PRODUCT DATA SHEET

INT-IR3-EX-SS
Stainless Steel Flameproof IR³ Flame Detector

FEATURES

- ✓ Excellent immunity to false sources
- ✓ Increased environmental protection
- ✓ Tolerant of fumes, vapours, dust and mist
- ✓ 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 flameproof triple Infra-Red (IR³) Flame Detector is designed to protect specialist hazardous areas where open fires may be expected and detects almost all flames, including hydrocarbon fires with 4.3 µm emissions through to invisible fires such as hydrogen.

The IR³ Flame Detector is sensitive to flickering, low frequency (1-15Hz) infra-red radiation emitted by flames during combustion even if the lens is contaminated by a layer of oil, dust, water vapour or ice.

This detector has three IR sensors which respond to different IR wavelengths in order to discriminate between flames and spurious sources of radiation. False alarms from flickering sunlight are avoided by a combination of filters and signal processing techniques.

The IR³ detector has selectable output options of relay contacts or 4-20mA signal, as standard.

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

APPLICATIONS

- ✓ Chemical plants
- ✓ Waste recycling
- ✓ Nuclear power sites
- ✓ Engine rooms
- ✓ Pharmaceutical production
- ✓ Military applications
- ✓ Marine industry
- ✓ Printing
- ✓ Refineries
- ✓ Fuel loading racks
- ✓ Storage tanks
- ✓ Aircraft hangars
- ✓ Spray booths
- ✓ Coal handling

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TECHNICAL SPECIFICATIONS

MECHANICAL

Housing material	316 stainless steel
Housing colour	Natural
Dimensions	150mm H x 146mm W x 137mm D
Weight	6kg
Cable Gland Entries	3 x 20mm
Wiring	1.0 to 4.0mm²

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 **Programmable** **Ratings: current** **Voltage** **Power**	 Normally open or normally closed. Latching or non-latching 1.0A max. 50Vdc max. 30W max. (Note: resistive loads only)

PERFORMANCE

Range **- Class 1:** **- Class 3:**	0.1m² n-heptane at 25m 0.1m² n-heptane at 12m (see EN54:10 for sensitivity settings)
Field of View	90° min. cone
Operating wavelength band - IR	0.75 to 2.7µm

ENVIRONMENTAL

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

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RESPONSE CHARACTERISTICS - HIGH SENSITIVITY

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

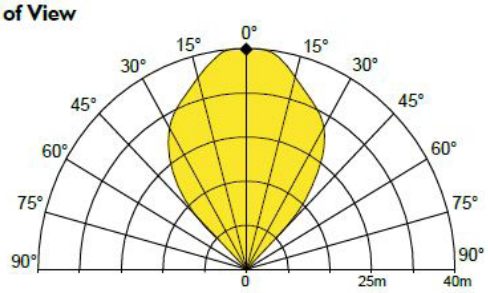
ACCESSORIES

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

APPROVALS

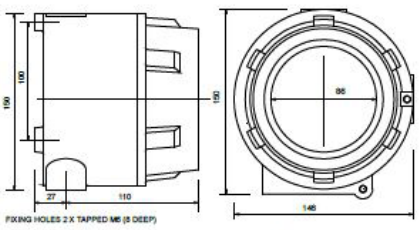
- ✓ FM Approved - Certificate No. 3059453
- ✓ BASEEFA ATEX - BASEEFA 08ATEX0270
- ✓ BASEEFA IECEx - IECEx BAS 08.0073
- ✓ SIL 2 - C127_CT003_(2.0)

Field of View

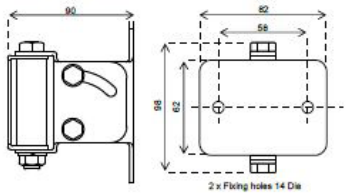


To meet the requirements of EN54:10 clause 5.4, where the ratio of the response points Dmax: Dmin should not exceed 1.41, the horizontal and vertical viewing angles max should not exceed ±30°.

Flame Detector



Mounting Bracket



Dimensions mm

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