



**SENSE-WARE**  
THE FLAME DETECTOR  
COMPANY



## Model IR3-109/1

### Triple Infrared Flame Detector

- Three Infrared Sensors
- Corrosion proof  
GRP housing
- Non-Incendive for Zone 2
- Weather Resistant
- Relay & 4-20 mA Outputs
- Automatic & Manual  
Self Test
- 5 Year Warranty
- ATEX, IECEx &  
FM3611 Approved
- EN54-10 & FM3260  
Approved
- Suitable for Zone 2 &  
Safe Areas
- Low Power

The Sense-WARE Triple IR3 Flame Detector is designed to give optimum performance for Zone 2 and Safe Area flame detection. Designed to detect all types of hydrocarbon fires and immune to false alarms, the Model IR3-109/1 offers a cost effective solution for Zone 2 and Safe Area industrial and commercial applications.

The Retroreflective ring around the window allows for easy testing with a Sense-Ware Test Lamp. The Pressure Compensating Element (PCE), prevents water ingress damaging the electronics.

Sense-WARE Flame Detectors offer fast performance, with a 5 year warranty making them the Best in Class.

### Typical Applications

- Aircraft Hangars • Atriums • Biogas • Car, Train Bus, Tram and Train Parkings • CNG Filling • Conveyor Belts
- Diesel Engine Rooms • Electric Power Transformers Engine Test Cells • Gas Cabinets • Gasoline/Gas Engine Rooms • Service & Charging Stations
- Hydraulics e.g. Extruders • Chemical, Fuel & Solvent Storage • Hydrocarbon Storage and Processing
- Laboratories • Loading / Unloading Terminals
- Monitoring of Machinery • Chemical Storage • Oil and Gas Pipe Line and Pumping Stations • Powder Coating & Paint Booths • Recycling and Waste Processing Plants • Wind Turbines

## Specifications

### Spectral Range

2.7 - 5.0 Microns

### Maximum Range

35 Meters (115 ft)  
0.09 m<sup>2</sup> (1 Sq.Ft.) Heptane pan fire

### Typical Response

<10 Seconds

### Field of View

90° x 90°

### Input Power

10-28 VDC

### Current (Normal)

25 mA @ 24 VDC  
(40 mA peak during Self-Test)

### Current (Alarm)

35 mA @ 24 VDC

### Start Up Time

<10 Seconds

### Analogue Signal - Sink

0-20 mA

### Power Fault

0 mA

### Optical Fault

2 mA

### Normal Operation

4 mA

### Alarm

20 mA

### Relays

Alarm & Fault SPDT

### Relay Contact Rating

30 VDC / 2 A / 60 W

### Latching (default) / Non Latching

DIL Switch selectable

### Normal Operation

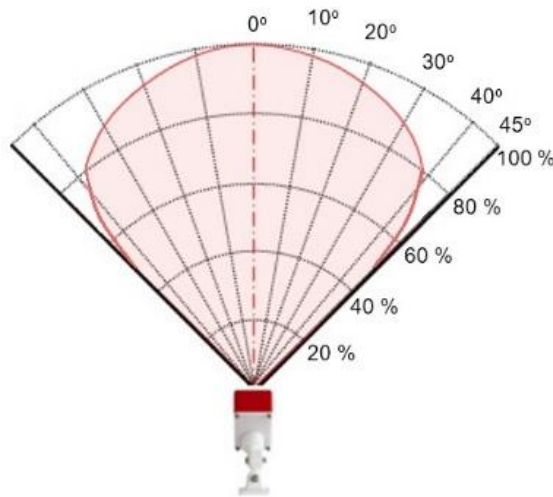
Green LED

### Alarm Indication

Red LED

### Fault Indication

Yellow LED



### Automatic Self-Test

Once per Hour

### Manual Self-Test

Available (see Manual)

### Cable gland (pre-mounted)

1 x M20

### Cable diameter

5.5-13 mm / 20-60 AWG

### Housing

GRP

### Temperature Range

-25 °C to +70 °C Hazardous Area  
-40 °C to +70 °C Safe Area

### Humidity

0-95 % Non Condensing

### Ingress Protection

IP65

### Pressure Compensation

PCE

### Weight

465 g

### Dimensions

125 x 80 x 57 mm

### Warranty

5 Years

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## Model IR3-109/1

## Approvals

### EN54-10

Performance, Class 1

### ATEX, IEC Hazardous Area

II 3G Ex nA IIC T4 Gc,  
II 3D EX tc IIIC T71°C Dc

### FM3260

Performance (see Manual)

### FM3611 Hazardous Area

Non-Incendive: Class I, II, III,  
Div 2, Groups A,B,C,D,F,G  
(see Manual)

## Accessories

### I.S. Test Lamp

TC-940/1Z

### Non EX Test Lamp

TC-169/1

### Swivel Mount

SM21

Specifications may be subject to change

[www.sense-ware.com](http://www.sense-ware.com)

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