

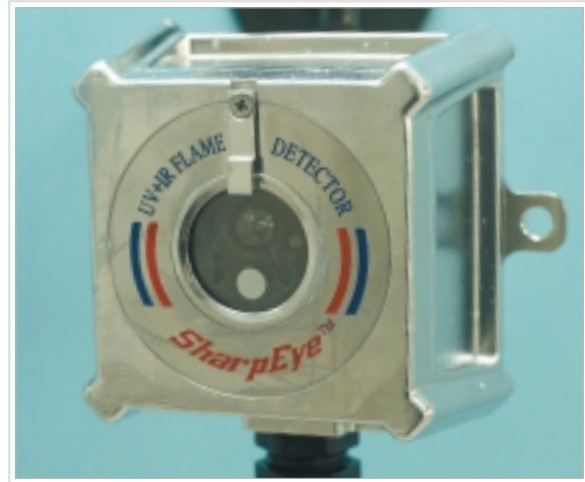


The SharpEye Mini-UV/IR Flame Detector (20/20ML) is a compact style detector featuring excellent detection sensitivity combined with enhanced immunity to false alarms.

This model is designed to detect hydrocarbon-based fuel fires, hydroxy and hydrogen fires, as well as metal and inorganic fires.

The UV/IR flame detector senses energy in the short wave section of both the ultraviolet and infrared portions of the electromagnetic spectrum.

The UV sensor incorporates a special logic circuit that helps prevent false alarms caused by solar radiation. The IR sensor is sensitive to radiation over the range of 2.5 to 3.0 microns. The signals from both sensors are analyzed for frequency, intensity and duration. Simultaneous matching of radiant energy in both the UV and IR sensors triggers an alarm signal.



This detector is packaged in a compact, lightweight housing for easy installation and where space is at a premium. It is specially designed as a general-purpose flame detector for industrial applications to withstand "harsh" environmental conditions, including extreme temperatures, high humidity, vibrations, etc.

MAIN FEATURES

- UV/IR Dual-Sensor
- High-Speed Response
- 50 msec Response to Saturated Signal
- Large Field of View (100° horizontal/vertical)
- User Programmable Functions
- Configurable via software from a PC or handheld device
- Immune to False Alarms (solar blind)
- Automatic and Manual Built-In-Test (BIT)
- Standard 4-wire Connection
- 4-20mA source (3-4 wires) configuration
- RS-485 Modbus Compatible
- MTBF Minimum 100,000 Hours
- 3-Year Warranty
- Functional Test - FM Pending

APPLICATIONS

- **Aerospace Industry** - Hydroxy fuels, Hydrogen and Hydrazine fuels
- **Aircraft Hangars** - landing gear pits, under-wing and over-wing protection
- **Automotive** - manufacturing, paint spray booths
- **Chemical Industry** - production, storage, transportation
- **Paint** - manufacturing facilities
- **Petrochemicals** - production, storage, shipping facilities
- **Pharmaceutical Industry**
- **Polymers and Glue** - manufacturing and curing
- **Power Generation Facilities** - pump areas, generator rooms, unmanned stations, gas-fired and coal-fired reactors
- **Printing Industry** - solvent handling, presses, drying processes
- **Warehouses** - storage facilities for flammable materials

GENERAL SPECIFICATIONS

Spectral Response	UV: 0.185 - 0.260 microns. IR: 2.5 - 3 microns.			
Detection Range (Highest Sensitivity Setting for 1 ft ² (0.1m ²) pan fire)	Gasoline	50 ft (15m)	Methanol	25 ft (7.5m)
	n-Heptane	50 ft (15m)	Methane*	15 ft (5m)
	Diesel Fuel	37 ft (11m)	LPG (Propane)*	15 ft (5m)
	JP5	37 ft (11m)	Hydrogen*	15 ft (5m)
	Kerosene	37 ft (11m)	Silane***	15 ft (5m)
	Alcohol (Ethanol)	25 ft (7.5m)	Polypropylene Pellets**	15 ft (5m)
	IPA (Isopropyl Alcohol)	25 ft (7.5m)	Office Paper	12 ft (4m)
	<i>*20" (0.5m) plume fire, **8" (0.2m) Diameter, ***12" (0.3m) plume fire</i>			
Response Time	Typical 5 sec.			
Adjustable Time Delay	Up to 30 sec.			
Field of View	100° horizontal, 100° vertical			
Built-in-Test	Manual and Automatic BIT			
Temperature Range	Operating:	-40°F (-40°C) to 160°F (70°C)		
	Storage:	-65°F (-55°C) to 185°F (85°C)		
Humidity	Up to 95%			

ELECTRICAL SPECIFICATIONS

Power Supply	Operating Voltage: 18-32 VDC
Power Consumption	Max. 40mA in stand-by Max. 70mA in alarm
Electrical Connection	12-wires electrical connector (the suitable connector will be supplied) Optional 12 wires 6 ft. (2m) cable (for junction box connection)
Electrical Input Protection	According to MIL-STD-1275A
Electromagnetic Compatibility	EMI/RFI protected CE Marked

OUTPUTS

Relays	Alarm and Fault SPST volt-free contacts rated 2A at 30 VDC or 0.5A at 250 VAC Fault relay normally closed, Alarm Relay normally open
4-20mA	Source configuration Fault: 0 +0.5mA BIT Fault: 2mA ±10% Normal: 4mA ±5% IR Detection: 8mA ±5% UV Detection: 12mA ±5% Warning: 16mA ±5% Alarm: 20mA ±5% Resistance Loop: 100-600 Ω
RS-485	The detector is equipped with an RS-485 communication link that can be used in installation with computerized controllers. The RS-485 is Modbus compatible.

MECHANICAL SPECIFICATIONS

Dimensions	4" x 4" x 2.5" (100 x 100 x 62 mm)
Weight	St.St 316L 2.5Lb (1.2 Kg) Plastic 0.7Lb (0.3 Kg) Tilt Mount 0.8Lb (0.37 Kg)
Enclosure	1. Stainless Steel 316L with electro polish finish. 2. Plastic housing - glass fiber reinforced polyester.
Environmental Standards	Meets MIL-STD-810C for Humidity, Salt & Fog, Vibration, Mechanical shock, High Temp, Low Temp
Water and Dust	IP66 and IP67 per En60529 NEMA 250 6P

ACCESSORIES

Fire Simulator	20/20-311
Tilt Mount	20/20-005 (St. St. 316L)