

FEATURES

- ✓ Highest immunity to false sources
- ✓ Solar blind
- ✓ High ambient temperature applications
- ✓ Suitable for indoor and outdoor areas
- ✓ Unaffected by convection currents, draughts or wind
- ✓ Proven response to multiple fuel types
- ✓ Multi-spectrum detection
- ✓ Selectable output options
- ✓ Selectable response speed
- ✓ Selectable sensitivity levels
- ✓ Built-in auto and manual test
- ✓ Low current consumption
- ✓ Fast response to fire



PRODUCT DESCRIPTION

The Ultra-Violet, Dual Infra-Red (UV/IR²) Flame Detector is designed to protect areas where open fires may be expected and detects most flames from hydrocarbon fires with 4.3µm emissions through to invisible fires such as hydrogen.

The UV/IR² Flame Detector is sensitive to flickering, low frequency (1-15Hz) infra-red radiation along with ultra-violet emitted by flames during combustion.

This detector has a UV sensor and two IR sensors which respond to different wavelengths of both the ultra-violet and the infra-red spectrum. The signals from these sensors are processed by the detector and checked for characteristics of a flame. The simultaneous detection of both the UV and the IR light by the sensors will signal an alarm. False alarms from flickering sunlight, arc welding and lightning are eliminated by a combination of UV and dual IR signal processing techniques.

The UV/IR² detector has selectable output options of relay contacts or 4 to 20mA signal as standard.

Note: This is an indent item, lead times of up to 4-6 weeks may apply.

APPLICATIONS

- | | |
|-----------------------------|--------------------------|
| ✓ Chemical plants | ✓ Generators |
| ✓ Refineries | ✓ Compressor stations |
| ✓ Nuclear power sites | ✓ High voltage equipment |
| ✓ Pharmaceutical production | ✓ Power plants |
| ✓ Military applications | ✓ Marine industry |
| ✓ Fuel loading racks | ✓ Storage tanks |
| ✓ Tunnels | ✓ Aircraft hangars |

TECHNICAL SPECIFICATIONS

MECHANICAL

Housing material	Die Cast Zinc Alloy (ZA12)
Housing colour	Blue
Dimensions	142mm H x 108mm W x 82mm D
Weight	2kg
Cable Gland Entries	2 x 20mm
Wiring	1.0 to 4.0mm ²

ELECTRICAL

Sensor supply	14 to 30Vdc
Quiescent current	8mA, RL2 energised 4mA, current loop, RL2 off 3mA, RL2 off
Alarm current	28mA, RL1 & RL2 energised 20mA, current loop, RL1 & 2 off 9mA, RL1 energised
Power up time	2 seconds max
Test signal voltage	14 to 30Vdc
Relay outputs	Normally open or normally closed. Latching or non-latching 1.0A max. 50Vdc max. 30W max. (Note: resistive loads only)
Programmable Ratings: current Voltage Power	

PERFORMANCE

Range	- Class 1: - Class 3:	0.1m ² n-heptane at 25m 0.1m ² n-heptane at 12m (see EN54:10 for sensitivity settings)
Field of View		90° min. cone
Operating wavelength	- IR - UV	1.0 to 2.7µm 185 to 260nm

ENVIRONMENTAL

Operating temperature	-10°C to +55°C
Storage temperature	-20°C to +65°C
Relative humidity	95% non-condensing
IP rating	IP66

RESPONSE CHARACTERISTICS - HIGH SENSITIVITY

Fuel	Flame Size (m)	Certified distance (m)	FFE Factory Tested Distance (m)	Average response time (seconds)
n-Heptane (yellow flame)	0.3 x 0.3	25	60	8
Methylated spirit (clear flame)	0.5 x 0.5	25	60	12
Hydrogen (non-visible flame)	0.1 x 0.5	12	30	16

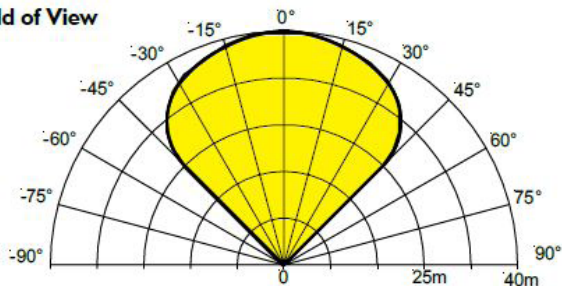
ACCESSORIES

- ✓ **INT-AM:** Adjustable mount (required for all flame detectors)
- ✓ **INT-DET-TESTER:** Portable flame detector testing unit

APPROVALS

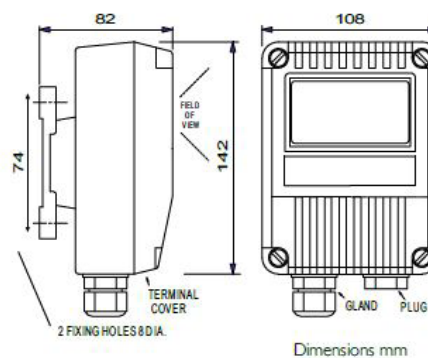
- ✓ FM Approved - Certificate No. 3059453
- ✓ CPR - 0832-CPR-F0584
- ✓ LPCB - 1204a/12
- ✓ VdS - G212190
- ✓ SIL 2 - C127_CT003_(2.0)

Field of View



To meet the requirements of EN54:10 clause 5.4, where the ratio of the response points $D_{max} : D_{min}$ should not exceed 1.41, the horizontal and vertical viewing angles max should not exceed $\pm 30^\circ$.

Flame Detector



Mounting Bracket

