



SharpEye™

20/20MPI

A compact, lightweight, high performance

IR3 Flame Detector
based on Spectrex's proven industrial IR3 technology

With its lightweight housing and low power consumption, the 20/20MPI provides a cost effective solution, specially suited to indoor applications such as transport terminals, storage areas, industrial kitchens and historical and cultural sites with large open areas, providing an efficient alternative smoke and heat detectors often prove to be ineffective.

The 20/20MPI is a compact, lightweight, high performance IR3 detector with a new design for retail use based on industrially proven IR3 technology. The 20/20MPI retains all the benefits of IR3 technology, including long distance detection and the highest immunity to false alarms.

Main Features

- Long distance Flame Detection (up to 140ft / 43m)
- Large Field of View (100° horizontal / 90° vertical)
- Highest immunity to false alarms
- Output options (two models):
  – Alarm and Fault relay outputs (4 wire)
  or
  – Stepped mA output (3 wire source)
- RS-485 Modbus Compatible
- Automatic and Manual Built-In-Test (BIT)
- 3 Year Warranty

SPECTREX

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Main Applications



AIRPORT TERMINALS

Airport terminals situated in dense cities often have large halls, accompanied by retail, food and beverage outlets, each with their fire risks, which don't have full fire protection coverage. With the structure's size and complex design, fires are often difficult to detect and larger fires are less common due to the large air intake.



TRAIN STATIONS AND TERMINALS

Train stations and terminals often have large atria containing food and beverage outlets which have large air intake and often have little fire protection coverage. Additionally, within these areas, electricity and fuel are present, increasing the chances of ignition.



STORAGE AREAS

A wide range of substances are stored within open or closed storage facilities, part of which can be dangerous or flammable, creating a greater fire hazard than usual.



ARCHIVES

A large amount of paper work collecting dust poses potential fire hazards that require monitoring.



MALLS

With over 1,000 fire events taking place annually within the retail industry, it is imperative that the large open areas with high ceilings found in shopping malls have full fire protection coverage in order to avoid damage to assets and personnel.



HOSPITALS

Hospitals consist of large open spaces and confined rooms, all of which contain a wide variety of contents that pose hazards. Cooking and heating equipment, as well as electrical distribution, lighting and medical equipment such as oxygen tanks are found throughout hospital buildings and are all potential fire risks which should be protected against.

Main Applications

CAR PARKING TOWERS AND GARAGES

Areas intended for vehicle storage or maintenance contain large amounts of fuel and fumes within an enclosed space, posing a fire hazard that must be monitored.



PUBLIC BUILDINGS

Public buildings often house governmental offices and more, requiring excellent fire protection in order to prevent damage to assets and personnel in any potential fire.



BANKS AND OFFICES

Banks and offices face common fire hazards with large open areas, coupled with large amounts of paperwork and a large volume of people constantly passing through.



HISTORICAL AND CULTURAL SITES

Historical, cultural or national sites often contain irreplaceable assets, alongside flammable materials. A fire within these areas which were not designed with safety in mind would cause irreversible damage.



AIRCRAFT HANGARS

Large open floor areas with high roofs provide a suitable area for aircraft storage and repair. However, the large quantities of liquid jet fuel and risk of spill, coupled with maintenance activities provide potential ignition sources which is complicated by aircraft wing obstructions.



CABLE TUNNELS

Cable tunnels play an essential role in every industrial company. Any fire damage to the cables puts entire production areas out of action. As the cable tunnel environment deteriorates with time, cable insulation performance decreases, leaving an increased heating value and greater risk of tunnel fires and detection of these fires is essential in order to prevent further damage.



GENERAL SPECIFICATIONS

Spectral Response	Three IR Bands	ft	m		ft	m
Detection Range *Highest sensitivity setting for 1 ft² (0.1m²) pan fire	n-Heptane	140	43	Methanol	100	30
	Gasoline	140	43	IPA (Isopropyl Alcohol)	115	35
	Diesel Fuel	100	30	Methane*	40	12
	JP5	100	30	LPG (Propane)*	40	12
	Kerosene	100	30	Polypropylene Pellets	50	15
	Alcohol (Ethanol)	100	30	Office Paper	50	15
	**20" (0.5m) long 8" (0.2m) width plume fire*					
Response Time	Typically 5 seconds					
Adjustable Time Delay	Up to 30 seconds					
Sensitivity Range	4 sensitivity ranges for 1 ft² (0.1m²) gasoline pan fire: 35 ft (11m) up to 140 ft (43m)					
Field of View	100° horizontal, 90° vertical					
Built-in-Test	Manual and Automatic BIT					
Temperature Range	Operating: -40°F (-40°C) to +160°F (+70°C) Storage: -40°F (-40°C) to +160°F (+70°C)					
Humidity	Up to 95%					

ELECTRICAL SPECIFICATIONS

Power Supply	Operating Voltage: 18-32 VDC
Power Consumption	20/20MPI-R at 24V DC: Max. 15mA at Normal Max. 25mA at Alarm 20/20MPI-M at 24V DC: Max. 16mA at Normal Max. 36mA at Alarm
Electrical Connection	M20 Gland Connection
Electrical Input Protection	Per EN54-10
Electromagnetic Compatibility	EMI/RFI protected CE Marked per EN50130-4

OUTPUTS

20/20MPI-R	Relays	Alarm and Fault SPST volt-free contacts rated 2A at 30 VDC Fault relay normally closed, Alarm Relay normally open			
20/20MPI-M	0-20mA	Source configuration Fault: 0 +0.5mA BIT Fault: 2mA ±10% Normal: 4mA ±10%		Warning: 16mA ±5% Alarm: 20mA ±5% Resistance Loop: 100-600 Ω	

MECHANICAL SPECIFICATIONS

Dimensions	4.7" dia x 2.9" (119mm x 74mm)
Weight	10.6 oz (300g)
Tilt Mount Weight	2.5 oz (70g)
Enclosure and Tilt Mount	Polycarbonate
Water and Dust	IP55

PERFORMANCE APPROVALS

FM3260	Approved
EN54-10 (VdS)	Approved

ACCESSORIES

Tilt Mount	768004 (included with each new detector)
Protective Cover	768005 (included with each new detector)
Flame Simulator	FS-1100

Specifications subject to change
For more information view manual or website **www.spectrex.net**