

F-GUARD UVIR



UV-IR Flame Detector

The Gastech F-Guard UV-IR-HD detector offers extremely reliable and fast detection of fires and explosions, providing the additional, extremely valuable time that, in many cases, can make all the difference!

The Gastech F-Guard-UV-IR flame detector provides ultra-fast response, high performance and reliable detection of a large variety of fires including hydrocarbon fires (visible and nonvisible), as well as Hydrogen fires. The detector addresses slow growing fires as well as fast eruptions of fire using improved UVIR technology. The detector operates in all weather and light conditions.

KEY FEATURES

- Hydrogen and Hydrocarbons flame detection.
- Ultra-fast detection mode detection within 5 milliseconds for fireballs or explosions
- High sensitivity - up to 100ft (30m) for a 1ft² (0.1m²) n-heptane pan fire
- High immunity to false alarm
- Data/Event logger - alarms, faults and other relevant events are logged to non-volatile memory.
- Ethernet communication – in addition to the standard methods, such as 4-20mA and Modbus.
- Built-in-Test (BIT) - Automatic and manual internal self-test of window cleanliness and the overall operation of the detector (for both IR and UV channels).
- Window heater to avoid condensation and icing.
- Tilt mounting bracket can be connected either above or below the detector.
- Configurable detection mode – allows configuration of UV-IR, UV or IR detection mode.



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SPECIFICATIONS

Specifications subject to change without notice

FIRE DETECTION	Detection time and distance	5ms for fast burst of explosion 1s for 1ft ² (0.1m ²) n-heptane pan fire at 0–50 ft. (0–15m) Up to 7s for 1ft ² (0.1m ²) n-heptane pan fire at 50–100 ft. (15–30m)
	Field of view (IR detection)	90° Horizontal, 90° Vertical
	Time Delay	0-30 seconds
	Built in Test	Automatic and Manual
ELECTRICAL SPECIFICATIONS	Operating Voltage	24 VDC nominal (18-32 VDC)
	Current Consumption	Standby: 180mA Maximum: 200mA all systems in operation (including window heater)
	Electrical Entries	2x 3/4" 14NPT or M25x1.5
	Wiring	12-20AWG (2.5–0.35mm ²)
OUTPUTS	Relays	Volt-free contacts rated 2A at 30 VDC Alarm – normally open and normally closed Fault – normally closed
	0-20mA (stepped) current output	3 wire and 4 wire (isolated) configurations (sink and source)
	Indication	dual-color LED
	HART® 7 Protocol	
	Modbus	RTU compatible on RS-485
	Digital (for video)	IP network IEEE 802.3 10Base-t
	MECHANICAL SPECIFICATIONS	Size
	Weight	Detector (Stainless Steel 316): 6.6 lbs. (3.0 kg) Tilt mount (Stainless Steel 316): 3.3 lbs. (1.5 kg)
ENVIRONMENTAL SPECIFICATIONS	Temperature Range	Operating: -67°F to +167°F (-55°C to +75°C) Option: -67°F to +185°F (-55°C to +85°C) Storage: -67°F to +185°F (-55°C to +85°C)
	Humidity	Up to 99% (RH), non-condensing
	Ingress Protection	IP66 & 67; NEMA 250 4X & 6P
APPROVALS*	Explosion proof	ATEX: II 2 G D (pending) Ex db eb IIC T5 Gb -55°C<Ta<75°C or Ex db eb IIC T4 Gb -55°C<Ta<85°C Ex tb IIIC T95°C Db -55°C<Ta<75°C Ex tb IIIC T105°C Db -55°C<Ta<85°C IECEX Ex db eb IIC T5 Gb -55°C<Ta<75°C or Ex db eb IIC T4 Gb -55°C<Ta<85°C Ex tb IIIC T95°C Db -55°C<Ta<75°C Ex tb IIIC T105°C Db -55°C<Ta<85°C FMU & FMC (pending) Class I, Div. 1, Groups B, C & D Class II, Div. 1, Groups E, F & G Class III
	Performance	ANSI FM 3260 EN 54-10
	Functional safety	SIL2, per IEC 61508
	DNV GL	Standard DNVGL-CG-0339 for open deck locations Temperature class D; Vibration Class A, B and C
	EAC CU TR	(pending)
	ACCESSORIES	Weather shield Adapters for connecting different mounts
	WARRANTY	5 years

*All products designed and tested to relevant approval standards