



**The FD Series Triple IR multi-spectrum infrared flame detector for instantaneous and reliable flame detection**

# FD Series Triple IR



## Reliable Operation

- Three infrared sensors precisely tuned to identify flame source radiation
- 90° field of view
- Fast response times at all sensitivity settings
- Market-leading 7 year warranty

## Easy to Use

- Automatic visual integrity testing technology continuously checks optical surfaces for contaminants while verifying functionality of the sensors and circuitry

## Durable Housing

- Stainless steel option for harsh environments

## Versatile Design

- Global certifications for hazardous indoor and outdoor applications

## Advanced Technology

- Proprietary automatic digital zoom feature—advanced flame source identification/detection
- No external reflector—greatly reduces faults and maintenance costs

**Serious risks to personnel and property are always present at industrial facilities that store, transport and process flammable or explosive chemicals. Automatic flame detection and must be initiated within seconds whenever a fire ignites. The FD Series Triple IR flame detector provides reliable and instantaneous flame detection response.**



Advanced technologies reduce maintenance costs and provide rock-solid performance in any environment. Three discrete infrared sensors are precisely tuned to infrared wavelengths with dynamic differences in absolute amplitude, relative amplitude, flicker frequency, phase relationship and bandwidth of energy emitted by typical fires, whether small, gradually expanding fires or massive, instantaneous explosions. Unexpected bursts of thermal energy, reflections of hot equipment or heavy rain and snow can cause other flame detectors to ignore actual fire, cause false alarms or go into a fault condition.

Automatic digital zoom (ADZ) technology precisely and reliably identifies a broad spectrum of flame types and sizes while minimizing false alarms. ADZ provides accurate detection of small and massive flames in the most difficult working situations where other detectors fail.

The FD Series Triple IR is the only flame detector on the market that does not have an external reflector or light source. External reflectors and light sources often become obscured by industrial dirt and corrosion which cause unwanted fault alarms that requires difficult and costly maintenance to correct. The FD Series Triple IR flame detector completely eliminates these issues in applications where salt, dust, petroleum vapor, heavy rain and snow or blowing sand are present.

# General Specifications



## Standard Specifications

<b>Operating Voltage Range</b>	10 to 32 Vdc
<b>Power Consumption (at 24 Vdc)</b>	<p>Analog: Nom 31 mA / 0.74 W Max 65 mA / 1.56 W</p> <p>Relay: De-energized - Nom 39 mA / 0.94 W Max 73 mA / 1.75 W Energized - Nom 53 mA / 1.22 W Max 86 mA / 2.06 W</p> <p>Digital: Nom 31 mA / 0.74 W Max 65 mA / 1.56 W</p>
<b>Power Consumption (at 12 Vdc)</b>	<p>Analog: Nom 46 mA / 0.55 W Max 114 mA / 1.37 W</p> <p>Relay: De-energized - Nom 66 mA / 0.79 W Max 138 mA / 1.66 W Energized - Nom 93 mA / 1.12 W Max 165 mA / 1.98 W</p> <p>Digital: Nom 46 mA / 0.55 W Max 114 mA / 1.37 W</p>
<b>Temperature Range</b>	<p>Certified: -40°C to +75°C (-40°F to +167°F)</p> <p>Operational: -50°C to +85°C (-58°F to +185°F)</p>
<b>Field of View</b>	90° vertical / 90° horizontal
<b>Spectral Range</b>	Wavelengths between 2.5 – 5.5 microns
<b>Time Delay</b>	Dip switch selectable to 0, 3, 5, 7 seconds
<b>Sensitivity Settings</b>	Two adjustable settings via DIP switch (high / low)
<b>Typical Response Time</b>	<5 seconds
<b>Enclosure Material</b>	Yellow powdercoat with clear anodizing, copper-free aluminium (optional stainless steel), factory sealed housing
<b>Humidity Range</b>	0 to 95% RH, non-condensing
<b>Weight (with swivel)</b>	2.1 kg / 4.5 lb. Stainless steel option: 3.4 kg / 7.5 lb.
<b>Outputs</b>	<p>Analog: Digitally stepped analog output 0 to 20 mA into a maximum loop impedance of 800 Ohms at 32 Vdc or 150 Ohms at 10.5 Vdc. Isolated / non-isolated loop supply.</p> <p>Relay: Normally open/normally closed Form C contacts rated 5 Amps at 30 Vdc 125 Vac Selectable energized / de-energized fire relay. Fault relay fixed as energized. Both fire and fault relays fixed as non-latching and cannot be modified.</p> <p>Digital: RS-485 RTU Modbus protocol</p>
<b>Certifications/Approvals</b>	<p>CSA - Class I, Division 1, Groups A (Canada only), B, C and D - Temperature code T5 - CANADA: Class 1, Zone 1, Ex d IIB + H2 T5</p> <p>ANSI-UL/ISA - Class I, Division 1, Groups B, C and D - Temperature code T5 - UNITED STATES: Class 1, Zone 1, AEx d IIB + H2 T5</p> <p>ATEX - EEx d II B+H2 T5</p> <p>GOST-R - 1Ex d II BT5/H2</p> <p>INMETRO - BR-Ex d II B+H2 T5</p> <p>Factory Mutual (FM) 3260 Performance Certification</p> <p>SIL 2 Rated NEMA Type 4X</p> <p>IP66 - Enclosure ratings</p>
<b>Warranty</b>	7 years (see website for details)

# Honeywell Analytics Lines of Business



## Commercial

Vulcain-brand gas detection from stand-alone units to fully engineered, multi-point systems, all offering cost-effective regulatory compliance

- » Applications: parking structures, chillers, mechanical rooms, office towers, commercial buildings, shopping centers, swimming pools, golf courses, schools and universities, laboratories

## Industrial

Renowned Sieger and Manning gas detection systems with advanced electrochemical, infrared and open path sensing technologies

- » Applications: oil and gas, cold storage, water/wastewater treatment, chemicals, engine rooms, plastics and fibers, agriculture, printing and light industrial

## Portables

Single or multi-gas Lumidor and other premium detectors with compact, lightweight designs ranging from simple alarm only units to advanced, fully configurable and serviceable instruments

- » Applications: underground utility and electricity ducts, boiler rooms, post-fire sites, sewers, industrial plants, industrial hygiene, first responder teams, remote fleets



### Find out more

[www.honeywellanalytics.com](http://www.honeywellanalytics.com)

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## High Tech/Government

A complete portfolio of gas and chemical detection instrumentation including infrared spectroscopy (MST) with no cross interference, to Chemcassette paper-based solutions (MDA Scientific) offering detection down to parts per billion

- » Applications: semiconductor manufacturing and nanotechnology, aerospace propulsion and safety, specialty chemicals industry, research laboratories, emergency response

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## Technical Services

24/7 global network includes post-sales service and Systems Integration teams

- » Emergency call out, service contracts, on/off-site repair, training and commissioning
- » Complete range of spares, consumables and accessories

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