FLAME DETECTORS
FLAMESPEC IR3 FLAME DETECTOR [NON-EX]

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DESCRIPTION

FlameSpec IR3 flame detectors deliver ultra-fast response, high performance and reliable detection of all types of hydrocarbon fires (visible and non-visible).

The detector addresses slow-growing fires and the fast eruption of fire using improved triple IR technology. The detector operates in all weather and light conditions with the highest immunity to false alarms.

FEATURES

- Highest levels of false alarm immunity.
- Detects up to 80 metres for a 0.1 m² n-heptane pan fire.
- Hydrocarbon flame detection. Three wavelengths, in the infrared spectral range of 4.0 to 5.0 μm, with clear separation.
- Each sensor has the same field of view to improve false alarm immunity further.
- Ultra-fast detection mode – detection within 40 milliseconds for fireballs or explosions.
- Fast flame detection, <1.5 s for standard fire up to 30 metres.
- Five selectable sensitivity levels.
- Universal outputs, 3- and 4-wire, 4-20 mA sink/source, Fire, Auxiliary and Fault Relays. RS485 port using Modbus RTU.
- Event logger – alarms and faults are logged to non-volatile memory.
- Built-in Test (BIT) – automatic and manual self-test of window cleanliness and overall detector operation.
- Dirty optics warning for preventive maintenance requirements.
- Window heater to prevent condensation and icing.
- Stainless steel tilt mount provides horizontal and vertical adjustment.
- SIL2 option available.
- HART® 7 for configuration and maintenance option available.
- 5-Year warranty.

SPECIFICATIONS

FIRE DETECTION	Detection Time & Distance	40 ms for fast fire burst or explosion 2.6 s for 0.1 m² n-heptane pan fire at 0–30 m 7.1 s for 0.1 m² n-heptane pan fire at 30–80 m
	Sensitivity Range	Five sensitivity ranges: Extreme, High, Medium, Low, Very Low
	Field of view (IR detection)	90° Horizontal, 75° Vertical
	Time Delay	Configurable 0-30 seconds
	Built-in Test	Automatic and Manual
ELECTRICAL	Operating Voltage	24 VDC nominal (18-32 VDC)
	Current Consumption	Standby: 120 mA 180 mA all systems in operation (including window heater)
	Electrical Entries	2x cable and conduit entries 3/4" NPT(F) or M25x1.5
	Wiring	12-20 AWG (2.5-0.35 mm²)
OUTPUTS	Relays	SPST volt-free contacts rated 2A at 30 VDC 3 relays: Alarm & Auxiliary – normally open; Fault – normally closed
	0-20 mA (stepped) Current Output	3-wire and 4-wire (isolated) configurations (sink and source) HART® rev 7.0 (option available)
	Indication	Tri-colour LED (Green, Yellow, Red)
	Modbus	RTU compatible on RS485
MECHANICAL	Size	140 x 90 x 90 mm
	Weight	Detector (Stainless Steel 316): 3.0 kg Tilt mount (Stainless Steel 316): 1.5 kg
ENVIRONMENTAL	Temperature Range Humidity	Operating & Storage: −55°C to +85°C
	Humidity	Up to 99% (RH), non-condensing
	Ingress Protection	IP66 & 68 (2m, 24hr); NEMA 4X & 6P
APPROVALS	Performance	ANSI FM 3260 EN 54-10
	Functional Safety	Complies to SIL2, per IEC 61508 (option available)
	MED	DNVGL Certificate Number MED-B-00006AM - units available upon request

ORDERING INFORMATION

Product Code	Product Description
FG-IR3-SS	IR3 Flame Detector: Hydrocarbon Fires, *non-EX,* SS316
FG-WCSS-SD	Weather Cover: Standard Flame Detector, SS316
FG-AS-SD	Airshield: Standard Flame Detectors only
FG-FSIM-IR3-KIT	Flame Simulator Kit: IR3 Hydrocarbon Flame Detector

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