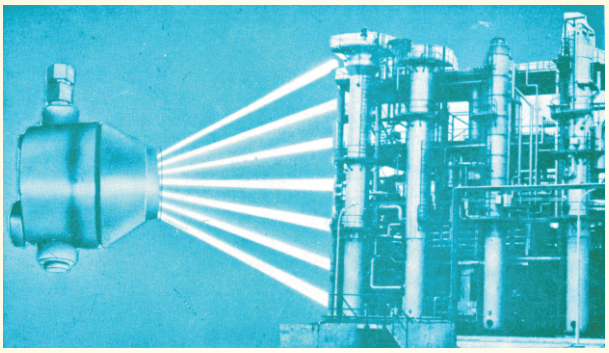
UV FLAME DETECTOR

endee
Protects your Plant & Personnel

ELECTRIC SPARK DETECTOR/FIRE CONTROLLER

A highly sensitive instrument to detect flames/ electric spark, tire in environments where catastrophic consequences could result from unwanted fire. It is particularly suitable for use in outdoor applications because it is not affected by wind or rain and is insensitive to solar radiation. Various models to detect & control the presence or absence of flame are available.



FIRE DETECTION SURVELLANCE DESIGNED FOR HAZARDOUS ENVIRONMENTS

FEATURES

- Highly Sensitive - detects cigarette lighter flame from 5 meters.
- Flame detection exceeding 50 meters.
- Scans an area instead of spot detection.
- Fast Response Time.
- Solar and artificial light blindness.
- Rugged electronic module.
- Weather proof/explosion proof housing.
- Designed for use in hazardous/non-hazarduous locations.
- Low power consumption 12/24 V DC or 220 V AC Operation.

APPLICATIONS

- Wherever highly combustible material are involved.
- Where there is a need for instantaneous response to flame.
- Whenever unsupervised areas require automated fire protection.
- Whenever there is a large capital investment to be protected.

Typical

- Gasoline Transport Loading Terminals.
- Pipeline Pumping Station.
- Marine Engine Rooms.
- Tank Forms.
- Furnace & Boilers.
- Fertilizer Plants.
- Airports.
- Aircraft Hangars & Refueling Areas.
- Offshore Drilling & Production Platforms
- Stack Flare Controls
- Computer Rooms
- Gas Turbines
- Chemical & Petrochemical Plants
- Refineries
- Turbine & Rocket Engine Test Facilities
- Underground Stores/Tunnels System

Description

The Ultra violet radiation is the fastest method of Fire detection because the first energy released from a fire source is the ultra violet. This energy travels through air at the speed of light and it is not dissipated by air currents. Thus ENDEE-UV Detector is the Most effective in early detection of fire before they can possibly cause damage. It scans an area instead of spot detection. In contrast, other types of detectors operate at a disadvantage. Keat detectors operate slowly because of the low energy levels emitted at the outbreak of fire. Smoke detectors do no operate until the-fire has developed into a sufficient size to accelerate smoke along with strata of hot air rising to the detector.

The ENDEE UV Detector is a compact and highly responsive Flame / Fire Detector. The Unit incorporates an extremely sensitive sensing circuit that responds to high energy sources in a bandwidth of 185 - 260 nm with optimum spectral sensitivity centered Around 200 nm.

Sensors

Operating in this bandwidth renders the ENDEE UV Detector virtually blind to solar radiation while affording extremely high sensitivity to UV flame. An exclusive windowing technique has been adopted which further accurately discriminates between background UV radiation and UV Flame Energy emitted from an actual flame. This, a very critical aspect of flame detection inherent in ENDEE UV Detector, assures of No False Alarms. The detection device is enclosed in an environmentally sealed explosion proof housing which assures its safe use both in hazardous & non - hazardous environments.

Operation

The signal generated with the detection of UV energy in the operational field of view, is analysed and processed for its content. As the signal reaches a certain level of intensityand the flame source is properly identified, a switching mechanism activates an alarm

circuit. A response system coupled to this circuit may be interfaced with fire precautionery equipment or fire extinguishing equipments. The ENDEE UV Detector can be set on with response times in milli seconds for certain monitoring situations, though three to five seconds meet most detection requirements.

Specification

Current Consumption :	30 mA
Operating Temperature :	-10° C to 50° C
Mounting Dimensions :	2 Nos. of 9mm dia. holes, 150 mm apart
Electrical Connection :	3/4" BSP
Output :	SPDT Relay 3A 220 V
Field of View :	120°
Background :	10 CPM Max
Sensitivity :	5000 CPM Typical

Approximate Detection Distance for Burning Materials

Cigarette Lighter 1 inch flame :	5 mtr
Alcohol :	30 mtrs (1x1ft. Panfire)
Gasoline :	50 mtrs (1x1ft. Panfire)
Jet Fuel :	50 mtrs (1x1ft. Panfire)
Butane :	05 mtrs. (1 x 1 inch flame)
Hydrogen Fuel :	75 mtrs (6 x 6 inch Pan fire)
Electric Spark :	50 mtrs.(15 V AC or DC)

Models	To Detect Presence of Flame	To Detect Absence of Flame	Electric Spark Detector
12 V DC, 24 V DC	782, 780	882, 880	982, 980
110 V AC, 220 V AC	742, 740	842, 840	942, 940

Note : Specifications and Features will vary with application. The above are established and validated during design, but are not to be construed as test criteria for every product. Due to endee's commitment to research, design and product improvement, specifications are subject to change without notice.

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