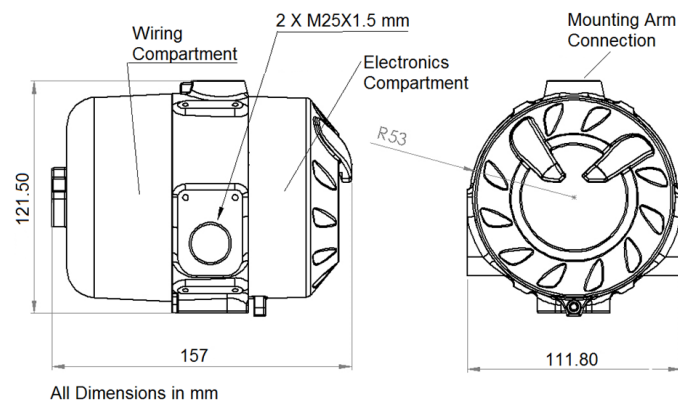
Model D370 & D371 Flame Detectors Technical Data

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, Very High
Response Time:	3 Seconds
Detection Range:	1' x 1' n-Heptane fire: Model D370: 150 ft. (45 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 / Fault / Auxiliary 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 HART Protocol (Optional)
Visual Indications:	Green LED - Normal Red LED - Alarm Amber LED - Fault
Conduit Entries	(2) M25 Optional Adapter for 3/4" NPT
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:

D371-1S2	UV/IR/IR/IR Detector with Relays & 4-20 mA outputs, S.S. enclosure and 2 x M25 Conduit entries, ATEX Certified.
D370-1T1	IR/IR/IR Detector with Relays & 4-20 mA outputs, S.S. enclosure and optional M25 X 3/4" adapter for Conduit entries, ATEX Certified.
A-001	316 S.S. Swivel Mounting Bracket Assembly

SENSE WITH PEACE OF MIND

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