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# Linear System is the leading supplier of:

- Burner Sequence Controller
- Flame Sensors
- **Ignition Transformer**

- **UV Sensor & Amplifiers**
- Flame Amplifier
- Flame Rod for Gas Flames







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### **ABOUT US**



**LINEAR SYSTEMS**, a technocrat firm based in Mumbai (India) is a well established and reputed manufacturer of **Burner Controllers** for **Boilers and Furnaces**. Controllers are manufactured deploying State -of- the -art technology.

**Founded in 1986**, the firm has relentlessly worked for innovations for the Flame Monitoring in the process industry.

#### WHY LINEAR SYSTEMS



QUALITY PRODUCT



TIMELY DELIVERY



AFTER SALES SERVICE



CUSTOMER SATISFACTION

Linear system is the leading supplier of Burner Sequence Controller, UV Sensor & Amplifiers, Flame Sensors, Flame Amplifier, Ignition Transformer and Flame Rod for Gas Flames.

#### WHY CHOOSE US?

The firm has gained a lot of experience and expertise being so many years in the field. We have a good number of collaborations with Boiler and Furnace manufacturers for the necessary requirements. Started off small, but today have **20,000+ controllers** installed over places like Canada, India, Bangladesh, Nepal, Sudan, Africa, etc. and it became possible only because of the hard work and effort of our staff, the timely delivery of products, and our quality assured services.

### WHAT IS OUR ULTIMATE VISION?

Just like any other reputed and responsible business, we also want to serve the customers to the fullest by offering high quality and cost-effective products and services. To achieve the ultimate vision, we are trying to:

- Build goodwill in the market
- Provide a good environment even for our employees
- Coordinate and work effectively with the customers
- Always aim to serve the customers. Trying to be a customer-centric company, drawing its inspiration from large firms like Amazon.

### **WHAT'S UNIQUE ABOUT OUR PRODUCTS?**



Good Period of Warranty



LED Indication of Sequence Progress



Local & Remote Reset Facility



Attractive & Compact Enclosures



### **WHAT WE DO**

- **OEM Source For Major Boiler**
- Furnace Manufacturers for Over 20 Years
- Fully Committed To The Product Quality
- Service & Prompt Deliveries

#### **MANUFACTURERS**

Oil / Gas Burner Controller

- User Specific Sequence Controllers
- **O** UV Flame Sensor / Amplifier
- Modulating Controller
- Enquiries solicited for Import Substitute Sequence Controllers
- Amps Controller

#### WHAT DO WE STRIVE FOR?

When it comes down to running a business, the people at LINEAR SYSTEMS believe in few value points and without them, we never perform any of our business activity. They are the following:

**Quality Product** 

**Customer Satisfaction** 

Timely Delivery

**☑** After Sales Service



#### **PRODUCT SHOWCASE VIDEO**



Product Video - 1



Product Video - 2

### **OUR PRODUCTS**



Burner Sequence Controllers



**UV Sensor & Amplifier** 



Flame Rod **Amplifier** 



Burner Controllers



Flame **Sensors** 



**Flame Amplifier** 



**Ignition** Transformer



for Gas Flames



### **BURNER SEQUENCE CONTROLLERS**

We analyze and understand the customer requirements and on the basis of that technically advanced Burner Sequence Controllers are manufactured.

- Precise Sensitive Controls
- It has high efficiency
- It's quite easy to use even for non-technical people



#### Oil Fired Burners/ Boilers

- 107 S 60, 107 S 30(Standard models with pre purge time of 60 seconds & 30 seconds)
- 107 TU
- 107 M (Suitable for Nestler Boilers)
- LS 107 (Suitable for IAEC make Boilers)

### Gas Fired Burners / Furnaces with UV Flame Sensing

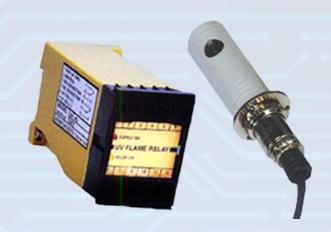
- 307-GI-S Gas Controller, with Inbuilt UV Amplifier.
- 307-GE-S, Gas Controller, with External UV Amplifier with Pilot Flame, Damper, Blower and Iginition Terminals
- 307-GID-P (Inbuilt Amplifier) & 307-GE-P (with external amplifier)

### For Gas Fired Burner / Furnaces with Flame Rod Sensing

- 207 FR-S, with Pilot Valve Option.
- 207 FRD AP21 without Pilot. (Functionally Compatible to LGB–21) Controller.

#### **UV SENSOR & AMPLIFIERS**

The UV Sensors & Amplifiers manufactured by us are used in various fields including petrochemical plants, dyeing houses, chemical plants, Dairy and many more. These systems are capable of detecting UV radiations produced by naked flames by coal, oil fired burners and gas. Our UV Sensors and Amplifiers come in both general and customized specifications.



- It's available in a compact design **(**
- 0 It's easy to fit
- It's made using a professional workforce 0
- It's sensitive to refractory glow and normal light

**UV Flame Sensor** designed by Linear Systems India uses very sensitive electronic UV tube. The specially tuned UV tube is designed to detect UV radiations emitted by the naked flame. The UV Flame Sensor is insensitive to normal light and refractory glow in furnace walls. UV Sensor is ideally suited for detecting all types of flame, namely flames due to Gas/ Coal / Oil fired burners in Boiler and Furnaces.

UV Sensor (Model UV – o1 -AJ) has been specially designed for harsh industrial environment. It provides for easy cleaning of the UV Sensor and viewing of the flame. UV Flame sensor is housed in a metal jacket to provide mechanical protection and various mounting features.

UV Flame Amplifier / Relay (Model UV-FR-o1) is used in conjunction with UV Flame Sensor to detect various types of flames namely Gas, Oil, Coal etc.

Model UV – FR – 21, has a site adjustable time delay of 2 – 8 seconds and is useful for installations with high flicker situation.

### FLAME ROD AMPLIFIER (UV / FR / PR)

The Flame Rod Amplifier is made by professionals, having years of experience and knowledge in the field. Our Flame Rod Amplifier are manufactured and supplied without compromising with quality and timing. The amplifiers will detect when there is imitation of flame. The Flame Rod Amplifier has got the best raw materials that have been used keeping the industry standards in mind.



- It utilizes the flame detection rectification technique.
- It senses only burning flame, so you can be worry-free in case of 0 glows or visible light
- It's easy to get started
- 0 It comes with a good period of warranty

LINEAR SYSTEM's Flame Rod Sensor Senses the flame using flame detection rectification technique. The Amplifier provides a voltage for the Flame Electrode. The flame electrode is immersed in flame to sensed. The current thus generated by the flow of electrons through the flame to the ground is detected by the controller for presence of flame.

The Flame Rod Sensor senses only the burning flame and completely insensitive to visible light and refractory glows. It is best suited for sensing flame in Gas Fired Burners.

#### **BURNER CONTROLLERS**

A gas burner is a device that is used for mixing a gaseous fuel with oxygen and feeding this mixture to an outlet where it gets ignited and forms a stable combustion front.

The invention of the gas burner increased the use of gas sharply. The fuel gases which were initially used for lighting street lights, started being used for a lot of different purposes. This increasing number of uses also led to several new construction patterns and design principles.



### **Types of Burners**

Based on the pressure of the gas that is applied to the burner, burners can be classified into the following types:

- Low Pressure Burners: The pressure of the gases that are applied to 0 the low pressure burners are upto 5 kilo Newtons per square meter (kN/m<sup>2</sup>) or 0.05 kilogram force per square centimeter (kgf/cm<sup>2</sup>)
- **Medium Pressure Burners**: The pressure of the gases that are applied to the medium pressure burners are between 5 to 300 kilo Newtons per square meter (kN/m²) or 0.05 to 3.0 kilogram force per square centimeter (kgf/cm²)
- High Pressure Burners: The pressure of the gases that are applied to the low pressure burners are more than 300 kilo Newtons per square meter (kN/m²) or 3.0 kilogram force per square centimeter (kgf/cm²)

### The main components or parts of a burner are:

The Mixer: The mixer is the part of the burner where the mixing of the fuel gases and oxygen takes place and feeds it to the outlet, i.e the nozzle.

The Nozzle: The nozzle is the outlet of the burner through which the feeded mixture is ignited and forms a stable combustion front.

## FLAME SENSORS

The Flame Sensors can detect fire or other light source in the present wavelength of the product. The firefighting robot game is held in some places and this is where our Flame Sensors can come to use.

They can be used as the robot eyes for finding the fire source. It sports black epoxy, making it sensitive to infrared radiation.



It's quite easy to use

- It has high photosensitivity
- The sensitivity level can be adjusted
- It has our special look
- It has got a high response time

Flame Sensor uses a Light Dependent Resistor (LDR) for sensing flame. The flame sensor essentially senses the "Light" emitted by flame. It is usually suited only for oil burners in Boilers. It is not suitable for Furnaces, where background refractory brich glows. These sensor senses all types of light, including Sun light and rays emitted by electric bulb tube light.

#### Models

- Flame Sensor (FS 1) with Front Viewing
- Flame Sensor (FS 2) with Side Viewing
- Flame Sensor (FS 3) Equivalent to Satronic Sensors

### FLAME AMPLIFIER (UV / FR / PR)

The Flame Amplifier of our company has served various clients. It has been designed to detect the presence of flame that is in reply to signal from an infrared, ultraviolet or rectifying flame detector. It should work well with the burners that are under the cycle of on and off at least every 24 hours.



- 0 It has got fault diagnosis
- It shows a precise display of intensity
- 0 It sports pre-alarm
- It allows to setting your own threshold value 0

FLAME EYE (FE-01) is a flame detector, which is sensitive to visible light.

This used CDS (Cadmium Sulphate) photo resistor as light sensing device.

This is suitable for sensing flame in oil fired burners. Amplifier has two potential free relay contacts rated at 230 V AC, 5 Amps.





#### **IGNITION TRANSFORMER**

The high range of **Ignition Transformers** offered by LINEAR SYSTEMS is worldwide known for durability and the high quality.

A lot of research goes into making the most advanced and innovative Ignition Transformers, which is unique from what our competitors offer to you. Anyone who is also a just starting out in the field, can easily install and use the product.



In major cases, the ignition transformers runs for long due to its sturdiness and high quality materials from which it has been made.

- It holds good strength 0
- 0 It will run for a long period of time
- 0 It provides smooth operation
- 0 It has controlled voltage functions





#### FLAME ROD FOR GAS FLAMES







Flame Rod 3 mm Dia

The Flame Rod for Gas Flames has been made to find the visible light produced by oil flames. The resistor has been manufactured by our experts using quality material and kept with the international industry standards.

Our product may or may not work with oil fired furnaces with a refractory glow. To know further about this, you can contact us anytime.

- It's easy to use **Ø**
- It can detect small Ionization current
- It's available in various shapes and dimensions
- It's durable and stable

Detect small Ionisation current. Economical Flame Sensor for small Gas Burners.

Available in 6.25 mm Diameter and 3 mm Diameter.

For your requirement of any other size or specifications, please feel free to contact us.





## **PHOTO GALLERY**















Flame Rod 3 mm Dia



**OUR VALUABLE CLIENTS** 









































## **CONTACT INFO**

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