

# ESP Safety Flame Detectors

Self-contained Fire and Flame Detectors  
Designed for the Most Critical Environments



## IPES-IR3 Flame Detector

- \* Multispectral IR detection provides highest level of flame and fire detection with optimal rejection of false alarms
- \* Power-on self test and frequent sensor self-test ensure system integrity
- \* Heated optics & secondary heater function reduces condensation
- \* 100° field of view
- \* Highly visible tri-color LED status indicator shows current status
- \* Available in aluminum or stainless steel enclosure
- \* FM Approved for Class I, Div 1 Grps B, C, D
- \* *SIL-3 Rated with 5-Year Warranty*

The Model IPES IR3 Flame Detector affords the best solution for the detection of flames from combustible gases and vapors across a wide field of view. Advanced technology ensures rapid response to flame sources while virtually eliminating false alarms from sunlight, arc welding, resistive heaters, fluorescent, halogen or incandescent light. Independent 4-20mA analog, RS-485 MODBUS and dry contact relay outputs.



## IEPS-IR/UV Flame Detector

- \* Combines data from both IR and UV sensors in specific wavelengths to detect fires from oil, petrochemicals, metals and a wide range of other materials
- \* Automatic and manual self-tests ensure system integrity and correct operation
- \* Heated optics & secondary heater function help prevent condensation
- \* Highly visible LED status indicators
- \* 90° field of view
- \* Digital, relay contact and analog output
- \* FM Approved for Class I, Div 1 Grps B, C, D
- \* *SIL-3 Rated with 5-Year Warranty*

The Model IPES-IR/UV Flame Detector provides superior sensitivity to fires from oils and petrochemical products, as well as metals and other hazardous materials. Monitoring UV in the range of 180 to 250 nanometers, and IR in the range of 4.2 to 4.6 microns, the IPES-UV/IR detects and alarms only when recognizing specific characteristic wavelengths that indicate actual flame or fire. Outputs include 4-20mA analog, RS-485 MODBUS and dry contact relays.



## Applications

- \* Drilling and production platforms
- \* Shipping tankers, freighters & vessels
- \* Fuel loading docks
- \* Refineries, bulk terminals, tank farms
- \* LNG/LPG processing and storage
- \* Chemical, paint and fertilizer plants
- \* Power plants and gas turbines
- \* Transportation facilities
- \* Aircraft hangers and auto storage

**GDS**  
**Corp**

Gas and Flame Detection

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Toxic & Combustible Gas Detection • Controllers • Process Monitors • Calibration Supplies

Model IPES-IR3 Flame Detector <b>SPECIFICATIONS</b>	
<b>Power Input</b>	18 - 32VDC < 2 Watts standby; < 3 Watts in alarm < 5 Watts in self-test < 7.5 Watts with heater on maximum
<b>Spectral Range</b>	Monitors three separate optical ranges
<b>Response</b>	nHeptane, 1 ft <sup>2</sup> , 210 ft, 6 seconds Methanol, 1 ft <sup>2</sup> , 150 ft, 7 seconds JP5, 2 ft <sup>2</sup> , 210 ft, 4.5 seconds
<b>Time Delay</b>	Slow: 4 seconds; Fast: 2 seconds
<b>Range Setting</b>	Near / Far
<b>Field of View</b>	100° horizontal and 100° vertical
<b>Analog Output</b>	Analog signal 4-20mA Fault signal 2 mA ± 0.1 mA Ready signal 4 mA±0.1 mA Fire Signal 18 mA ± 0.1 mA Test Mode Signal 8 mA ± 0.1 mA
<b>Relay Output</b>	Fire: J1, 1-2 Normally open Closes on fire detection Latching, non-latching option Fault: J1, 3-4, Normally closed Opens on fault detection Latching, non-latching option
<b>Wiring</b>	14 AWG (2.08 mm <sup>2</sup> ) or 16 AWG (1.31 mm <sup>2</sup> ). Shielded cable recommended.
<b>Temperature</b>	- 40°C to +85°C operating; 95% humidity
<b>Housing</b>	Aluminum (standard), #316 Stainless Steel (optional); 3/4" NPT cable entry
<b>Dimensions</b>	11.6" wide, 19" tall, 22.3" deep Al: 5.5 pounds, SS: 11 pounds
<b>Approvals</b>	FM Class I, Div 1, Groups B, C, D ABS Class I, Div 1, Groups B, C, D IP-66
<b>Warranty</b>	Five years from date of purchase
<b>Viewing Angle</b>	

Model IPES IR/UV Flame Detector <b>SPECIFICATIONS</b>	
<b>Power Input</b>	18 - 32VDC < 2 Watts standby; < 3 Watts in alarm < 5 Watts in self test < 7.5 Watts with heater on maximum
<b>Spectral Range</b>	4.2 to 4.6 microns (IR) 180 to 250 nm (UV)
<b>Response</b>	nHeptane, 1 ft <sup>2</sup> , 100 ft, 5 seconds Methanol, 1 ft <sup>2</sup> , 85 ft, 5 seconds JP5, 2 ft <sup>2</sup> , 100 ft, 5 seconds
<b>Time Delay</b>	Slow: 4 seconds; Fast: 2 seconds
<b>Range Setting</b>	Near / Far
<b>Field of View</b>	90° horizontal and 90° vertical
<b>Analog Output</b>	Analog signal 4-20mA Fault signal 2 mA ± 0.1 mA Ready signal 4 mA±0.1 mA Fire Signal 18 mA ± 0.1 mA Test Mode Signal 8 mA ± 0.1 mA
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