

IPES IR/UV FLAME DETECTOR

IPES IR/UV Flame Detector of ESP provides a superior sensitivity for fires from oil and petrochemical products. It is also indicated for a wide range of other fire types including metal fires.

IPES IR/UV advanced detection technology includes optical filters configured for maximum sensitivity to radiation produced by flame or fire and ensures rapid flame recognition and alarm signaling. Upon fire recognition within its 120-degree field of view, the IPES IR/UV signals a change in state from normal operation to alarm state. Via integrated ultraviolet (UV) and infrared (IR) sensors, the IPES IR/UV monitors specific regions of both spectral ranges. In the infrared spectrum, the device is configured for sensitivity to wavelengths in the range of 3-5 microns, allowing optimal sensitivity to combustible gas fires. For ultraviolet (UV) radiation, the device is configured for sensitivity in the range of 180 to 260 nanometers, making the sensor «blind» to sunlight and radiation from heated objects

The combination of multiple sensors and wavelength range settings make the IPES IR/UV an excellent choice for elimination of false alarms, by sources such as radiation, artificial lighting, direct and indirect sunlight, arc welding and metal grinding.

While operating the IPES IR/UV generates detector status information via:



Areas of Use	Feature and benefits
<ul style="list-style-type: none"> » Power stations and petroleum and gas stations » Storage of combustive-lubricating materials » Tank ships and other vessels » Vanish and dye industry » Storage of oily products » Oil and gas industry » LNG/PNG processing and storage 	<ul style="list-style-type: none"> » Automatic and Manual self check for any internal component failure. » Quick warm up time of detector (15 seconds from cold start) » Color Status LED » Industry standard digital, analog and relay outputs are used for alarm and fault indications » Heated optics prevent accumulation of snow, ice and condensation » Option for integrated alphanumeric display for displaying current concentration, fault, over limit (SS316/Al) » SIL-3 Third Party Certified » Optical path obstruction monitoring. » Hydrogen flame detection



SIL-3 Rated

The IPES device is SIL-3 Third Party certified. This enables the device to be utilized in the most critical applications.

Heated Optics

Heated Optics enables the device to operate in the harshest environments leaving it unaffected by ice or water build up on the detector optics.

Built-In Self Test

The IPES IR/UV device has an inbuilt feature to perform continuous self testing in order to ensure that all of the sensing elements are functioning correctly.

Highest Temperature Range

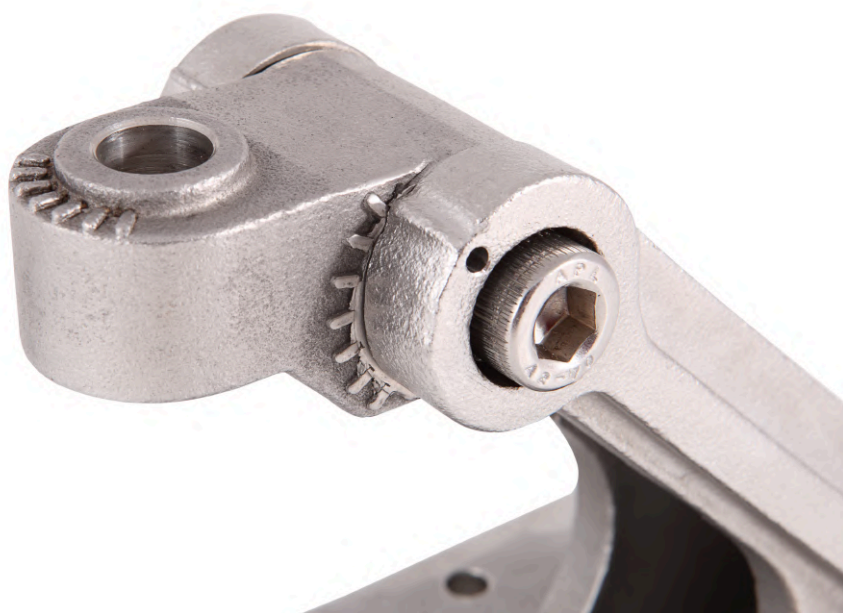
The IPES detector has been designed for use in the harshest environments, therefore it possess one of the highest operating temperatures and is suitable for use in turbines and other environments where such conditions are present.

Swivel Mounting

The detector possesses a swivel mounting bracket allowing the device to be easily mounted and adjusted to monitor the required perimeter.

False Alarm Immunity

The IPES IR/UV device posses the immunity to false alarms like no other detector in the market. The combination of a UV and IR sensors alongside the ESP developed smart algorithm, makes the device the obvious choice for any operator.



Specification:

Voltage Supply: 24 VDC (18-32 VDC)

Power Supply: <3.6W (Test Mode)
<7.0W (Heated Optics)

- Outputs:
- 4-20mA
 - RS-485
 - HART 7.0
 - Relay (Fault & Fire)

Response:

<u>Fuel</u>	<u>Distance Feet (M)</u>	<u>Size</u>	<u>Typical Response</u>
n-Heptane	100 (30)	1 ft * 1 ft	5
Methanol	85 (26)	1 ft * 1 ft	4.9
JP5	100 (30)	2 ft * 2 ft	5

Operational Characteristics:

Detection Range : up to 30 meters

Viewing Angle: 120° (Conical)

Response Time: <3 sec.

Built In Test: Automatic & Manual

Operating Temperature: -40°C to +85°C

Humidity Range: 0-95% RH

Ingress Protection: IP66/68

Indication: 3 colour LED (normal, fault, alarm indication)

Ex Marking: Ex d IIC T4 Gb

SIL Rating: SIL 3

Mechanical Characteristics

Material: Stainless Steel (SS316)/Aluminium

Cable Entry: 2 x M20 (other options on request)

Weight: 6.0 kg (SS316)
2.5 kg (Aluminium)

Warranty: 2 years

Certification



SIL 3 (IEC 61508)
Class I, Division 1
Groups B, C & D
IP66



Class I, Division 1
Groups B, C & D
IP66



Ex d IIC T4 Gb
-45 °C ≤ Ta ≤ +85 °C
IP66

