# SharpEye<sup>™</sup> 20/20MI



## Mini Triple IR (IR3) Flame Detector

The SharpEye Mini-IR3 Flame Detector (20/20MI) is a high performance and high reliability compact, selfcontained triple spectrum infrared flame detector.

With the highest immunity to false alarms, the Mini-IR3 has applications in a wide range of industrial and commercial facilities, where the threat of accidental fire involves hydrocarbon fuels such as gasoline, kerosene, diesel fuel, aviation jet fuels like JP-4, JP-5, JP-8, hydraulic fluids, paints and solvents, monomers and polymers like ethylene and polyethylene, natural gas (LNG), town gas and liquefied petroleum gas (LPG), hydrocarbon gases like methane, ethane, propane, butane, acetylene, propylene, etc.

The patented Triple IR design also offers 3-4 times the detection distance of any conventional IR or UV/IR Detector.

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 generalpurpose flame detector for industrial applications to withstand "harsh" environmental conditions, including extreme temperatures, high humidity, vibrations, etc.

### MAIN FEATURES

- Triple Spectrum Design
- 80% Less Power Consumption
- Highly Immune to False Alarms
- Large Field of View (100° horizontal/vertical)
- · Sensitivity Selection
- User-Programmable Functions
- Configurable via software from a PC or handheld device
- Automatic and Manual Built-In-Test (BIT)
- Standard 4-Wire Connection
- 4-20mA sink or source (3-4 wires) configuration
- RS-485 Modbus Compatible
- MTBF Minimum 100,000 Hours
- 3-Year Warranty
- FM Approval (Functional)
- EN54-10 (VdS) Approved for 20/20MI-1

#### **APPLICATIONS**

- · Aircraft-hangars and maintenance areas including landing gear pits
- · Automotive parts manufacturing
- · Car parking towers and garages
- Chemical industry
- · Mining and heavy-duty vehicles
- · Nuclear power plants
- Paint spray booths
- · Petrochemical facilities
- Power generation pumps, generators, and unmanned stations
- · Printing-presses and facilities
- Recreational and sports arenas (facilities)
- Storage areas
- Tank farms with fixed or floating roofs
- · Wet bench manufacturing



## **SharpEye** <sup>™</sup> 20/20MI Mini Triple IR (IR3) Flame Detector

GENERAL SPECIFICA				
Spectral Response	Three IR Bands			
Detection Range	0!:	ft m	IDA (Issuere et Alssess)	ft m
Highest Sensitivity Setting	Gasoline	133 40	IPA (Isopropyl Alcohol)	100 30
for 1 ft² (0.1m²) pan fire)	n-Heptane	133 40	Methanol	100 30
	Diesel Fuel	90 27	Methane*	40 12
	JP5	100 30	LPG (Propane)*	40 12
	Kerosene	100 30	Polypropylene Pellets	16 5
	Alcohol (Ethanol) 100 30 Office Paper 50 15 *20" (0.5m) long 8" (0.2m) width plume fire			
		3" (0.2m) widt	.h plume fire	
Response Time	Typical 5 sec.			
Adjustable Time Delay	Up to 30 sec.			
Sensitive Range	4 Sensitive Ranges for 1 ft <sup>2</sup> (0.1m <sup>2</sup> ) gasoline pan fire:			
	20/20MI-1: 33 ft (10m) to 133 ft (40m) 20/20MI-3: 7.5 ft (2.5m) to 33 ft (10m)			
			rt (10m)	
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)			
Unmidity	Storage: -65°F (-55°C) to 185°F (85°C)			
lumidity	Up to 95%			
ELECTRICAL SPECIF	ICATIONS			
Power Supply	Operating Voltage:	18-32 VDC		
Power consumption	Max. 25 mA in sta			
Tower consumption	Max. 50 mA in ala	,		
Electrical Connection			action box 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-S		mediai (ine suitable comie	otor will be supplied)
Electromagnetic Compatibility	EMI/RFI protected			
	Livily IVI 1 protected	OL Warked		
OUTPUTS				
Relays	Alarm and Fault			
·	SPST volt-free contacts rated 2A at 30 VDC			
	Fault relay normally closed, Alarm Relay normally open			
4-20mA	Sink (source option	•		
	Fault:	0 ±0.5mA		
	BIT Fault:	2mA ±10%		
	Normal:	5mA ±10%		
	Warning:	10mA ±5%		
	Alarm:	15mA ±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. T	he RS-485 is Modbus com	npatible
MECHANICAL SPECI	FICATIONS			
		100 22		
Dimensions	4" x 4" x 2.5" (100			
Weight	St.St 316L	2.5Lb (1.2 K	0,	
	Tilt Mount	0.8Lb (0.37		
Inclosure	Stainless Steel 31		· · · · · · · · · · · · · · · · · · ·	
Environmental Standards  Water and Dust	Meets MIL-STD-810C for Humidity, Salt & Fog, Vibration, Mechanical Shock,			
	High Temp, Low Temp			
	IP66 and IP67 per	LN60529		
	NEMA 250 6P			
APPROVALS				
THE THOU	ENA /Francisco de la contraction de la contracti			
	FM (Functionality)			
	EN54-10 (VdS) - 20	)/20MI-1 Only	/	
ACCESSORIES				
ACCESSORIES	F0.4400	AL OLIVIE		22/22 727
Flame Simulator	FS-1100	Air Shield		20/20-787
	FS-1100 20/20-005 787980	Laser Pointe	er Pocket PC Diagnostic Kit	20/20-787 787969 777820

Specifications subject to change

