



Industrial Detectors

Optical detection | IR Flame detectors

FlameSpec-IR3 - Triple IR flame detector



Technical specifications

Fire Detection	Detection time and distance	<ul style="list-style-type: none"> 40 ms for fast fire burst or explosion 2.6 s for 1 ft² (0.1 m²) pan fire at 0-100 ft. (0-30 m) 3.7 s for 1 ft² (0.1 m²) pan fire at 100-230 ft. (30-70 m)
	Field of view (IR detection)	90° Horizontal, 75° Vertical
	Time Delay	0-30 seconds
	Built in Test	Automatic and Manual
Electrical Specifications	Operating Voltage	24 VDC nominal (18-32 VDC)
	Current Consumption	<ul style="list-style-type: none"> Standby: 120mA 180mA all systems in operation (including window heater)
	Conduit Entries	M25 x 1.5
	Wiring	20-12AWG (0.35-2.5 mm ²)
Outputs	Relays	Volt-free contacts rated 2A at 30 VDC Alarm – normally open Fault – normally closed
	0-20mA (stepped) current output	3 wire and 4 wire configurations (sink and source)
	Indication	Tri-color LED
	Modbus	RTU compatible on RS-485
Mechanical Specifications	Size	5.51 x 3.54 x 3.54" (140 x 90 x 90 mm)
	Weight	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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

Designation	Part number
IR-detector - S Steel	VK-IR3-AS11
IR-detector - S Steel	VK-IR3-H2-AS11

The FlameSpec-IR3 flame detector provides ultra-fast response, high performance and reliable detection of all types of hydrocarbon fires (visible and non-visible). The detector addresses slow growing fires as well as fast eruption of fire using improved triple IR (IR3) technology. It operates in all weather and light conditions with highest immunity to false alarms.

Add to that, the integral event recording, on top of the proven superior capabilities of Triple IR (IR3) flame detection and you have a very powerful safety tool to protect your personnel, plant and process.

Product features

- IR3-H2 detector is suitable for hydrogen fires
- High immunity to false alarm
- Extreme sensitivity – up to 260 ft. (80 m) for a 1 ft² (0.1m²) n-heptane pan fire
- Ultra-fast detection mode – detection within 40 milliseconds for fireballs or explosions
- 1.3 seconds detection time – for 1 ft² (0.1 m²) n-heptane pan fire at up to 50 ft. (15 m) distance
- Data/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 the overall operation of the detector
- Window heater to avoid condensation and icing
- Tilt mounting bracket can be connected either above or below the detector.

Optional accessories

Weather shield: **VK-COVER-STS**

Cable glands M25 x 1.5

NPT thread on request

Software and USB converter: **VK-USB-Converter**

Tilt mount: **TMSTS-OC**

Approvals / marking

Explosion proof	ATEX: II 2 G D
	IECEX (pending) FMU & FMC (pending)
Performance	ANSI FM 3260 EN 54-10
Functional safety (pending)	SIL2, per IEC 61508
DNV GL (pending)	Standard DNVGL-CG-0339 for open deck locations Temperature class D; Vibration Class A, B and C
EAC CU TR (pending)	

