GENERAL MONITORS
Protection for life.

MODELS FL3110/FL3111

**UV/IR and UV
Unitised Flame Detectors**

Features

• Wide Field of View

• LED Status Indication

• Continuous Optical Path
Monitoring (COPM)

• Stainless Steel Construction

• EExe Wiring Compartment

• Five Output Configurations

Benefits

• Greater coverage for detecting fires
utilising fewer detectors

• Status clearly visible from front

• Checks optical path integrity and
detector's electronic circuitry once
every minute

• High level of corrosion resistance
for Marine Environments

• Ease of Field Wiring connection

• Flexibility of choice and economy of
purchase

Description

General Monitors' Models FL3110 and FL3111 are UV/IR and UV only flame detectors designed to detect unwanted fires and provide alarm outputs directly from the detector while maintaining false alarm immunity. They complement the existing FL3112 multi-IR detector, completing the "family".

The Model FL3110 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 Model FL3111 detects in only the ultraviolet (UV) spectral range for optimised speed of response.

The detectors' electronics are integral within an explosion-proof housing, allowing detector information to be processed at the point of detection. The electronics are fully separated from the Exe wire compartment, offering protection during installation and service. The Models FL3110 and FL3111 are available in a number of output configurations:

• 4-20mA 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
• 4-20mA 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.

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

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System Specifications

Wave Lengths: 185 to 260nm (UV)
4.35 microns (IR)

Field of View: 120° horizontal
115° vertical (FL3110)
120° horizontal
115° vertical (FL3111)

Sensitivity: Approved performance specifications-50feet(15.2m) distance for a 1sq. ft(0.092m²) gasoline fire.

Typical Response Time: <3sec @ 50 ft. (FL3110)
<1sec @ 50 ft. (FL3111)

Minimum Sensor Response Time: UV/IR -FL3110<500 ms
UV-FL3111<100ms

Accessories: Programming Card

Classification: II 2 GD EEx de IIC T4/T5, IP66/67

Warranty: Two years

Approvals: ATEX and CE Marking. Russian VNIIPO pending.

Environmental Specifications

Operating Temperature Range: -40°C to +90°C
(-40°F to +194°F)

Storage Temperature Range: -40°C to +90°C
(-40°F to +194°F)

Operating Humidity Range: 0% to 100% RH, non-condensing

Mechanical Specifications

Housing: Stainless steel

Diameter: 84mm (3.3 inches)

Length: 136 mm (5.3 inches))

Weight: 2.27kg (5 lbs)

Cable Entries: 2 x M20

Mounting: Adjustable surface mount bracket included

Electrical Specifications

Input Power: 20-36 VDC
24 VDC @ 150mA max. (3.6w max.)

Analogue Signal: 4-20mA (600 Ohms max.)
Fault Signal: 0mA
COPM Fault: 2.0mA ± 0.2mA
Ready Signal: 4.0mA ± 0.2mA
Warn Signal: 16.0mA ± 0.2mA
Alarm Signal: 20.0mA ± 0.2mA

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 EN50270

Exe Terminal: 0.75 – 2.5mm2 (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

Standard Configuration: FL3110-1-5-1-3-1
FL3111-1-5-1-3-1

Specifications subject to change without notice.

Represented by: