



FlameGard[®] 5 UV/IR-E Flame Detector

Ultraviolet and infrared flame detection provides high immunity to false alarms

Description

The FlameGard 5 UV/IR-E Flame Detector is designed to detect unwanted fires and provide alarm outputs directly from the detector while maintaining false alarm immunity. It detects fires by monitoring in both the ultraviolet and infrared (UV & IR) spectral ranges making it highly immune to false alarms caused by lightning, arc welding, hot objects and other sources of radiation.

The detector's electronics are integral within an explosionproof housing, allowing detector information to be processed at the point of detection. The electronics are fully separated from the Ex e wire compartment, offering protection during installation and service. The model is available in a number of output configurations:

- 4–20 mA stepped output + single serial communications port
- Dual serial communications ports
- Warning, alarm and fault relays
- Alarm and fault relays with on-board EOL and alarm resistor
- 4–20 mA stepped output only

The serial communication port(s) allows 128 units (247 using repeaters) to be linked up to a host computer using the Modbus RTU protocol. The communication registers provide alarm status, fault and other information for operation, trouble shooting or programming the unit.

The COPM (Continuous Optical Path Monitoring) self test feature checks the optical path integrity (window cleanliness) and the detector's electronic circuitry once every minute.



Features and Benefits

Wide field of view enables greater coverage for detecting fires utilising fewer detectors

LED status indication provides clear visibility from front

Continuous Optical Path Monitoring (COPM) checks optical path integrity and detector's electronic circuitry once every minute

Stainless steel construction enables high level of corrosion resistance for Marine environments

Ex e wiring compartment eases field wiring connection

Five output configurations provide flexibility of choice and economy of purchase

Applications

- Refineries
- Drilling and Production Platforms
- Fuel Loading Facilities
- Compressor Stations
- Electrostatic Paint Spray Booths
- LNG/LPG Processing and Storage Facilities
- Gas Turbines
- Chemical Plants
- Aircraft Hangars

System Specifications

Wave Lengths	185 to 260 nm (UV), 4.35 microns (IR)
Field of View	120° max. horizontal, 115° vertical
Sensitivity	Approved performance specifications – 15.2 m distance for a 0.092 m ² gasoline fire
Typical Response Time	< 3 sec @ 15 m
Classification	II 2 GD Ex d e IIC T4/T5; IP6X
Warranty	Two years
Approvals	ATEX and CE Marking

Environmental Specifications

Operating/Storage Temperature Range	–40°C to +90°C
Operating Humidity Range	0% to 100% RH, non-condensing

Mechanical Specifications

Housing	Stainless steel
Length	136 mm
Diameter	84 mm
Weight	2.27 kg
Mounting	Adjustable surface mount bracket included
Cable Entries	2 x M20

Electrical Specifications

Input Power	20–36 VDC; 24 VDC @ 150 mA max. (3.6 W max.)
Analog Signal	4–20 mA (600 Ohms max.)
Fault Signal	0 mA
COPM Fault	2.0 mA, ±0.2 mA
Ready Signal	4.0 mA, ±0.2 mA
WARN Signal	16.0 mA, ±0.2 mA
ALARM Signal	20.0 mA, ±0.2 mA
Relay Contact Rating	30 VRMS, 42.2 VPK, 1A
Selectable Options	Sensitivity: 100%, 75%, 50% Alarm time delay: 2, 4, 8 or 10 seconds Warn & alarm relays: Latching/Non-latching, Energised/De-energised
Serial Communications	Modbus RTU, suitable for linking up to 128 units and 247 with repeaters
RFI/EMI Protection	Complies with EN 50270
Exe Terminal	0.75–2.5 mm ² (12–22 AWG)
Status Indicators	Two LED's with status and fault cues
Faults Monitoring	RAM, EPROM and EEPROM checksum errors, optics failure/blockage and low supply voltage

Ordering Information

FlameGard 5 UV/IR-E	FlameGard 5 UV/IR-E, 0–20 mA, No Relays, 2 x M20	5UVIRE-15131
	FlameGard 5 UV/IR-E, 0–20 mA, 3 Relays, Non-Energized, 2 x M20	5UVIRE-25131
	FlameGard 5 UV/IR-E, 0–20 mA, 3 Relays, Energized, 2 x M20	5UVIRE-26131
	FlameGard 5 UV/IR-E, Modbus, 0–20 mA, No Relays, 2 x M20	5UVIRE-45131
Accessories	FlameGard 5 UV/IR Test Lamp	5TL-12
	Window Cleaning Solution	10272-1
	FlameGard 5 UV/IR-E Programming Board	71338-1

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