SharpEye™ 20/20ML

Mini UV/IR Flame Detector

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

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.

MAIN FEATURES

- UV/IR Dual-Sensor
- High-Speed Response
- 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)

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, gen- erator rooms, unmanned stations, gas-fired and coal-fired reactors
- Printing Industry - solvent handling, presses, drying processes
- Warehouses - storage facilities for flammable materials

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SPECTREX

SharpEye™ 20/20ML Mini UV/IR Flame Detector

GENERAL SPECIFICATIONS

Spectral Response	UV: 0.185 - 0.260 microns. IR: 2.5 - 3 microns					
Detection Range		**ft**	**m**		**ft**	**m**
(Highest Sensitivity Setting for 1 ft² (0.1m²) pan fire)	Gasoline	50	15	Methanol	25	7.5
	n-Heptane	50	15	Methane*	15	5
	Diesel Fuel	37	11	LPG Propane*	15	5
	JP5	37	11	Hydrogen*	15	5
	Kerosene	37	11	Silane*	15	5
	(Alcohol Ethanol	25	7.5	Polypropylene Pellets	15	5
	IPA (Isopropyl Alcohol)	25	7.5	Office Paper	12	4
	*20" (0.5m) long 8" (0.2m) width plume fire					
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. 40 mA in stand-by Max. 70 mA in alarm
Electrical Connection	12 wires 6 ft. (2m) cable (for junction box connection) Optional: 12-wires electrical connector (the suitable connector will be supplied)
Electrical Input Protection	According to MIL-STD-1275B
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)
	Tilt Mount	0.8Lb (0.37 Kg)
Enclosure	Stainless Steel 316L with electro polish finish	
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	

APPROVALS

FM (Functionality)

ACCESSORIES

Flame Simulator	FS-1200
Tilt Mount	20/20-005
Air Shield	20/20-787
Rain Shield	787980

Specifications subject to change