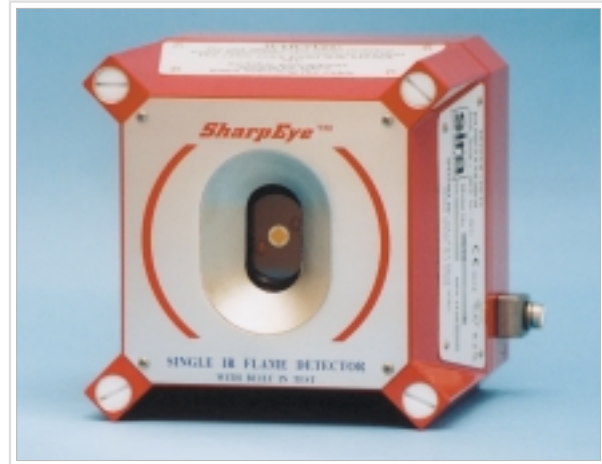**SPECTREX INC.**

SharpEye™ 20/20R

3 YEAR WARRANTY

The SharpEye Single-IR Optical Flame Detector (20/20R) incorporates advanced flame analysis tools, combined with a cost-effective design to produce a low-cost flame detector.

The 20/20R Flame Detector was designed to provide early warning of flaming fires involving organic (hydrocarbon fuels and vapors) materials.

The detector contains an infrared sensor and optical filter that provides maximum sensitivity to the CO_2 emission spectral band at 4.4 microns and improved immunity to false alarms caused by environmental IR emitting sources, including sunlight and IR projectors.

The detector was designed to withstand "harsh"

environmental conditions, including extreme temperatures, high humidity, vibrations, etc.

A cost-effective, explosion-proof, single IR detector that works in the 4.4 micron range!

MAIN FEATURES

- Sensitivity Selection
- User Programmable Configuration
- Immune to False Alarms
- Automatic and Manual Built-In Test (BIT)
- Standard 4-wire Connection
- 4-20mA sink or source (3-4 wires) configuration
- RS-485 Interface
- MTBF Minimum 100,000 Hours
- 3-Year Warranty
- ATEX & Gost K Approved

APPLICATIONS

- **Automotive** - manufacturing, paint spray booths
- **Chemical Industry** - production, storage, transportation
- **Oil & Gas** - exploration, production, storage and offloading
- **Onshore** - refineries, loading terminals, pipelines
- **Paint** - manufacturing facilities
- **Petrochemicals** - production, storage, shipping facilities
- **Pharmaceutical Industry**
- **Power Generation Facilities** - pump areas, generator rooms, unmanned stations, gas-fired and coal-fired reactors
- **Printing Industry** - solvent handling, presses, drying processes
- **Tank Farms** - floating-roof and fixed-roof tank areas
- **Warehouses** - storage facilities for flammable materials
- **Waste Disposal Facilities** - incineration, processing and storage of flammable waste materials (solids, liquids, gases)

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GASTECH AUSTRALIA

GENERAL SPECIFICATIONS

Spectral Response	Single IR Band 4.2-4.5μm

Detection Range	Gasoline	50 ft (15m)	JP4	37.5 ft (11m)
(Highest Sensitivity Setting	n-Heptane	50 ft (15m)	Kerosene	37.5 ft (11m)
for 1 ft^2 (0.1m^2) pan fire)	Alcohol 95%	37.5 ft (11m)	Diesel Fuel	25 ft (7.5m)

Response Time	Typical 5 sec.
Adjustable Time Delay	Up to 30 seconds
Sensitive Range	2 Sensitive Ranges for 1 ft^2 (0.1m^2) gasoline pan fire from 15 ft (5m) to 50 ft (15m)
Field of View	90° horizontal, 90° vertical
Built-in-Test	Manual and Automatic BIT
Temperature Range	Operating: -40°F (-40°C) to 160°F (70°C) Operating Option: -40°F (-40°C) to 185°F (85°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. 150mA in stand-by Max. 200mA in alarm
Electrical Connection	2 x 3/4" - 14NPT conduits or 2 x M25 x 1.5 mm ISO
Electrical Input Protection	According to MIL-STD-1275B
Electromagnetic Compatibility	EMI/RFI protected CE Marked

OUTPUTS

Relays	Alarm - 2A at 30 VDC, 0.5A at 250 VAC Fault and Accessory - 5A at 30 VDC and 250 VAC Fault relay normally closed, others normally open
4-20mA	Sink (source option) configuration Fault: 0 +0.5mA Normal: 5mA ±10% Warning: 10mA ±10% Alarm: 15mA ±10% Resistance Loop: 100-600 Ω
RS-485	The detector is equipped with an RS-485 communication link that can be used in installations with computerized controllers.

MECHANICAL SPECIFICATIONS

Dimensions	4.7" x 5.2" x 5.2" (120 x 132 x 132 mm)
Weight	Aluminum: 8.1Lb (3.7 Kg) St.St 316L: 14.3Lb (6.5 Kg)
Enclosure	Aluminum, heavy-duty copper free (less than 1%), red epoxy enamel finish. Optional - 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

HAZARDOUS AREA APPROVALS

ATEX	EX II 2G, EExd IIB + H$_2$ T5 (70°C) EX II 2G, EExde IIB + H$_2$ T5 (70°C)

ACCESSORIES

Fire Simulator	20/20-312
Swivel Mount	20/20-003 (St. St. 316L)

Specifications subject to changes