FLAME DETECTORS
FLAMESPEC UV/IR FLAME DETECTOR

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UV/IR FLAME DETECTOR**

DESCRIPTION

The FlameSpec UV/IR flame detector delivers ultra-fast response, high performance and reliable detection of a large variety of fires, including hydrocarbon fires (visible and non-visible), as well as hydrogen and methane/hydrogen mixed fires.

The detector addresses slow-growing fires and fast eruptions of fire using improved UV/IR technology. The detector operates in all weather and light conditions.

FEATURES

- High immunity to false alarms.
- High sensitivity – up to 30 metres for a $0.1m^2$ n-heptane pan fire.
- Hydrocarbon and non-hydrocarbon flame detection.
- Ultra-fast detection mode detection within 5 milliseconds for fireballs or explosions.
- Four 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, faults and other relevant events 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 needs.
- Window heater to avoid condensation and icing.
- Stainless steel tilt mount with horizontal and vertical adjustment.
- Detect high UV (sparks and arcs) or IR levels via auxiliary relay and 4-20 mA.
- 5-Year Warranty.

SPECIFICATIONS

FIRE DETECTION	Detection Time & Distance	5 ms for fast burst of explosion 1 s for 0.1 m² n-heptane pan fire at 0–15 m <2 s for 0.1 m² n-heptane pan fire at 15–30 m
	Sensitivity Range	Four sensitivity ranges: Extreme, High, Medium, Low
	Field of view (IR detection)	90° Horizontal, 80° Vertical
	Time Delay	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	Operating & Storage: −55°C to +85°C
	Humidity	Up to 99% (RH), non-condensing
	Ingress Protection	IP66 & 68 (2m, 24hr); NEMA 4X & 6P
APPROVALS	ATEX	ATEX: II 2 G D Ex db IIC T5 Gb or Ex db eb IIC T5 Gb and Ex tb IIIC T95°C Db -55°C<Ta<75°C Ex db IIC T4 Gb or Ex db eb IIC T4 Gb and Ex tb IIIC T105°C Db -55°C<Ta<85°C
	IECEx, INMETRO & PESO	Ex db IIC T5 Gb -50°C≤Ta≤75°C Ex db IIC T4 Gb -50°C≤Ta≤85°C
	FMus & FMc	Class I, Div. 1, Groups B, C & D; T4 Class I, Zone 1, AEx/Ex db IIC T4 Gb T4 -50°C≤Ta≤85°C T5 -50°C≤Ta≤75°C
	EAC CU TR	1Ex d IIC T5 Gb or 1Ex de IIC T5 Gb and Ex tb IIIC T95°C Db -55°C≤Ta≤75°C 1Ex d IIC T4 Gb or 1Ex de IIC T4 Gb and Ex tb IIIC T105°C Db -55°C≤Ta≤85°C
	Performance	ANSI FM 3260
	Functional Safety	Complies to SIL2, per IEC 61508 (option available)

ORDERING INFORMATION

Product Code	Product Description
FG-UVIR-EXSS	UV/IR Flame Detector: Hydrocarbon & Non-Hydrocarbon Fires, SS316
FG-WCSS-SD	Weather Cover: Standard Flame Detector, SS316
FG-AS-SD	Airshield: Standard Flame Detectors only
FG-FSIM-UVIR-KIT	Flame Simulator Kit: UV/IR Hydrocarbon/Non-Hydrocarbon Flame Detector

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