SAFE Flame™

SafeFlame
UV/IR Optical Flame Detector

Data Sheet

Part Number: RFD2000(X)

◼ Features and Benefits

- **High Sensitivity UV/IR (Infrared) Detectors**
- **Detects fire at distances up to 100 feet (30 Meters)**
- **Latching/Non-Latching Fire Alarm**
- **90° Horizontal and 90° Vertical Field of Vision**
- **Water and Dust Tight**
- **Auto-Comissioning**
- **EMC Protected**
- **Fast Response Time**
- **Self Testing**
- **RS-485**
- **Fire, Fault, and Warning Relays**
- **0 to 20mA isolated output (Optional)**
- **Mounting bracket for easy alignment**
- **Explosion Proof option available**
- **False Alarm immunity**
- **Wide temperature range of operation**

SF100SX
Stainless Steel /
Explosion Proof

SF100A
Aluminum

◼ Approvals

FM APPROVED   KFI   ATEX   CE

◼ Applications

- **Offshore Oil and Gas installations**
- **Onshore Oil and Gas installations**
- **Chemical Plants**
- **Pipelines**
- **Printing Industry**
- **Warehouses**
- **Aerospace Industry**
- **Aircraft Hangers**
- **Power Generation facilities**
- **Fuel Storage Facilities**
- **Automotive Industry**

◼ Description

SafeFlame's UV/IR Flame detector uses an ultra high signal to noise ratio UV sensor and a separate IR sensor to offer superior flame detection. The UV sensor offers superior sensitivity while the IR sensor ensures resistance to false alarms from things like solar spikes, arc welding, lighting and X-Rays. The IR sensor works on the 4.1-4.6 micron spectral range. The same spectral range as a fire. When the UV sensor in the SafeFlame detector senses that there is a fire it will automatically cross-check that signal with the one from the IR sensor. If both sensors detect a fire an alarm signal is generated.
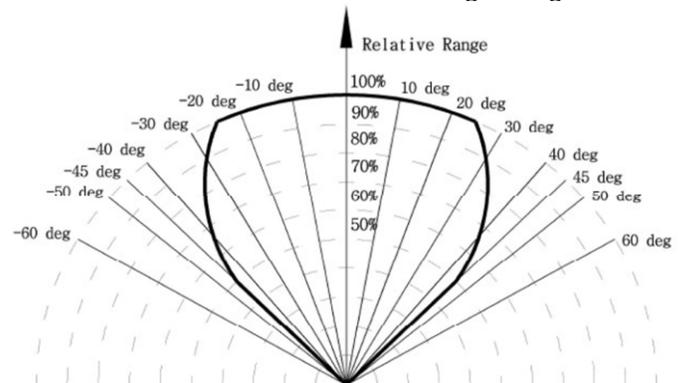

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WARRANTY

General Specifications

Detection Range	100 feet (30 meters)
Response Time	3 Seconds
Adjustable Time Delay	25 Seconds
Sensitivity Ranges	60ft(18m) to 100ft(30m)
Field of View	90° Horizontal; 90° Vertical
Self Testing	Automatic or Manual
Temperature Range	Operational: -40°C(-40°F) to +75°C(+167°F) Storage: -50°C(-58°F) to +80°C(+176°F)
Humidity	0 to 95% Relative Humidity

Electrical Specifications

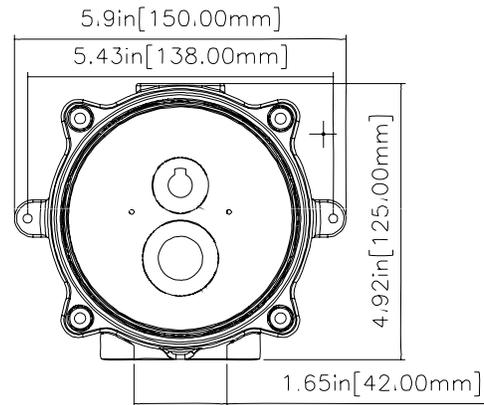|	
Operating Voltage	24VDC (17 to 32VDC)
Power Consumption	Standby: 35mA @ 24VDC Alarm: 70mA @ 17VDC
Cable Entries	2 x ½" PF, ½" NPT-14
Wiring	14 to 24 AWG
Electrical Interface	Includes 26 terminals for customized settings
EMC	EMI/RFI Protected

Outputs

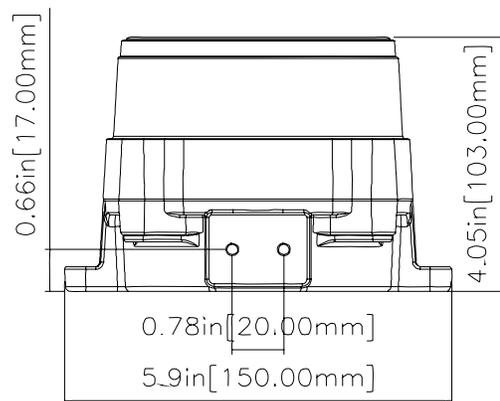|	
Relays	Alarm, Fault, and Warning Rated 2A@28VDC, 4A@125VAC, 2A@350VAC
0-20mA	0mA (±.5mA) Connection Fault 2mA (±.5mA) Self-Diagnosis Test Fault 4mA (±.5mA) Normal 8mA (±.5mA) IR Detection 12mA (±.5mA) UV Detection 16mA (±.5mA) Warning 20mA (±.5mA) Fire Detection
Max Loop Resistance	500Ω
RS-485	RS-485 compatible link that can be used in computer controlled installations

Mechanical Specifications

Materials	Aluminum or 316 Stainless Steel	
Mounting	Aluminum with Ivory coloring	
Dimensions	Standard:	150 x 125 x 103 mm 5.9" x 4.9" x 4.1"
	Explosion Proof:	134 x 117 x 120 mm 5.3" x 4.6" x 4.7"
Weight	Standard:	1.2kg (2.6lbs)
	Explosion Proof:	2.4kg (5.3lbs)
	Mounting Bracket:	1kg (2.2lbs)
Water and Dust	IP67, NEMA type 4X	
Hazardous Areas	Explosion Proof Only Class I Div. 1 Groups B, C, and D Class II Div. 1 Groups E, F, and G Class III	

Dimensions

Front, inch[mm]

Dimensions shown in inches (mm)